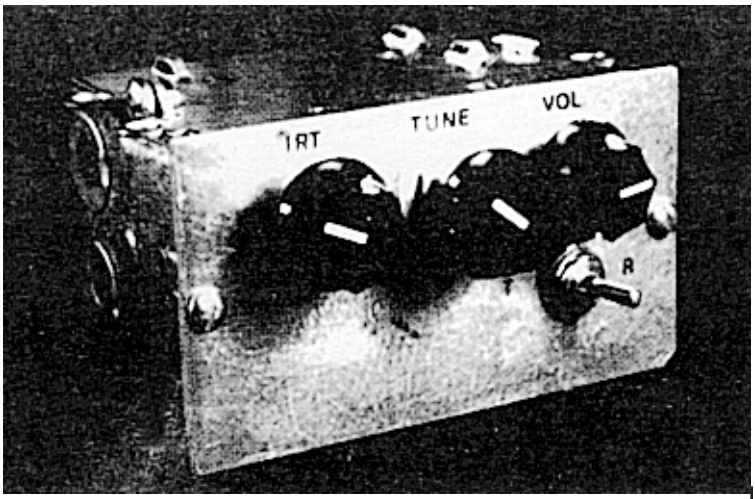
SPRAT

THE JOURNAL OF THE G-QRP CLUB

DEVOTED·TO·LOW·POWER·COMMUNICATION

ISSUE NR. 46 | © G-QRP CLUB | SPRING 1986

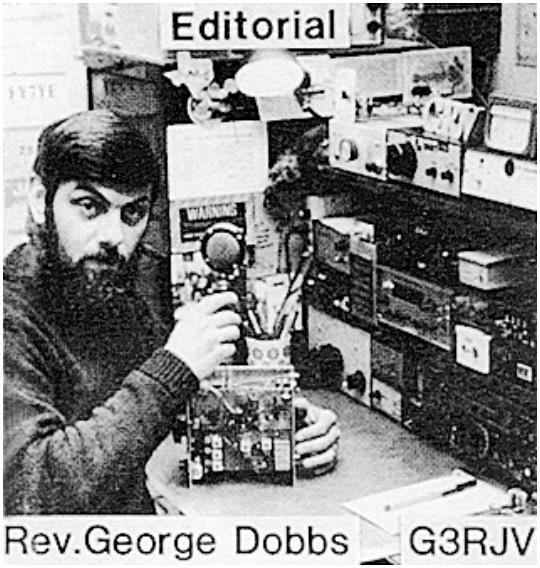


THAT SNEAKY "FOXX TRANSCEIVER GETS AROUND !

The FOXX Mini-Transceiver by GM3OXX (SPRAT 35) built into an electrical outlet box as featured on the front page of the February issue of the Canadian magazine TCA.

R.F. PREAMPLIFIER. KEYING AND T/R SWITCHING WITH CMOS IC'S. PEAK READING R.F. PROBE. "FISHING BOX" TRANSCEIVER STATION. AUTO KEYER. MAGNETIC DELTA LOOP ANTENNA. SIMPLE QRP WITHOUT TEARS. AN SSB/CW TRANSCEIVE BOARD OFFER. MEMBERS NEWS. SSB & VHF NEWS. AWARDS AND CONTESTS. RSGB CONVENTION 1986.

JOURNAL OF THE G QRP CLUB



St. Aidan's Vicarage,
498 Manchester Rd
ROCHDALE,
Lancs,
OL11 3HE.
Rochdale [0706] 31812

Dear Member,

R.S.G.B. NATIONAL CONVENTION 1986 April 5/6th.

Once again the G QRP Club will have a stand at the RSGB Convention at Birmingham. This issue is due for publication just before the event but sadly I did not know what involvement the club would have at the Convention until recently. We hope that as many members as possible will visit us on the club stand.

We also need helpers to man the stand - could you help by giving a little time on the club stand? What is suggest is, that members who wish to help make their way to the club stand as soon as they enter the exhibition hall. On the stand will be a rota for those who wish to help. Please study the rota and fill in your name.

There will also be a QRP Lecture as part of the programme of lectures at the Convention. The time and place of the lecture will be announced by the RSGB nearer the event and at the Convention. Members are also invited to bring home-built items of equipment for exhibition on the stand.

At the weekend following the RSGB Convention, I will be guest speaker at the Lough Erne Rally in Enniskillen, Northern Ireland where I hope to meet some of our GI members.

hpe to cu on the bands....73 fer nw G3RJV

Subscriptions

Renewals (rates: £4.50 or $10 US to Alan Lake, G4DVW, 7 Middleton Close, Nuthall, Nottingham, NG16 1BX. PLEASE QUOTE YOUR MEMBERSHIP NUMBER. Cheques: G QRP CLUB. A reminder should appear in membership number sequence on the address label of SPRAT. Please ignore the reminder if you have already paid. Overseas members might like to pay by direct transfer from their bank to: National Westminster Bank plc, Town Hall Square, Rochdale, Lancs, OL16 1LL. Account: G QRP CLUB. No: 04109546. Please inform G4DVW whenever such a transfer has been made.

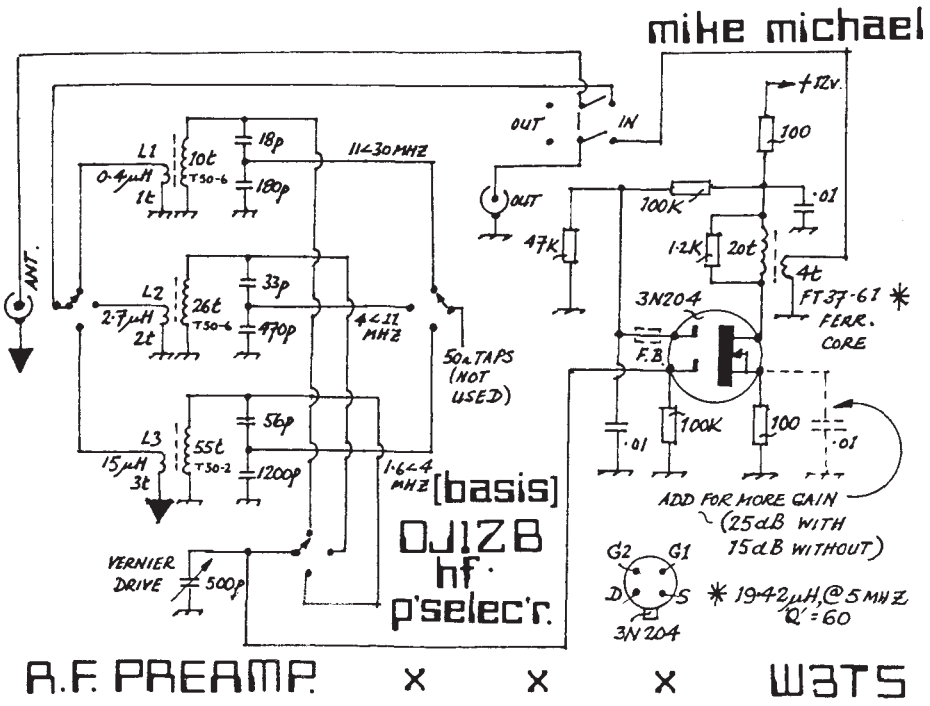
R F P R E A M P

By Mike Michael W3TS

This circuit is based on the HF Preselector by DJ1ZB designed for the front end of general coverage receivers.

The preselector circuit has very good selectivity for only one tuned circuit. This unit was built up, using "ugly" point to point construction on a small PCB mounted in the bottom of the case. The unit has been used for a beverage antenna and general purpose HF preamplification. It has also been used with a diode detector and AF amp as a SW BC receiver.

L1 and L2 on a T50-6 core and L3 on a T50-2 core.



Q R P S U M M E R P A R T Y

Following the tradition of the last two years Pam and Chris will be holding their Summer QRP Party at the G4BUE QTH on Saturday 26 July 1986.

It starts at 2.30pm and lasts until everyone has had enough, the bands close or the drink runs out!! Come and meet other members of the club and share your experiences, (or frustrations) in working DX and homebrewing. Several knowledgeable types will be there to help you get that rig working that you have built and just won't work!

Everyone is invited, but **please** let Pam or Chris know you will be going. They want to ensure they get the catering right. Bring that latest homebrew rig/project/experience/ tall story.....with you, together with a bottle of something to ensure we don't run out. Contact Pam and Chris on 0903.814594.

See you in July at Upper Beeding.....

KEYING AND T/R SWITCHING WITH CMOS IC´S

By Matthias Volkert DF4SQ

Proper timing and waveform shaping is an important detail of a good sounding rig, and should not be neglected, even with simple QRP designs.

A possible circuit is shown is Fig. 1. Only two CMOS ICs, and a few other components around are necessary to mute the receiver, activiate the antenna relay, shift the VFO and apply a shaped voltage to the transmitter. When the key is released, these events occur in the reverse sequence as shown in Fig. 2.

Key down: The outputs of the inverters 1a, 1b and 1e go high. C7 is charged immediately through D3 turning the analog switch 2c on and therefore 2d off. This interrupts the AF path and mutes the receiver. As the output of 1f goes low the relay is activated by T2 . C3 is charged through R5 and this causes a delay of approximately 2ms for the VFO shift. The analog switch 2b opens after this time and the bias of the varicap is determined by the setting of R6, (transmit frequency). Unfortunately the antenna relay has a decay of some milliseconds, but usually not more than 5ms if a small single contact relay is used. The transmitter keying is therefore delayed as well by R7, C5 and the output of inverter 1c goes low about 5ms later. A shaped waveform is accomplished by inverter 1d, which is used as an integrator. Its output voltage rises linearly and reaches 12V after 3ms. The emiter follower T1 provides up to 100mA of output current to key the TX and a sidetone.

Key up: The output of inverter 1c goes low after a 5ms delay. The keying voltage then decreases softly within 3ms. C3 is discharged through R4 and the analog switch 2b closes about 25ms after the key is released. The varicap bias is then determined by the 47K RIT pot on the front panel. The relay drop out time T_D can be adjusted by R9, up to 1 second with the 1uF capacitor for C7. The relay however does not change back immediately after T_D has passed. It generally needs more time to switch back than the other way round. The relay I used needs about 25ms. To ensure that no clicks are heard in the RX, the muting is kept active for another 25ms determined by R11 and C8.

As no RF voltage will be present as long as the relay switches, a small relay can be used and T_D may be set to a low value providing a fast semi break-in. The zero beat button can be used to tune exactly to the frequency of another station. It shifts the VFO to the TX frequency without activating the other TX functions.

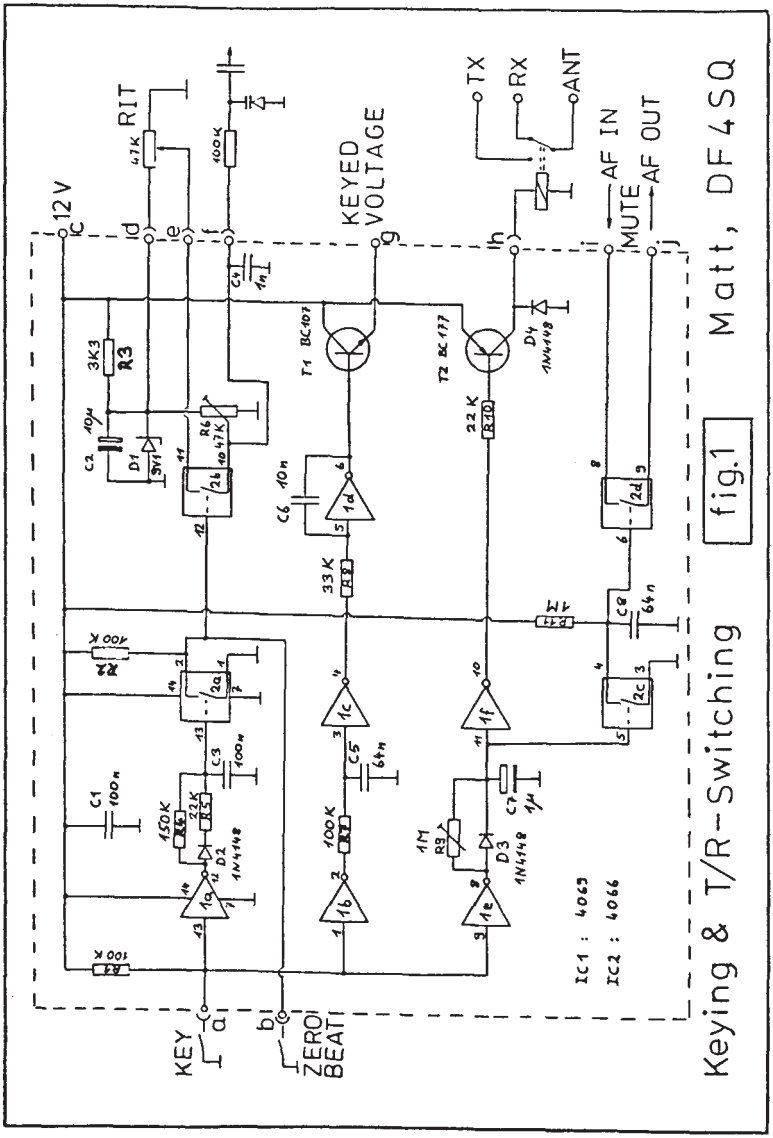
A possible layout for the cicuit is shown in Fig. 3

G 2 N J T R O P H Y 1 9 8 6

A JOINT AWARD TO CHRIS AND PAM, G4BUE AND G4BUE/2

This year the Trophy is awarded for services to International QRP during the past three years. Your Committee unanimously voted that the award this year be to Chris, G4BUE and Pam, his XYL for their joint services in this area. Nobody needs to be reminded of Chris´s skill and dedication in the area of international cmmunications, or of his long term contributions to Sprat. What may be less known is his backroom work in the actual production of Sprat and his long term efforts in the organisational field of QRP, both with our own Club and with QRP ARCI.

Again, most members will know of the great work that Pam does in running our QSL Bureau, but may not be as aware of her background work in assisting with Sprat and in helping provide hospitality for groups of QRP operators. I think all membrs will wish to join in congratulating Chris and Pam, and thanking them for their past efforts.



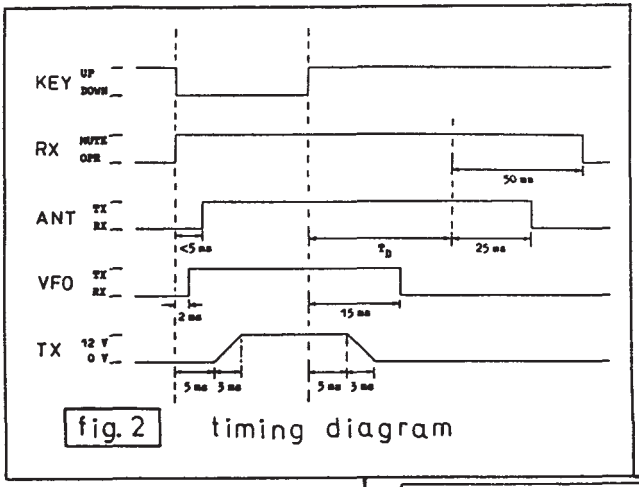
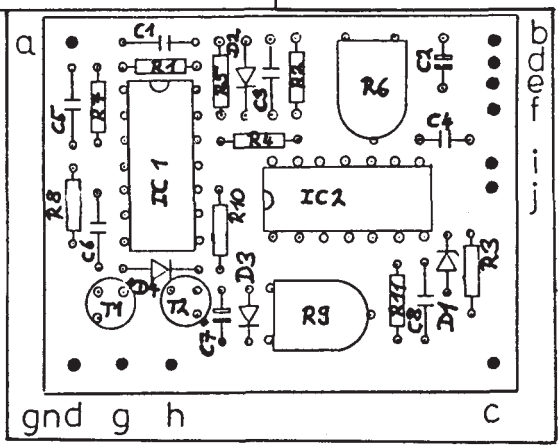


fig. 2 timing diagram



TRANSATLANTIC TRANSISTORS

BY COLIN TURNER G3VTT

When Chris G4BUE and myself went to the USA last year we were often asked, particularly by the QRP ARCI gang, "What´s a BC107"?

It seems so many of our circuits use transistors that our friends on the other side of the ´pond´ just have not heard of. Listed here are a few equivalents which may help. (Come to think of it, what on earth is a 2N3905 anyway?)

UK	USA	UK	USA	UK	USA
BC107	2N708 2N3904	BC108	2N708 2N3904	BC109	2N3904
BFY51	2N3053 2N2219	BF245	2N3819 (FET)	BC171	2N3904 2N708
BC321	2N2905	BC318	2N3904	BCY70	2N2905
BCY71	2N2905	BCY39	2N2905	ECL82	6BM8!
OC81	2N3703 2N2905	OC171	2N2672 2N711		

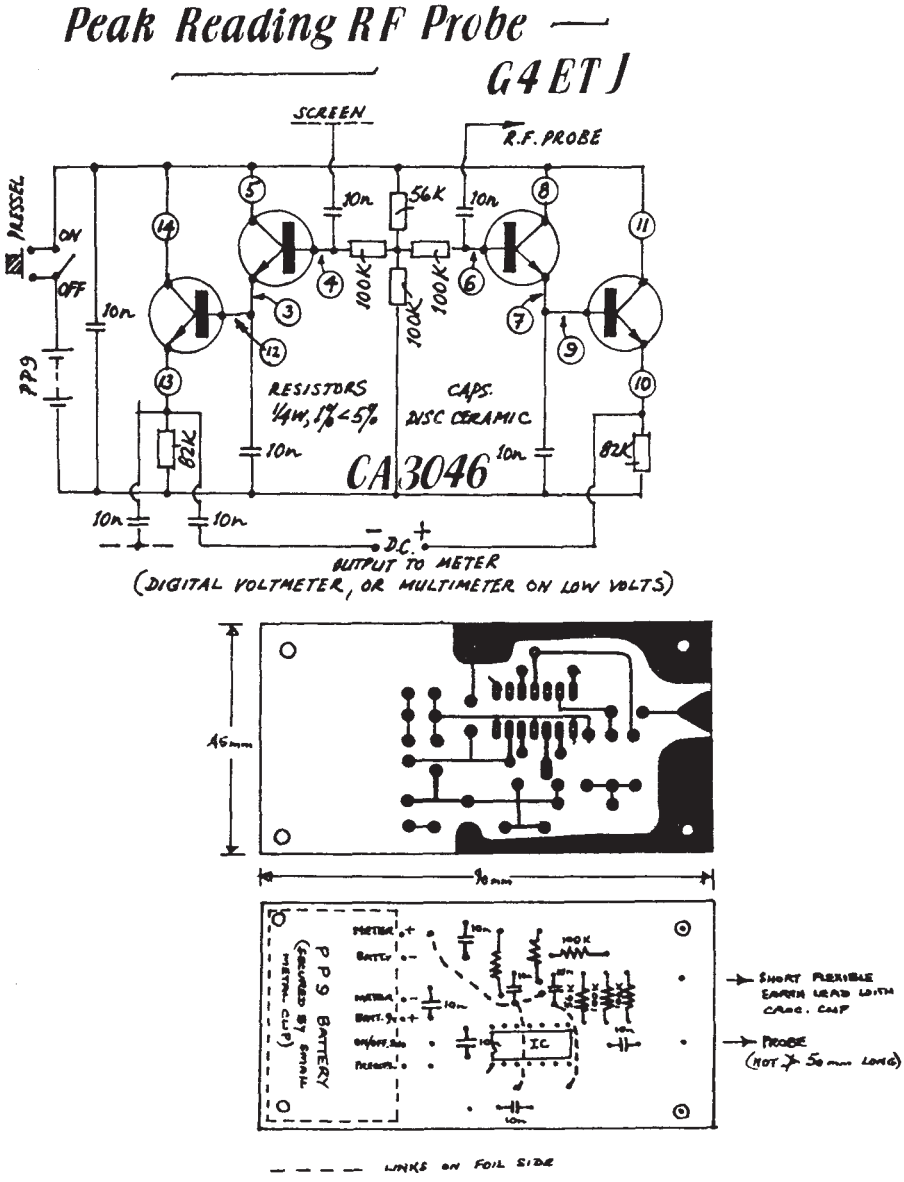
The last two or three devices are a little old, but may still be of interest.

Incidentally, the equivalents given are not exact but should allow most circuits to work. As they say "Should put you in the right ball park"

A PEAK READING R.F. PROBE R.F.LYDDON G4ETJ

The probe measures from 5mV up to 4 volts maximum, and covers frequencies up to 100MHz, (response down 6dB at 120MHz). There is no DC offset adjustment, (but it can be minimised by accurate matching of resistors and a good quality IC). The current consumption is less than 1mA, and the input impedance is 50Kohms in parallel with 3pF.

It is constructed in a small screened case with a short probe tip and no IC socket, solder CA3046 direct to the PCB.



ROCK'S FISHING BOX

A pragmatic one watt station for 40 and 80 metres CW

By C.F. Rockey W9SCH

The rules for The Suitcase Competition, (Spring 1984 Sprat), specify that the rig shall be contained in a "suitcase, briefcase or other common object." Now, since every Wisconsin male, (and female too!), fishes, a "fishing box" is a common object indeed in these parts.

The box in reference is actually a metal tool box, measuring 5.5 x 5.5 x 12.5 inches. These are most often used for carrying reels, hooks, sinkers, lures and other piscatorial gear, (often also a bottle of "Kentucky Antifreeze" against dawn chills or a possible snake!). The box is equipped with a handle on the top for easy carrying and sometimes even an embossed inch scale for measuring the catch. Mine is made of sheet steel, (recommended for radio purposes), rather than the plastic ones now becoming common, but are inferior for this use.

The transmitter is built into the lower or main body part of the box. The receiver is built into the lid, (which, when open, forms a pan about 1.5 inches deep). There is room within the lid also to strap in two six volt lantern batteries, (I do not use these, rather I use my external regulated 12 volt supply on all my solid state gear). The rules also specify, "modern techniques". This rig is solid state which, I believe, satisfies these requirements.

I use, what Wes Hayward calls, "ugly construction" in this rig, rather than circuit boards. Not that I am against circuit boards, it is just that it does not fit my philosophy as it were. When I build a piece of ham gear, after deciding on basic objectives, I start with the oscillator and let it grow from there. Some people plan things down to the last detail before begining, but my small brain doesn't work well that way, (I guess I am what they call "aristotelian" rather than "caretesian" in these things). Furthermore, my method permits me to check the operation of each stage as completed. This is a big help in de-bugging, and is good for one's moral. In this rig I use the bottom (or inside top) itself for the common ground plane. Transistors and other "hot" items are supported in insulated tie strips. This makes a solid job and is attested by the fact that the rig may be dropped three feet onto a wooden floor without breaking anything loose; it will work perfect;y thereafter (my electronics students used to call this the "....ivity test". This rig has "....ivity".

The transmitter circuit is straight forwardand and seems to work as intended on both 40 and 80 metres with a minimum of fuss. Aside from basic orderliness, no attempt was made to either miniature or beautify the rig. There is no doubt that some of the latest tricks would improve things, but I did it my way!, and make no apology for this.

The schematics specify the types of trnsistors I would buy <u>if</u> I were to go out and buy them. But, in fact, I actually used such motley units as I had on hand, begged, bought and stolen over the years. Likewise, the other parts; very little is critical. I purposely avoid tricky circuits that require more than ordinary care in constructing or adjustment. This is a rig for us simple souls....

The receiver is a direct conversion job of the simplest sort. I admittedly stole the AF amplifier circuit from Sprat, probably G3OXX. The transistors used were salvaged from a discarded industrial control device and, aside from being NPN types, are otherwise unknown. But they seem to work well in this application, despite their questionable ancestory. Perhaps some people would require three audio stages, but we found two to be adequate when a good pair of magnetic high Z phones are used.

Not having IC chips to hand, and not wishing to buy any, (George Burt and his Scottish ancestory friends will understand this!), I first tried a simple diode mixer; it worked, just as old Papa Fessenden predicted in 1905, but was tricky, particularly with respect to oscillator injection. It also put out too much RF into the antenna in receive position, not good....so, we went to a junction FET; several arrangements were tried, but the one diagrammed seemed to be the best found. The oscilllator voltage is injected through a "gimmick", (Americans are fond of "gimmicks"), which is just a very small adjustable capacitor of a microfrarad or two. Twist two pieces of insulated hook up wire together until the sensitivity seems best, that´s all!

The transmitter produced one watt of clean, chirpless output on both 40 and 80 metres. This is genuine QRP, yet adequate for reasonably consistent results. Under good conditions we have had many long "rag chews" with one watt, and the signal strength still impressed those without QRP experience.

None essential features such as side-tone, SWR bridge, QSK etc., are not included as I do not find these necessary to my life style. (In "transmit" condition a soft hum is heard in the phones when the key is pressed, and this is sufficient for good sending, I find.)

The receiver permits you to hear almost anything you are normally likely to work with one watt input. Headphone volume is comfortable, (if you need more, add another AF stage). Indeed, the volume is equal to that experienced with those good old O-V-1 receivers that I grew up with. As with any simple receiver, the main selectivity is contained between your own ears. This is sufficient in my case; when the QRM is too bad, one watt hasn´t much chance anyway. I admit that at times those powerful BC stations on 40 metres butt in at night, but so they do on classier receivers too, (I avoid this by using 80 metres at night).

Considering its simplicity and low cost, this little rig was, for me, very much worth building; it might be so for you too, "´tis a gift to be simple...."

Notes on Parts Used, etc.

1. I used half or one watt carbon resistors as I had on hand, quarter watt units would do in most places.
2. Use "driftless" silver mica capacitors in criticial spots in the oscillaltor circuits. Other RF by-passes may be ceramic, or even old micas.
3. The VFO tuning capacitor must be air dielectric. Use a slow motion "vernier" dial on it for easy tuning. The driver and final amplifier tuning variables may be these little mica variable ones made by the Japanese for BC receiving tuning. Being about 350pF maximum capacitance, they cover both bands satisfactorily, 80 metres nearly full capaitance and 40 metres at about one third "in". The same is true of the receiving tuning capacitor, (these are still available on the market).
4. The toroids are some pre-wound things I picked up cheap at a ham "flea market". These measure between 6 and 7 microhenries. The small ones are half inch and the larger ones are three quarters of an inch outside diameter approximately. The small ones are wound full of (US guage) No. 26 enammeled wire and the large one wound full of No.22 wire. These are tapped where specified on the schematic diagram. Tap positions are not highly critical.
5. The oscillator coil is wound on a half inch iron slug former, half inch diameter. It is wound to a winding length of 9/16 inch with No.24 enammeled wire, tapped 1/6 of the way up from the earthy end.
6. The secondary windings on the driver and final amplifier coils are best set up by individual experiment to provide the best output, (the values I suggest are approximate and may not be the best in your case, they are for guidance only).

I use a simple 80 metre centred "Zepp" antenna, 25 feet high, and with this rig 200 to 500 mile contacts are routine with one watt, further on a good night.

ROCK'S FISHIN' BOX

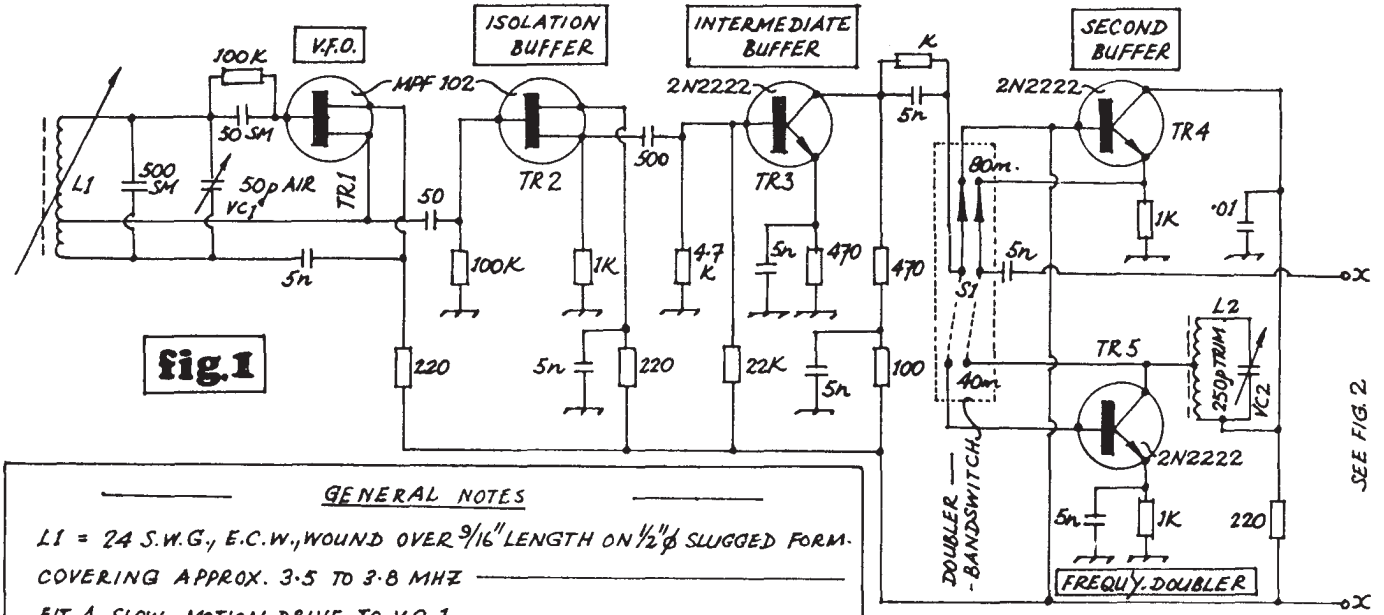


fig.1

GENERAL NOTES

L1 = 24 S.W.G., E.C.W., WOUND OVER 9/16" LENGTH ON ½"ϕ SLUGGED FORM. COVERING APPROX. 3·5 TO 3·8 MHZ

FIT A SLOW-MOTION DRIVE TO V.C.1

DOUBLER BANDSWITCH IS A 2-POLE, 2-WAY "KNIFE" TYPE

L2 IS A SMALL TOROID, C.T. WINDING. TUNE TO 7·1 MHZ, VIA V.C.2

• W9SCH •
ALBANY, WISCONSIN, U.S.A.

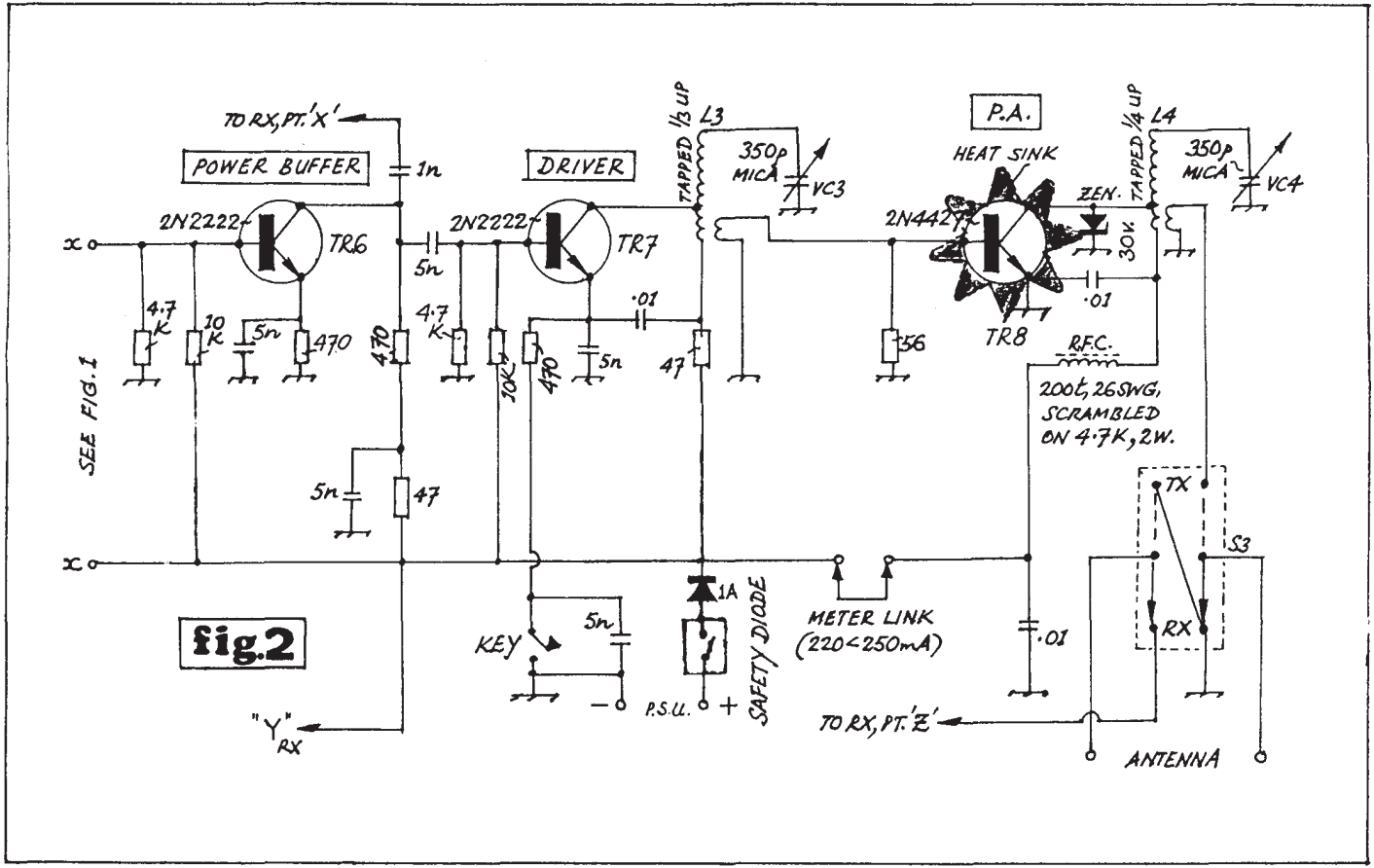
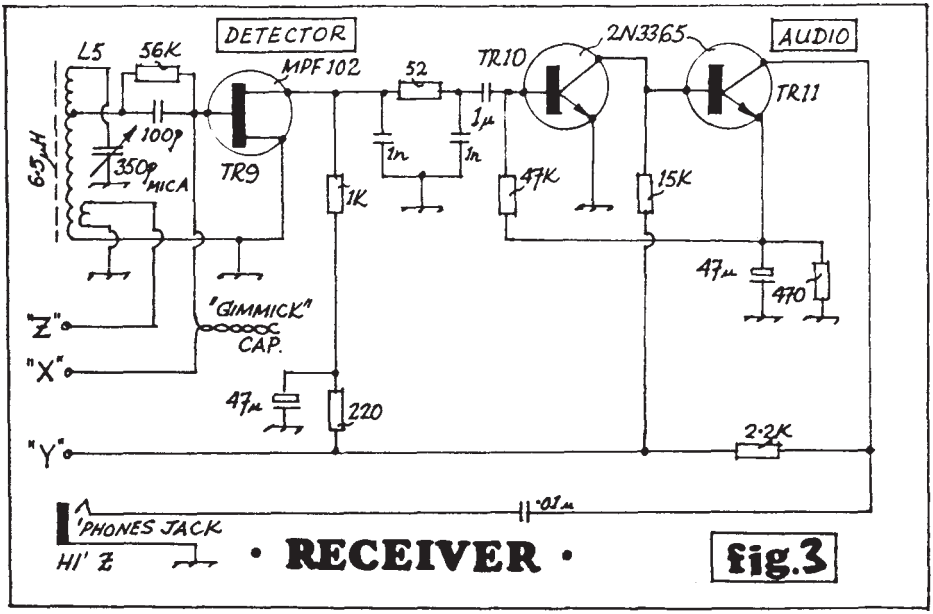

TO RX, PT. 'X'
POWER BUFFER
DRIVER
P.A.
1n
2N2222
TR6
2N2222
TR7
2N4427
TR8
TAPPED 1/3 UP
L3
350p MICA
VC3
HEAT SINK
ZEN.
30V.
TAPPED 1/4 UP
L4
350p MICA
VC4
SEE FIG. 1
4·7K
10K
5n
470
5n
4·7K
10K
470
5n
·01
47
56
·01
R.F.C.
200t, 26SWG, SCRAMBLED ON 4·7K, 2W.
5n
47
TX
S3
RX
1A
SAFETY DIODE
KEY
5n
METER LINK (220<250mA)
·01
P.S.U.
"Y" RX
TO RX, PT. 'Z'
ANTENNA

fig.2



FOR SALE: M/M Freq. Counter MMD50/500 ranges 0.45-500MHz in perfect cond. £50 or exchange for Imabic keyer. Tel:Stan 0254 40802 Blackburn

G3RJV is interested in tracking down a Ten-Tec RX10 Receiver. He has never seen one in the UK. Perhaps some member in the USA can help?

FOR SALE: Eddystone GC RX, 500KHz-30MHz, Good Condition. £55 ono
Trio-Kenwood PS20 PSU: 13.8v@4A. As new. £35
Contact G3BFR Tel: 04536 3994

FOR SALE OR EXCHANGE (prefer exchange) Drake 2B Receiver. Xtalled for 80-40-20-15-full 10m Bands. Converted for 160m. Plus Manual. Good condx.
Also: Yaesu FL50B TX Good Condx. Offers. Cash or Equipment.
WANTED 20m+80m transceiver ssb/cw. Anything considered, QRP/QRO commercial/homebrew/unmade kits etc. w.h.y. also 2M Transceiver as above.
WANTED URGENTLY: Any info on use/operation etc. of Racal 836 32MHz Frequency Counter. All mail answered.
Peter Hunter, 2 Huxley Close, Norwich, Norfolk. NR1 2JS.

WANTED: DSB80 - ring Charles Topham 01 640 6201

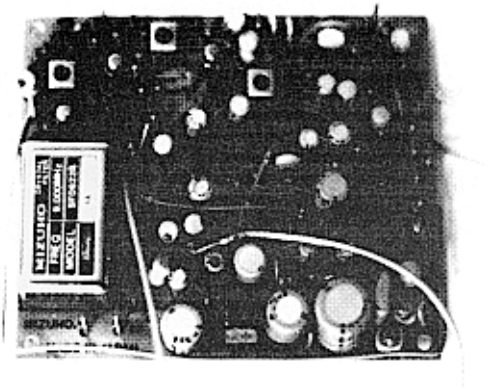
WANTED: Sony CRF320 Receiver - ring Frank Amoroso 061 743 1570

INFORMATION WANTED - TTL overtone osc to 250MHz - Direct Converion Rx for 2 metres for SSB - Mixers for use in 2m and 250MHz DC receivers
G8RSD c/o 37 Fordbrook Ave.Ealing Common,LONDON. W5.

THE HOT WATER HANDBOOK: In the SPRAT review of this book, the box number for Fred Bonavita was given wrongly as 12972, it is 12072.
This excellent little book of modification circuits for the HW8 transceiver is still available for the author at $6 surface mail, $7 airmal.
Fred Bonavita,W5QJM,PO Box 12072,Capitol Station,Austin,Texas.78711.USA.

JAMES RANKIN G4HKD Member 462.
We regret to announce the untimely death, at 34, of Jim, G4HKD. Jim was an early member of the club, a keen builder of equipment and an operator on 160m. Our sympathy goes to Carol, his wife,and to his two young children

A SIMPLE WAY TO CONSTRUCT A QRP SSB RIG



It is not often, these days that a surplus item appears on the market that is directly usable by Radio Amateurs. Well it has happened. G3RJV has been introduced to the MLX Board by KC5EV. This board , once used as the heart of a range of amateur band SSB Transceivers, is now surplus to manufacturers requirements.

What can they do? Well with a few extra bits of external circuitry, using standard and cheap components, the board forms all the hard work of building a complete QRP SSB/CW Transceiver. The single band version is very simple. G3RJV has tried several combinations of transceiver with the board and soon an article on the use of the board will appear in SHORT WAVE MAGAZINE and some circuit notes in SPRAT.

What will it cost? Well the club plans to obtain some boards from the USA for sale in the UK at £25 each. That is about the cost of the filter and bfo crystal on their own. So this is an advanced notice for members to obtain this useful and cheap little 9MHz IF SSB/CW transceive Board. There will be a delay in supplying the boards but if we get advanced orders, then the club can, with confidence get some over here.

So if you want to try this project, order a board now from G3RJV, for £25 plus 40p postage - cheques to "G QRP CLUB"

The board is only 4"x3½", so why not build yourself a compact SSB/CW Transceiver. Full circuit information is supplied with the boards, including their original application circuits.

Some pictures from the G4BUE summer QRP Party last year.

Leo, KC5EV and his wife Sharon surprised everyone,including Chris by turning up for the party from Texas.

After the party Leo and Sharon motored north for a couple of days at the G3RJV QTH

During the visit Leo passed on a sample MLX SSB Transceiver Board to G3RJV. This board, capable of making into a simple SSB rig will shortly be available in the UK

He's done it again! Yet another photograph of Colin, G3VTT, in SPRAT....

Pictured in the G4BUE shack, Colin holds up a novel QSL.

Honestly that really is what he his holding ! At least that is what he told his xyl.

....and it was for a real two way qrp qso.....

Still at the QRP Summer Party, a fine line-up of QRP Club members: l to r: Brian, G3SYC, Gerald, G3MCK and Tony, G4FAI.

Bob, G4JFN, cheerfully hands over his tenner for his copy of Ade Weiss' book THE JOY OF QRP. The book is still available in the UK from Norman, G4LQF - see page 27 in this issue of SPRAT.

THE AUTO KEYER

By Bev Branden G4TDU

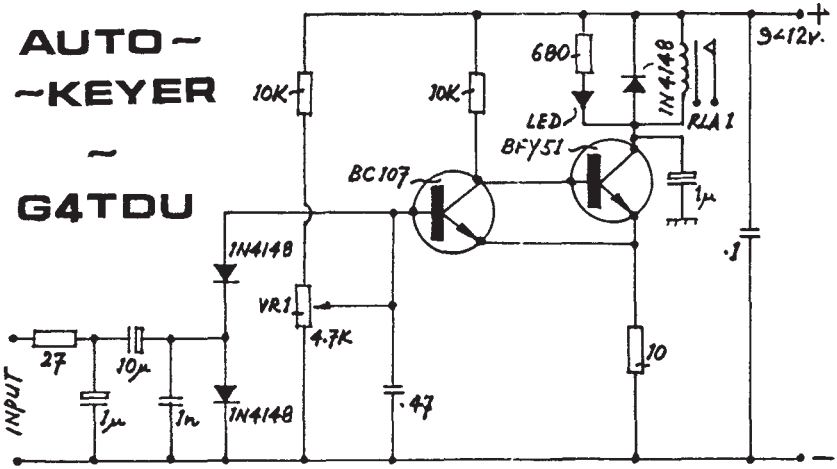
The circuit is based on the Schmitt Trissler principle. An audio tone from the earphone socket of an ordinary cassette recorder is AC coupled to D1 and D2. This produces a negative voltage on the base of TR1 when a tone is present. This negative voltage opposes the positive standing bias voltage on the base of TR1, and the transistor turns off.

This allows the collector voltage of TR1 to rise toward VCC, thus turning on TR2 which draws current via the relay coil, pulling in the relay. The current pasing through the 10 ohm resistor in the emitter circuit of TR2 creates a voltage at the emitter of TR2. This is then fed back to the emitter of TR1 to enhance the switching action.

When TR2 is on its collector voltage falls to about two volts. This fact is used to operate the keying LED.

RV1 is the standing bias control and is adjusted so that TR1 is turned fully on wihtout a tone being present.

Your CW recording is then played back and the volume adjusted for the minimum required for accurate keying.



AGCW-DL QRP/QRP PARTY

The above Contest is being held on 1 May from 1300 t0 1900z on 3530-3580 and 7010-7040 on CW only. Class A is 10W input or 5W out, and Class B is 20W in or 10W out. Exchange RST, QSO number and class, i.e. 579001/A. Scoring is 1 point per QSO with your own country, 2 for others, and double points for contacts with Class A stations. Multiplier is each DXCC country. Band score is points x multiplier and total score is both band scores added together. Logs to be submitted by 31 May to Wolfgang Kuhl, DL1DAL, Schultenstrasse 12, D-4780 LIPPSTADT, West Germany.

We regret to announce the death of Bill Cox, G3NJC (member 635). Bill was a keen CW operator on the HF bands and an avid builder of amateur radio equipment and radio controlled aircraft. Bill spent the last 50 years of his life in a special wheelchair designed by himself with his brother Tom. Bill will be missed by the local amateurs in the Doncaster area.

A MAGNETIC DELTA LOOP ANTENNA

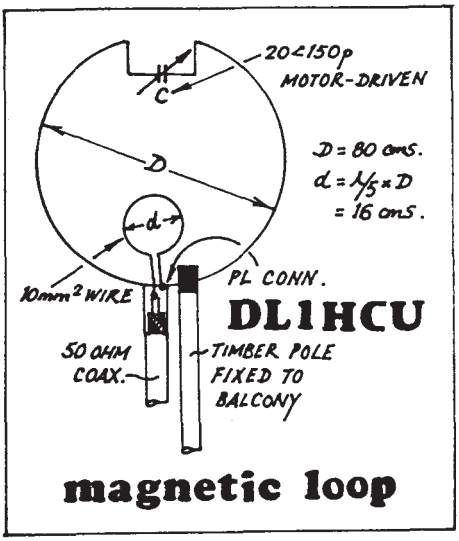
UDO VELTEN DL1HCU

The antenna is mounted on the balcony, about 2.5 metres above ground, near the wall of the house. It is doing a pretty good job even when used indoors. The diameter of only 80 cms is an important fact if you are not allowed to use wire antennas or beams of the normal size.

Resonance is given for the 21MHz and 14MHz bands. Other frequencies are possible and depend on the diameter of the loop and the capacitor. Note though to take care of high voltage at the capacitor when using a QRO rig. The voltage is greater than 1000 volts when the transmitter power is about 100 watts! This is one reason for the motor driven capacitor. The second reason is for easier tuning of the antenna. The bandwidth is very narrow and tuning must be as exact as possible. On the other hand there are no problems with harmonics, (TVI/BCI etc.).

When operating the motor drive the collector of the motor causes very much QRM. The signal strength on your 'S' meter, (or loudness), is a good indicator for the correct tuning, (tune for maximum QRM signal!). Operate the motor in small steps for minimum SWR to get optimal effectiveness. The motor speed should be less than two turns per minute.

Other matchings to that shown in the diagram are possible, but I had best success with the one shown.



ATTENTION MEMBERS IN THE USA !

When paying your club dues, please help us by not using cheques (checks!) We get a very bad exchange rate on these and we do want to continue with sending SPRAT Airmail. Please help us by paying by direct credit transfer, or better still, send us dollar bills. Whichever - please quote your membership number when paying.

DATA PROTECTION ACT

The membership records of the club are held on computer. This is to enable the mailing list and membership lists to be prepared more easily. Only information supplied by you on your application form in respect of your name, address, call sign and club number is stored. Details will only be supplied to other members of the club. To save the club having to register under the above Act it is necessary to ask members if they object to their details being included in the data base. If you object please notify the Membership Secretary, Chris Page G4BUE, and a separate card index will be used.

DL AGCW QRP CONTESTS

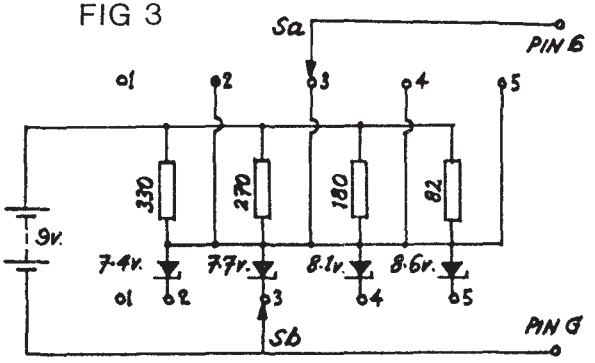
From 1.1.86 the power rule for the above contests will read:-

Class A	-	not exceeding 3.5 watts input or 2 watts output
Class B & C	-	not exceeding 10 watts input or 5 watts output

SWITCH POSITION -	POWER REDUCTION dB	POWER OUTPUT W
1	0	10
2	4	4
3	12	0·6
4	28	0·016
5	36	0·0025

(FROM 'RADIO ZS')

FIG 3



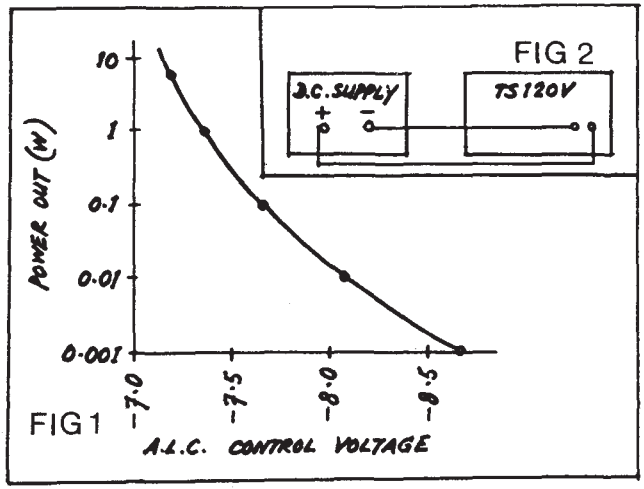


FIG 1

SIMPLE QRP WITH NO TEARS

WITH THE TS120/130

BRIAN AUSTIN
ZS6BKW

This short article describes a very simple add on unit for the Kenwood TS120/130 series of tranceivers, which enables one to reduce the output power in controlled steps, and so run QRP without any modifications to the equipment.

The principle involved is simply ALC - or automatic level control, except that the onset of ALC is set externally and so is adjustable. Shown in the diagram is a graph illustrating the power output from the TS120V over a range of DC voltages applied to the ALC line on its remote socket. Clearly from this graph one can select any reasonable number of points, say half power (-3dB), one tenth (-10dB) and maybe one hundredth (-20dB), and then by applying the indicated control voltage to the ALC line, achieve a most flexible QRP system.

The circuit diagram shows the general system in block diagram form. It is as simple as a suitably connected DC power supply, or, as in the other circuit diagram, an even simpler solution, based on a small 9 volt battery, a rotary switch and a handful of resistors and zener diodes.

The values used by thr author produce power reductions and output figures as shown in the table above. Notice that positions 4 and 5 yield powers which are less than 20mW. For those who have not yet experienced it, a QSO on SSB when you are only running 2.5mW gives this hobby a new lease of life.

D A N D E L I O N S E E D S I N T H E W I N D

By John Trent KL7DG

Alaska grows dandelions in profusion. These are tough hardy lawn weeds for gardeners, but remarkably hardy plants that survive the Arctic cold, emerge in the early spring even out of asphalt black top, and bloom early from ice thawed ground to herald planting time by their golden yellow blooms. These dandelions flower during the long summer sunlight hours of the far north and dot the green landscape like stars on an emerald field. At night they tuck their heads in sleep, as though triggered by a natural photo cell. Their rebirth is a miracle of propogation as their fluffy parachuted seeds are wafted by the winds of early autumn to distant plantings for future growings out of next years snow melt.

Like these dandelion seeds in the wind, from a puff of gentle breath is wafted a tiny radio signal of 5 watts from amateur radio station KL7DG in Anchorage, Alaska to distant parts of the globe on favourable winds of radio propogation. It is QRP. Not a 1000 watts, mind you, not even a 100 watts, nor as much as 10 watts, but a bare dandelion seed of five watts morse code emission from the top of the world to distant amateur radio stations wherever tides of radio propogation might favour. Like the challange of propogation itself of the seed in the wind was the challange of transmitting great distances with tiny amounts of power.

Why not an Alaskan Gold Pan Award to world-wide amateurs I mused one day, as I blew a ball of seeds from a dandelion stalk, why not a Gold Pan Award engraved by our renown Alaskan Engraver, Mr. Hegin. It would be awarded to the amateur in some distant shore who could copy and contact me the most times over the longest path in 1979.

My QRP Low Power Contest was opened on 3rd January 1979 with a contact between JH1WDN in Tokyo on 15 metres CW. The word was out and the contest had been kindled for 1979. By the end of 1979 more than 160 stations in the Far East had been in communication with that candle light power for peace and understanding from Anchorage.

These stations included 42 of the 47 perfectures in Japan. Good radio communications was made with amateurs using power from 1000 watts to less than 5 watts throughout Japan. Friendly contacts had been realised with more than 160 Far Eastern amateurs with a mere 5 watts of power from a low hung dipole antenna during a peak of radio propogation, plus the skill and dedication of the individual radio operators. The dandelion seed of KL7DG had truly taken root in those far away places.

The winner was Asob Mori, JF2BBF a 17 year old high scool senior of Nagoya, Japan. Asob, using only 20 watts with a diamond loop antenna, made ten separate QSOs throughout the year. His call sign and name were engraved on a gleaming gold pan.

Like the dandelion seeds of fortune, I used the benefit of retired military members to fly on "space available" military air flights to Yokoda, Japan from Anchorage on 26th February 1980 to bring my Alaskan Gold Pan Award to Asob in Nagoya. The adventure of that flight opened a miracle world of friendships for me that had been cultured through the contacts made by my tiny amateur radio station.

DE Ed. John says he continues to issue the award annually, so you members that like a challange.....

"AMATEUR RADIO" MAGAZINE QRP AWARDS

Awards are to be introduced for working 250 QRP stations, for working 250 different stations on two-way QRP, and a SWL award for hearing 250 QRP stations. For the full rules send a SAE to T. Morgan, GW4OXB, 1 Jersey St., Hafod, Swansea, SA1 2HF. Trevor is Club member 1454 and SWL columnist for "Amateur Radio".

John Beech, G8SEQ, 14 Hollow Crescent, Radford, Coventry, CV6 1NT.
(Tel: 0203.598186)

Judging by the amount of mail that I am getting, their seems to be quite an upsurge of interest in VHF, especially in home contruction. It is a pity that all licencees were not given access to 50MHz on February 1st. However, we can all listen, and here is a way of going about it for those who have a general cverage communications RX, (HRO, AR88 or similar), or a 21MHz amateur bands RX.

The circuit is a dual gate mosfet mixer, driven by a 27.145MHz crystal oscillator giving an output of 22.855MHz (50.0) to 23.355MHz (50.5) to the HRO, though obviously one can tune wider than this for receiving overseas beacons.

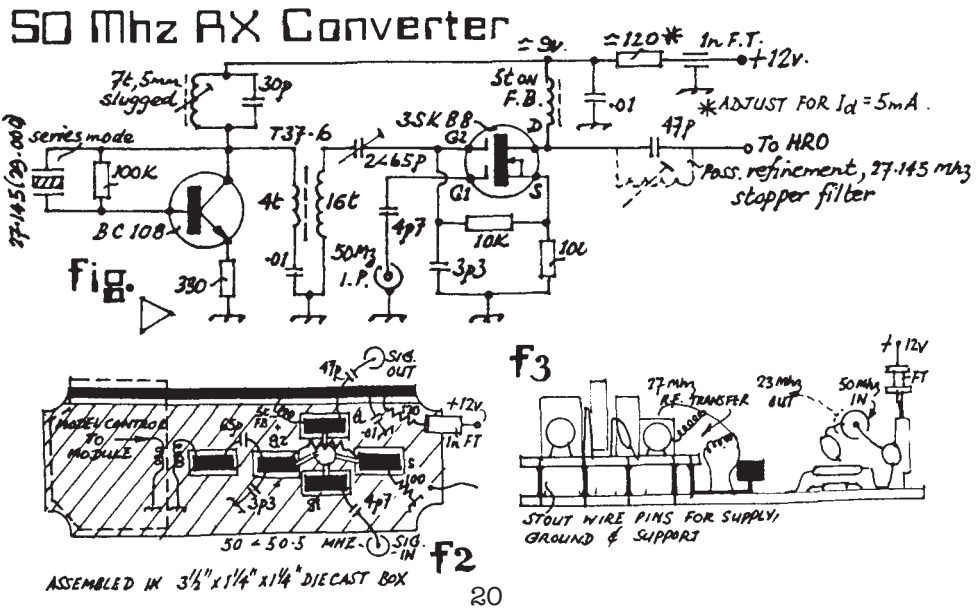
Most activity is currently centred around 50.1MHz (CW) and 50.2MHz (SSB). If you have an amateur bands only HF RX then you can use the same circuit with crystal changes. I only used 27.145 because I had several model control transmitter modules ready built to use as local oscillators.

At least one member is already active on 6 metres using the transmitter circuit on page 30 of "Solid State Design for the Radio Amateur". The member, (I'm sorry I've mislaid your name and call sign), used a 2N3553 in the output and says it went first go. I've got some similar transmitter designs borrowed from Japanese 49MHz cordless phones, which I am anglicizing and hope to publish in the next Sprat.

Incidentally, the above described converter is intended to be used with a tuned preamp, also using a 3SK88 mosfet. If you run it barefoot from an antenna it needs a 6MHz wavetrap or high pass RF filter to remove broadcast interference.

The 50Mhz band seems an ideal place for newcomers to VHF to start constructing on and excellent for QRP, with the promise of excellent DX at certain times of the year and good auroral propogation. Use of it may also encourage people to use that other much underused VHF band, 70MHz.

Finally, I would be most interested to hear reports from people who worked anyone in the recent aurora, (8/9th February). Apparently it was visible from the Midlands, though nobody told me about it until it was all over! (Monday).



S S B N E W S

By Ian Keyser G3ROO

"Rosemount", Church Whitfield, Dover, Kent. (Tel: 0304.821588)

Hi folks, I'm back! Sorry for the absence of the last three issues, not all my fault, once was forgetfulness, second time was the post - took a full week to get to Chris's QTH and so missed out, and the other time was just that I was feeling so lousey that I couldn't be bothered.

Firstly, may I thank all those of you who have written and phoned me with wishes of a speedy recovery....amateurs are a fantastic bunch, one normally hears stories of people not wanting to know when someone is ill, but with me I've made many more friends in the Dover area because of it and people I didn't even know phone up and offer lifts to functions....fantastic!

For those that don't know my balance has gone and my eyes have to do the work of my ears....That's fine until the brain (no comments please!) decides that it won't use that info and then I fall over! No driving, difficulty in walking so amateur radio and cooking now fill my life.

Shame you didn't pass more info on what's going on on the bands as I have absolutely nothing to report! I have been active on the key on the QRP frequencies and worked a lot of stations, but not much on SSB. The reason for this is not that I have lost interest, but more because I have not got a QRP SSB station at the moment. A new all band rig is being built with an output of about 15 watts PEP, so by the end of the summer you will hear me again.

Please write and give me any information, and I will give a fuller report in the next Sprat.

73's to all, Ian

T H E "B U E" M E M B E R S H I P L I S T

As a result of several suggestions from members I have produced an up to date membership list, containing call sign, club number and (in approximately 50% of cases) christian name. Facilities are provided for QSO and QSL so you can keep a record for the Club's Members Award.

It has been compiled by going back through my log book, QSLs, letters etc., and has been prepared with on my word processor. It will therefore be an easy matter to amend and keep up to date. If you are one of the members whose christian name is not on it, please let me know what it is so I can gradually make the list complete. I intend producing a new list every three months to coincide with the publication dates of Sprat, (end of March, June, September and December).

In addition to keeping an accurate record of who you have worked and QSLd, help make the QRP frequencies more friendly places by having members christian names to hand.

The price of the list is £1.50 post paid, (cheques to C. Page), or 3 US$ cash for overseas members, including airmail. Chris Page, G4BUE, "Alamosa", The Paddocks, UPPER BEEDING, Steyning, West Sussex, BN4 3JW.

ANNUAL LADDER

Samual, GM3RFR, has suggested an annual ladder for the number of countries worked when using 1, 0.75, 0.5, 0.1 and 0.01 watts. Will any members interested who are prepared to report quarterly <u>without fail</u> contact G8PG by letter, indicating whether they are interested in a CW ladder, SSB ladder, or both.

PROPOGATION NOTES

By Gus Taylor G8PG

Improvements in the solar flux and A Index produced excellent conditions for this part of the solar cycle during October and early November. Weekend operation with 3 watts at G8PG produced contacts on 14/21MHz with CT3, EA9, C5, UH, UI, UJ, UM, KP4 and many W/VE. Weekday operation added JT0. 7MHz was also excellent with W3 and UA9 worked. Ws were audible on the band before 1900 local time on occasions.

During the ARRL SS Contest many S9 Ws were audible on 3.5MHz, but sadly would only work each other. Owing to an ATU rebuild the main openings on 28MHz were missed, but on 11th December, what is believed to be a minor sporadic E opening to Sweden occurred, with SM signals audible from 1200 - 1430; one was worked.

The December sporadic E events are minor affairs compared to the summer, with sinals several S points down. Note that the winter MUF occurs at, or just after, noon, and 28MHz openings are most likely to occur at that time during the present phase of the sun spot cycle.

Monitor 21MHz just before noon. If fairly local signals, such as DL, SM etc are coming in well, then there is a good chance of a 28MHz opening, (provided anyone is on!). This method should also apply next winter, though openings may well be rarer then.

3.5MHz has also been showing typical low sunspot winter behaviour. It may not generally be realised that at this part of the sunspot cycle both 3.5MHz and 1.8MHz have a rather peculiar winter evening skip profile. Around sunset there are very good conditions to Western Europe from the UK. The first skip distance then increases greatly for several hours, (probably over 300 miles on 1.8MHz and 500 miles on 3.5MHz). Around 22-2300 hours the skip usually drops quite sharply, allowing inter UK working on 1.8MHz, and possibly on 3.5MHz, together with much better conditions to Europe on the latter band. Operation on 3.5MHz and 1.8MHz before one goes to bed can therefore pay off.

Once again these cnditions are likely to be repeated next Winter. Weak VKs have been heard around noon on 10MHz, and also weak Ws at that time and at local sunset, but the band has not been good. Careful monitoring of 5B4OG (1400-1500) did, however, produce a day when his signals were three points above normal, and a tail end call produced a QSO. The moral is obvious, if you can hit a day when the wanted DX station is very loud to you, your QRP signals may be audible to him.

QRP ARCI CONTEST/ACTIVITY PERIODS 1986

2.2.86	Winter Fireside SSB Sprint
19/20/4/86	Spring CW Contest
31.5.86	Hootowl CW Sprint
9.8.86	Summer Daze SSB Sprint
16.8.86	Novice Band CW Sprint
18/19.10.86	Fall CW Contest

Unfortunately, the information on the above events did not arrive in time for the Winter Sprat.

The Spring CW Contest follows the format of previous years. Full information is available in previous issues of Sprat or from the QRP ARCI Contest Manager Eugene Smith. KA5NLY , PO Box 55010, Little Rock, AR, 72225, USA. Rules for the other events are not yet available, but will be pulicised in the Summer Sprat if received in time.

COMMUNICATION AND AWARD NEWS

By Gus Taylor, G8PG, 37 Pickerill Rd., Greasby, Merseyside, L49 3ND

NEW MAJOR QRP ACTIVITY EVENT !!!

QRP SUMMER RAMBLE - 14 to 22 JUNE 1986

With the great success of the Winter Sports in mind, your Committee are introducing a summer activity event to be held annually from the Saturday before International QRP Day until the Sunday after. This year the dates are 14 to 22 June, (QRP Day is 17 June). Members are invited to be active around the QRP calling frequencies on all bands that are open during the above dates, and to submit logs to G8PG within 30 days of the event ending. There will be a number of merit certificates awarded, including those for best difficult location log and best small antenna log . If you enjoy the Winter Sports you cannot afford to miss the Ramble!

WINTER SPORTS 1985

Who says the bands are dead!!

With at least 21 countries active on QRP, 80 metres often sounding like a major contest, and DX being worked on HF, this was again a great success. GM3OXX made three two-wau QRP trans-Atantics on 14MHz, and we undertand another well known GM made it QRP/QRP with VU2. Sadly we have not yet seen his log. Going down, G4OKN worked QRP/QRP with YU3 on 3.5MHz when only using a half size G5RV. To tell the whole story would need a complete issue of SPRAT, but the main message is that everyone enjoyed themselves and made new friends. The G4DQP Trophy goes to GM3OXX, and Merit Certificates to G4JFN (runner up), G4OKN (best short antenna), EI4DZ (best difficult location) and OK2BMA (best EU). CU next year!

NEW QRP MASTERS

Congratulations to Pete G8JR, Leif SM7KWR and John FE6FZL/F6FZL on becoming QRP Masters. Well done lads! On a historical note, my first QSO with Pete was in 1938!

AWARD NEWS

Congratulation to the following on their Awards.

QRP WAC: EA3FHC (all on 28MHz during 1985!)

QRP Countries: 100 SM7KWE, EA2SN; 75 G8JR; 25 G4ASL, G4OJF, G3XJS (all 3.5MHz)

Worked G-QRP-Club: 380 GM3OXX; 280 G4JFN; 160 G4CQK; 80 G3XJS; 60 G4VGA, FE6FZL, G8JR; 40 G4OJF, G4INM, EA3FHC, GM4XQJ, G4PUU; 20 G4NBI, GM4OSS, GM4YLN.

Two-Way QRP: 30 SM7KWE; 20 G8JR, G4MIJ; 10 G4INM

More than 700 Awards of various types have now been issued by the Club.

CORRECTION TO 160m TRANSVERTER
(Sprat 45)

In the third paragraph 500uA should read "500mA".
In the last paragraph, 100uF should read "1000uF".
There were two omissions from the circuit diagram: The capacitor coupling the RF amp to the RX mixer is 1n, and the fixed capacitor across L2 is 180pF.

C H E L M S L E Y T R O P H Y 1 9 8 6

SSB/M DX WITH LESS THAN 10W PEP!

The first award of the Chelmsley Trophy goes to Bob Fowler, G3IQF, for a combination of CW/SSB work with a very restricted antenna from his fixed QTH, and /M SSB with less than 10 watts PEP and a G Whip. The outstanding QSO from his fixed QTH was on SSB on 7MHz with VE1. On 14MHz /M SSB produced contacts with CT2, UL7, VE, VP2E, VP2M and W. On 21MHz it raised EA6, KP4, W and 5B4. No DX was worked on 28MHz when /M, but 7 European countries were raised. Bob makes one very important point. With QRP and a whip mounted on the rear of the car, point the car in the direction you want to work, as radiation always seems best in the direction of the car body groundplane.

Runner-up was Brian, G4SXE, for an excellent log including lots of DX worked with 3 watts CW and 5 watts PEP SSB. Congratulations to both. The rules remain unchanged for this year and are as follows:-

Duration: From 1st January to 31st December each year.

Bands: Contacts may be made on all authorised bands between 1.8 and 28MHz.

Modes: CW and/or SSB

Power: CW - not exceeding 3.3 watts RF output (5 watts DC input).
SSB - not exceeding 10 watts PEP output.

Antenna:
(a) No antenna used shall exceed 35 feet (10 metres) in height above ground.
(b) No antenna shall exceed 132 feet in length.
(c) Entrants may change the antennas in use during the year, but at any given time not more than one horizontal and one vertical antenna shall be used.
(d) All antenna used shall consist of only a radiatior element without reflectors or director.

Logs: For each band used the log submitted will consist of:-
(a) A list of all DXCC countries contacted in alphabetical order of prefixes with below it figures showing the total number of DXCC countries contacted.
(b) A similar and separate list of all countries worked using two-way QRP.
(c) A note drawing attention to any contacts which, by virtue of very low power used, rarity or other reason, the entrant considers to be outstanding.

In addition a separate sheet shall be provided giving details of the transmitting, receiving and antenna equipment used during the year. Should any entrant consider that during the year he has done work of importance in the field of simple antenna design or propogation studies, a note briefly outlining such work should be included.

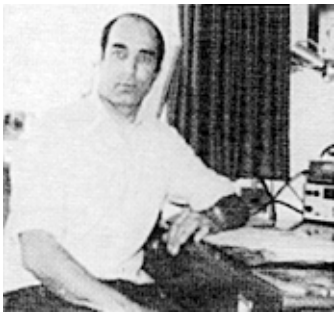
Submission of Entries: Entries must reach the Communications Manager by 15th February of the year after the contest year. Entries received after that date will be disqualified.

Awards: At the discretion of the Club Committee, the entrant submitting the most outstanding log will be awarded The Chelmsley Trophy for one year. The two runners-up will receive certificates of merit.

Disputes: In the event of any dispute regarding these rules, the decision of the Club Committee will be final.

Proof of Contact: If they wish, the Club Committee may ask for written proof of any contact.

Members News



Chris Page G4BUE

"Alamosa", The Paddocks, Upper Beeding,
Steyning, West Sussex, BN4 3JW.

The first thing you will notice about Members News *this time is a different print face. In keeping with* our policy of continuing to improve Sprat we are experimenting with smaller print. We are a litle concerned that it will be too small after it has been reduced and we don't want any members having to get glasses!, so we have experimented with it on these two pages only. Sprat is prepared on A4 paper and is reduced by our printer to A5. For the technically minded Sprat is produced on my word processor with a line length of 75, but this copy has a line length of 118, resulting in a great deal more text. If 118 is used for the whole of Sprat it would mean you getting about 40% more text in the same size magazine. More important it would only cost us the same to print and post as at present.

So, what do you think? Please let us know if you want the whole of Sprat done like this. One point though, if we use the smaller print face we will need more articles from you to fill up the extra space. Let's have that article from you. You don't have to be an artist or a journalist, we will do that for you, all we want is the basic information.

You will have read in the last Sprat that I have recently taken on the job of Membership Secretary. I would not have been able to do this had it not been for Cedric, G4JBL and Pat, G4UYA. They both live close to me and volunteered to help with the distribution of Sprat as a result of my request for assistance. On behalf of all the members, thanks a million Cedric and Pat.

Finally on the administration side I was hoping to be able to publicise the arrangements we have come to with the QRP ARCI of the USA for their members in the UK. Please bear with me, I shall be finalising the details when I meet the ARCI gang at the big Dayton Convention in Ohio in April, and will give details in the summer Sprat.

G4XYX, assisted by G4JFN, put on a QRP demonstration station at his local rally using the call sign GB4LP. Several members were worked, and Phil has been invited back again this year. He is open for DX CW skeds for evenings of 9th and 10th August. Phil makes an interesting comment that only QRO phone operators seem to find the conditions poor. He has noticed lots of active QRP stations working DX. Phil himself has worked W3, CE and UA9 on 40 metres with a vertical. It is centre loaded and fed against a counterpoise which he moves around in the required direction. He says that east coast USA stations are now easy to QSO and W6's a bit of a struggle! Previously with his dipole, the east coast stations were a struggle!!

Just to prove what Phil was saying about active QRPers working the DX despite the bad conditions, several members report an excellent opening on 21MHz at the end of November. *G4EBO made QSOs with W1FMR and KA1GPG and F9YZ worked* HC8 and 3XO for two new ones. Congratulations to Jacques on his second placing in the QRP section of the 1985 ARRL CW Contest behind C6AAA. G3KJC, on hearing the band open to the USA, lashed up a quick VXO rig and worked a W2 in NJ with 500mW. G3XJS sends a summary of his first years QRP activity with homebrew rigs, over 600 QSOs including 203 members. Using an inverted vee W3DZZ on 80 metres, Peter has worked 47 DXCC on the band.

G4KRN was hoping to be QRV from Jersey at the end of December and through January as GJ4KRN with a homebrew transmitter on 20 and 40 metres. Another member who has been travelling is GOBQF/HB9ANW, who took his HW7 to VK and ZL. Dick worked UAO from Perth over a distance of 10000kms with 1 watt output on 20 metres with an inverted vee at 22 feet. He was impressed by the on the spot issue of a reciprical licence and the complete absence of QRM, even on 40 metres. G4ASL was QRV from Komorov, Poland as SO5ASL over Christmas and the New Year. Steve was using a JLD TCVR and made 20 DXCC on 20 metres with 1 watt, including member G4MQC. He says the unusual prefix usually resulted in replies to his CQ calls.

Members have been busy building through the winter months. G3YCC has built a *160 SSB TCVR, a 20 metre SSB TCVR, and a* transverter for 160 - 30 metres. Frank has also made a 160 metre Z match ATU and SWR bridge. G3ICH has been building the G3YCC TCVR from Sprat 43 and has had plenty of QSOs with it. Pete is using a different PA to Frank's design. G4PUU has built the QRP Universal TX into a tobacco tin. Cyril is now using the W1FMR Bobtail antenna. KH6CP is working on a simple balanced JFET DC RX to get a lower noise figure than is obtainable with simple DBM diode mixer designs. EA3FHC has built the Fag Box(o) and finds it works well. Mike says the only problem in using it like a spy is that he doesn't like smoking! Mike mentions that he will be monitoring 28060 between 12 and 1400 daily throughout the year. During 1985 he made WAC and 61 DXCC with one watt on the band. He made over 200 QSOs with UK amateurs and, (to prove Club members are not checking the band), only one was with a member!

6 metres is causing some interest amongst members. G3YYF has built a converter and is now changing his 4 metre transverter over to 6. So far Reg has had no joy but hopes to solve the problems in due course or "hit the whole lot with a large hammer"!! G4CIB has also been listening on the band and is now building a simple xtal controlled TX. Brian dabbles on 70 Cms and 2 metres, and his most recent project is a wideband FM 10GHz rig using a surplus burglar alarm head. No doubt this will bring back memories of GM3OXX before his QRP days.

G3ZPN is building the Micron and G0BZL the Howes 80 metre receiver. The favourite rig at the moment though is the Oner transmitter, described in the last Sprat. GM4XQJ is making QSOs on 20 metres, even with the reduced power level on that band. G4KKI manages to get 400mW out of his on 21MHz, and G3DOP is turning his into a TCVR for /P use, adding that he hopes the inventor approves....George? Stewart, GM4UTP combined two of the articles in the last Sprat by building his Oner into a cigarette packet. G4INM built his Oner on New Years Day and by the begining of February had worked 11 DXCC on 40 metres with it. Tom has built another for 80 metres. On a different tact he mentions that it is a pity the RSGB have moved their HF Convention from London to Oxford. This has left an absence of big rallies in the south east and no where for QRPers to meet each other. This leads me nicely into a plug for my annual QRP summer party, the object of which is to enable members to meet each other. Details are mentioned elsewhere in Sprat, but just to mention here that it is on Saturday 26th July and everyone is welcome.

Reports of QRP activity from the other side of the world make ineresting reading. KH6CP found an opening on 10 metres in the CQ SSB Contest at the end of October. Zack was able to run VK/JA stations for an hour. He worked VK9 and KL7 on two-way QRP, and met Bob, W6SKQ on his recent visit to Hawaii. AI2H has been posted to the Misawa AFB in Japan with the US Air Force. Barry is hoping to get a JA call and will be monitoring 14060. 5N9GOM has built the OXO and worked TR8IC with it. Yeni likes it for three reasons; it is small, uses batteries and above all, gives him QSOs. DJ3KK, who has been using QRP for over 30 years, suggests going up to 3570-75 when the 3560 QRM gets too bad. Fred says his QTH is 80 Kms north of Hamburg and he has to struggle with the Danish fishing boat QRM around 3560. G3BFR is another who mentions the QRM on 3560.

So you think you have got a difficult QTH and struggle to work QRP? Spare a thought for G3SB who says he is giving up working QRP from his home QTH. During the Winter Sports Chas struggled to make three QSOs in four days. He took the same gear and antenna to the top of the hill overlooking his home and worked three stations in half an hour, only going QRT when he got too cold in the car! Chas says he gets better results with his three watts and a whip from the car than 150 watts and a dipole from his home QTH. The offending hill is 1000 feet high and full of iron oxide. Imagine the frustrations of being given a 319 report on 80 metres from a station 25 miles away, together with the comment "expect ur using QRP?" Only trouble was Chas was using 150 watts!! We look forward to working you /P in the summer months Chas when it gets a bit warmer.

(To give you some idea of the extra text available with the smaller print, this is where the end of Members News would have come with the previous type.) G4ELZ is QRV on RTTY with three watts output on all bands. Jeff is using a Creed 444 and a ST5 terminal unit. G6MXL is playing with FSTV on 70 Cms with 200mW QRP, as well as phone on the same band and 2 metres. G4GOF asks if members have any information on the effects of HF radiation from amateur radio equipment on the functioning of heart pacemakers. Jesse wants the information for Guys Hospital having just been fitted with a pacemaker himself. I'm sure Jesse won't mind me telling members that he is 77 years old, suffers from chronic emphysina, is hard of hearing, has failing eyesight but is still cheerful and active on the bands. WB2EUF is another member who has recently had hospital treatment. Ken is working on new designs to use in his all homebrew station while recovering at home.

WA1MAC has built a JU-10 (with some options!), and the FOXX and has just put up a G5RV after Hurrican Gloria took down his previous antennas. Paul tells me to ask the members of The Shoreline ARC to get off their duffs, (that's a new one!), and start building. So guys, off your duffs.....G4RVW is back on the air having traced an offending capacitor in his DSB80 which has kept him off the air recently. G4GDR is now using an HW8, and G4OKN is having great fun making his FT101z play ball with three watts. Ron has a new 500mW QRP transmitter on the work bench so the 101's days are numbered. G0BOP, (who has been known as "Bright Old Penny"), has got the PW Teme to work at the second attempt but can only get 1.5 watts out of it. Francis has also built the Howes CTX80, and says it is a nice kit doing everything it claims. G4KKI is also building the Teme, but into one case. Bill would like to hear from members using the FRG7 receiver with simple home made transmitters.

The Winter Sports is reported elsewhere by Gus, but several members wrote to say how much they enjoyed it. EI4DZ spanned the UK on QRP by working GM3RFR in Shetland and GJ2FMV in Jersey. Rumour has it that the member who worked the VU2 on two-way QRP mentioned in Gus's report was GM4HBG. I7CCF reports 48 QSOs and meeting many old friends on 20 metres. Felix also worked WB2RZU and UB5UIZ on two-way QRP. Chris, GM4YLN runs a Micron to a 250ft long wire and enjoyed the Winter Sports, despite being only a quarter of a mile away from GM3OXX!!

GW3ATM has sent further information on the 10MHz QSO with VK using his OXO, reported in the last Members News. Doug describes it as the best QSO in 40 years of amateur radio. The 850mW from the OXO went to a 132 feet end fed Zepp at 25 feet which runs parallel to a 400Kv power line about 100 yards away. Evidently, after the QSO, Doug came downstairs from the shack in such an excited state that his wife was afraid his health would be affected!

G4OQD is QRV on 80 metres with an all home brew station. Derek is using a DC receiver and 500mW. ON4KAR says that in Namur QRP is considered as a novice activity. Needless to say Rene is trying to prove that fine QSOs and DX can be obtained with no more than three watts. He finds his OXO built into a beer can helps! G3DOP is still using his JU6 and worked 67 stations on 20 metres in the CQ CW Contest. John has used the JU6 on all bands from 7 to 28MHz, but says the most suspect band is 24MHz.

GM3OXX worked 13 USA stations and a VE on 80 metres during the CQ CW Contest. George has suggested some 80 metre activity periods after the success of the Winter Sports. See elsewhere in Sprat for details of the new Summer Ramble, but members are reminded that 2000 local time onwards on Wednesday evenings on 3560 is still a suggested activity period. The ARCI gang have the first week-end of each month as an activity period, so let's try the same. Throughout the summer make a special effort to be active on the QRP frequencies on the first week-end of each month, and let me know what you think about it. As conditions improve we should come across ARCI members on the HF bands.

GM4XQJ worked SM5CCT on 10MHz and says that Ben is always looking for members on that band. Brian himself will be QRV from EA6 during the first two weeks of July and is building a /P rig for 20 metres. Watch for him on 14030,50 and 60. W3TS has been working on a new suitcase set covering 80, 40 and 20 metres. It will have 15 watts output and have the PSU, ATU and keyer all built into it. Mike has been finding out more about WWII suitcase sets and related items. He would like to hear from members with a similar interest and from anyone who has a schematic for the MCR RX. Mike hinted that he may try and make a trip to the UK this summer.

Roy, G3KJC has been trying milliwatting on 80 metres around breakfast time when the band is quiet. He is using a low rectangular loop fed with open wire feeder, and his best QSO is with G4JRE at 50mW. G4WGY tells me she has found a crowd of new friends on LF after being QRV on 2 metres. 80 metres CW is Sue's favourite spot, when she can get away from running the newsagents with her husband.

Even with the smaller print face I have gone over my usual two pages, sorry George. By the way members often ask me for back copies of Sprat, and at the moment I have spares of 44 and 45 which are available for 50p each, (cheques to G-QRP-C). That clears the files. With visits to the NEC and Dayton coming up before the next issue I should have plenty to write about, but please, let me know how your spring goes, by 10th of May please.

73, Chris

MEMBERS ADS

RAE CORRESPONDENCE COURSE Following his recent complete revision of their RAE Course No. 1055, the Rapids Result College have appointed Gus Taylor, G8PG as Course Tutor. Members or friends interested in the course should write to the college at 27/37 St. George's Road, London SW19 4DS for further details.

FOR SALE Argonaut 509, with matching PSU, 208 CW filter and manual. Clean condition. Best offer over £275. Chris Page, G4BUE, 0903.814594 or "Alamosa", The Paddocks, Upper Beeding, Steyning, West Sussex, BN4 3JW.

DIFFICULTY IN GETTING THOSE COMPONENTS FOR YOUR QRP PROJECTS ?

WE NOW HAVE A SOURCE OF COMPONENTS DEDICATED TO OUR NEEDS.....

John, G4KJJ (no.927) has launched a company to supply components, kits, and other construction requirements. John will stock a range of brand new components which will provide the main stock. In addition supply of redundant electronics items from auctions etc. will be offered from time to time.

SEND A SELF ADDRESSED, STAMPED ENVELOPE (9"x4") FOR A LIST/ORDER FORM:

CAMBRIDGE QRP COMPONENTS, KORTEN BUILDING, THE GREEN, HISTON, CAMBRIDGE. CB4 5JA. TEL: HISTON 2369.

CRYSTALS

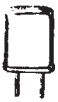
MADE to ORDER

Any frequency 2 to 125 MHz

Standard Service (4 - 5 weeks) from £8.00 each (inc)
Economy Service (14 - 16 weeks) from £5.00 each (inc)

FILTERS Crystal, Monolithic, Ceramic, Mechanical on 455 kHz, 9.0 MHz, 10.7 MHz, 21.4 MHz.

10.695 MHz 2-pole monolithics , HC18/U, 7 kHz Bandwidth, Make a big improvement to most CB rigs (whether modified or not). £4.50



SPECIAL "SPRAT" OFFER to G-QRP CLUB Members.
QRP Calling Channels. HC25/U. Price £3.50 each (inc).
3560, 7030, 10106, 14060 kHz, Fundamental, 20 ppm.
21060, 28060, 28080 khz, 3rd Overtone. (Fundamentals will be available later).
14030, 14040, 14050 kHz, also in stock now. All 30 pF.

Useful wire-ended MPU crystals that are in, or will multiply to, amateur bands 1843.2, 3579.5, 3686.4, 5068.8, 14218, 14318.8 kHz. Plus useful markers:- 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 10.7, 11, 12, 14, 15, 16, 18, 20, 24, MHz. Special Offer Price £2.25 each (inc). Minimum order 2 crystals.

-- All prices include VAT and UK postage. Overseas Please include an extra £ --

P. R. GOLLEDGE ELECTRONICS

MERRIOTT, SOMERSET, TA16 5NS G3EDW Ex-VQ2W Tel: 0460 73718

DC30P Kit Offer Double sided PCB and construction notes £6. Kit of parts less box, £35, full kit £40. These prices include U.K. postage and packing. Overseas members, please write for price quote. Also available DC40P and DC80P at same price. Three band kit covering 80, 40 and 30 metres, £55, full kit only.
Send orders to John Beech, G8SEQ, 14 Hollow Crescent, Radford, Coventry. CV6 1NT.