

QRM

BULLETIN ISSUED BY THE NORTHERN
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OF AUSTRALIA TAS. DIVISION.

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AX PREFIX

As from the 1st of October until the 31st of December you may once again use the prefix AX if you feel so inclined. Though I agree with some of 7MX's grievances in his thought for the month, we should also consider the other side of the picture.

During this sunspot minima and resulting poor band conditions have you noticed how the bands seem to improve when there is a contest on somewhere or a contact is required for an award? When conditions are poor and you lose interest isn't it that new country or prefix that makes you use your equipment and thereby use the frequencies?

Therefore if the AX prefix is going to increase activity, particularly on 15 and 20 metres then its a good thing, even if it may be a little inconvenient at times.

While on prefixes, listen in on the 2 metre FM channels for a while and you will soon wonder whether we have even a VK prefix.

73 John AX7JV

MEETINGS

2nd October	North West Branch, Lakins Hall Ulverstone
12th October	Northern Branch, AEB rooms, High st

YRCS

6th & 20th October	Elementary classes, Kings Meadows High School, room 38 block B
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CONTESTS

6th & 7th October	VK-ZL Oceania, Phone
13th & 14th October	VK-ZL Oceania, CW

Q.R.M.

BULLETIN OF THE NORTHERN BRANCHES OF THE W.I.A. TAS. DIV. OCT.'73

Page 2

The meeting of the Northern Branch held on September 14th was chaired by Peter 7PF and attended by 32 members.

One of the appologies received was from Norm 7NR who was enjoying himself in Sydney, however Norm had made arrangements with Joe 7ZGJ to take over while he was away, thanks Joe.

A discussion over two letters received asking for assistance in the Jamboree on the air resulted in Norm 7NR and Peter 7PD being nominated for the job of organizing equipment and operators, subject to their acceptance as they were not present.

Kevin 7ZAH reported that equipment store sales last month amounted to \$412.75 and our bank balance is \$706.25.

Lindsay 7ZLD spoke about the Hamfest arrangements and requested that members ask their xyl's and yl's to help by supplying hot dishes for the Saterday dinner, please notify Lindsay of the result if succesfull.

QRM, I pointed out that postage rates will increase early next year and this will have to be considered when subscriptions are reviewed at the end of the year.

Some costs are offset somewhat by selling advertising space on the back page, we ask our members to patronise our advertisers and to mention QRM when dealing with them.

Postage rates will double next year and it will cost 55 cents per member to post QRM to them, who said Ned Kelly is dead.

The question of lectures and films was raised and it is hoped to obtain more of these for future meetings.

After the meeting closed a Barlow Wadley receiver, brought along by Geoff Lang, was demonstrated and a keen interest was shown by all.

Congratulations to Malcolm VK7ZMS on his pass in the recent CW exams, lets know what the new call will be Malcolm.

Some new equipment aroud the place includes, Reg 7KK's new 6 metre transverter, IGL trancivers of Maurice 7JU, Dean 7ZAD, Phil 7ZAX and Bill 7AK .

Seems DCA has given Eric 7ZEC a spell in Hobart to learn all about digital electronics and roulette, hope you win Eric.

We still have some advertising space for sale on the back page if you know of anyone that may be interested please contact John VK7JV or write to, Editor QRM, PO BOX 1010 Launceston.

How will VHF be effected.? from GARC newsletter for September

Astronomers predict that a comet discovered in March this at Hamburg, is leading towards Earth. It should be visible in our morning sky in November and December, and the evening sky in January 1974.

The orbit is still in doubt, but it is predicted to be closest. to Earth during mid January. Since last month the comet has been hidden from view by the Sun.

Astronomers predict that this comet will be more spectacular than "Halley's comet".

It will be interesting to see what can be done on the VHF bands .

NOTES FROM THE NORTH WEST BRANCH by VK7MX

This months thought provoker. I have had no kick back yet but may strike oil yet. Somewhere I heard, on the Broadcast maybe, that the use of the prefix AX instead of VK would be approved for 3 months use to mark a Royal visit.

To me this is a rather stupid idea and I can find no merit in changing for such a short period, in fact at any time.

If it was an internal affair between VK stations only, we would all be aware of the significance of it, but to foist it on overseas stations with resulting confusion and explanations is pointless. Our VK call is recognised and long respected overseas so why mess about with it. I for one will not use it.

Following my expostulation last month on W.I.A. activity, on reflection, I must qualify my plea to non active members.

The first consideration is, be a member of the W.I.A. Boost the numbers.

However we appreciate that there will be amateurs, particularly younger ones who are studying, forging a career, who cannot allow a hobby to interfere with study. This is a commendable attitude and after all A.R is a hobby.

Just give us your support financially and morally and active members will carry on the good work for you until your turn comes.

Now the news. Our monthly meeting was held on 4th Sept. with a poor attendance.

Don't bother to come along chaps, you don't have to.

The faithful few will carry the flag but if the situation worsens there will be no flag to carry. Don't suggest that it is to far to come, it wasn't for Steven 7ZSF who came from Launceston.

Thanks OM for your interest. Bob 7ZRF who was in the area was allso welcomed. It was an interesting meeting really with some curly points coming up.

Afterwards a most interesting lecture was given by David 7MS on a most unusual branch of electronics, illustrated in a practical way on his home built computer, you missed a beauty non attenders. Have you ever wondered what hams do for a living? Well here are some details on our local lads, 7AX, 7MZ, 7ZGS and 7ZJS are associated with the P.M.G. Dept. 7KH and 7SF in the car industry, 7ZBE Supermarket, 7AR, 7ZAQ, 7ZGR, 7LR and 7EM are involved in various branches of electronics, 7ZIE works with joinery etc., 7AI on the land, 7MX seed industry, 7MS and 7ZRS with the Department of Agriculture, 7LH electrical and communications in the railway, 7TT draughting and 7CF retired, hope I have the lot.

Laurie Tongs 7LT has moved to Melbourne and we hope to hear his fist from VK3, best of luck OM.

Bob 7ZRF has been resident in our area for a few weeks and has been heard from various local shacks. We allways welcome visitors from other areas.

A series of phone calls from VK3 about the middle of August soon spread the happy news that Peter 3ZPX (prickly whiskers) had become a Daddy. Jodie Leah Waterhouse is her name and we congratulate Robyn and Peter.

The R.D. contest, the best I ever worked, nor have I heard so many considerate operators.

Remarks like "I'll move up 5" or "when you have finished" were quite common. During the contest I worked VK9MC John Mc Culloch who was stationed at Devonport airport for a time.

We took time off to catch up on news, John hopes to be back in VK7 next year.

Finally about the Sunday Broadcast. We have never had it so good, but could the callback on 80 be streamlined.

There are times when one cannot wait possibly 20 minutes to report in due to other commitments. So a suggestion, first up invite all

cont. page 4

Q.R.M.

BULLETIN OF THE NORTHERN BRANCHES OF THE W.I.A. TAS. DIV. OCT.'73

Page 4

stations to call in including the N.W. then ask each in turn to report signal strength, at this point the callback officer has a list of stations who have received the broadcast. Now go through the list again with news or smalltalk and if anyone has to leave no harm is done, but he has at least reported.

Fair enough ?

Till next month 73 Max 7MX

On a Sunday morning a couple of weeks ago a rare sight was witnessed when a 35 ft steel tower was transported from Port Sorell to East Devonport on top of a Holden Station sedan. Not content with that the tower was lifted over the top of the house and now rests in the back yard of Graham VK7ZAQ. A mighty effort and only some would attempt such a feat. 7MX

FOR SALE

FOR SALE

FOR SALE

Ferris car radio (portable) model 184 with power cradle and aerial \$45.00 G.D.Reardon 2 Trent st, Youngtown. Phone 469455

MR 20 B unconverted \$25.00 B.R.Waldron 62 Connaught Cr

FIDX 400 as new \$350.00 ono , or buy FRDX 400 B.J.Morgan 103 Montifiore Cr

150 Watt modulator, multi tapped output transformer will match any impedance from 2 - 20K, pair of KT88's driven by a KT88 \$15.00

Geloso amateur band receiver front end \$30.00

J.E.Gelston, 40 Lavender Gr. Phone 443882

4 element quad, triband, 2el. complete and 2el. unassembled complete with spare bamboo spreaders fully fibre glassed Aluminium boom 2 1/2 inch diam. 22 1/2 foot long, also 8 ft boom, all the above brand new \$40.00

W.Henry 495 Churchill Av , Sandy Bay

Back issues of Amateur Radio, Carl Waldon has donated these to the Club room fund.

We have complete volumes for the years 1960 through to 1970 also 1971 from January to October, 1972 January to March.

Your offers to VK7JV C/o po box 1010 Launceston.

Dont forget to state which volume your offer is for.

WANTED

WANTED

WANTED

Valves for a command receiver 12K8 and 12SK7, also a spline connector to suit tuning shaft of above.

G.D.Reardon 2 Trent st , Youngtown. Phone 469455

0 - 30 Pf variable vacuum capacitor 10 KV rating

J.E.Gelston, 40 Lavender Gr. Phone 443882

Articles of interest for publication in QRM, preferably typed but handwritten is quite acceptable.

Editor QRM, PO BOX 1010 Launceston, 7250

AO6 ORBIT DATA by VK7PF

OCT. 13 TO FEB. 28

Times are for the closest N-S and S-N passes for each day.
Other passes can be heard 1hr 55min earlier and later with 29 degrees less or greater. For those without a calculator add 1hr 42min to give the centre of a pass for AM (Z time) and 1hr 12min for PM (Z time)
The satellite should be heard for 20 min. centred on these times.
X indicates the days the satellite is on.

DATE	ORBIT	DATE	ORBIT	TIME Z	°W	DATE	ORBIT	DATE	ORBIT	TIME Z	°W	
OCT						NOV						
X	13	4542		19	5381	0934	191		6	4843		
X	13	48		19	87	2105	004		6	48		
	14	55	X	20	94	1029	205		7	55		
	14	61	X	20	5400	2159	017		7	61		
X	15	67		21	06	0929	190	X	8	68		
X	15	73		21	12	2059	002	X	8	74		
	16	80	X	22	19	1024	204		9	80		
	16	85	X	22	24	2154	016		9	85		
	17	92		23	31	0924	188	X	10	93		
	17	98		23	37	2054	001	X	10	98		
X	18	4605	X	24	44	1019	202		11	4905		
X	18	11	X	24	50	2149	015		11	11		
	19	17		25	56	0919	187	X	12	18		
	19	23		25	62	2049	000	X	12	24		
X	20	30		26	69	1014	201		13	30		
X	20	35		26	74	2144	013		13	36		
	21	42	X	27	81	0914	186		14	43		
	21	48	X	27	87	2044	358		14	49		
X	22	54		28	93	0814	171	X	15	55		
X	22	60		28	99	1944	343	X	15	61		
	23	68	X	29	5507	1104	213		16	68		
	23	73	X	29	12	2039	357		16	74		
	24	80		30	19	1004	198	X	17	81		
	24	85		30	29	1939	342	X	17	86		
X	25	93	X	31	32	1059	212		18	93		
X	25	98	X	31	37	2034	356		18	99		
	26	4705	JAN	1	44	0959	197	X	19	5006		
	26	10		1	49	1934	341	X	19	11		
X	27	18		2	57	1054	211		20	18		
X	27	23		2	62	2029	355		20	24		
	28	30	X	3	69	0954	196		21	31		
	28	35	X	3	74	2124	008		21	36		
X	29	43		4	82	1048	210	X	22	43		
X	29	48		4	87	2023	353	X	22	49		
	30	55	X	5	94	0948	194		23	56		
	30	61	X	5	5600	2118	007		23	61		
	31	68		6	07	1043	208	X	24	68		
	31	73		6	12	2018	352	X	24	74		
NOV	1	80	X	7	19	0943	193		25	81		
X	1	85	X	7	24	1918	337		25	87		
	2	93		8	32	1038	207	X	26	93		
	2	99		8	38	2208	019	X	26	99		
X	3	4805		9	44	0938	192		27	5106		
X	3	11		9	50	2108	004		27	12		
	4	18	X	10	57	1033	206		28	18		
	4	24	X	10	63	2203	018		28	24		
X	5	30		11	69	0933	191	X	29	31		
X	5	36		11	75	2103	003	X	29	37		
						JAN						
				19	5682	1028	204	X	12	5682	1028	204
				19	87	2003	348	X	12	87	2003	348
			X	20	94	0928	189		13	94	0928	189
			X	20	5400	2058	002		13	5700	2058	002
				21	06	1023	203	X	14	07	1023	203
				21	12	2153	016	X	14	13	2153	016
			X	22	19	0923	188		15	19	0923	188
			X	22	24	1858	332		15	24	1858	332
				23	31	1018	202		16	32	1018	202
				23	37	1953	346		16	37	1953	346
			X	24	44	0918	187	X	17	44	0918	187
			X	24	50	2048	359	X	17	50	2048	359
				25	56	1013	200		18	57	1013	200
				25	62	2142	013		18	63	2142	013
				26	69	0912	185	X	19	69	0912	185
				26	74	2042	358	X	19	75	2042	358
			X	27	81	1007	199		20	82	1007	199
			X	27	87	2137	012		20	88	2137	012
				28	93	1102	213	X	21	94	1102	213
				28	99	2037	357	X	21	5800	2037	357
			X	29	5507	1002	198		22	07	1002	198
			X	29	12	2132	010		22	13	2132	010
				30	19	1057	212		23	20	1057	212
				30	29	2032	355		23	25	2032	355
			X	31	32	0957	197	X	24	32	0957	197
			X	31	37	2127	009	X	24	38	2127	009
				1	44	1052	210		25	45	1052	210
				1	49	2027	354		25	50	2027	354
				2	57	0757	167	X	26	57	0757	167
				2	62	2122	008	X	26	63	2122	008
			X	3	69	1047	209		27	70	1047	209
			X	3	74	2022	353		27	75	2022	353
				4	82	0947	194	X	28	82	0947	194
				4	87	2117	007	X	28	88	2117	007
			X	5	94	1042	208		29	95	1042	208
			X	5	5600	2017	352		29	5900	2017	352
				6	07	0942	193		30	07	0942	193
				6	12	2112	005		30	13	2112	005
			X	7	19	1037	207	X	31	20	1037	207
			X	7	24	2207	019	X	31	26	2207	019
				8	32	0937	191			32	0937	191
				8	38	2107	004		1	38	2107	004
				9	44	1031	205	X	2	45	1031	205
				9	50	2201	018	X	2	51	2201	018
			X	10	57	0931	190		3	57	0931	190
			X	10	63	2101	003		3	63	2101	003
				11	69	1026	204	X	4	70	1026	204
				11	75	2156	016	X	4	76	2156	016

DATE	ORBIT	DATE	ORBIT	TIME Z	°W	DATE	ORBIT	DATE	ORBIT	TIME	°W
NOV		FEB				DEC		FEB			
30	5143	5	5982	0926	189	12	5294	17	6133	1050	210
30	49	5	88	2056	001	12	99	17	38	2025	354
DEC 1	56	6	95	1021	203	X 13	5306	X 18	45	0950	195
X 1	62	6	6001	2151	015	X 13	12	X 18	51	2120	007
2	68	X 7	07	0921	188	14	19	19	58	1045	209
2	74	X 7	13	2051	000	14	24	19	63	2020	352
X 3	81	8	20	1016	201	X 15	31	20	70	0945	194
X 3	88	8	27	2341	043	X 15	36	20	75	2115	006
4	93	X 9	32	0916	186	16	44	X 21	83	1040	207
4	99	X 9	38	2046	359	16	49	X 21	88	2015	351
5	5206	10	45	1011	206	X 17	56	22	95	0940	192
5	12	10	51	2141	013	X 17	62	22	6201	2110	005
X 6	18	X 11	57	0911	185	18	69	X 23	08	1035	206
X 6	24	X 11	63	2041	358	18	75	X 23	14	2205	019
7	31	12	70	1006	199			24	20	0934	191
7	36	12	75	1941	343			24	26	2105	004
X 8	42	13	81	0711	155			X 25	33	1029	205
X 8	48	13	87	1841	328			X 25	39	2159	017
9	56	X 14	95	1001	197			26	45	0929	190
9	62	X 14	6101	2131	010			26	51	2059	002
X 10	69	15	08	1056	211			27	58	1024	204
X 10	74	15	13	2031	355			27	63	2154	016
11	81	X 16	20	0955	196			X 28	70	0924	188
11	87	X 16	26	2125	009			X 28	76	2054	001

A07 Amsat is applying a concentrated effort to have this package ready for launch early in 1974 to carry on from A06.

A change in frequencies has been made for the 2 to 10 metre repeaters, the input to be 100 Khz wide centred on 145.9 Mhz with output centred on 29.450 Mhz, this is a shift down of 50 Khz.

The second repeater in the satellite will have an input 50 Khz wide around 432.150 Mhz with the output centred on 145.950 Mhz. The Australian RTTY telemetry system is to be used as well as the C.W. system used in A06.

W.I.A. 2M BAND PLAN as per the special federal convention held in Melbourne on September 15 and 16.

INPUT	FREQUENCY	CHANNEL No	USE	REPEATER OUTPUT (all new)
Old CH 1	146.10	42	Repeater	146.70
	146.15	43	Repeater	146.75
	146.20	44	Repeater	146.80
	146.25	45	Repeater	146.85
	146.30	46	Repeater	146.90
	146.35	47	Repeater	146.95
Old CH 4	146.40	48	Repeater	147.00
	146.45	49	Simplex	
	146.50	50	Simplex	New recommended national
	146.55	51	Simplex	
	146.60	52	Simplex	RTTY channel
	146.65	53	Simplex	

TECHNICAL ARTICLE - VK7ZBYA 250 MHZ FREQUENCY COUNTER

PART 6

Main Counting Decades

In this, the last part of this article, we will describe the operation of the main counting decades, memory, decoders and display. The decade counters used in this section are 7490's which consists of 4 master-slave Bi-stables internally inter-connected to provide a divide by 5 and divide by 2 counter. There are also gated direct reset lines to inhibit the count inputs and return all the outputs to logic 0 or to a BCD count of 9. If the BD input is externally connected to the A output and the A input receives the incoming count signal then we have a BCD counter. The truth table for the 7490 decade counter appeared in PART 4, page 7, for this article.

Counter Memory: The outputs of the 7490's are fed to quadruple Bi-stable latches (7475) which are used as a temporary store for binary information from the 7490's. Information which is present at the data inputs (D) is transferred to the Q outputs while the clock (Strobe Memory Line) is high. The Q outputs follows the data inputs for as long as the clock is high, but when the clock goes low this information is retained at the Q outputs; it is by this method that we can obtain a steady display.

Decoders: The decoders used in this counter are BCD to 7 segment (type 7447). These devices are used to accept the BCD information from the Bi-stable latches and decode this information to drive the 7 segment incandescent indicators. Another feature of these decoders is the provision for causing all indicator segments to be displayed on command to check for burnt out segments (lamp test). One other provision is for non-significant zero suppression should this be required.

Readout Tubes: The readout tubes used in this counter as already mentioned are 7 segment, 5v filament types, with a left hand decimal point and have an approximate useage life of 100,000 hours. The type number of these tubes are DA/133D made by Antron, England, but can now be purchased locally.

The last function to look at is the overflow indication. As the name suggests it is simply a means of detecting and indicating (via a L.E.D. indicator on the front panel), when the counting section of the instrument has "gone round the clock", or filled to maximum capacity and returned to the fully reset state. It may not be immediately apparent why such an indication is desirable, however the fact is that for high frequency measurements the counting process may be taking place in a gating time of 10 μ s, or even less, a period very much less than the proverbial "blinking of the eye". It can be seen from this that the counter could well fill to capacity many times over without the operator being in the least aware of the situation. Naturally the measurements made in such circumstances would be very much in error, because the reading finally displayed would simply represent the pulses which had entered the counter after it had counted to full capacity and overflowed an unknown number of times. Hence it can be a **decided** advantage to know when the counter has overflowed and indicate immediately when this condition occurs.

Fig. 10 shows the complete circuit of the counting decades.

TECHNICAL ARTICLE (Cont.)

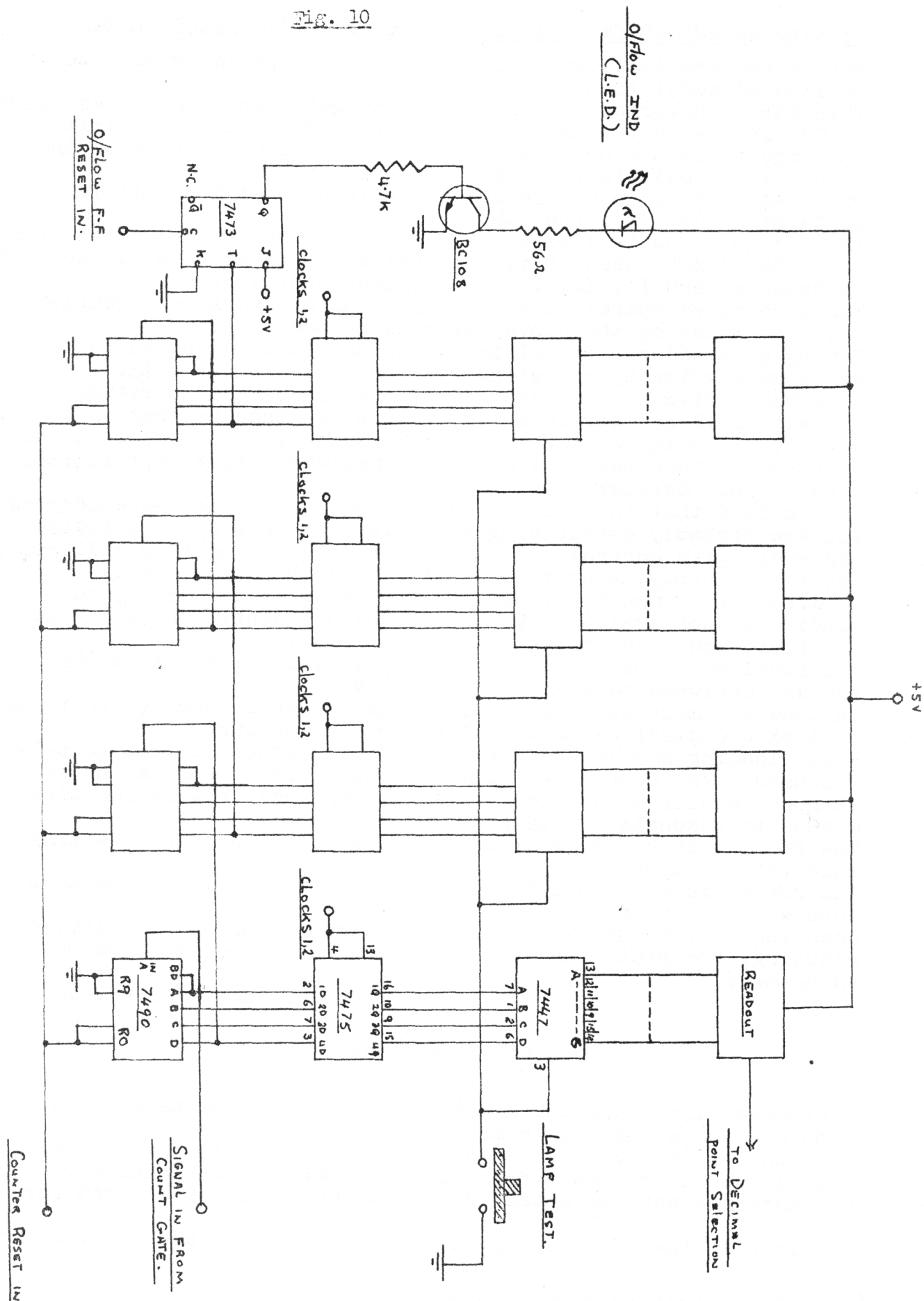
To explain the operation of the complete 4 decades would take too long and is not necessary, because they all operate in the same manner, and so we will describe only one. On the opening of the count gate, a series of pulses are applied to the input "A" terminal of the first decade. This decade will accept 9 of these pulses and on the arrival of the 10th pulse will pass on to the next decade one pulse, also on this tenth pulse the first decade will automatically reset to zero. This sequence of events will continue until the count gate closes. At this stage we have a decade counter that has stopped at a particular count and stored this count. This stored count is passed on to the 7475 memory latch and on command (Strobe pulse) is released and applied to the 7 segment decoders. This decode information is used to connect the appropriate segments of the readout tubes for display of the counter. As we have now displayed the counted signal as explained earlier we must now reset the decades to zero before re-opening the count gate. When this occurs, all decade outputs will go to zero, but as already explained in the section on Counter Memory the displayed frequency will remain. When the count gate re-opens the whole procedure will be repeated.

That concludes this article on a digital frequency meter. While there are no doubt, many and varied ways to build such an instrument, this article shows the way in which I have attacked the problem. I hope in some small way I have removed the mystery that surrounds digital electronics for some people (including myself), and that this article shows that it is not as hard to understand, as first thought. If anyone is considering building this, or any other digital equipment, I will be only too pleased to help out (or confuse) in any way possible.

This article **could** not be concluded without expressing my gratitude to a number of people. First, my wife DIANE, for it was she who did all the typing, correcting of grammar and spelling mistakes (English not my strongest subject at school!!) and having to spend many a night by herself while hubby was out in the shack trying to sort out development problems. Second, to all those AMATEURS whose brains I picked while building and testing this instrument. Last, but not least, to D.C.A. who (unwittingly) provided the test equipment and facilities which allowed me to build and set up the counter when completed.

73's BRIAN - VK7ZBY

Fig. 10



Getting on 6M SSB for this DX season by J.E.Gelston VK7ZGJ

TVI is the greatest deterrent to using 6M especially when using antiquated modulation.

This SSB transverter is clean, easy to get going and causes no TVI on CH1 in the next room even when running a 6/40 to its limit.

The circuit is not original and I must thank 6UP for it as they used this circuit for a 432Mhz transverter.

The power supply is on the same chassis so that the unit is self contained except for the 14Mhz drive.

The design is quite flexible and any frequency of SSB drive from 5 - 28Mhz can be used providing that the correct crystal oscillator is selected and L1, L2, L3 are changed accordingly.

For transceive operation a one turn link around L2 and coupled into the mixer of the converter will be necessary.

Tuning up procedure. Oscillator drive should be adjusted to approximately 1ma by adjusting the coupling link into L3.

Side band drive can be measured by opening S2 and operating the PTT with full carrier inserted, drive can then be read on a grid current meter in V2 this should be around 0.25 mA, close S2 and operate PTT then peak all coils for maximum output, approximately 2 Watts full carrier.

If you find that the output flattens out as you increase carrier you are probably overdriving the mixer, if this happens reduce the audio gain control on your exciter or non linearity will result. The power supply is self explanatory and (the circuit will be published next month) any old transformer will do, if a 5 volt winding is not available you could voltage double the 6.3 volt to obtain your $\pm$ voltages.

The final may look a little unusual, this is direct from 6UP and was designed by Mike Farrell VK2AM.

On tune up, make sure you monitor the screen current so that you don't exceed dissipation with light plate loading.

Plate loading should be increased until screen current is 8-10mA resonance also occurs at maximum screen current and as the screen is more sensitive than the plate to resonance this is the ideal method to resonate the tank coil.

The final must be neutralised and shows no sign of instability once this is done.

The 22K resistor across the grid coil keeps the loading almost constant on the driver.

Changing the frequency from 52 to 52.5Mhz requires very little retuning, the plate tuning and loading should not require any adjustment.

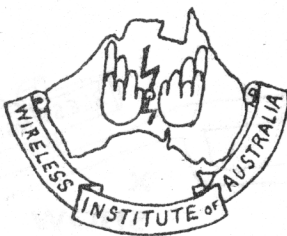
Best of luck, Joe VK7ZGJ

Equipment store, the LED's have not been received as yet but should be here when you read this.

The Sun yagi's have been ready for you for nearly 3 weeks, will you please collect them from Kevin VK7ZAH, 8 Clarendon st. any antennae not collected by next meeting will be offered for sale.

Received in the last month, TIS88, 2N3564, 2N3565 and 741 op. amps.

YIPPEEEEEEE, SUPER CRUNCH IS HERE.

VK7**GOLDEN JUBILEE
HAMFEST
1973****EVANDALE
NOVEMBER 24 & 25**

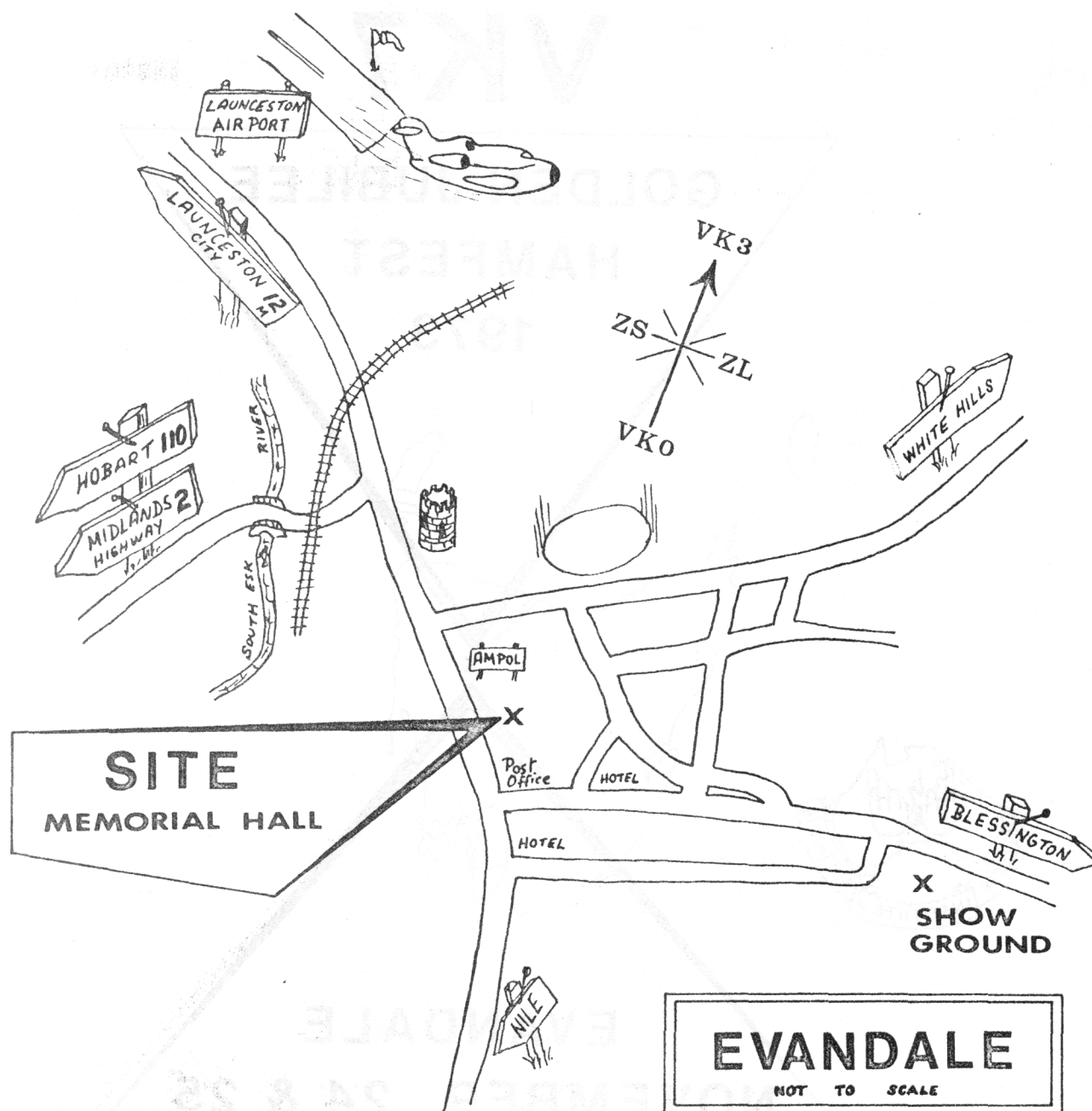
The Wireless Institute of Australia, Tasmanian Division wishes you and your family to attend their Golden Jubilee Hamfest to be held on 24th and 25th of November, 1973.

The programme on Saturday will consist of registration, displays of home constructed and commercial equipment, carphone checks, etc. A Buffet Dinner and Cabaret will be held at the Hamfest site on Saturday evening. On Sunday transmitter hunts, yes/no hunts, equipment displays, guessing competitions, Barbecue Lunch, etc. The success of the Hamfest depends on a large number of people participating, so we hope to see you at Evandale on the 24th & 25th of November, 1973.

Hamfest Committee.

Further information can be obtained from:-

B.Yeoman, Bus.918288 Home 918218, K.Henricks, Bus.321208
Home 469772

REGISTRATION FORM

Name _____ Phone Home _____

Address _____ Bus. _____

Callsign _____

Registration Fee

Single \$3-50 _____

Family/Double \$5-00 _____

Student \$2-00 _____

SUNDAY ONLY per adult \$1-00 _____

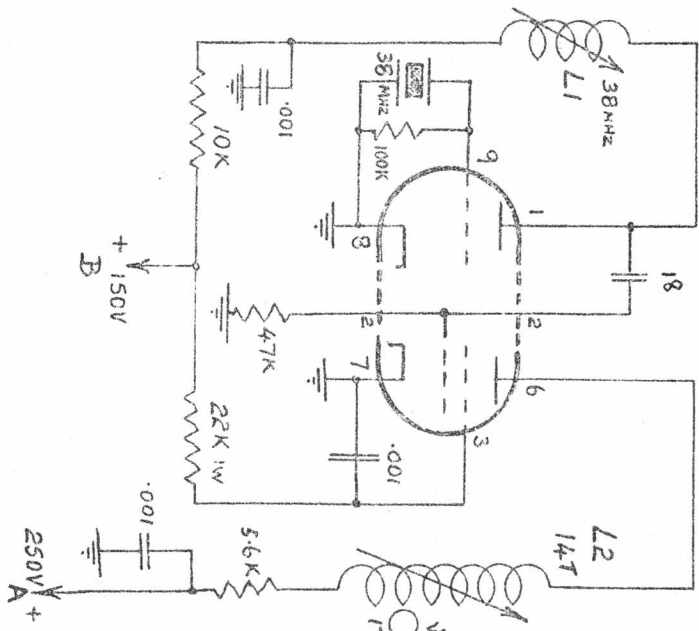
Please find enclosed cheque for \$ _____

I will require Hotel/Motel/Guest House accomodation for
 _____ persons. Deposit of \$5-00 is enclosed.

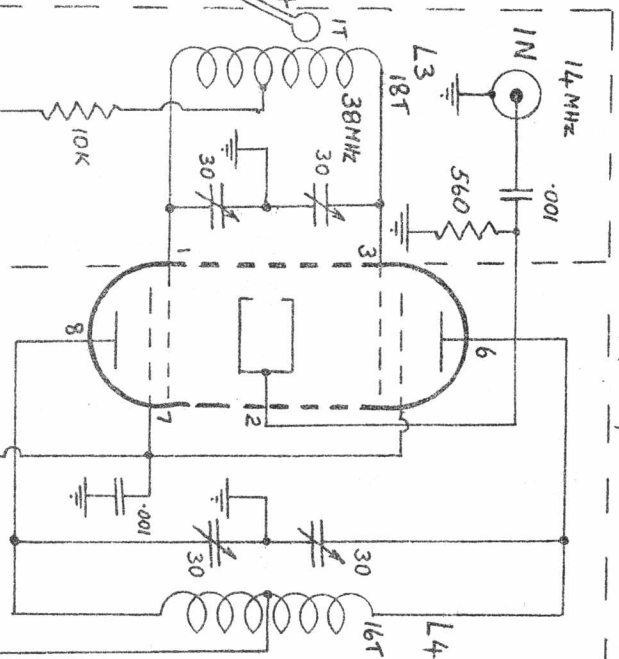
Accomodation for tents and caravans at Evandale Show Grounds
 which are only a short distance from Hamfest site.

PLEASE RETURN..... P.O.Box 1010, Launceston, TAS 7250

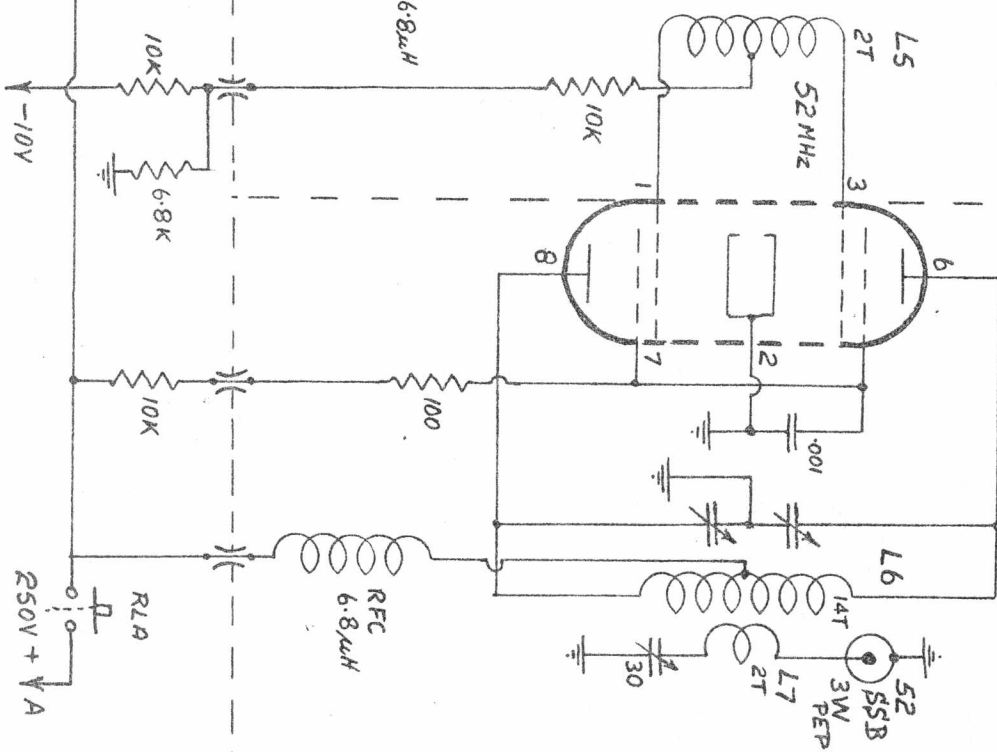
V1 6BL8



V2 6QE02/5



V3 6QE02/5

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all feedthroughs .001 mF

L1 - 15 turns 1/4 inch former

L2 - 14 turns 1/4 inch former

L3, 4, 5, 6, 7 all wound on 1/2 inch aluminium tubing

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