RAMBLER

AMATEUR RADIO

CLUB CALL: VE3RAM

OTTAWA VALLEY MOBILE RADIO CLUB INCORPORATED

OTTAWA, ONTARIO

MONITORED FREQS
3760 kHZ 146.94 MHZ

Vol 11 No 6 OTTAWA VALLEY MOBILE RADIO CLUB, INCORPORATED, Ottawa, Ont. June 68

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1968 EXECUTIVE

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POT HOLE NET: Official Club Net. Meets every Saturday and Sunday at 10 AM local time on 3760 kHZ. On Saturdays only, the Club sponsored SWAP NET follows immediately after roll call. All amateurs are welcome to call into the NETS

MONITORING FACILITY: VE3CGO monitors 3760 kHZ and 146.94 MHZ FM daily from 8 AM to 6.30 PM for local mobile or out of town traffic. Service available to all amateurs regardless of Club affiliation.

NOTICE OF MONTHLY MEETING

PLACE: Vincent Massey Park
TIME & DATE: 7.30 PM , Thursday, 13 June 68

PROGRAM

In keeping with the practice of former years, Club Meetings for the months of June, July and August will be informal, out-of-door type. The location for the 13 June meeting is in the parking lot near the refreshment stand. An ideal opportunity to view other mobile installations and to have an eyeball QSO. The earlier time is to take advantage of the daylight. Come and bring the family.

REPORT ON THE LAST MEETING

The last meeting was held at NRC and featured an 8 mm color film epic on the the 1967 and 1968 OXFAM Walks taken by our Club cinematograher, W5PSY/VE3.

REPORT ON THE OTTAWA FLYING CLUB AIR RALLY -11 May 68

Amateur radio communications were provided for this annual event by means of the 2 M FM repeater. The checkpoints were located at Vars Ont., Buckingham P.Q. Luskville P.Q., and Stittsville Ont. The Club portable base station was located at the Flying Club and operated by VE3DMU and VE3BDX. Mobiles located at each checkpoint relayed aircraft arrival times, registration numbers and approach info to the Flying Club. Mobiles participating were: VE3GX, VE3FTJ, VE3FXG, VE3CEZ, VO1GR/M2, VE3CJD, VE3DF, VE3GMN. The operation commenced at 9.30 AM and concluded at approx 5 PM. The Flying Club Officials were most grateful for the assistance rendered. Our thanks and three doffs of our mobile whips to all participants.

FAMILY PICNIC SUNDAY 16 June 68

The Club has booked area "L" in Vincent Massey Park for a family picnic. This area is behind and to the left of the refreshment stand and washrooms. So pack a picnic lunch and try to arrive around 12 noon or 1 PM. There will be some races and free ice-cream for the jr ops. In the event of inclement wx it will be cancelled. Call VE3CGO or VE3GX on 2 or 75 prior to noon for additional details if required or for confirmation that the event is on. The Club Witch Doctor has already commenced his incantations for fine weather!

FIELD DAY 22/23 JUNE 1968

Setting up time this year is included in the total FD Period which has been extended from 24 to 27 hours. The 27 hour period is from 3 PM EDT Saturday to 6 PM EDT Sunday. This change in the rules means that we need lots of members on deck for the set-up! VE3DMU Gord is the FD Manager assisted by Mike VE3DNJ. They will be calling you! .....help us to come out on top by your participation! Sure we need C.W. and Fone ops, but we also need loggers and physical help. The location is the same as in former years, the farm of Bill Manson, VE3YK. To get there proceed along Highway 17 to the Constance Bay turn-off. Immediate -ly upon leaving Highway 17, you will see a dirt road heading in a northerly direction. Take this road and proceed to the end where you will see a YMCA Camp. Turn left and proceed a little over a mile and the site will be on your right. There will be signs to assist you. It is easy to find and a convenient distance from Ottawa. We will be again operating in the two transmitter class, one SSB and one C.W. Two meter FM will be used for contact with Ottawa. Bring your own food, sleeping equipment, lawn chairs, bug or key etc.

REPORT ON THE HIDDEN TRANSMITTER HUNT 2 June 68

Our first Hidden Transmitter Hunt in four years was held on 3760 kHZ. The rendez-vous point for the participants was located at the GEM Store parking lot. The following participated: VE3DMU, VE3BGX, VE3GFL, VE3GGQ, VE3GAH. VE3DNJ was the "bunny" assisted by VE3GX. None of the participants had the traditional DF loops but instead employed the directional characteristics of their whips and some augmented this with transistor radios. VE3DMU was the first to find the "bunny" 55 minutes after start time. VE3GGQ's time was 10 mins after Gords. VE3GAH and VE3GFL in that order, arrived minutes later. VE3BGX, although warm several times, had to admit defeat! I am sure he will be first next time! All repaired after the hunt to the QTH of VE3GX for appropriate refresments and a post mortem. It was the concensus of opinion that some form of DF loop is required and in many cases construction has already begun. One nice feature of this type of event is that the family can come along and enjoy the activity! Most of the participants had the XYL and family along. Get ready for the next one. You do not have to be mobile on 75 to participate --a transistor radio or other type of receiver is all that is required. Be ready for the next Hunt'.

WELCOME ABOARD: To new member VE3DF Jack Stauffer who is an active mobile on 2 meter FM. Pleased to have you join us Jack!

BELATED CREDITS: Your editor neglected to give the following credits in the write up of the Spring Auction in the last issue of the Rambler. Our thanks to Mr. Jenkins for the use of the EMO facilities. A letter of appreciation has been sent to him. Also our thanks to the following who donated equipment or food for sale at the Auction: K7LRV/VE3, VE3SH, VE3CGO, VE5PI, W2YYP/VE3, VE3BGH, VE3GFL Your generosity was very much appreciated. I hope that I didnt leave anyone out !

NEW FEATURE

VE3DNJ, Mike our Technical Adviser, who is presently working on his Masters Degree in solid state electronics will be writing a series of technical articles for the Rambler, couched in terms that us "old tube men" can understand! A most welcome addition to our bulletin. Save the articles for future reference!

RAMBLINGS

A short one this month -...- Congrats to VE3BMJ Glen Marshall and XYL Gloria on the the new arrival (their first) a"transmitter".-...- Belated congrats to VE3BGX Gib and Gloria on their latest, a welcome change in a family of all boys a "receiver" -...- Gord VE3GAH has his new HW-100 Transceiver on the air--but has few bugs to iron out -...- Mac VE3VI is building an HW 100 for Boyd VE3CMO which will soon be hitting the airwaves -...- W2YYP Gary will definitly be moving to Sacremento -...- Read W5PSY will be moving to San Bern adino -----We wish them well in Sunny California --CU on 20 -...- 30.

TECHNICAL TOPICS by VE3DNJ

In the past ten years, many new solid-state devices have become available. Most of those in the conventional (or"bipolar") transistor family require a radical change in outlook for those amateur builders who are used to thinking in vacuum tube terms. For this reason, many hams have avoided trying solid-state circuits; in so doing they have missed out on a great deal of enjoyment (and sometimes frustration!). In fact, modern transistors (unlike early models) are relatively easy to apply and quite forgiving of mistakes.

For less than a dollar, you can now purchase transistors which will operate at over 400 MHZ and even devices designed to give 20-25 watts PEP will soon be

priced comparably to tubes. Due to inherently low power consumption, solid-state is a natural for those interested in furthering the art of mobile communications.

It is the intention of your technical adviser to publish this column from time to time (frequency to be determined by Club interest) and to give in it general rules of thumb which will enable hams used to vacuum tube thinging to get in on the fun of solid-state construction. If any member would like to see any particular area covered (not necessarily semiconductors) please call VE3DNJ via the ether or the land line.

Finally, it is hoped that those members interested in building will file (Not #13) the technical page from the Rambler for future reference as one article will, to a certain extent, follow from those that went before it.

The Field Effect Transitor

Because an FET has characteristics similar to those of a low voltage vacuum tube, they can be used by those familiar with tube design with very little difficulty. The circuit symbols for the two types of junction FET are shown in Fig. 1 with the equivalent triode tube elements named in brackets.

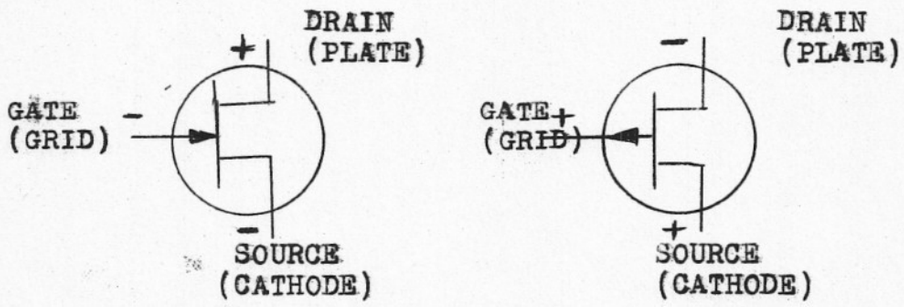

Figure 1

In the N-channel FET, current is carried by negative particles (electrons) while in the P-channel, current is carried by positive particles called "holes". The reason for the names "drain" and "source" in the N-channel FET is clear when one recalls that a positive pole will attract negative electrons while a negative pole will repel them. Since the MPF-102 and MPF-103 are very common FETs, and since they are N-channel, this is the type that we will deal with.

In using the FET, take almost any simple, low power tube circuit; change the "plate" voltage to +12 volts or so and wire in an N-channel FET. You will get some sort of results, although values of the resistors used may have to be adjusted for optimum performance. A typical amplifier stage is hown below in Fig. 2, both in FET and tube form.

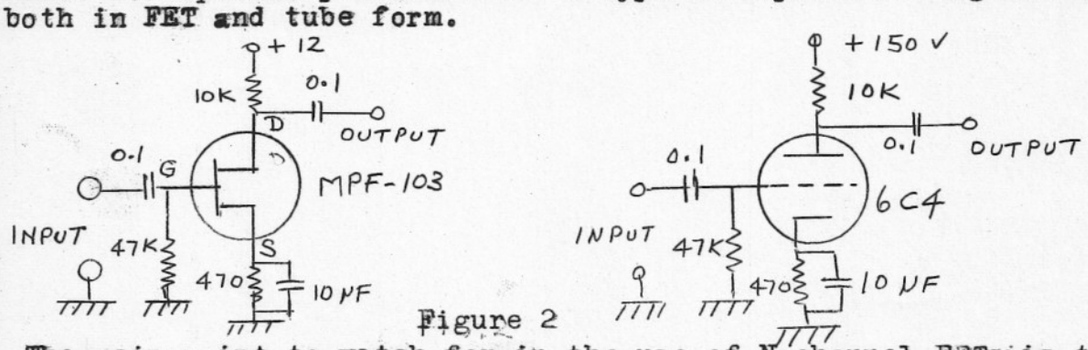

Figure 2

The main point to watch for in the use of N-channel FETs is that the gate must be biased negatively (the same as the grid of a vacuum tube)otherwise, a large gate current will flow causing very poor gain and efficiency.
On page 25 of QST,June 68 is the circuit of a poorly designed FET transmitter where the gate has been biased positively. In a foot note, the editor points out that the efficiency of the transmitter is 15%(that would make the eyes of an AM operatorrwater). Although QST doesn't say so, the reason for this is that the gate is biased in the wrong direction.

For more information on the FET see: Sevin, L.J. "Field Effect Transistors"
McGraw Hill, 1965

NEXT MONTH: ADVANTAGES AND DISADVANTAGES OF FETs versus CONVENTIONAL TRANSISTORS

-VE3DNJ-