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EDITOR	EDWIN H. TAYLOR	VE3 FRM	416-985-3790
ASST. EDITOR	BARBARA ANN TAYLOR		

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

2-METER NET CONVENES EVERY THURSDAY AT 19:30 LOCAL TIME ON THE CLUB REPEATER (OSH). AS PART OF THE NET CODE PRACTICE IS PROVIDED BY BERNIE (ATI) BEGINNING AT 20:30 LOCAL.

10-METER NET - 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 XYLS CALL DINNER.

MAY MEETING: ACCORDING TO REPORTS, THE MEETING WAS POORLY ATTENDED BUT THOSE THAT DID, REALLY ENJOYED THE "SHOW AND TELL" ASPECT. THE REASON FOR THE LOW ATTENDANCE FIGURES COULD HAVE BEEN BECAUSE THE NEWSLETTER WAS LATE REACHING THE MEMBERSHIP. YOURS TRULY WAS UNDER THE WEATHER AND DIDN'T MAKE THE MEETING EITHER.

NEXT MEETING: JUNE 12, 1989, 8:00 p.m. IN THE GREEN ROOM OF THE ART RESOURCE CENTER, CENTER STREET SOUTH, OSHAWA. (BEHIND CITY HALL.)

AGENDA: SURPRIZE !!!!!!!

FROM THE PREZ: JULY 10TH MEETING: "SERMON ON THE MOUNT" 6:00 p.m. THIS IS THE ANNUAL TREK TO OUR REPEATER SITE. THE VE3OSH SITE IS AT THE GUN CLUB ON TOP OF THE RIDGES WHERE THE VIEW IS FANTASTIC. OUR TECHNICAL COMMITTEE WILL BE PRESENT TO ANSWER YOUR QUESTIONS. THIS IS A NICE SOCIAL EVENING WITH FOLKS SHOWING DIFFERENT PROJECTS OR HOBBIES. MIKE VE3DKW, WILL BRING HIS TELESCOPE.

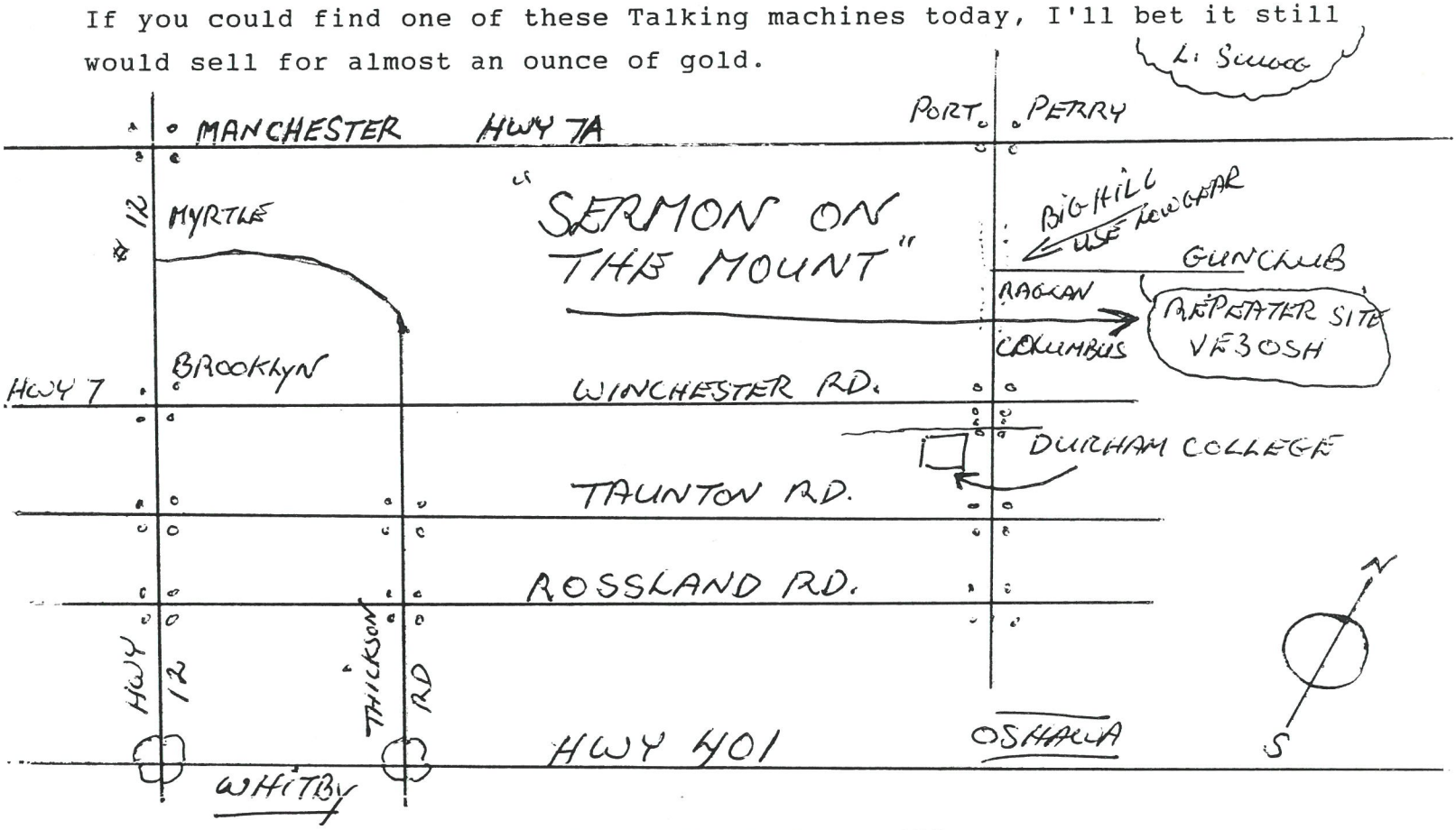
FIELD DAY - 24 - 25 JUNE. PLACE - HEBER DOWN. GROUP CAMPING AREA #1. MORE DETAILS NEXT MEETING 12 JUNE. TO OUR NEW AMATEURS AND OTHERS THAT ARE INTERESTED, COME ON OUT. THIS WILL BE A LEARNING EXPERIENCE FOR ALL.

TV WEATHERMAN: " THE FORECAST FOR THE WEEKEND IS CLEAR AND WARMER WITH A 90 PERCENT CHANCE THAT THE FORECAST IS WRONG"

THAT MUCH?

BY ED TAYLOR

How would you like to have that Columbia Talking Machine pictured on page 1 of last months issue? Eighteen dollars was a lot of money in 1905. Back then $18.00 bought a little less than an ounce of gold. One ounce of gold today is dang near a weeks wages. Buying the Columbia Talking Machine then, would have brought on the same pondering that we would have today when we must spring for a high priced T.V. If you could find one of these Talking machines today, I'll bet it still would sell for almost an ounce of gold.



ANTENNA FACTS AND FALLACIES

Back in the thirties when yagi beam antennas were first being used by hams there was no commercial beams. Hams had to construct their own. The theory of how a yagi worked was not very well understood. Because of this came the old stock statement, (Make the reflector five per cent longer and the director five per cent shorter than the driven element). This thinking was long way from being accurate. As a .....con't

From the Fire Bird Radio Club submitted by Ray VE3 OUB

THE SUREST WAY TO HAVE THE LAST WORD IS TO APOLOGIZE.

result many antennas were constructed with poor results. Most of the beams were ten meter antennas as twenty meter beams seemed too large to be practical.

It is a difficult job to tune a beam. To be accurate it would have to be some distance above the earth. I measured the resonant frequency of one of my beams while it was laying on a table, about three feet above the earth. It checked at 13.500 Mhz, way out of the band. At 40 feet it was back where it belonged. The capacity effect close to the earth will do this.

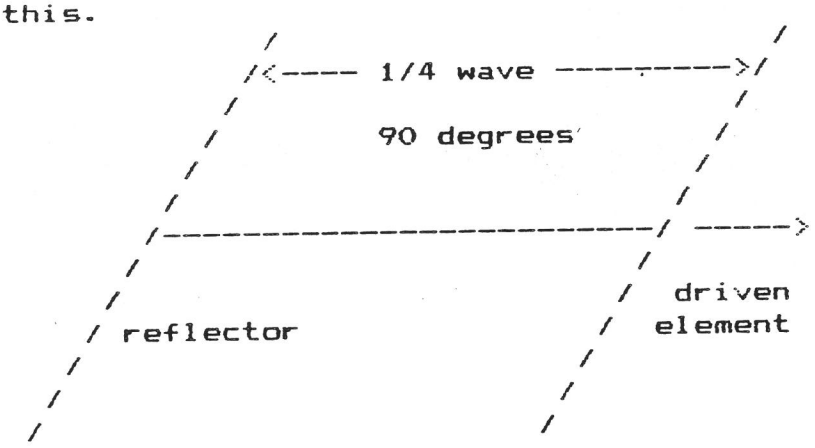


Figure 1

We now know that many factors effect the efficiency of an antenna. Parasitic elements are either inductive or capacitive and any change in the shape or length will change its' inductance (reflector) or its' capacitance (director).

This discussion will be around a two element beam with a reflector (inductive) and a driven element, resonant, which means it is neither inductive or capacitive, but a pure resistance. See figure 1.

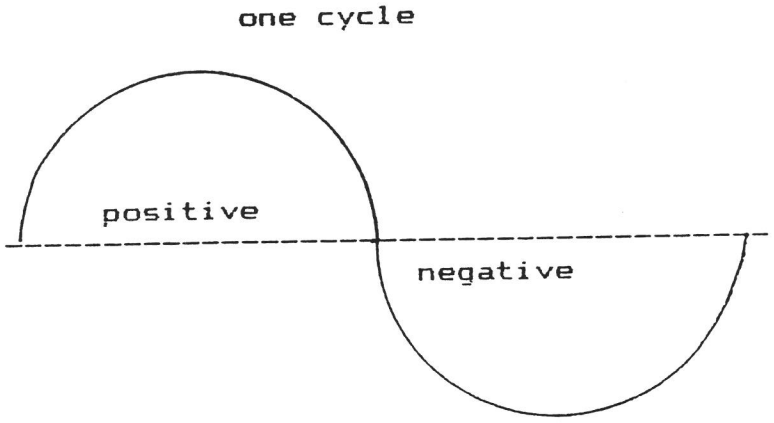


Figure 2

First let us show how the two element beam works so it will be easy to see how changes can effect it. In figure 1, the reflector is a quarter wave, or 90 degrees behind the driven element. Figure 2 is a full wave of RF current, the top half positive, the bottom half negative. The positive half is fed to the driven element developing a positive field. This field travels the one quarter wave distance to the reflector. At this large spacing we have made the reflector resonant (no inductance) for a reason. The element will energize instantly, no delay.

When a field is induced in an element, or coil, it is always 180 degrees out of phase with the energizing field. The field from the driven element is positive, so the field developed in the reflector is now negative. It travels thru the quarter wave spacing back to the driven element, a total of one half wave in time.

At this point the RF current feeding the driven element has also traveled a half wave in time and is now also negative, so the two negative fields add producing gain.

We now come to the average where the spacing is NOT a quarter wave, but 1/8 wave so the conditions are different. The field induced in the reflector will have to be delayed enough to allow the field to arrive at the driven element at the correct time to add. To do this the reflector is made longer, which will make it inductive. The amount of inductance determines how long the delay will be. So it is obvious that the delay will have to be a quarter wave in time to make up for the closer spacing, a total of one half wave. Figure 3 is the close spaced antenna.

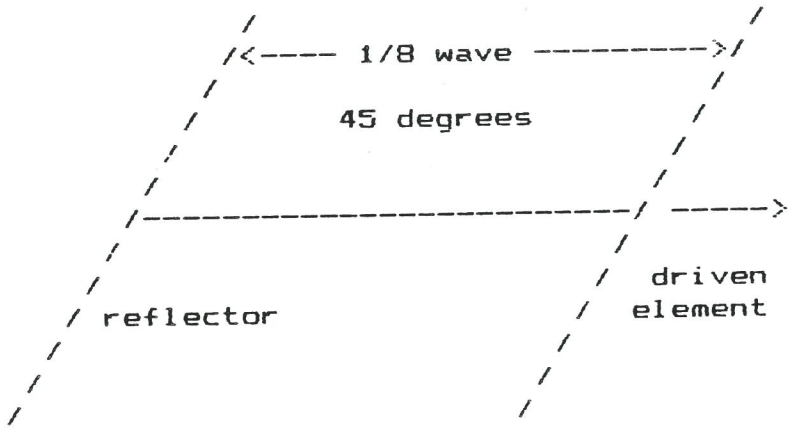


Figure 3

The additional length of the reflector has to be exact for the antenna to be efficient. This is where the problem is. Any change in size or shape of the element will change its' inductance. If the element is insulated from the boom it has a given inductance. If it goes thru the boom, or is

fastened to the top or bottom the inductance is different. Tapered elements effect it. The diameter of the elements change it. Larger are less inductive, have less reactance, so have a wider band width. Adding metal around the elements can change it.

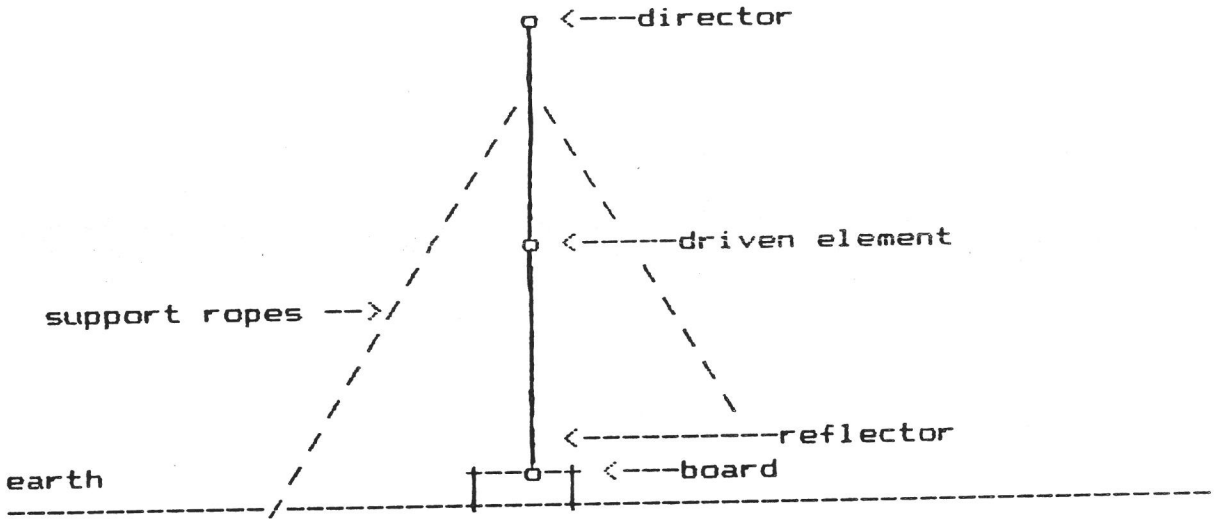


Figure 4

One can see that to construct a beam, specs must be followed very accurately for the antenna to work well.

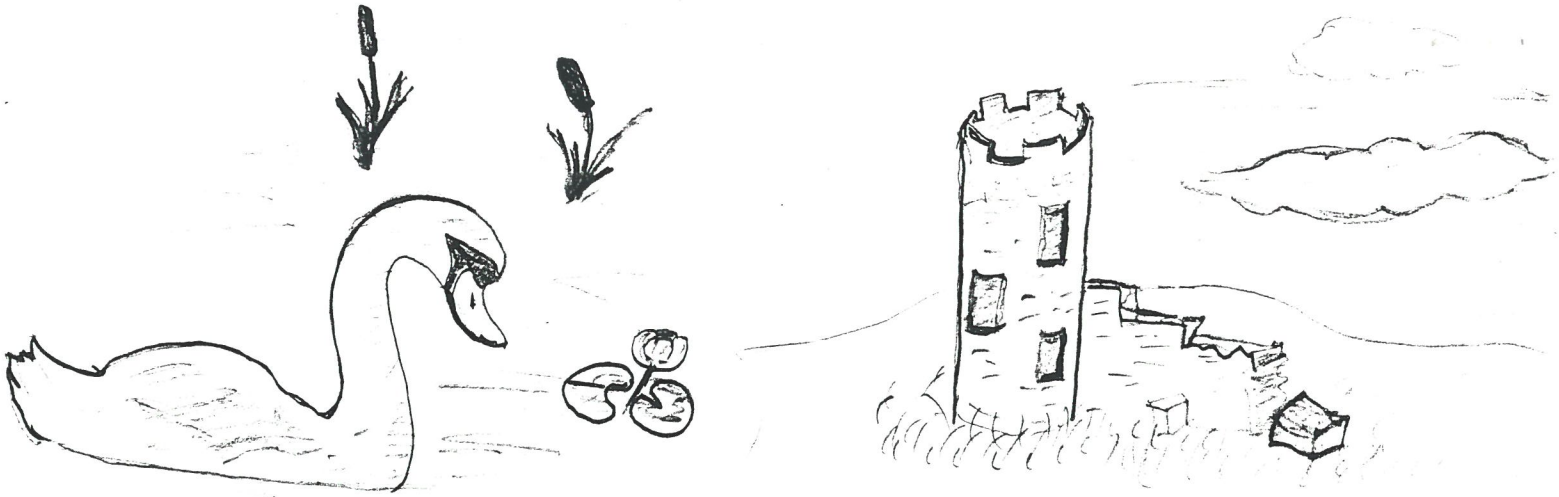
One can set the resonant frequency of a beam by pointing it straight up, figure 4, with the reflector down, parallel with the earth. I place a board under the reflector so it is insulated from the earth. On a step ladder one can reach the driven element and adjust it so the minimum standing point is where you want it in the band. When it is raised to 40 feet or more it will be where you set it.

Any mistakes were made by this typewriter, certainly not my typing.

73 & 88,
John W8BXM

A tip from the Vice President:

Net controls, when band conditions are such that the normal net frequency is wiped-out by QRM, don't be afraid to QSY up or down the band a few kilocycles to establish the net.



AMATEUR RADIO - THE PARADOXICAL 1980'S

OR

DEATH BY ASPHYXIATION

by Ed, VE3FRM

I have just read a true story about "The Swans of Abbotsbury". Abbotsbury is an ancient historical village located in the West County of England. Its roots date long before the Norman Conquest. Part of its heritage is a beautiful lake covering about four square miles. The lake has been and still is a paradise to a species of swan. Records dating back 575 years ago, to the time of Henry V111, support modern tallies of this population to vary between 600 and 1200. The swans have few enemies in man nor beast, therefore, one would expect their numbers to increase steadily, but this is not the case. When their population approaches the 1000 mark they sense the impending dangers of over grouping, disease, malnutrition and eventual breeding of weaker, lower strain of the species and ultimate extinction. Through intelligent decision or instinct they automatically reduce their numbers by mutual celibacy. When the population declines to about 600 they begin breeding until the 1000 mark is again reached and the cycle repeats itself. This has been going on since before King Henry V111 and will most likely continue until some outside intervention plays its hand.

The monastery for which "Abbotsbury" was named, is no longer. The monasteries across England expanded in number, wealth and power until King Henry V111 became so jealous that he ordered them destroyed. The remaining few suffered later at the hand of Cromwell. Monasteries are a rare vestige in modern day England.

Now to explain the moral of this story, please read on.

We amateurs have such a great love for our hobby that we are always trying to push it onto others. It's only nature at it's best. If you enjoy something so much, you want to share it right? How many times have we tried to entice our family, friends or neighbours into this great past time of ours? When our offer is refused we feel hurt and try to

break down any barriers that created the refusal. For example our recent thirst for a "no code license'. We are all natural born salesmen. We get out and hustle our hobby to any passerby. Witness our booths at fairs, exhibitions and even shopping malls. We're darned proud of our hobby and so we should be, its a great hobby!! But should we be giving it away so easily??

Never before have our bands been so crowded! Nets and more nets are being organized to conserve frequencies. We are lining up, taking a number, just to have an open in which to insert a few words to our fellow hobbiests. Can we afford more space for the newcomer? The people who provide us with equipment, magazines, etc. are telling us we're dying off. They even produce figures to prove their theory. Forget the trumped up figures and think a bit about this paradox. Amateur radio has more frequencies today than ever before and these frequencies are more crowded today than ever before. Think about it! Shouldn't we be at least as intelligent as the Abbotsbury Swan and control our numbers or will we disappear from existence as did the Abbotsbury Monastery?

THINGS TO SEE by Ed, VE3FRM

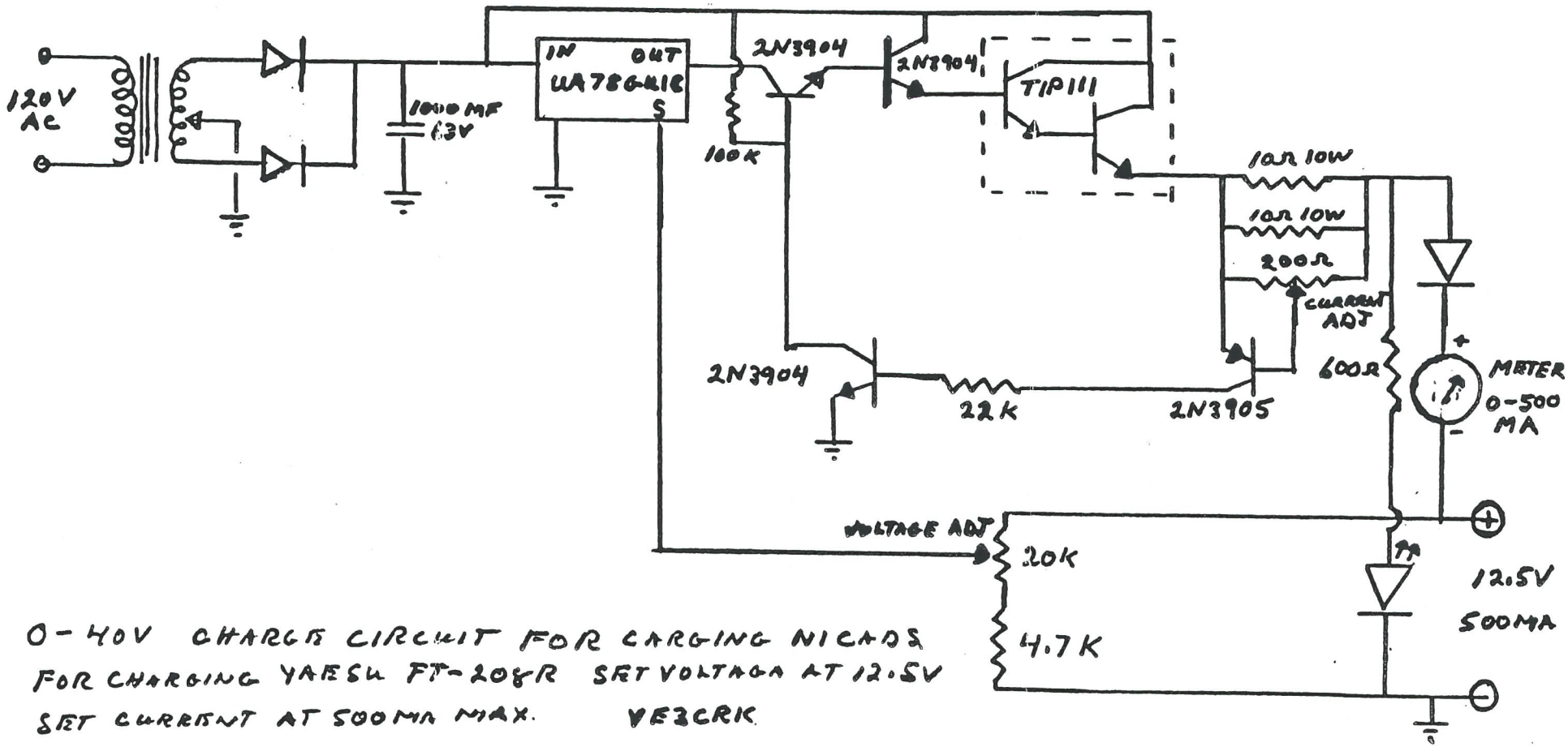
Now that summer is just a short distance down the winding road, you may want to take a few short trips to enjoy some of the radio museums near by.

TORONTO: The old army barracks on the exhibition ground hosts the Maritime Museum. Well worth the admission, they have an almost complete showcase of maritime artifacts depicting early shipping on the Great Lakes. A room is dedicated to shipboard wireless including a small radio "shack" as it would have appeared in the early days.

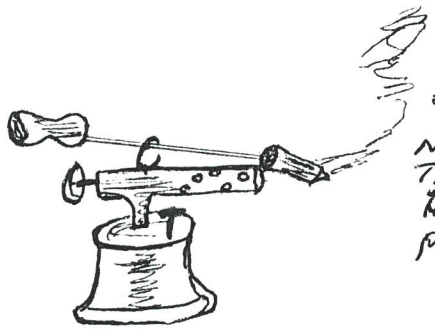
GUELPH: Fred Hammond, VE3HC has the most complete wireless museum in Canada. Free of charge, the museum is on the top floor of one Fred's factories. Located at Guelph Ontario. It is only open during business hours.

KINGSTON: Early military wireless gear is on display in one of the buildings located on the old Kingston Army Training Grounds. Just a few miles east of Old Fort Henry on the south side of highway #2. Be wary of where you park. Most parking at the buildings entrance is reserved for VIP's.

EAST BLOOMFIELD N.Y.: AWA museum. One of the finest museums of early wireless in North America. It is located just off the toll way on the Village Green, Rtes 5 & 20, East Bloomfield, N.Y. This is almost directly across the lake from Oshawa. Free Admission, telephone (716)657-6260. Hours: May 1st through October 31st. Sunday 2 to 5 p.m.; June 1st through August 31st Saturday 2 to 4 p.m. Wednesdays 7 to 9 p.m. Closed Holidays.



0-40V CHARGE CIRCUIT FOR CARGING NICADS
FOR CHARGING YAESU FT-208R SET VOLTAGE AT 12.5V
SET CURRENT AT 500MA MAX. VE3CRK



WARNING!
NOTHING LARGER THAN A ½ POUND IRON FOR THIS PROJECT!

THIS IS THE CIRCUIT FOR THE LITTLE POWER SUPPLY THAT MANY MEMBERS ADMIRED AT A RECENT CLUB MEETING. RALPH WAS KIND ENOUGH TO SEND IT ALONG FOR PUBLICATION.

ED.

1

Back to Basics...

ONTARIO HAMFEST

... after the Earth cooled, the sponsors of the Scarborough CJ Picnic at Elora Gorge said they had to give it up. At the RSO Convention in '72, it was offered up for sponsors ... and we accepted. It became the OH in a park north of Carlisle and the next year at the Steel Workers Union Park off Cedar Springs Road. It rained. There was ... roasted cow ... wine making ... spaghetti and chicken dinners ...

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

2

Back to Basics...

807 GARDEN

... something missing in the last two years, the chance to sit down and enjoy a cool one with a few buddies... returns this year as we escape the 'big city' rules! It's really a meeting point for the OM's you only see once or twice a year, so enjoy! (in moderation of course)

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

3

Back to Basics...

THE FLEAMARKET

If you've been to Dayton, you know we could never offer the attractions that great numbers bring ... besides most of our stuff is imported. As an incentive to hams to get back into building, we offer:

FREE FLEAMARKET TABLES! why? ... because we haven't any. It's BYO table.

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

4

Back to Basics...

... got the kids for the weekend? Relax. We've got Jimbo the clown to keep them amused while you haggle for fleamarket jewels. Jimbo's on stage from 9 til 1 aided by his merry band of sitters. Fixed magic show at 9\;30 followed by roving balloon sculptures while the kids enjoy colouring and face painting!

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

5

Back to Basics...

ONABUN

... why is the bull angry? You'd be angry too if you were served *sliced on a bun!* These come hot from the roast at 2 bucks apiece ... but don't dally ... chances are they'll be going as quickly as a stampeding longhorn! Enjoy!

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

6

Back to Basics...

... It's 1 pm, CONTEST TIME!

Cllub teams of three *men* will battle the clock to raise a symbolic antenna (club flag?) to the skys! All necessary parts provided. Some assembly required ... batteries not included. St. John Ambulance on alert. Pythageorean theory a definite asset. Beat Podunk ARC for the 2nd HOISTERS INTERNATIONAL Trophy!

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

7

Back to Basics...

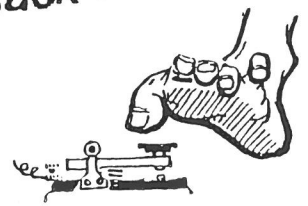
the bottomless coffee cup returns. Had your run thru the fleamarket? ... seems to be fewer 'bargoons' every year & less useful junque. When you;ve exhausted your curiosity, wander over to the bcc with a buddy and have a free cuppa java ... relax.

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

8

Back to Basics...



... QLFers! Have you been bangin' the brass for 25 years? Why not give up on the Grecian Formula regimen, face the facts and join the Quarter Century Wireless Association. Lets face it, an OM is an OM. They'll welcome you at their table at the ...

ONTARIO HAMFEST 89

Milton Fairgrounds -- 8 July

Plan to attend!

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VE3RSB
147.31 in
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25 HWAY
TRAFFIC LIGHTS

CUT

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BY PRE-REGISTERING PRIOR TO JUNE 15, YOU WILL BE INCLUDED IN THE SPECIAL ONTARIO HAMFEST PRIZE DRAW

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CALL _____
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CITY _____
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PLEASE SEND THE FOLLOWING:

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Weekend Campsite 15. ea. _____
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9