

SPRAT

THE JOURNAL OF THE G-QRP CLUB
DEVOTED TO LOW POWER COMMUNICATION

ISSUE NR. 31

© G-QRP CLUB

Summer 1982



THE FINE HOMEMADE STATION OF CLAUDIO STENTA IV3ESX (396)

SPECIAL 10MHz ISSUE

DJ1ZB 10MHz VXO Transmitter

'Scotsman's' Dream 10MHz Transverter

G3IGU 10MHz Transceiver

'ROO' 10MHz Receiver

Quickie 10MHz Converter

PLUS:

QRP4 Transceiver 3 Band Mini Groundplane

15m Monoband Yagi

QRP - Members - Award NEWS



Rev. George Dobbs
G3RJV
17. Aspen Drive,
Chelmsley Wood,
Birmingham.
B37 7QX. 021-770
5918

Dear Member,

Not much room in this issue for 'RJV words of wisdom - thankfully ! May I draw your attention to the new range of club badges etc, a service that some members have requested for a long time. The G QRP CIRCUIT HANDBOOK is still in preparation, it is being printed through a government training scheme and hence most proceed at their pace, but completion is expected mid to late summer. Some members will have seen a mock up of the book at the RSGB Convention.

Several good entries have been made for the G3RJV 20/20 Trophy and the first of these will appear in SPRAT after the closing date in September. Everyone who has entered so far tells me what an enjoyable challenge it has been. (Rules Autumn 1981 issue of SPRAT)

Hpe to CU QRP 73 FER NW.

George G3RJV.

Subscriptions

Renewal (Rates now £3.50 or \$9 US) to Alan Lake, G4DVW, 7 Middleton Cl. Nuthall, Nottingham. NG16 1BX. PLEASE QUOTE MEMBERSHIP NUMBER. Cheques to 'G QRP CLUB'. European members may use Giro Cheques. A reminder will automatically be stamped in sequence onto copies of SPRAT, if you have already paid ignore this notice.

Due 121-154, 223-232, 293-325, 419-444, 573-615, 833-890, 1158-1209

Overdue 91-120, 201-222, 272-292, 393-418, 522-572, 772-833, 1082-1157.

SUBSCRIPTIONS: A Note from Allan, G4DVW, our Treasurer.

There seems to be a little confusion about the payment of subs so I feel a few words of explanation might be helpful.

Ever since the club was first founded, about 7 years ago, membership entry dates have been grouped into 4 monthly periods - marked by publication of SPRAT. Your annual payments are due when that particular quarter comes round again.

A 'reminder' stamp will automatically appear on your SPRAT at that time - if you have already paid don't worry: ignore the stamp. If, on the other hand you are due -----!

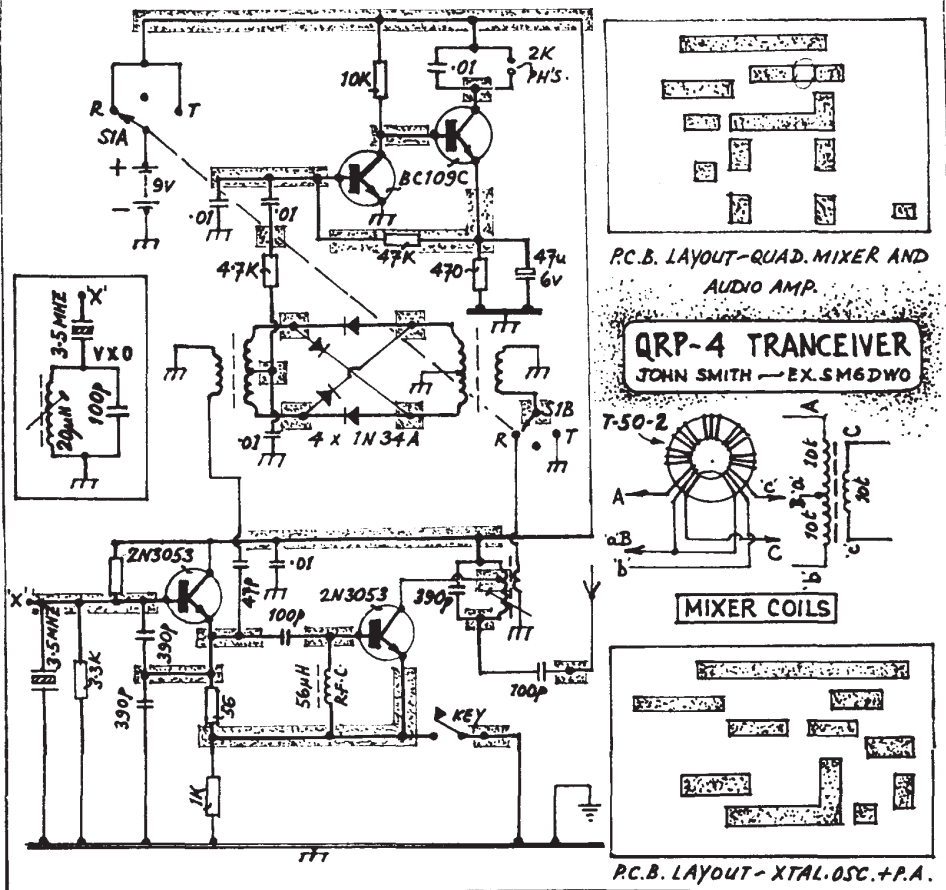
If you are more than 3 months in arrears then a personal reminder is sent with your next SPRAT - followed by a final reminder in due course. Please try to avoid these - it causes a lot of work!

With over 1300 members now enrolled we must admit to the occasional hiccup - not very many I'm pleased to say! It helps to avoid them and saves time if you ALWAYS quote your membership number when you write in. (Forgotten it? - Its on your SPRAT address label!)

Your letters are always appreciated. I'm sorry that there just isn't time to reply to everyone, Much as I would like to.

Having said all that, I must admit that a lot (Most?) of the donkey work is done by my wife. I know that several of you who have 'phoned with a query about subs, QSL cards, Books etc. have been a bit surprised to find that Eileen knows all about it! (Not to be confused with my daughter who can be guaranteed to get her wires crossed!)

Note that all cheques should be made out to G QRP CLUB, this includes cheques to G3VIT for datasheet handling costs and all club items offered for sale.



A very compact PCB version of the little transceiver by SM6DWO featured in the January 1981 Radio Communication. John used components more readily available in The U.K., with a simple top mounting PCB layout.

The original Pat Hawker, Technical Topics, article states "Now from Sweden (Hans Linstrom, SM6DWO, in The Swedish QTC Nr. 9 1980) comes another mini rig. This uses two transistors as a two stage crystal controlled (or VXO) transmitter, which also fulfills the local oscillator requirement for the DC receiver based on a homemade doubly balanced quad mixer with a two transistor AF amplifier. Despite the simplicity, SM6DWO reports that he has had some 100 contacts at distances up to 850Kms on 3.5MHz using a 42 metres long wire antenna."

Club Offer -

THANKS TO THE KINDNESS OF GM3RKO WE ARE ABLE TO OFFER THE FOLLOWING FOR MEMBERS:
 1 MHz CRYSTALS (plus a few on 150KHz) at 50p each plus a strong S.E.A. FROM
 Colin Turner, G3VTT, 'Hurley' Weaving Street, Maidstone, Kent. (Cheques: G QRP CLUB)

We regret to announce the death of Lionel Furness G4JLL (860) whilst on holiday in Wales last year. Our sympathies go to Joan, his xyl.

Brian, G3SYC, has informed us of the death of Brian Hick, G8BVH (639) He was in his early forties and died suddenly. G8BVH was a keen member of the local Pontefract Amateur Radio Society.

3-BAND MINI GROUND PLANE - G3MPW

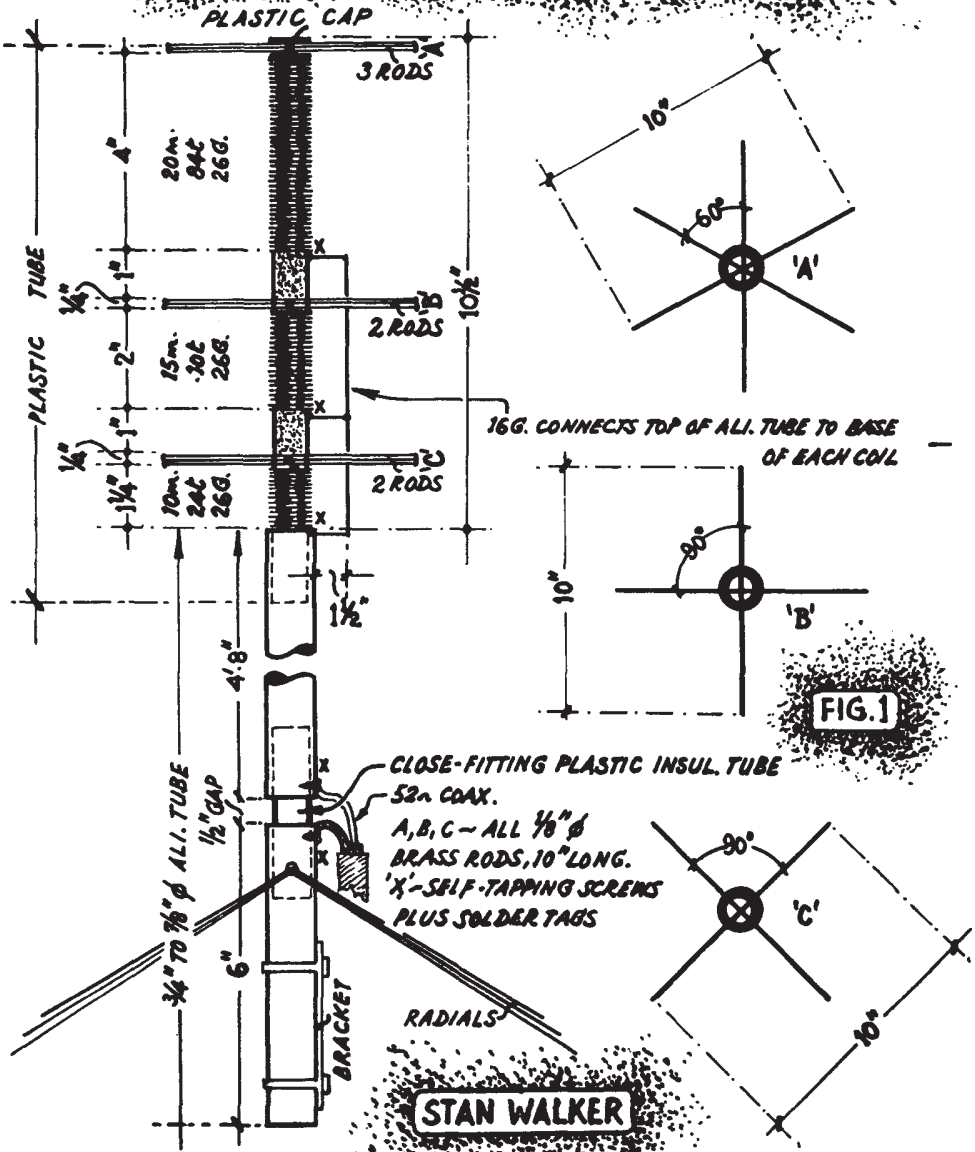
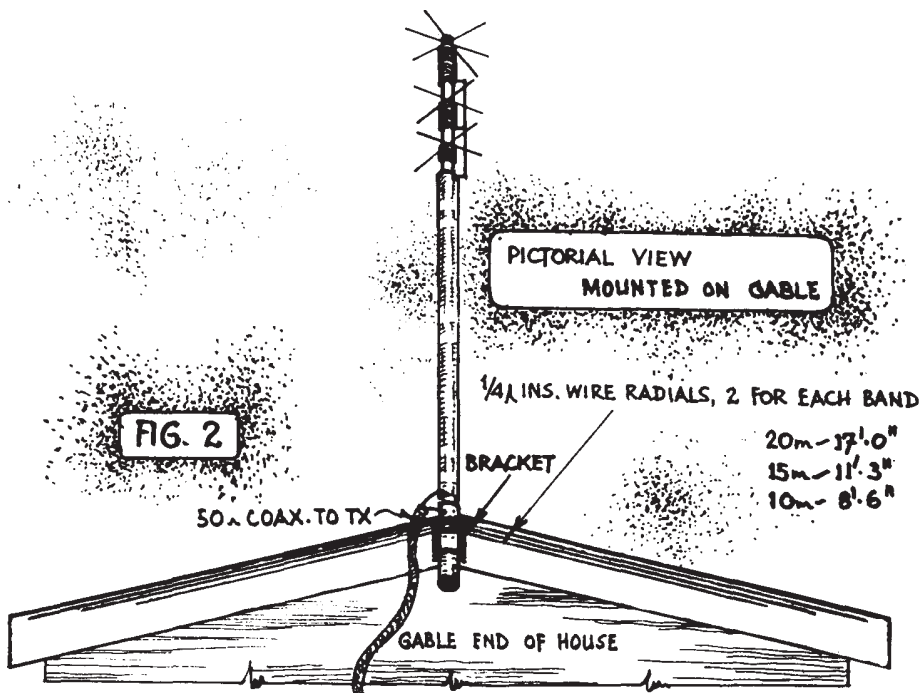


FIG. 1

NOT TO SCALE

An antenna was wanted that would meet the following requirements:- 1. Operate on the three HF bands. 2. Be self selecting. 3. Mount on the gable end of the house, and 4. Be inconspicuous.



A trap vertical was considered but they all looked too large. After looking at articles on miniature antennas it was decided to build a three band ground plane with top loading to reduce the length of the vertical element (similar to that based on a number of commercial beams).

Material at hand was some 1/4 inch OD aluminium tube and some 1/2 inch diameter plastic water pipe was found that would fit neatly into the aluminium tube. The plastic tube was used for the loading coil former and also the insulation between the vertical top section and the base. The capacity hats were made from scrap pieces of 1/8 inch diameter brass brazing rod. I think you will find the two construction drawings self explanatory.

When the antenna had been constructed it was mounted on a ground post with the radials laid on the ground. The antenna was resonated for the required part of each band by opening or closing the turns on the loading coils. (Adjusting one coil does not effect the setting of the other coils.) It is recommended that this be done with a noise bridge and an accurate general coverage receiver. When all three coils have been adjusted they were sprayed with "Damp Start" to lock the turns and keep out moisture.

A suitable method of determining the resonant frequency would be to place a single turn loop when the coax is connected and use a grid dip meter. Another method is trial and error with a SWR meter in line and adjust until the SWR is at a minimum in the centre of each band. An antenna noise bridge would also serve this purpose. The current in the coils is low and only a light gauge of wire is required. It is important that there is spacing between turns and the wire is enamel covered.

The antenna was first tried on the ground mounting post and some interesting DX contacts were made. Good SSB contacts with an Argonaut 515 have been made with the antenna at ground level, including 3B8AE/P.

The antenna was subsequently fitted on the gable end as shown in the drawing and it is interesting to note that there was no change in resonant frequency.

The vertical section is only 5' 6" tall and is smaller than a TV antenna. The radials can be hidden from view or laid on the roof

QRP Success From an Impossible Location

G4GJW



When the call G4GJW was obtained in 1977 there only remained one small problem - how do you get a QRP signal out from a first floor flat in a large building located on a busy London street? The answer proved to be a "Joystick" antenna, a "Joymatch" ATU and a Joystick artificial earth. As the shack also serves as my bedroom the JS was placed vertically against the window frame and the artificial earth was fixed to the skirting board. After initial work with a 10w tube TX covering 160 and 80m real QRP was begun with a Heathkit HW8. This was very carefully constructed, one or two sub-standard components being rejected and replaced by Heathkit without argument. A PSU/AF amplifier and a G3RJV swr bridge were also constructed. By March 1979 all was ready, and the first QRP contact was made, UK7QB giving me a 559 report on 40m. The HW8 was an immediate success when used with the JS, the 15m results being particularly good ; all Europe and European USSR were worked, and KLZDI in N.H. proved the trans-Atlantic capability by giving a 549 report. Later SSB was added in the shape of an Argo which provided many 10 and 15m contacts with the USSR and the USA ; reports averaged 56, but 59 was received from W4 on one occasion. In the spring of 1980 cw operation re-commenced, using the HW8, and since then, by choice, all hf contacts have been on cw. So far 28 countries in 3 continents have been worked, and the basic QRP Countries Award has been obtained together with the 1000 Miles Per Watt Award, the latter for a contact with WD4PSQ in Florida. Despite the crowded location no TVI complaints have ever been received - another strong reason in favour of QRP ! Sadly, TVI in reverse is often a problem, particularly in the evenings. So, despite what appears to be an "impossible" location, precise netting and careful listening provides regular QSOs with European, USSR and East Coast W stations using 3w input. It is hoped that this report will serve as encouragement to other amateurs in similar circumstances.
(And there are those who say you need a beam to get out with 150w! Ed.)

PLEASE NOTE: On the diagram for the GM30XX Transverter (SPRAT 28) the transmit mixer may appear to have the G2 of the dual gate MOSFET joined to the source resistor. In some copies of SPRAT the reduction of the drawing for printing makes the 'hump' appear as a dot.

WANTED: 128 Set, complete with sack, phones, key, leads etc. John S. Smith
G4KJJ, Wilslow 531058.

HELP WANTED: Gosta Kallensand, Styvingevagen 4A, 3tr, S-591 34 Motala, Sweden, a club member runs a shortwave listening group for children and would like to buy one or two R1155 receivers. Any members who have ideas for obtaining these receivers are invited to contact Gosta.

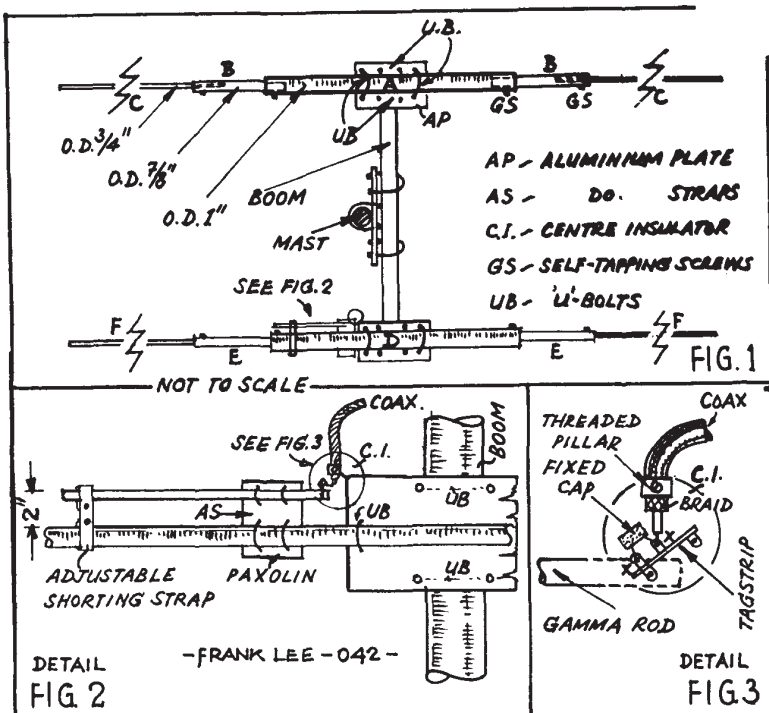
URGENTLY REQUIRED: QRP rig - HW8, Argo 509 or any cw rig by Daibhidh Dhuglas,
Flat 8, 1 Crown Gdns-GLASGOW.GL12 9HJ (GM4ELV)

FOR SALE: MMA144V 2m Preamp. £23. D.J.Robinson, G4FRE, 19 Bostock Rd. Ipswich. Suffolk.

15 Metre
Monoband
Yagi

Frank
Lee

G3YCC



This beam is based on that described in The 1972 A.R.R.L. Handbook, pages 606-608. The aluminium tubing I used was different from that described, and the gamma capacitor is a fixed value, in a sealed insulated junction box (ex TV antenna). The result is a compact beam weighing less than 10lbs and shows no 'droop', unlike many commercial beams. The use of U bolts or exhaust clamps minimises drilling holes in the tubing. The boom is protected by swilling out with old paint and sealing with wooden plugs. The yagi when assembled, is adjusted as per the diagram and tuning instructions, and finally given a coat of polyurethane varnish or similar. The coax is taped to the boom and the waterproof connector box given a coating of underseal.

The tuning procedure is to attach the beam to the supporting mast which if lowered will result in the reflector being on the ground. A short length of 50 ohm coax is connected temporarily to the yagi and a variable capacitor clipped across points X-X. With a SWR bridge in circuit RF is applied and the capacitor tuned for minimum SWR. I found that 100pF approximately was needed for a 1:1. Replace the variable by soldering a fixed capacitor. Slight alteration of the gamma strap may be necessary for optimum, then small self tappers are used to secure this in position. An insulated paxolin block ensures rigidity.

This antenna is without doubt the best I have used to date, and has received much praise from stations in all Continents. I hope others may find the construction details useful, as I only used hand tools and kitchen table (large) techniques. For an outlay of less than £20 an excellent monobander can be easily built.

Dimensions

- | | |
|---|--|
| Driven element - 22' 6" | Reflector - 23' 7" |
| A - 8 feet (overall length) O.D. - 1" | D - 8 feet (as tube A) |
| B - 9 inches (o/length) O.D. - 7/8" | E - 9 inches (as tube B) |
| C - 7' 0 1/2" (o/length - 8') O.D. - 3/4" | F - 6' 6" (as tube C) |
| Boom - 8 feet of 1 1/4" 16 guage tube. | Gamma Rod - 3' 6" of 3/8" - 1/2" tube. |
| Centre insulator (C1) ex TV antenna type. | |

Shopping list:- 1 x 8' of 1 1/4" O.D. 2 x 8' of 1" O.D. 2 x 1' of 7/8" O.D. 2 x 8' of 3/4" O.D. U bolts, alloy plate, etc.

VXO's for the 10 MHz Band

by DJ1ZB

From the beginning, the author was qrv on the new 10 MHz band with a modified version of the Lagos QRPeter (SPRAT summer 1980). The doubler coil L1 was changed to 11 turns on an Amidon T37-6 core. The 100 pF coupling capacitor to the pa base could be retained. In the pa tank, Cp and Cs were altered to 82 pF, L6 to 18 turns and L7 to 24+11 turns (T50-6 core). Two different vxo's were tested.

The first one used a 5,0688 MHz HC-18/U crystal, which can be found in many lists of microcomputer crystals in DL. By experiment it was found that the pulling range could be extended from 10137 kHz down to 10077 kHz with an adjustable coil of 150 uH maximum. 100 uH gave a pulling range of 10137 - 10112 kHz. Performance and keying characteristics of the tx were as usual. It was the only disadvantage that the range above 10137 could not be tuned.

Other suitable crystals available were 10140, 10145, and 10150 kHz, from a series for cb synthesizers. In this case the vxo series coil was a 22 uH molded rf choke, with a small home made parallel capacitance consisting of two insulated twisted wires. All three crystals could be pulled down to 10100 kHz, with some fine adjustment of the twisted wire capacitor. The upper frequency limit was about 10147 kHz for the (nominal) 10140 kHz crystal, 10152 for the 10145 and 10158 for the 10150 kHz crystal. Over the pulling range, the frequency dial was rather non-linear, crowded at the upper end. Therefore, a gear drive is recommended for the vxo capacitor. As a result it is interesting to note that a vfo is not necessary to cover the 10 MHz band.

With the 10 MHz vxo however, tow changes had to be made on the transmitter circuit. The second transistor, now operating as a straight amplifier, needed less excitation. Therefore the capacitor from the vxo emitter to ground was increased from 120 pF to 150...180 pF and the bias resistor R1 readjusted. Furthermore, the buffer action of the straight amplifier was not sufficient. Especially at the lower frequency. end of the pulling range an error of more than 1 kHz was observed between the spot and transmit mode. An emitter follower was tried between vxo and amplifier, but created other problems. The simplest solution was to change the wiring of the spot switch to provide a substitute load for the straight amplifier resonant tank in the spot mode, as shown in the circuit diagram. By aligning the capacitive and the resistive trimmer at 10100 kHz in the spot mode the vxo can be adjusted to exactly the same frequency as in the transmit mode. After the first experiments one of the trimmers may be replaced by the next fixed value, but the other should be retained for fine realignment.

THE AGCW-DL SUMMER QRP CONTEST

The AGCW-DL remind us that the above contest is to be held on the 17th and 18th July 1982 from 1500 to 1500 GMT. The rules as are in previous years, and are as follows :-

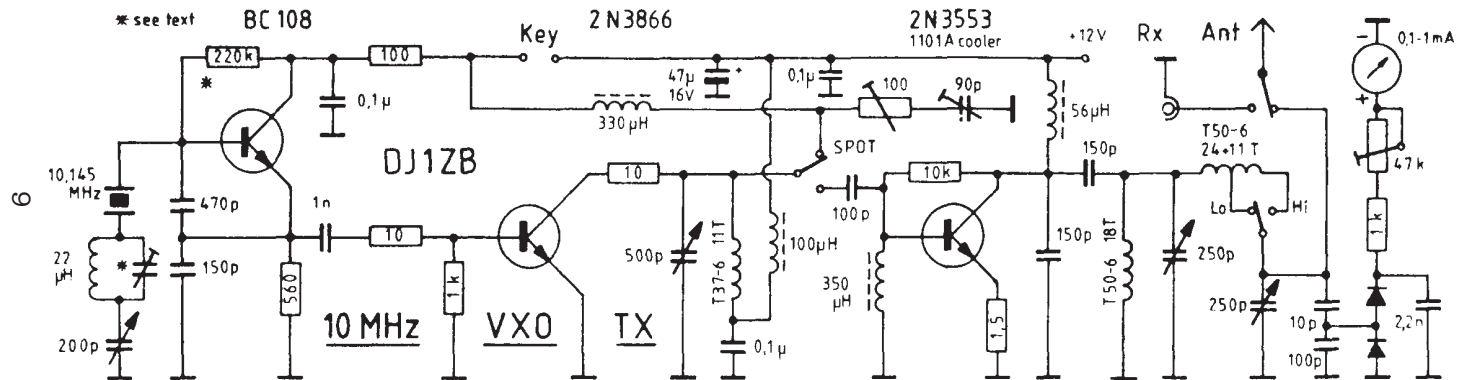
- Class A - Below 3.5 watts input, single operator
- Class B - Below 10 watts input, single operator
- Class C - Below 10 watts input, multi-operator
- Class D - QRO stations (over 10 watts input) - to contact QRP stations only
- Class E - SWLs

Bands 160 - 10 metres on two way CW only. Class C stations may operate for the full 24 hours and the other classes for 15 hours only.

Exchange RST and QSO number and input, i.e. 579001/5 and add X if crystal controlled, (not more than three crystals to be used for any one band). Points as follows :- QSO with own country - 1 point, own continent - 2 points and for DX - 3 points. Multiplier is one for each country and one for each DX QSO. Band result is points x multipliers and total result is the sum of the band results. For crystal controlled stations the result is doubled.

Certificates are awarded for the first three places for each class and band. Separate log to be submitted for each band which are to be sent by 28th August to Siegfried Hari, DK9FN, Spessartstrade 80, D-6453 Seligenstadt, W. Germany.

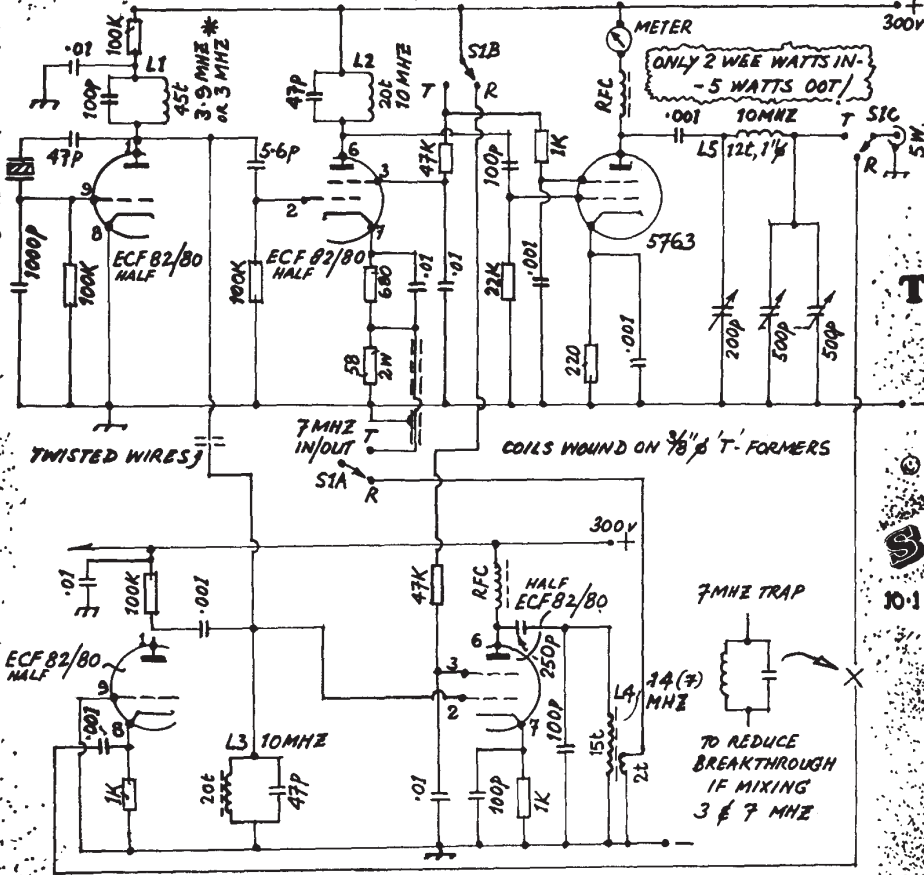
A 10MHz VXO TRANSMITTER Ha-Jo Brandt DJ1ZB



Drawing: DL7MAM

1G-ORP MAC-C

3.9 OR 3 MHZ (SEE TEXT) *



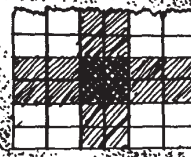
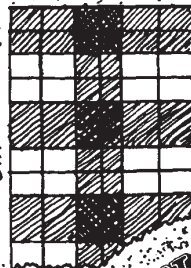
ONLY 2 WEE WATTS IN - 5 WATTS OUT!

THE SCOTSMAN'S DREAM
 (ONLY 3 WEE VALVES, BUILT FRAE JUNK, AND COSTIN' NAETHING!)

10:1 MHZ TRANSVERTER 7-14 MHZ

GM3MXN

TO REDUCE BREAKTHROUGH IF MIXING 3 & 7 MHZ



The Scotsmans Dream Tom Sorbie GM3MXN

A 10.1MHz Transverter

A simple valve transverter for the new 10MHz band. This is a simple circuit I have been using on 10MHz which will transvert about two watts input to five watts out on 10MHz from either 7 or 14MHz. The circuit could be improved by an extra driver stage and bias to run the PA in Class AB1 or C with a clamp tube, members might like to suggest improvements.

I used a 3MHz (2966) to mix with 7MHz, but now use a 3.9MHz to mix with 14MHz which performs better, with less breakthrough. The switch may be replaced by a relay. The transverter was built from junk and cost me nothing...the true Scotsmans dream!!

L1 on 3.9MHz
L2 on 10MHz

L3 on 10MHz
L4 on 14MHz

L5 on 10MHz

TRY 14.333MHz FOR CLUB SSB ACTIVITY DAILY 1730z - CALL IN ON CW IF YOU WISH.

10MHz Transceiver Keith Coates G3IGU

This little transceiver was based upon the miniature 7MHz transceiver now in use for portable operation. The transmit section has a VFO on 5MHz which is doubled for the band by L2. The 300pF capacitor across the tuned circuit in the VFO is open to adjustment and should be arranged to give the required coverage with the minimum insertion of the VFO coil (L1) slug. The transmitter follows the design of my 7MHz transmitter but includes a sidetone derived from the RF output. This gives no noticeable drop in output.

The receiver is direct conversion. The input filters (L7 and L8) and the AF amplifier are borrowed from the G3RJV 'Ben' transceiver. The changeover is shown in a separate diagram and may be used with any small transceiver. The transceiver complete with keyer and QSK is built into a space 5 x 2½ x 7 inches.

The VFO and RX were built on panels and the rest of the TX was built on a tag-strip, the PA transistor bolted to the chassis through a mica insulator. Note that a BY127 provides polarity protection to blow the supply fuse if the 12 volts is connected the wrong way round. The VFO covers 45KHz and is adjusted 2½KHz either side of the band edges. The PA tank circuit was loaded into a 75 ohm dummy load, then only the ATU requires adjustment.

I have had well over 100 QSOs with this transceiver and have heard VK and ZL stations, although no real DX has yet been worked.

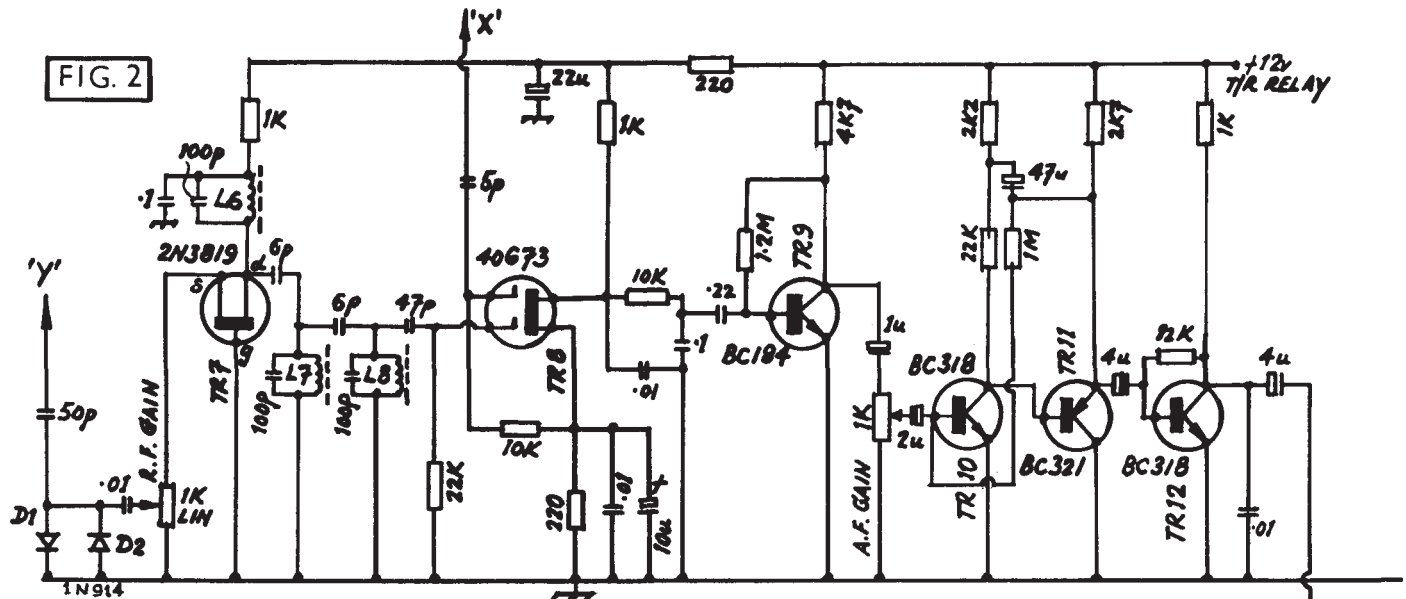
WANTED: Circuit Diagram or Handbook for Panda Cub TX - G4GDR. also
EXCHANGE: MK 123 set in mint condition complete in brand-new canvas holdall with earth stake, key, earphones etc, Would like to exchange for HW8 or homebrew QRP transceiver (W.H.Y.) or Argo 509 and make up difference with cash!
Contact, Adrian G4GDR QTHR.

ATTENTION VALVE FANS: From Jeff (485) comes a request for a circuit for a 5 w. CW Valve transmitter (with VFO option) for 2 or 3 bands, including full details of inductances, click filters, traps ATU etc. A reproducible circuit to put on the air..... Any offers ?

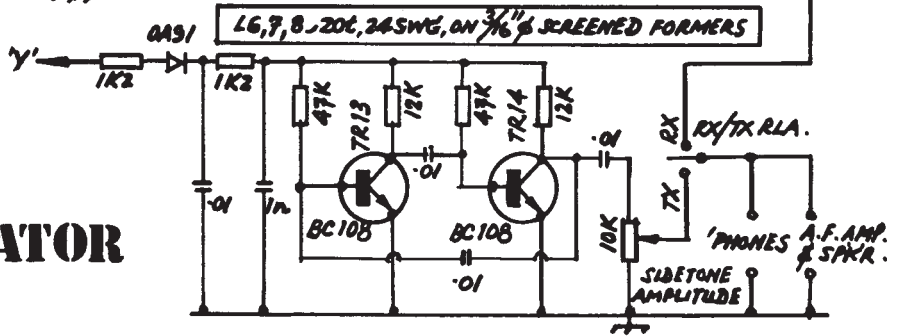
WANTED: Argonaut, any any or condition. Good Home Offered. Steve Ireland
G3ZZD, Tel: 0892 - 34117.

HEARD ON GRAPEVINE: Doug, GM4ELV not contented with completing his QRP DXCC has just received his Phd. Well Done Doc. Doug!

FIG. 2



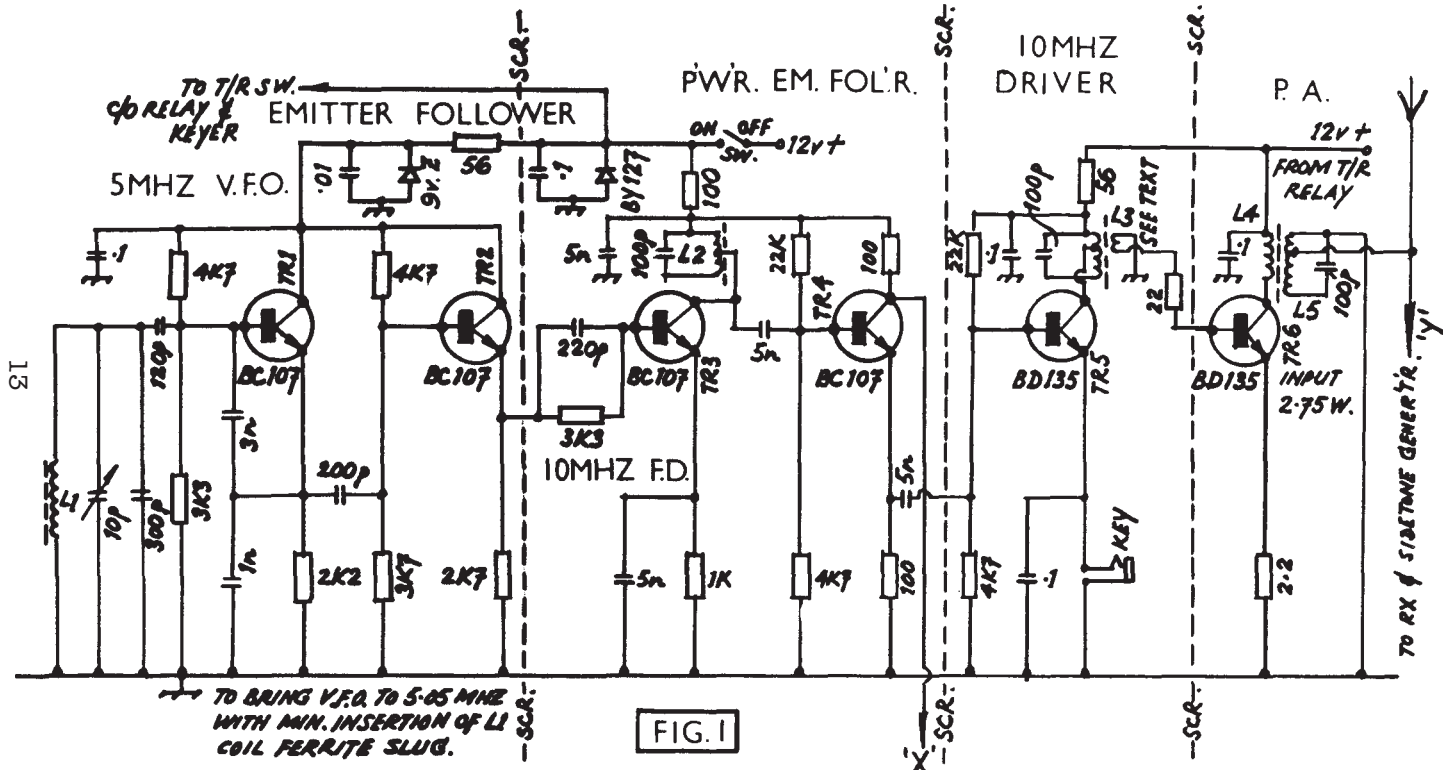
RECEIVER
AND
SIDETONE GENERATOR



KEITH COATES / 831GU

G3IGU 10 MHz X'CVR.

L1, 2, 3, 5 - 20 μ 20 SWG ON 1/4" ϕ
UNSCREENED "ALADDIN" FORMERS
L4 - 6 μ 22 SWG, ADJACENT TO L5.



XMITTER

G31GU 18 MHZ. TRX - LAYOUT & GENERAL DIMS.

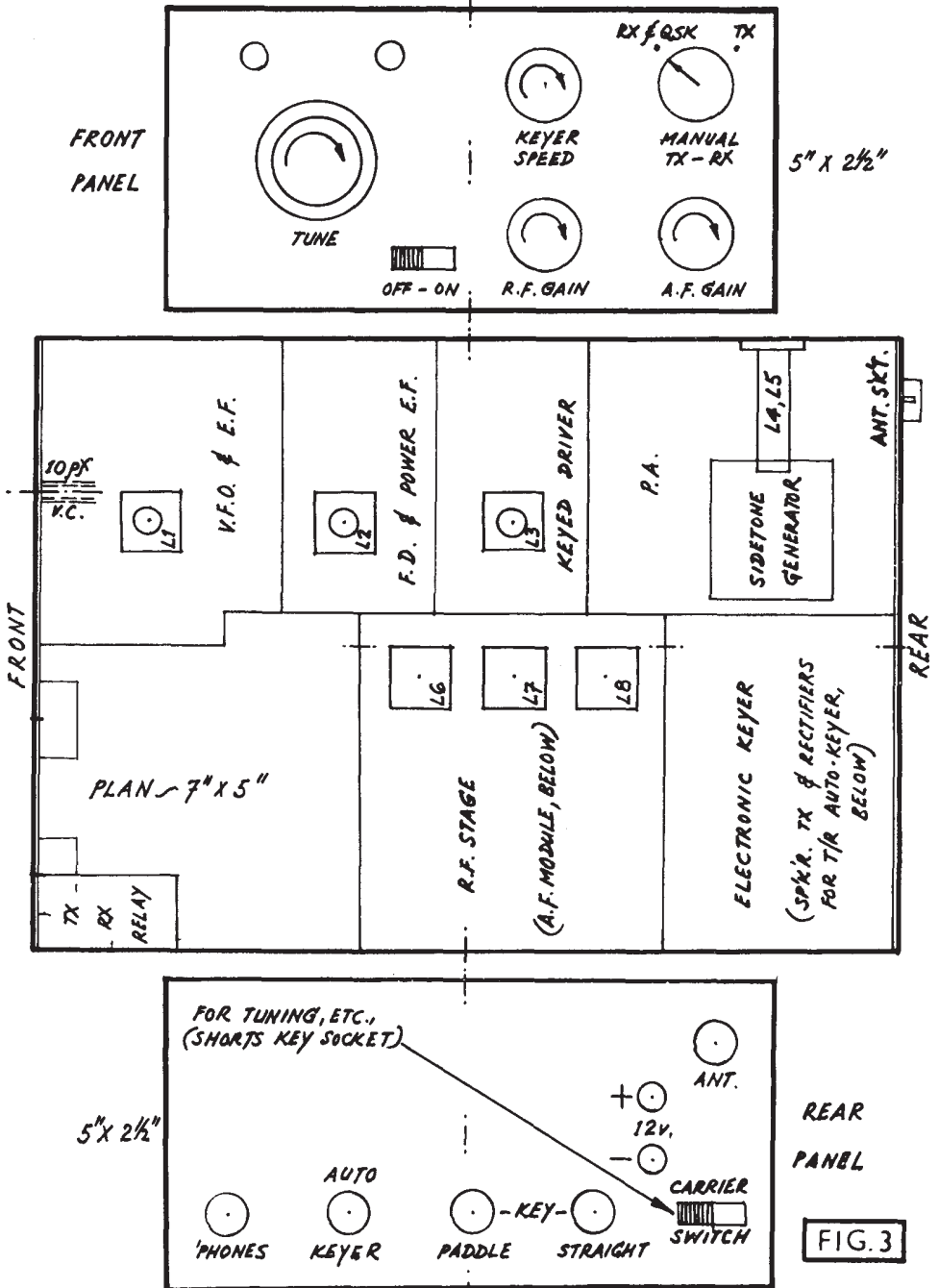
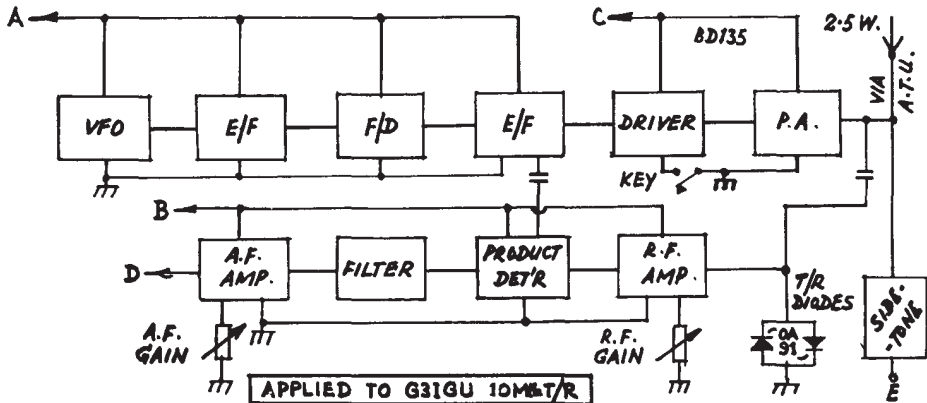
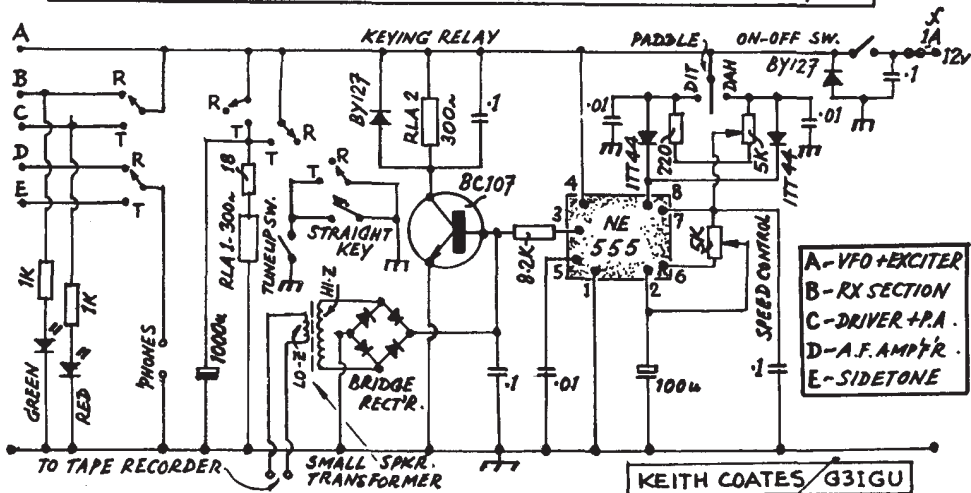


FIG. 3

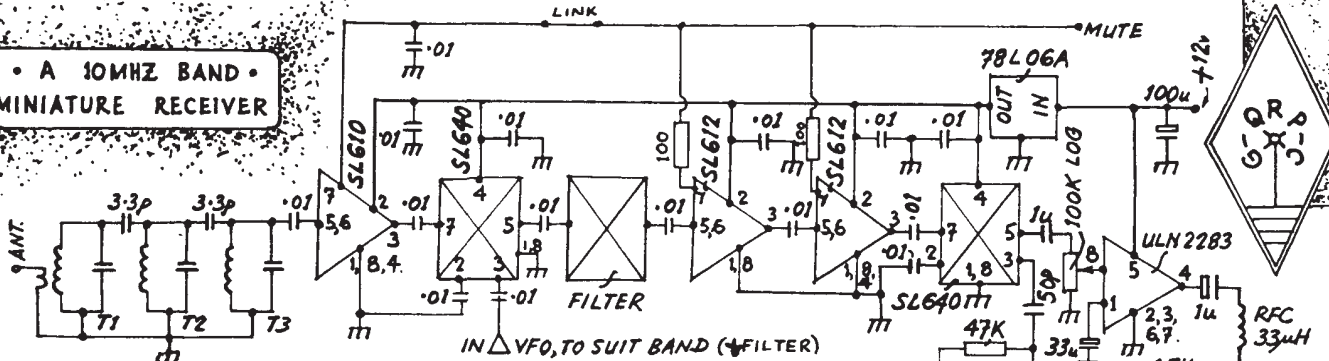
SEMI-BREAK IN SYSTEM WITH I.C. KEYSER AND TAPE AUTO-KEYING



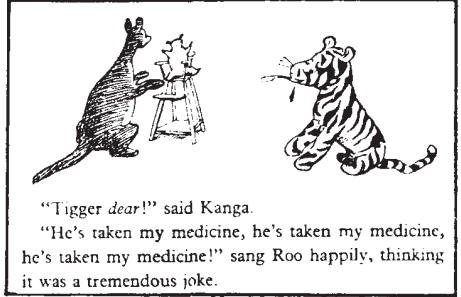
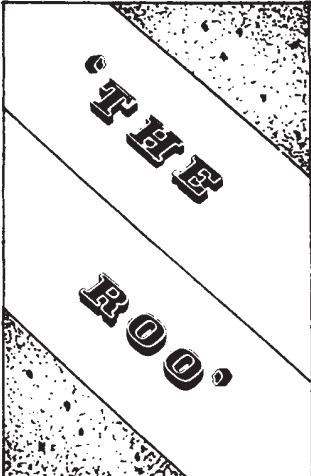
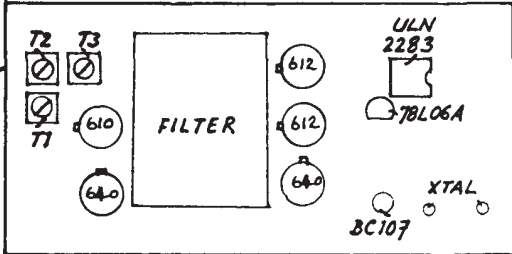
The change over system incorporates various items which had been odd units strung around the bench. Note that the T/R antenna change-over is solid state in the transceiver, but a change-over set of contacts on RLY 1 could perform this function. The break in delay is controlled by the 1000uF capacitor, which could be changed to suit. The auto keyer circuit is the one suggested for tape recorder inputs by G8PG in a previous issue of SPRAT. The keyer circuit was in Rad Com Technical Topics of October, 1979, but that actual circuit does not work, the version here with the ITT 44 steering diodes plus a bit of decoupling has worked in three keysers for me. The manual front panel control TX - RX can be used for hand changeover, the semi break in is still in operation on the RX position.

Each spring, the RSGB run an annual Low Power Field Day and in spite of the increasing interest in low power working, it receives a low level of support. The RSGB Committee are inviting suggestions to "liven up" this contest. It may be that the rules are satisfactory and it merely requires more publicity. Do you have any views which could be passed onto the RSGB Contest Committee? If so, write to G3RJV, so that we can help strengthen this QRP annual event.

• A 10MHZ BAND MINIATURE RECEIVER



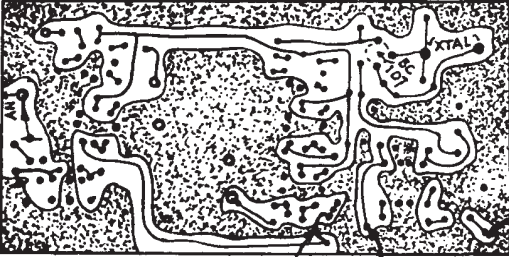
IN Δ VFO, TO SUIT BAND (4 FILTER)



"Tigger dear!" said Kanga.
 "He's taken my medicine, he's taken my medicine, he's taken my medicine!" sang Roo happily, thinking it was a tremendous joke.

IAN KEYSER / G3ROO

FOIL - P.C.B. - TOP



LINK +12V MAX.

QRP NEWS

NEW QRP MASTER AWARD HOLDERS

Our sincere congratulations to SP5AGU, SM0FSM and OK2BMA who have now qualified for the Master Award. Well done !

AWARD NEWS

Congratulations to the following Members on their new Awards.

QRP WAC. SP5AGU, OK2BMA.

QRP Countries. 100 SP5AGU, SM0FSM; 75 OK2BMA ; 50 PY2TU ; 25 GM4JJG,G3YNA,G4KKI.

Worked G QRP Club. 200 GM30XX (congratulations !); 80 G4JFN; 60 SP5AGU,SM0FSM,OK2BMA.
40 GM3RKO; 20 PA0ATG,G4LDG,HB9ASJ,G4ETJ.

Two-way QRP. 20 SP5AGU,SM0FSM,OK2BMA; 10 SM0AOQ,GM3RKO,HB9ASJ,G4ETJ.

SCOTLAND THE BRAVE !

There are now more QRP DXCC Trophy holders in Scotland than in any country except the USA. They are all Club Members !

VERY IMPORTANT - NOVICE LICENCE

After full consultation with the RSGB we find that the delay in implementing the UK Novice Licence is almost entirely due to low staffing levels in the Home Office department responsible for issuing licences ; neither the RSGB or the Civil Servants concerned can be blamed for this. If members, and also local radio societies, wish to express their dissatisfaction with the situation they should write to their local M.P.(s) asking that the matter be raised with the Home Secretary with a view to increasing staffing levels in the department concerned. If, as is claimed, the amateur licence is self-financing it should be possible to do this without increasing public expenditure. +

SSB POWER LEVEL

An attempt is being made to get this question re-opened at WQF level. It is sponsored by ARI QRP Club, Benelux QRP Club, and G QRP Club. It is important to note that at this stage we are attempting to get a "yes" vote to reconsider the matter at all - not a vote on what power level may or may not be adopted finally. Bearing in mind that WQF represents Organisations in all six continents it is quite a slow and complex matter to organise such a vote. Each organisation has to consult its own Committee, also possibly its members, then send a vote to the WQF Secretariat. This normally takes at least 3 months. Assuming that the vote is in favour of re-opening the matter it is then necessary for each members Organisation to make its views known and, if there is a real divergence of opinion, for these to be circulated. Further voting must then take place to get a democratic decision on which of the proposals put forward is to be adopted. With luck the process may be completed in six to nine months, but if a compromise solution has to be negotiated it could take longer. This is the slow, grinding, back room side of international QRP co-operation which is often not understood by ordinary members, or even by some officials in member Organisations. Unfortunately it is the only way to achieve lasting results ; there are no magic solutions - just a lot of hard work ! G8PG

QRP AMATEUR RADIO CLUB INTERNATIONAL OCTOBER 1982 CW QSO PARTY

The above event will be held from 1200 UTC 16.10.82 to 2400 UTC 17.10.82 with a maximum of 24 hours operating, on the International CW QRP Frequencies. Exchange RST and State/Province/Country and members give their Club number and non-members their output power. Scoring is total QSO points (five points for Club members, 2 points for non members in USA/VE and 4 points for non members outside of USA/VE. Non members USA novice and technician (/N or /T) count 3 points) multiplied against total States/Provinces/Countries multiplied against power multiplier (4-5W X2, 3-4W X4, 2-3W X6, 1-2W X8, Less than 1 watt X10 - all output power). Logs plus a separate check sheet to be sent by November 20th to William W. Dickerson, WA2JOC, 352 Crampton Drive, Monroe, Michigan, 48161, USA.



AT LAST!

in response to your requests

G QRP CLUB Circuit Handbook

100 PAGES OF THE BEST OF SPRAT CIRCUITS SINCE THE FIRST ISSUE
IN LARGE A4 FORMAT (Twice SPRAT page size) with CARD COVERS.

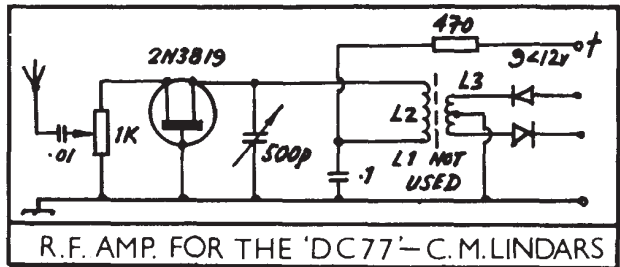
Many members have requested back issues of SPRAT, but we are unable to supply these, so in response to member's requests the best circuits from past issues are to be issued in book form. Preparation and printing is in hand for publication in the Summer. To offset the initial heavy costs of this book, we invite members to SUBSCRIBE IN ADVANCE OF PUBLICATION. The first printing will be 500 copies, so order now at the first issue price of : £ 2.00 (\$4.00) a copy + postage

Postage [40 p. for U.K. members. 50p. for European members
Out of Europe 63p (£1.00) Surface Mail.

Overseas members could receive the book by Airmail, but the cost is more than the price of the book! at least \$5 for USA and \$6 for VK/ZL. These are minimum prices which could be ruined by exchange rates, so for EU members Girocheques are preferred and for US members dollar bills. If you are doubtful of exchange rates, please add a little extra so the club does not incur losses.

ORDERS (WITH CASH) TO ALAN LAKE, G4D VW. (QTH ON INSIDE OF SPRAT COVER)

Martyn offers a simple RF amp for the DC77 receiver in the last issue. He also points out one diode was reversed on that circuit and suggests that the 4.7K from the 10K pot to the 1st BC107 could, with advantage, be a 2.5mH RFC. There then may be no need for diffing values of Ck (1Kp would serve) Si diodes could replace the Ge types in the VFO.



ADVICE ON SUBSCRIPTION PAYMENT FOR OVERSEAS MEMBERS.

The club bankers, National Westminster Bank PLC have expressed concern about how much income the club loses in exchange rates and handling charges on overseas cheques and money orders. Many overseas members do not like to send paper money in the post and the bank suggests that they use a direct credit transfer from their own bank. This should be made in Sterling (£3.50 for subscription renewal) and made to G QRP CLUB c/o National Westminster Bank Ltd, 12 Greenwood Way, Chelmsley Wood, Birmingham. B37 5TN. A advice note stating that the transfer had been made and stating the membership number should be sent to G4D VW. This method does not involve money or tokens being sent through the post and is inexpensive. Members in Europe can use the Giro arrangements through the EEC Banking agreements.

MEMBERS NEWS



Chris Page
G4BUE

W6YVK made 304 QSOs in The ARRL SSB Test. Ev is now solar powered and is very active on 28880-28885 looking for other QRP stations. YU3EOP recently worked VE1ZZ on 3.5MHz and received a 449 for his two watts and antenna which varied between 3 and 5 metres above ground. PY2TU says that most PY QRPers frequent 7MHz, but Moser calls for DX QRP stations on the HF QRP frequencies. He is anxious to improve on his six members worked. G8PG mentions the excellent conditions for DXing in mid March when he worked JA, EA8 and 9, 7X2 and UAØ. Gus mentions getting on in the daytime as one of the reasons. He also worked CT2 for DXCC No. 90. Some more DXCC Awards are in the offing. CT4CH is 109 wkd/95 confmd., I7CCF is 113/78, KA1CZF is 104/89 and GM3OXX goes marching on...In BERU George was not content with working "plenty" of ZL and VK stations, he worked VK9NS on both 14 and 21MHz. On another occasion George had to be content with frustration. Three times he had a "QRZ GM3" from FK8DK before finally getting "Sri Ur too weak". You cannot win them all George!

The February Activity Week-end from general opinion seems to have been the best yet. It seemed to have everything, but all at a leisurely pace. G8PG heard I7CCF coming into The U.K. with his 100mW signal. Felix later worked W9PNE with it. GM3RKO spent a lot of time making the most of the short skip on 14MHz. YO6HQ was worked by many, although a poor receiver and QRM caused him to miss some who called him. DJ1ZB and DK5RY were both putting huge signals into The U.K. on 21MHz, and G3PTO was receiving 579/599 signals from all around Europe. G3RJV was also working around Europe and also W and VE. I7CCF worked a VU during the Sunday afternoon and described the week-end as "all O.K." KA1CZJ had three G members in his log and W4IV, although a non-member sent in a log which showed GM3OXX, G4HOM, and G3RJV making it across the pond.

Since passing his morse test in December G4NKM says he has received a lot of pleasure working QRP, the best being a W4. Steve uses a piece of garden wire in the living room! For 7MHz he finds the central heating system (without an earth) works fine!! G4JFN has finally worked VK to take him to 63/39. Bob says he gave a talk on QRP to his local Club which went down very well. G4IUP is QRV with a TS520 at two watts and a home brew rig for 7MHz. He uses a 18AVT without radials and would like to hear from members using this antenna for QRP work. OK1DKW has built a new transistor transceiver and over Easter he used it from Eastern Bohemia with a dipole at 12 feet. Petr had 30 QSOs with it whilst running 500mW output. G3PTO has recently worked VK2UVA on two-way QRP, and ZL and VP2K on 14MHz, JA, PY, VP2ED and SV9 on 21MHz with his 67 foot centre fedd zepp, with 42 feet open wire feeder and 39 feet high. John says the Heathkit (valve type) CDO makes a very good crystal activity meter - simply plug in a crystal instead of the coil.

What is this I hear, G3VTT exchanging a higher serial number in a contest than GM3OXX! Yes it happened in The RSGB LP Contest. George says he made 96 QSOs but thinks Colin may have beaten him. EI4DZ was also QRV in the Contest and Noel says he has never

As I write this (16th May) it seems that Summer has reached The U.K. early with temperatures in the 70s. It has been really nice sitting out in the sun on the patio this afternoon reading your letters. The message that comes across very strongly is that QRP is not only alive and kicking but is growing. Thanks for all your letters.

A nice letter from N6HY describes Dan's interest in very low power QRP. Dan uses a T Network resistive attenuator with his Argonaut to get down to 3mW levels. With that power he has worked KH6, although he admits to dropping down in stages from 2 watts. Another low power member is Brice, W9PNE who has just completed his 100mW WAS by working KH6 in The ARRL CW Test. Brice was also pleased to work a G3 on 7MHz in the same Test. The ARRL Tests attracted several general members with IØSKK making 330 QSOs in the CW weekend and 220 in the SSB one.

CT4CH will not be active from home until August, but in the meantime is active as SM6HY/MM. K9PNG worked Ben when he was in Panama, and Jim was using his 135 feet long wire which zigs zags all around his back yard..

worked so many QRP stations on 7MHz in one day. In the Foreign Section of The 1981 HA QRP Contest there were five Club members in the first 15 places (total of 28 in the Section). OK2BMA was 2nd, G4FAI 5th, PA3AJU 9th, YU3TFW 13th and YU5TVN 15th - well done to you all. Well done also to G8PG and KL7BT who came 1st and 2nd in The VK CW QRP Contest.

An interesting letter from CX7BBB tells me that there are approximately 10 stations in CX active on QRP. Tony himself is on the HF bands with an Argonaut and in two years has worked 124/97. He describes QRO as "going hare hunting with a machine gun"!! N4FLC who is Assistant Scout Leader with Troop 52 in Alabama found that after taking part in The Jamboree on the air last year, much interest in amateur radio was shown by the scouts. At the end of January Smokey went on a week-end scout camp and took along his HW8 with the intention of showing the scouts the need and reason for good operating no matter what the power. 53 QSOs in 16 States were worked with a 7MHz dipole. Smokey is planning another trip in March, this time with solar power. G3IEB has recently purchased the Tandy (Radio Shack) DZ100L receiver, George says it is ideal for QRP, there not being much it cannot pick-up.

10MHz continues to attract members. Larry operated for a week as GU5EFL/A with a Tunbridge rig kindly loaned by Ian, G3ROO our SSB rep (nice to see Ian has at least one CW rig!). Larry made 71 QSOs in 13 countries including OX. G3IEB is also active using a modded version of the JU6 and G3PTO hopes to be QRV soon with a 'Ben' rig.

G4GDR is looking for a secondhand Argonaut or HW8 if any member has one for sale, and G4LGX has a Mizuho 7MHz VFO, 7MHz board and 21MHz board for sale for £25 plus postage Jon's telephone number is 0423.67390.

OK2BMA is now using a FET pre-amplifier to improve the sensitivity of his famous HMW8. It also removes AM breakthrough. GM3OXX has built a new SWR/PWR meter with two ranges on it, 1 watt and 3 watts FSD - "just in case some QRO friends drop in" he says. The 10MHz transverter continues to work well, but the new rig for 10MHz has some "teething" troubles. Hope all is now sorted George. G4HEP has been doing some mods to his Argonaut by changing the SSB filter to 1.8kHz. He has also changed the receiver mixer bias and plans to change the the receiver mixer to a SL6440. G4IKR has built a modified version of The SCD, and found that results improved with it on 14 and 21MHz when he changed the antenna from a ground plane to an inverted vee. G4EHT has built a VFO SCD transmitter for 7MHz and is very pleased with it. Bill uses a 2N3866 which gives one watt input. He uses one of the old R1155 receivers (your scribes' very first receiver when he started SWLING way back in 19--?!!?)

G3RJV between Secretarial duties found 8Q7BN on 28MHz SSB for a new one, but since then the gales have captured his antennas! KA1CZF has been staggered by his QRPing efforts on 7MHz. Tom has worked 35 countries, including KL7, HK, YV, TF and UP2 with a 67 feet wire.

Members are reminded of The Combined ARCI/G-QRP-C Activity Week-end over 14th November The same schedule as for the 1981 event, which will appear in the next copy of Sprat. Other events to watch out for are The AGCW Summer QRP Contest/WQF Field Day on 17/18th July and the Second Club Activity Week-end on 11/12th September 1982, which has been extended to become the first WQF Activity Week-end. This event has been very well publicised to all the QRP Clubs throughout the world and should be 'the' QRP event of the year. The week-end will commence at 0001 GMT on the 11th and end at 2400 on the 12th. The following times are suggested for contacts with Europe on the highest band which is open:- 0700-0800 Europe - Oceania (in particular VK and ZL), 0800-0900 Europe - Japan, 1600 - 1800 Europe to North America and 1900-2000 Europe to South America. Reports on the week-end should be sent to Gus, G8PG, WQF representative of The G-QRP-CLUB.

The work I have been doing on my QTH is now almost complete, and apart from an early holiday I shall be back on the air shortly. I am looking forward to meeting many of you who have written during recent months. In the meantime let me know how your Summer goes (by 15th August please together with any QSL cards for distribution).

Best 73 and QRP DXing,

Chris Page - G4BUE

ITALIAN QRP ARI ACTIVITY WEEKEND- 11 to 12 SEPT. ALL QRP (CW & SSB) FREQUENCIES.

Membership Changes

CHANGES OF ADDRESS:

- 057 G4CMY, 6 The Hedgerow, Longlevens, Gloucester. GL2 9JE
 074 Rev. F.G. Fleming, 73 Bellsdyke Rd. Larbert, Stirlingshire. FK2 8RE.
 128 G3KMG, 'Rose Cottage' Castleside, Consett, Co. Durham. DH8 9AW
 137 B.R. Marshall, 51 Queniborough Rd. Queniborough, Leics. LE7 8DG
 151 GW3TML, 10 Llanover Rd. Pontypridd, Mid Glam. CF37 4DY
 247 G4BJZ, 5479 Spruce St. Burnaby, Vancouver. B.C. V5G 1Y6. Canada
 319 W3AEC, 2713 Pinecreek Place, Forestville, Maryland 20747. USA.
 452 G4GSA, 15 Multon Cres. The Coppice, Talke, Stoke on Trent. Staffs.
 472 A. Maguire, 48A Goldstone Road, Hove. BN3 3JU.
 475 Bill Robinson, Dept of Lanuage & Social Studies, UNITECH, P.O. 793 LAE. Papua New Guinea.
- 503 APT 44. BAT 4. Montana Ia Cote, 3961, Randogne, Vs. Suisse. (HB9BCO)
 522 GW4IED, Flat 8, House 55, Road 15, Ma'adi. Cairo, Egypt.
 665 K1GKR, P.O. Box 515, No. Grafton, MA 01536. USA.
 723 G3TBT, Brackendene, Hollywater road, Passfield, Nr. Bordon. Hampshire. GU35 OAE.
 776 WA3FNB, RT4, BOX 223A, Hagerstown, IND 21740. USA.
 780 G3VMU, c/o 83 Vernon Walk, St. Edmunds, Northampton, NN1 5ST.
 898 G3LUJ, 43 Lime Tree Walk, Milber, Newton Abbot, Devon TQ12 4LF
 967 J.D. Murphy, 5 Kingscote Rd. Edgbaston, Birmingham, B15 3LA.
 1047 G3UFZ, 4 Elba Close, Goodrington, Paignton, Devon. TQ4 7LW.
 1103 EI5EJ, 17 Millisle Rd. Donaghadee, Co. Down, BT21 OHY. Northern Ireland (GI3LLO)
 1124 G4KIN, 22 Summerhill Dr. Maghull, Liverpool.
 1143 W0CH, P.O. Box 701, Waynesville, OHIO 45068. USA.
 1223 DA4DY, 14 Signal Regiment (EW), BFPO 23.
 1258 G6EPT, 82 Grassholme, Stoneydelph, Wilnecote, Tamworth, Staffs. B77 4BZ.

NEW CALLSIGNS AND CHANGES OF CALLSIGN:

- | | | | |
|---------------------------|---------------------------|----------------|---------------------------|
| 475 Now G4NOL, | 609 Now GW4NMF | 747 Now KM0Y | 880 Now KL7PF (ex WL7AHR) |
| 1095 Now G4NNJ | 1165 Now G4MPM | 1189 Now G4NCZ | 1191 Now G4NTK |
| 1197 Now EC6HS | 1223 Now G4NKM (ex G8EIU) | 1286 Now G4JRO | |
| 1289 Now G4NYK (ex G6ASF) | 1309 Now G4NHK (Not NKH) | | |

RESIGNATIONS:

- 107:G3DVL 278:SM5DXL 483:G3ZPF 521:G4ISO 610:ZL3WL 806:GM4JNF 1024 P.Riches
 1031:G8VAD

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 1317 L.Ward, Box 2074, RAF Mildenhall, Suffolk.
 1318 G3ZZD S.Ireland, 10 Chestnut Ave., Southborough, Tunbridge Wells, Kent.
 1319 7P8BT D.Nicol, Box 929 Maseru 100, Lesotho, S. Africa.
 1320 G3LWM J.Harris, The Oaks, Cricketfield Lane, Bishop's Stortford, Herts.
 1321 J.Lee, 1 Kelso Road, Leeds 2.
 1322 G4MKI J.Nelson, Artesa de Segre 5, Atico 6, Barcelona 22, Spain.
 1323 EI9EP J.Duffy, 69 Fitzroy Ave., Dublin 3, Ireland.
 1324 G3JFH T.Russell, 15 Orchard Road, Bishops Cleeve, Cheltenham, Glos.
 1325 G4CRN Dr.A.Hall, Westhill, Bear Lane,
 1326 L.Hall, Little Orchard, Byron Road, Bath, Avon, BA24RH.
 1327 W.Millerchip, 43 Wilkins House, Sandbank, Bloxwich, Nr.Walsall, W.Midlands.
 1328 G6ABO R.Campbell, 2 Marlborough Road, Wallasey, Cheshire, L451JE.
 1329 G4LTZ J.Peaks, 8 Surrey Drive, Congleton, Cheshire, CW121NU.
 1330 N1BK K F.Kelley, RFD 1 Box 283, No. Edgecomb, Main 04556, USA.
 1331 G8QM V.Flowers, 9 Laburnum Grove, Sunnyside, Newcastle-upon-Tyne, NE165LY
 1332 PY2NGL C.Postal 18638, 0100 S.Paulo, SP, Brazil.
 1333 PY2RLQ L.Bassella, Rua Benedito Sampaio, 126, Parque Sao Aurina, 13100 Campinas,
 1334 G5EFL L.Cohen, 34 St. Michael's Rd., Farnborough, Hants. SP Brasil.
 1335 G4KRJ E.Gaffney, 85 Kingsway, Prescott, Merseyside, L355BQ.
 1336 WB6MTR W.Franks, 1001 Sylmar, Space 107, Clovis, Ca., 93612, USA.
 1337 G4ADE M.Woolin, 26 Ashcourt Drive, Hornsea, Hymberside, HU18 1HE.
 1338 GM4IAO A.Robertson, Meadow Craig Deveron Rd., Huntley, Aberdenshire.
 1339 G4EBT D.Taylor, 26 Mortain Rd., Rotherham, S.Yorks, S603BX.
 1340 G4LQL D.Lander, 31 Sandycliffe Close, Forest Town, Mansfield, Notts.
 1341 GW3YDX Ron (Details withheld at member's request).
 1342 EI6AKB F.Matthews, 38 Balkill Park, Howth, Co. Dublin, Ireland.
 1343 G8XAB W.Cotton, Cottow's Corner, 17 Ombersley St. West, Draitwich Spa, Worcs.
 1344 G4IUX R.Williams, 1 Innage Rd., Northfield, Birmingham, B312DX.
 1345 G4LPF S.Swain, 51 Station Rd., Pilsley, Nr. Chesterfield, Derbys.
 1346 G4KCB G.Read, 2 Princess Ave., Great Sarkey, Warrington, WA5 3JF.
 1347 B.Hawkins, 1 Orchard Caravan Site, Shouldham, Kings Lynn, Norfolk.
 1348 LX1BK G.Scholtes, L-9662, Kaundorf, House N.2., Luxembourg.
 1349 KA5NLY E.Smith, 5507 Country Club Blvd., Little Rock, Ar.72207, USA.
 1350 G4KCH W.Sulley, 136 College Road, Sutton Coldfield, W.Midlands.
 1351 G8TUR D.Turner, 10 Jervis Crescent, Sutton Coldfield, W.Midlands.
 1352 G8TRN A.Hudson, 76 Denholm Road, Sutton Coldfield, W. Midlands.
 1353 C.George, 42 Nicholls Field, Harlow, Essex.
 1354 G3RII H.Armstrong, Outmoor, Five Bells, Watchet, Somerset, TA23 OHZ.
 1355 EA8UP D.Herrera, Santa Cruz de la Palma, Canary Islands, Spain.

- 1356 G3YOO J.Webster, 18 Colleton Road, Wigston Magna, Leicester.
- 1357 G4LVT A.Williams, 40 Woodcraft Rd., Wylam Northumberland, NE41 8DH.
- 1358 GW4LFF J.Devonshire, 1 West Drive, St. Donats, Llantwit Major, S.Glam.
- 1359 G4MKF M.Franks, 21 St. Johns Road, Newbury, Berks. RG14 7PY.
- 1360 KC7IG Mr. & Mrs. R.Sadler, 2721 West Acoma Dr., Phoenix, AZ 85032, USA.
- 1361 N7DEN " " " " " "
- 1362 M.Butler, 1A Springhead Avenue, Willerby Rd., Hull.
- 1363 G4GTD R.Ford, 2 Jersey Ave., St.Annes, Bristol.
- 1364 J.Reade, 7 Wilmar Close Hayes End, Middlesex.
- 1365 G3XFH D.Watts, 29 Pensford Court, Craydon Road, Stockwood, Bristol, BS14.
- 1366 DD7QP J.Keller, Juergon, Vereinsstr 56, Gronau, D4432, W.Germany.
- 1367 G8BAF L.Smith, 48 Pitt Avenue, Witham, Essex.
- 1368 G4NZY D.Coles, 91 Grove Lane, Harborne, Birmingham 17.
- 1369 KAØKDR P.O.Box Box 1330 Glenwood Springs, Colorado, 81602, USA.
- 1370 VE7FBL C.Orchard, 161 Old Drive Rd., R.R.2., Ganges, British Columbia, Canda, VOS1E
- 1371 E.Morgan, 2 Hopleys Close, Tamworth, Staffs.
- 1372 G6GTC P.Willson, 37 The Grove, North Cray, Sidcup, Kent, DA14 5NG.
- 1373 L.Mann, 7 Homefield Close, Swanley, Kent, BR87JH
- 1374 N3CTT R.Perkins, 3101 N.Van Buren St., Wilm., Del. 19802, USA.
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