FM cont'd

Ron Wragg, 3AIY was the lucky winner of the Ultra-Com portable 2m FM rig which was drawn at the last TFM meeting. Good going, Ron.

Bob, 3RA says the new Peterboro 220 repeater is coming along fine and will output on 223.94 soon. The call is VE3KRA. If you can't stand 2 meters, be the first one to hear Peterboro on 220 - of course you will need a 220 rig or convertor. Phil, 3BAL built a duplexer for NRS. St. Catharines and they can now use a single antenna. Present freq. is 146.22 - 147.24. A diplexer, on the other hand, is a gadget that allows 2 transmitters to match into a single antenna, such as the audio and video transmitters of a TV station. W2OY is not on 146.01 - .61, a new repeater at Colden, south of Buffalo will be on 146.04 - .64, Fredonia, N.Y. on 146.07 - .67, Burlington will go on 147.81 - 21 (new), Port Colborne will go on 147.90 - .30 some time in the future. Owen Sound hopes to use 146.34 - .94 if they don't cause interference. Brantford will go on 147.75 - 15 if they have simplex trouble on 146.55. OSH has acquired a continuous loop tape recorder for message purposes and hopes to have it up at the repeater soon. Touchtone command will operate this little machine, we hope. Harry, 3QG, our FM treasurer has prepared our 5 year financial report which starts from day one to the present time.

FINANCIAL REPORT

VE3OSH REPEATER
Statement of Income and Expense
July 13, 1968 to November 21, 1973

INCOME		EXPENSE	
VE3ATI	$ 268.00	Equipment	$ 1,109.66
VE3BIC	112.00	Maintenance	236.38
VE3FIV	70.00	Power	152.81
VE3QG	515.00	Rent	675.00
North Shore Radio Club	357.25	Insurance	55.00
Donations from Amateurs	684.74		
Special Activities	236.81		$ 2,228.85
EMO grant for equipment	139.12	Cash on hand Nov. 21/73	154.07
	$ 2,382.92		$ 2,382.92

LIABILITIES	
Rent for 1973	$ 150.00
(Est.) Power	33.00
	$ 183.00
1973 Operating Loss -	$ 28.93

December, 1973

AMATEUR DONATIONS RECEIVED TO DATE:

VE3AAF	$ 5.00	VE3ABV	$35.00	VE3ADD	$15.00
ADJ	22.00	AEQ	10.00	AET	8.00
AQV	10.00	ARV	3.00	AVY	2.00
AZT	10.00	AZV	5.00	BCE	5.00
BCQ	37.50	BDW	30.00	BHQ	25.00
CCP	2.85	CKK	20.00	CMM	24.75
CNO	18.00	CRK	15.00	CTM	5.00
CWR	20.00	DDD	15.00	DEN	4.85
DMB	10.00	DOC	5.00	DSB	5.00
DSL	5.00	DUS	5.00	DWQ	5.00
EPM	5.00	ESY	5.00	EWS	20.00
EWH	5.00	FAT	15.00	FGH	20.00
FGL	35.00	FGR	5.00	FHV	55.85
GDK	5.00	GEK	5.00	GEN	15.00
GNO	10.00	GOU	10.00	GTS	35.00
GUS	10.94	RP	40.00	WQ	5.00

Also, much equipment has been given and/or loaned to the repeater.

BITS N PIECES

George, 3BCQ just received a new Mosley CL-36 beam and is lining up his crew to put it up. Are we going to have competition for Norm in Ajax? Paul, 3AQV is presently in Room 317 in the Oshawa General but may be home by the time you read this. He says he is teaching his crutches how to walk. Gary, 3CNO loaned him a portable and he has been trying to find the best location in the hospital for hitting the repeater.

Congrats to Gary and his xyl for an additional harmonic to the family. Stats: a little yl weighing 3.402 kilograms (7½ lbs.) She will be taught the metric system in school and won't understand pounds anyway.

Scott, 3DSL has been having trouble with his eyes and has not been getting out of the shack much. Farny paid hom a visit on Sunday, Dec. 2 and had an eyeball qso. If you are around Prince Albert any time look Scott up. We hope to hear him back on 2 meters.

Don, 3GEN is wiring up a Heath HW-101 so won't be going to any more auctions for awhile. He is hoping to get something in Scarboro but had no luck.

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NOTES ON AUTOMATIC KEYER

1. This keyer circuit is a version of the keyer invented by W9TO. It cost me approximately $13.00 to build but I got quite a few things out of my junk box but I doubt if you would have to spend more than $25.00 to build it completely out of new parts including case. My case measures 6" X 4" x 2" and everything is located in it except the power supply. (See a later note about this.) The case is black plastic with an aluminum top. On the bottom corners are rubber suction cups to hold it to the shack table.

2. A bit of a circuit description follows:- The 3 transistors on the right - ie 2N3638, 2N3642 and 2N3643 form a "clock" that puts out regular pulses according to the setting of the 100K pot and the value of the capacitor that eventually goes to ground. The pot sets the speed and the value of the capacitor sets the upper limit of speed - in mine, I used 3.5uf to get an upper limit of 20 w.p.m. As the value of the capacitor decreases, the upper limit of speed increases. A 1.0uf capacitor gives about 100 w.p.m.

   The uL923's are J-K flip-flops and the uL914 is a dual 2-input gate. All IC's and transistors are Fairchild's except possibly the 2N2925.

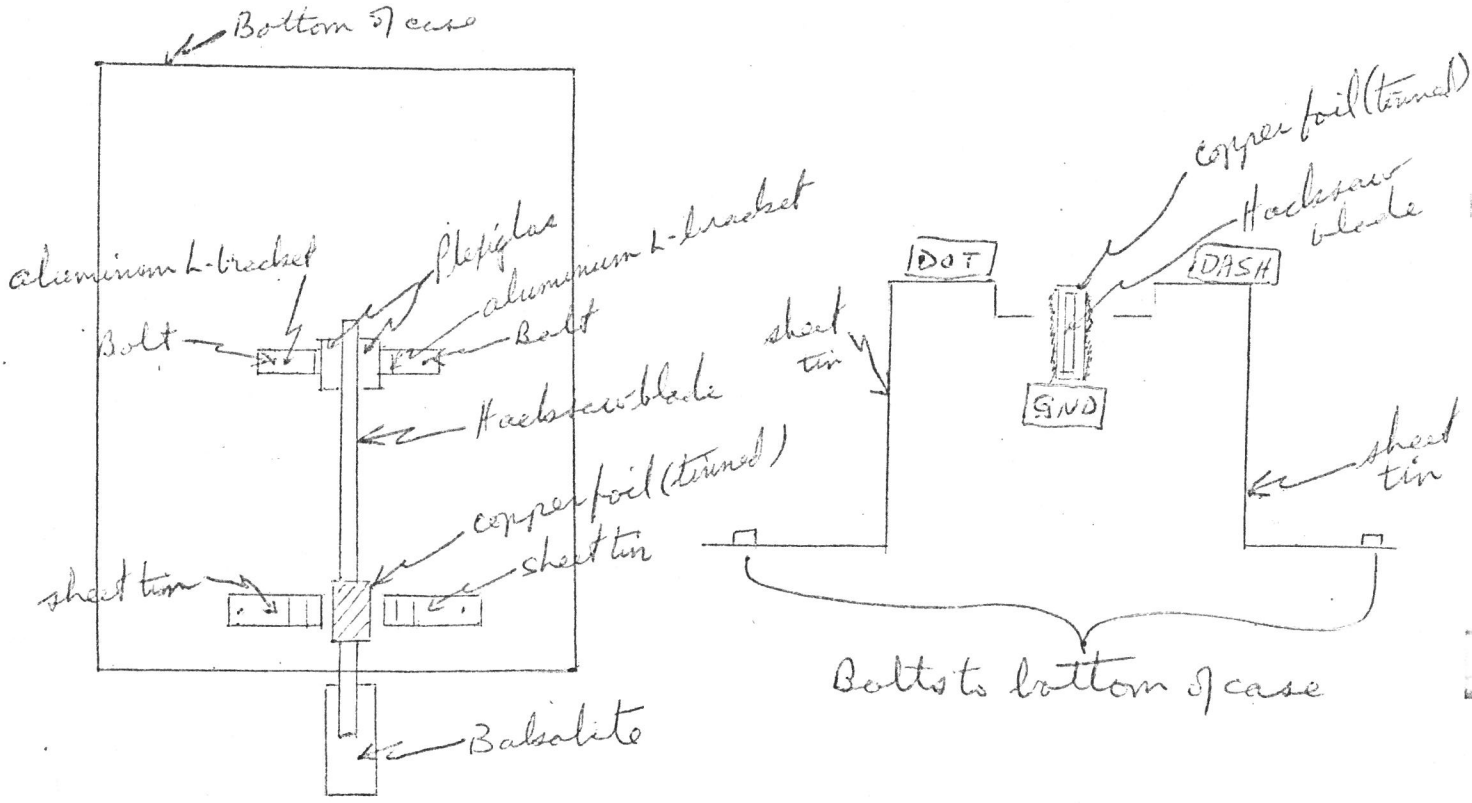
   In the monitor circuit, the .68uf capacitor sets the frequency of the tone heard from the speaker. A more complete description can be found in The Radio Amateur's Handbook. However, I built their circuit and it didn't work so I modified it so that it would.

   The 2N2925 replaces the relay they used for keying the transmitter. My transmitter (Knight T-150) uses cathode keying so I measured the voltage accross the hand key and picked a transistor which would handle a Vce of 25 volts at a current of 100ma. I inserted the 180 ohm resistor in the positive key line to dampen spikes from the transmitter tubes. The 68 ohm resistor in the base lead was to balance the 2N2925 with the 2N3643's base.

   The transformer in the monitor is a Hammond 146i because I had one handy but probably any 500 ohm C.T. to 8 ohm output transformer would work.

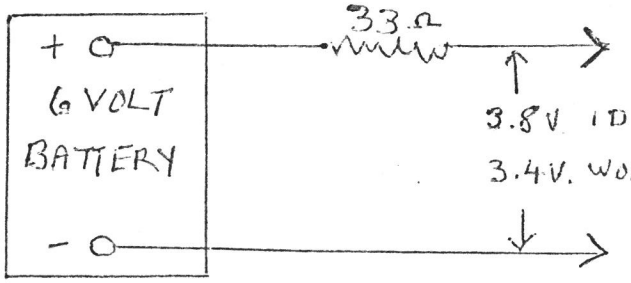
3. Here is how I made my paddle:- Take $\frac{1}{2}$ of a hack-saw blade, a $1\frac{1}{2}$" square piece of Bakolite $\frac{1}{4}$"thick, a piece of copper foil $\frac{1}{2}$" wide and long enough to wrap around the hack-saw blade, 2 pieces of plexiglas $\frac{2}{4}$" square with a #8 hole in the center, 2 aluminum L-brackets and 2 pieces of sheet tin $\frac{1}{2}$" X approx. 2" long. After the copper foil is wrapped around the hack-saw blade, solder it in place and then tin it with solder. See the next page for some pictures.

....2



Don't forgrt to sharpen the end of the tin where it touches the tinned copper to give positive biting contact. This can also be adopted to a squeeze key by using 2 hack-saw blades and grounding the center contact points. The paddle has a VERY SOFT action and will probably be hard to get used to but it really works slick for the price of it-ie. cheap.

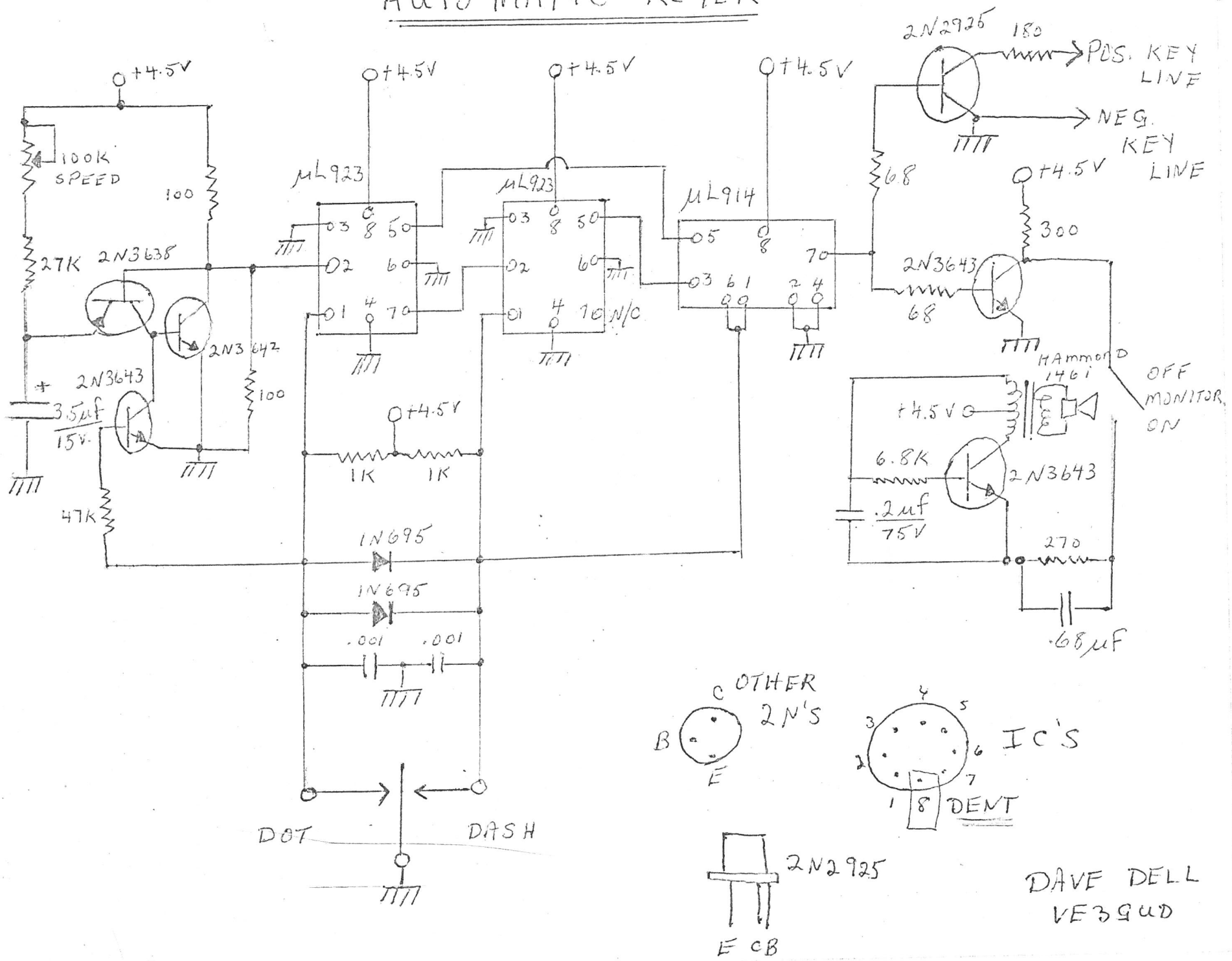
4. As it stands now, I built my keyer 3 years age and my power supply has been a 6 volt lantern battery with a 33 ohm resistor in the positive lead. It works like a charm and it is cheaper than a transformer supply. By the way, the keyer is very sensitive to supply voltage. The voltage must be between 3.2 volts and 4.3 volts or the thing won't work - it just sits there and peeps. Current drain is about 50 ma.



Gud luk O.M.'s; it's a worthwhile project if you've always wanted one but couldn't afford it.

Dave Dell VE3GUD

AUTO MATIC KEYER



DAVE DELL
VE3GUD