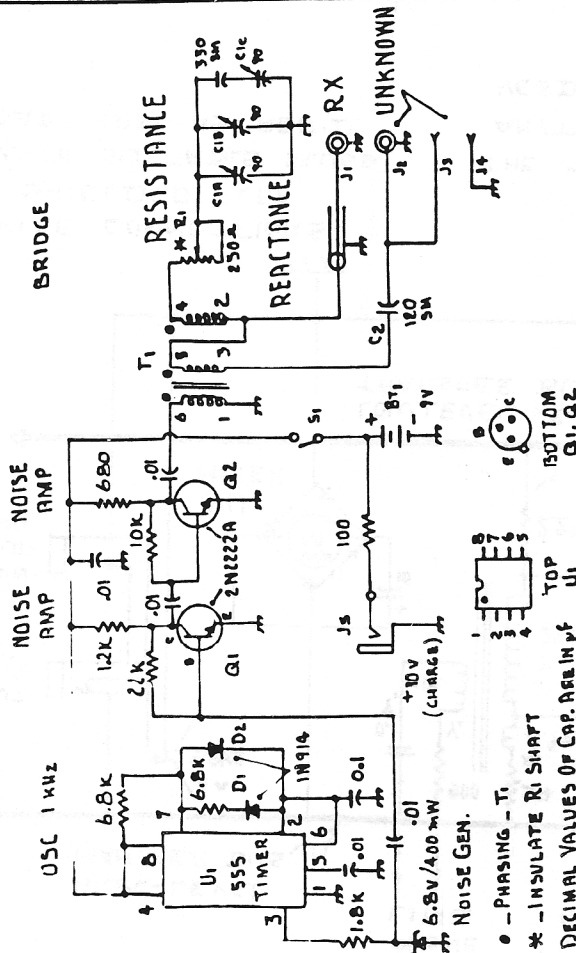


ARX NOISE BRIDGE



- BT1-9-v NiCd or transistor battery
- G1 - Surplus 3-section air variable 90 pF per section, or equivalent
- G2 - Fixed-value cap. half the value of G1 (120 pF)
- T1 - Broadband, trifilar-wound transformer. Use 8 trifilar turns of no. 26 enam. wire on a Amidon FT-37-43 toroid core
- J1, J2 - BNC connector
- J3, J4 - binding-posts
- D3 - Zener diode 6.2 or 6.8 V
- R1 - High quality, 250-ohm linear taper potentiometer

The building of this RX Noise Bridge can be found in the ARRL 1986 HANDBOOK, Chapter 25-36. An article on this bridge can be found in QST December 1987 Page 32.

Thanks to ARRL
Dave VE3CGL

The Hamilton

Amateur

January 1991
(Established 1932)

The Enjoyment
of Armchair
Contesting

Steve, VE3NYT, will provide some insights into CONTESTING with a view to Quality rather than Quantity

Meeting: 16 January 1991
20:00 hrs
Nash Auditorium - Hamilton

HARC EXECUTIVE FOR SEPTEMBER 1990:

PRESIDENT:	VE3SON	Jim Walsh	689-6839
PAST PRESIDENT:	VE3JTO	Mike Spenuk	
VICE PRESIDENT OPNS:	VE3DKJ	Keith Johnson	529-1603
VICE PRESIDENT ADMIN:	VE3TJL	Cliff Tooner	547-5801
SECRETARY:	VE3SMF	Stuart Fedak	628-4131
TREASURER:	VE3VFR	Norm Sainger	692-5182
MEMBERSHIP:	VE3MWO	Ron Hallas	547-1960

HARC COMMITTEE CHAIRPERSONS FOR 1990:

AWARDS & CONTESTS:	VE3AAH	Gordon Barber	383-9161
HISTORIAN:	VE3BLG	George Olenick	383-7338
PROPERTY:	VE3ANB	Richard Leah	
BULLETIN EDITOR:	VE3SON	Jim Walsh	689-6839
EDUCATION:	VE3EKY	Bernie Granby	527-7175
EMERGENCY COORD:	VE3NYC	Paul Hazen	984-4345
FIELD DAY COORDINATOR:	VE3TJL	Cliff Tooner	547-5801
FLEA MARKET:	VE3NYC	Paul Hazen	984-4345
HEALTH & WELFARE:	VE3GFE	Stan Boilbruch	528-4002
PROGRAMS:	VE3DKJ	Keith Johnson	529-1603
PUBLIC LIASON:	VE3GCP	Fred Robinson	575-5197
HOSPITALITY COORD:	SWL	Gerard Crawshaw	385-2789
CHRISTMAS DINNER PLAN:	VE3DKJ	Keith Johnson	529-1603
SWAP NET CONTROL:	VE3OCY	Don Graziano	560-1960
REPEATER:	VE3OCY	Don Graziano	560-1960
TECHNICAL:	VE3FHQ	Glen Gibson	385-2786
VE3DC LICENCEE:	VE3OCY	Don Graziano	560-1960
VE3NCF LICENCEE:	VE3NYC	Paul Hazen	984-4345
VE3RCB LICENCEE:	VE3EKY	Bernie Granby	527-7175
DESIGNATED EXAMINERS:	VE3DKJ	Keith Johnson	529-1603
	VE3GCP	Fred Robinson	575-5197
	VE3SMF	Stuart Fedak	628-4131

pending:

Notes from HARC - I

PRESIDENT'S MESSAGE

December 25 is past but I hope some of the Spirit of Christmas is still with us. New Year's Day is past but I hope some of the good resolutions are still with us. We could be better examples of the Spirit of Amateur Radio.

There are so many activities in amateur radio that there should be at least one that each of us could resolve to make a better effort this coming year. We, ourselves, the clubs and amateur radio in general will all benefit.

Jim VE3SON

RED CROSS TRAINING

Thursday January 17, the training is related to the provision of assistance on the spot for the fire department on behalf of the Red Cross. Dinner is provided at 6:00 pm, followed by instruction by the fire department. Phone Jessica Brennan at 522 8485 so she will know how many to expect. If you have any questions, phone Jessica.

AMATEUR TRAINING

Basic training course will start 9:00 am Saturday January 12, 1991 at the Red Cross. Bernie VE3EKY 527 7175 and Stanley VE3GFE 528 4002 are taking names. Rich VE3ANB has offered to give instruction on Morse code. Call him at 547 8192. This could be at the Red Cross after the Basic class on days that Rich is not working.

DESIGNATED EXAMINERS

Communications Canada local office, on the recommendation of the Hamilton Amateur Radio Club, has certified the following amateurs as Designated Examiners:

- VE3EKY Bernie 527 7175
- VE3DKJ Keith 529 1603
- VE3GCP Fred 575 5197
- VE3SMF Stuart 628 4131

and pending:

These people will be available to administer the testing requirements for the Basic, 5 WPM, 12 WPM and Advanced levels of certificate, both the Code and Written portions.

There will be no charge for the examinations, except in very extenuating circumstances, and then only on a cost-recovery basis. The examiners are required to test Club Members and non-Members alike.

If you think you are ready to try for your Basic certification or upgrade, contact one of the above to make arrangements....if not, get hold of Bernie VE3EKY 527 7175 or Stan VE3GFE 528 4002 and register for the upcoming Basic course.

use for that purpose.

5.5 The user must either have a separate cable with a suitable terminating fitting for each device he wants to patch, or else a single cable with a block of adaptors to get from the single plug to whatever jacks etc. he has to meet. I opted for the separate cables. It's pretty messy but I don't have to fiddle with (or misplace) a lot of adaptors. Take your choice. Keep things shielded and grounded - there's always RF and other stuff around.

5.6 When monitoring traffic with the speaker, note that transceiver traffic will be heard but telephone traffic will not - its level is too low. You must monitor the telephone part with the telephone handset - which is better anyway because you can match levels better that way.

5.7 Tape recorders have phenomenally effective ALC. The match to the tape recorder is pretty crude, but you probably won't have to adjust it in any way.

5.8 When testing and cutting over, cut in one device at a time and be sure that nothing untoward has happened to other levels such as that fed to the telephone system.

Have fun!

73.

Frank Gue, VE3DPC
(416) 634 9536

THIS APPEARED IN AN EARLIER BULLETIN AND WAS SO POPULAR THAT IT APPEARED IN SOME OTHER BULLETINS AND A RECENT EDITION OF THE CANADIAN AMATEUR. IT IS REPEATED BY POPULAR REQUEST TO SHOW AN ALTERNATIVE USING A RADIO SHACK TRANSFORMER.

////////////////////

NewMembers

NEW MEMBERS: JOHN TOWNSEND VE3JUN1
WILLIAM COURT VE3WVC

MEMBERSHIP DUES:
IF YOU HAVE NOT RENEWED YOUR MEMBERSHIP, \$15.00 TO AUGUST 31, 1991
OR \$40.00 TO AUGUST 31, 1992.

PHONE COLIN 389-6286 IF INTERESTED IN SURPLUS AIRCRAFT TRANSCIVERS
(NO 42 SETS) AND 30 VOLT GENERATORS.

FROM THE BULLETIN BOARDS - 1

HR BULLETIN 38 (PACKET CRLE338) FROM CRRL, LONDON, ONTARIO, 1990 DECEMBER 16, TO ALL RADIO AMATEURS

Item 1:

Ray Perrin, VE3FN, and Ralph Cameron, VE3BBM, from CRRL and CARF respectively, represented radio amateurs at the recent Radio Advisory Board of Canada (RABC) meeting held in Ottawa. Main topics of discussion: the impact of the new Radio Act on various radio services, DOC spectrum policy for 30-896 MHz, and electromagnetic compatibility standards related to power line interference, digital equipment interference, and RF susceptibility of consumer electronics devices. Ernie Welling, VE3HD, of the Electrical and Electronic Manufacturers Association, was elected RABC chairman.

Item 2:

A clipping from the Union of BC Municipalities News shows that local governments are quickly becoming aware of DOC's CPC-2-0-03, Municipal Consultation on Non-Broadcasting Antennas and Antenna Supporting Structures. DOC recently wrote to CRRL, explaining that amateurs are not required to follow the declaration procedures outlined in the CPC. This fact may be lost on some municipalities because the CPC makes specific reference to Amateur Radio. CRRL has asked DOC to modify the CPC to eliminate future problems.

Item 3:

In case you missed it, the STS-35 mission of the space shuttle Columbia with astronaut Ron Parise, WA4SIR, and the SAREX-II Amateur Radio station lifted off on December 2. Coincidentally, the Soviet Union launched a Soyuz Progress supply rocket carrying two cosmonauts and a Japanese television journalist about an hour after the launch of the Columbia. The US astronauts hoped to use Amateur Radio to contact their Soviet counterparts, headed for the space station MIR.

Item 4:

In other space news, AMSAT-DL officials have learned that the launch of their RM-1/RUDAK 2 Amateur Radio satellite will be delayed until at least January 7. The satellite was supposed to be launched on November 29, and both the payload and rocket were ready, so why the delay? According to reports, the launch was held up until January so a particular government official could view it at his convenience!

COMING EVENTS TO ACCOMPANY 1990 BULLETIN 38:

ARRL January VHF Sweepstakes January 19-20
NPARC (St. Catharines, ON) Big Event February 2

73, DE VE3GRO @ VE3GYQ, CRRL, BOX 7009, STATION E, LONDON, ON N5Y 4J9

Notes from HARC - 3

8525.20.90: Other transceivers- CB, walkie-talkies, civil aircraft, marine VHF-FM - FREE (US made) 9.5% otherwise

8525.30.10: Television Cameras, colour - FREE black+white - FREE (US made) 9.5% otherwise

8517.90.40: Morse keys - FREE (US made) 17.5% otherwise

The Tariff refers to duty only, GST will be charged on the items, but calculated at 7% rather than the old FST rate of up to 13.5%.

Make a note especially of the Tariff Item numbers, and have receipts available (these are converted to Canadian \$ in calculating tax and duties).

You are warned not to try to undervalue your goods or underdeclare them. The penalties are stiffer than any benefit, and the customs staff know their stuff. Gary was familiar with transverters, converters and linear amplifiers. His comment was "they have no sense of humour (at the border) when you don't declare".

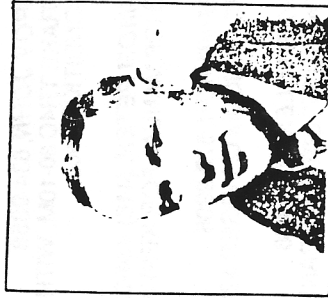
de VE3DKJ



Royal LePage Real Estate Services Ltd.

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25 YEARS CONTINUOUS SERVICE TO H.A.R.C.
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Fred J. Robinson
Associate Broker

The Swap Shop: For Sale - 1

To list items: VE3NCF (146.76) Tuesdays 8 pm, OR Call Keith (VE3DKJ) 529-1603 or Ralph (VE3BYM) 388-6146 or Rich (VE3ANB) 547-8192, OR leave message on the VE3DC Packet BBS (145.590 MHz).

Items accepted should be related to the enjoyment of our common hobby, Amateur Radio - this has been interpreted to include also computer equipment, C.B. and other electronic gear that can be used or converted to Amateur Radio use. Listings are read over the air for four weeks, published once in The Hamilton Amateur, and posted on the packet and computer BBS VE3DC (sysop VE3JSJ Gord) 145.590 and 575-4745.

VE3MWD SERAFINO, 662-4526
o PC COMBO SOFTWARE, COMMUNICATIONS PACKAGE FOR KAM INTERFACE RTTY, AMTOR, WEFAX \$25
o KENWOOD TS680 HF WITH 6M \$1000
o HEATHKIT VTVM WITH RF PROBE, NEW FACE, NEW TUBES, XCELLENT CONDITION \$25

NICK, (416) 696-8020 TORONTO
o IBM COMPATIBLE 286 AT, 640K RAM, MATH COPROCESSOR, 32MB HD, 1.2MB FLOPPY, COLOR MONITOR, PRINTER, 1200 BAUD INT MODEM, MICROSOFT MOUSE, SOME MANUALS \$1450 NEG

VE3NCK BILL, 545-3579
o KENWOOD TS430S WITH FM BOARD, WITH 20 AMP HD PS (CROWBAR), HEATH SWR METER (2000w), HOMEBREW TUNER, SCANNING U/D MIKE, MANUALS \$1100

VE3POV JOHN, 634-9858
o DRAKE TR4C 80-10M, WITH RV4C REMOTE VFO, PS, EXTRA FINALS, EXCELLENT CONDITION \$400

VE3MQM PETER, (416) 484-9292
o SHOP MANUAL FOR KENWOOD TR7400 2m \$FREE

VE3PVB RON, 572-9906
o BC16U ICOM CHARGER \$20

VE3DSP GLEN, 385-8478
o YAESU FT727R DUAL BAND HANDHELD \$325neg

VE3XBR BRIAN, 575-9733
o MFJ 959B ANTENNA TUNER/PREAMP asking \$75
o AUTEK QF1 AUDIO FILTER \$40neg
o "CANADIAN AVIATION" FL30M AUDIO FILTER \$25
o KSR DIGITAL FREQ DISPLAY UNIT \$100
o NEC TONE + VOICE POCKET PAGER WITH RECHARGER, MINT \$75

The Swap Shop: For Sale - 2

VE3MMC KEN, 388-2873 OR AUTODIAL 114
o CUSHCRAFT ARX-2B RINGO RANGER II \$65

VE3EWP BOB, (519) 653-9520
o MFJ 910 HF MOBILE ANT MATCHER \$OPEN TO OFFERS

The Swap Shop: Wanted .

To list items: VE3NCF (146.76) Tuesdays 8 pm, OR Call Keith (VE3DKJ) 529-1603 or Ralph (VE3BYM) 388-6146 or Rich (VE3ANB) 547-8192, OR leave message on the VE3DC Packet BBS (145.590 MHz).

THOMPSON, 575 8600
o COLOUR MONITOR, PRINTER-CO CO 3 COMPATIBLE, \$REASONABLE

BART, 574 9004
o PARALLEL PRINTER CARD FOR PC COMPATIBLE

VE3SMF STUART, 628 4131
o ICOM OR KENPRO BATTERY PACK UNIT, PREFERABLY NOT WORKING

VE3NYC PAUL, 146.760 OR C/O ROLLY 547 0546
o 75 METER HUSTLER CAN

VE3EWP BOB, 519 653 9520 OR 145.55
o INEXPENSIVE MOBILE 2M RIG FOR PACKET USE

VE3LRL LARRY, 574 1805
o 6M RIG SIMILAR TO SWAN, INEXPENSIVE

VE3WRN RANDY, 519 884 2989
o KENWOOD PHONE PATCH
o KENWOOD MC60A MIKE
o BEAM

VE3UNI JOHN, 389 6331
o CIRCUIT DIAGRAM FOR TT DECODER FOR PATCH/CONTROL

VE3GGM GORD, 519 658 9000 OR 145.55
o ANTENNA ROTOR, \$REASONABLE

VE3JGJ JERRY, 544 7770
o TV ANTENNA V/UHF WITH 30' TOWER
PAUL, 574 0818
o 65' 50 ohm COAX

UPCOMING EVENTS

The topic of the January Meeting will be "THE ENJOYMENT OF ARMCHAIR CONTESTING" with guest speaker VE3NYT Steve. Most of us fall into the category of "Armchair Contesters", rather than hard-core fanatics, and Steve will be giving us some insights into Contesting with an eye to Quality rather than Quantity.

On some Saturday in March, I am arranging a tour of the Hammond Museum in Guelph. This may include a lunch. The date isn't set yet as I don't want to conflict with any Ham events or flea markets. If you know of any dates the tour shouldn't be (eg: when is the Orlando convention?) - let me know (529 1603), otherwise I will arbitrarily pick a date and announce it in January.

de VE3DKJ Keith

PLANNING ON GOING TO DAYTON OR ROCHESTER THIS YEAR?

If you are planning a trip to the U.S., and will be buying some radio gear, this article should make your passage through customs smoother. Information herein was liberally borrowed from 1 Dec 1990 CARF bulletin, the Customs Tariff (available at the main Library), and verified by Gary W. Maas, Chief, CS Unit, Customs+Exise, Dominion Public Building, Hamilton (572 4118).

Some of the classifications and corresponding Tariffs of special interest to hams are:

8525.20.10: Transmission apparatus incorporating reception apparatus designed for use on the amateur bands of the radio frequency as defined by regulations made pursuant to the Radio Act; facsimile apparatus - FREE (transceivers, made anywhere)

8527.39.10: Domestic radio receivers; radios designed for use on the amateur bands of the radio frequency as defined by regulations made pursuant to the Radio Act - FREE (receivers, made anywhere)

8529.90.10: Parts suitable for use solely or principally with the apparatus of heading Nos. 85.25 to 85.28 - FREE (includes parts for the above two items, including transmitters, converters, linear amplifiers and others)

8529.10.90: Aerials and aerial reflectors of all kinds; parts suitable for use therewith - 3.8% (US made) 9.5% otherwise (includes satellite dishes)

8471.91.00: Digital processing units, whether or not presented with the rest of a system, which may contain in the same housing one or two of the following types of unit: storage units, input units, output units - FREE (US made) 3.9% otherwise (computers)

8471.93.10: Storage units, whether or not presented with the rest of a system - FREE (includes disc drives and drum storage memories)

Notes on the "Patch Anything to Anything Box"

1. **Objectives:** The circuit was designed to patch VHF to HF or telephone circuits or vice versa, providing for tape recording or playing at the same time, in any direction to any device or device combination. E.g. an amateur can, with this device, patch a 2-meter transmitter to a 20-meter transceiver and the local telephone system, using the telephone microphone as a mike for either or both circuits, while tape recording all traffic (or playing-back a message from the tape recorder.)
2. **Constraints:** It was designed to have no gain controls, switches, amplifiers, batteries or power supplies, i.e. the box is wholly passive.
3. **Support:** The box feeds and is fed from the devices being patched. All switching, gain control, etc. is done by the controls already in place on these devices. It is up to the operator, using the VU meter on the box and the indicator's his equipment already has for modulation level, etc., to set suitable audio levels. The transformer and resistors in the box provide only approximate matching and level transformation.
4. **Statutory Conditions:**
 - 4.1 The Act states that amateur's must not interfere with other services. This includes telephone. The greatest risk from this device is that too high a level will be fed to the telephone circuits, causing crosstalk in them. The amateur, by noting the relative level of the incoming signals off-air and off-telephone, can adjust receiver gain to get approximately the same level for both. Zero dB in the phone system, a good reference level, corresponds to less than one volt of audio fed into a 600-ohm phone line. Another risk is that the patch will be thoughtlessly left connected, which will put radio traffic on the telephone cables.
 - 4.2 DOC will not permit licensees without HF privileges to be patched from VHF into HF circuits, even through an advanced amateur is handling the patch.
5. **Technical:**
 - 5.1 The box shunts the phone line with an impedance of several thousand ohms - much less shunt than Bell gets from a wet dbx.
 - 5.2 The 0.1 uF capacitor blocks the flow of any d.c. from the phone system into the matching transformer. The 0.47 capacitor blocks d.c. from some mike circuits (e.g. the Icom 2AT) from the matching transformer. Neither value is critical.
 - 5.3 The VU meter is the kind you can get for 75 cents and up at a flea market. Other sensitivities than 50 microamps may require series resistance or different filter capacitor than 10 uF, which isn't much for such a low resistance as the meter.
 - 5.4 In the original version, all components fitted into a steel speaker enclosure already in

THE HAMILTON AMATEUR RADIO CLUB

BOX 253 Hamilton Ontario Canada L8N 3C8.

CLUB MEETINGS:

8:00pm on the 3rd Wednesday of each month except for July & August (special arrangements are often made for the December meeting as well), in the Nash Auditorium, Chedoke Hospital. Non-members & friends are welcome - coffee and donuts on the house!

EXECUTIVE:

Meets at 1930 on the fourth Wednesday of the month, except June & July, in the Radio Room, Red Cross, 400 King Street East.

STATION:

An emergency radio station is maintained in the RED CROSS, HAMILTON BRANCH (400 King East).

MEMBERSHIP:

\$25.00 per year with a common renewal date of September 1. Included is a subscription to the club bulletin. Additional Family Memberships (no bulletin) \$1.

EDUCATION:

Informal classes are being held in the Radio Room, Red Cross Building 400 King St East to help those who want to take their Amateur Licencing tests. Call Bernie (VE3EKY) or Stan (VE3GFE) for more information. Phone numbers are on the front cover.

REPEATER:

VE3NCF, Located on the Hamilton escarpment it is available for use by any amateur. Input: 146.16 Mhz. Output: 146.76 MHz. Part of the VE3RPT Link system. Contact a member of the Club Executive for information concerning Emergency use, Autopatch, Mail-boxes, Links etc.

FIELD-DAY:

HARC operates a multi-station site during Field-Day. Contact coordinator Cliff Toohar for information. His number can be found on the front page.

SWAP-NET:

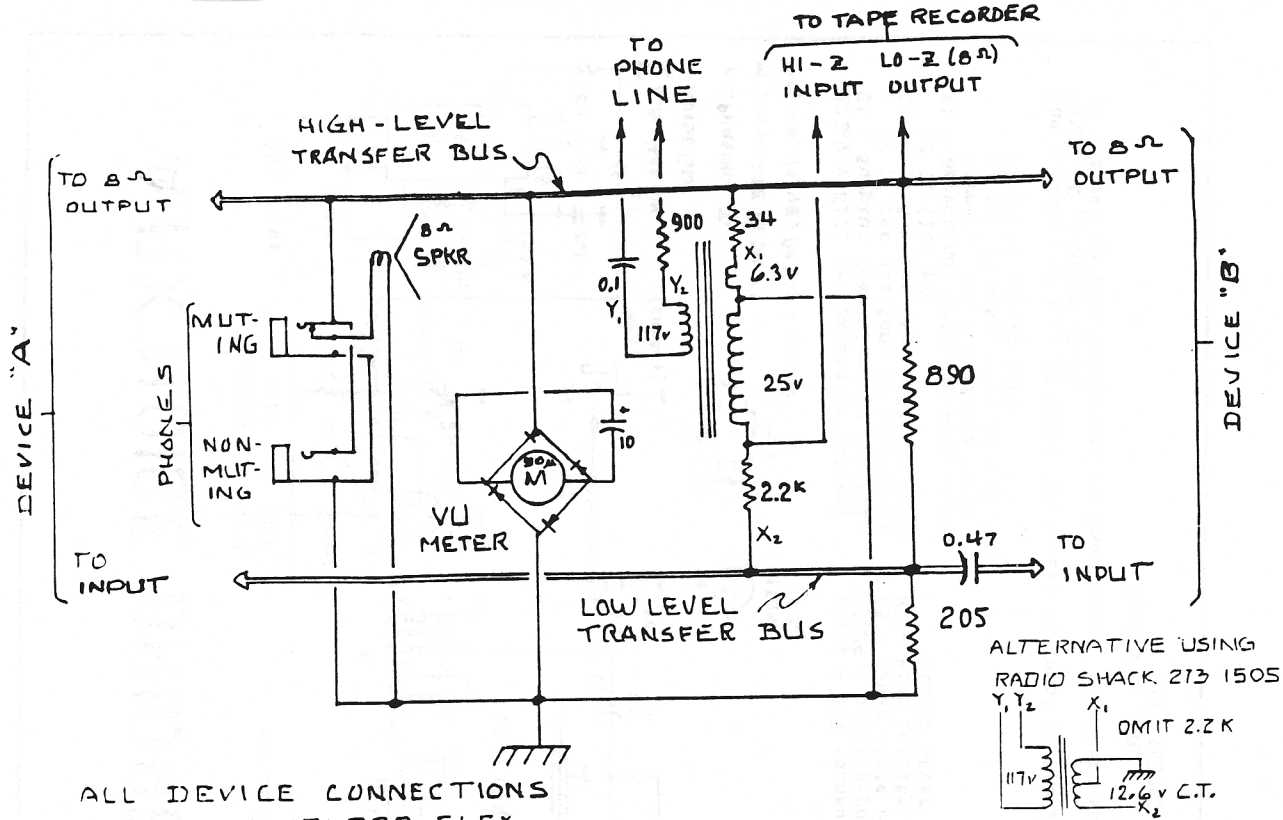
Every Tuesday at 8:00 pm on VE3NCF (146.76/16) except during July & August. Contact Keith, VE3DKJ if you have items to buy or sell. Swap Shop listings are also available on the club's packet bulletin board station VE3DC operated by VE3USJ on 145.590 FM.

FLEA-MARKET:

Held during September each year at the Ancaster Fair Grounds. Note that the flea market has both indoor and outdoor sales facilities. Call to reserve tables/power.

BULLETIN:

"The Hamilton Amateur", the official news bulletin of the club, is published 10 times a year and sent to all full club members (family members share a bulletin) during the first 2 weeks of the month (except July and August).



ALL DEVICE CONNECTIONS ARE VIA SHIELDED FLEX CABLE WITH SUITABLE PLUGS AND ADAPTORS AS REQ'D.

THE "PATCH ANYTHING TO ANYTHING" BOX
VE3DPC DEC. '88