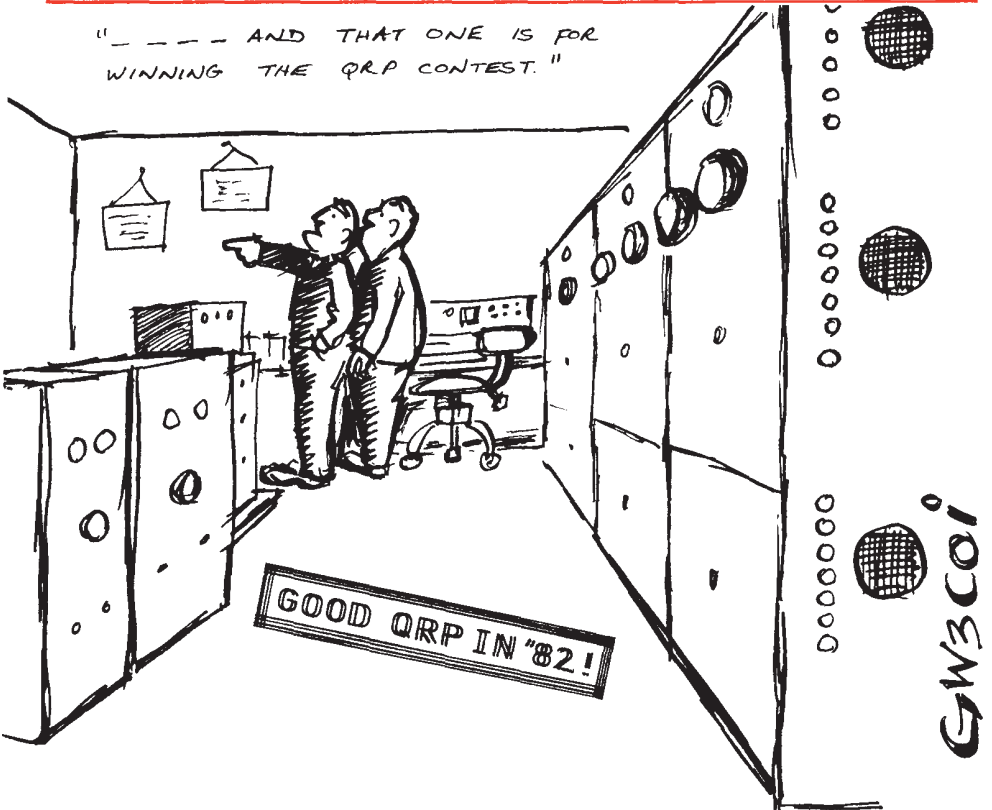


SPRAT

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

ISSUE NR. 29 | © G-QRP CLUB | Winter 1981/2

" _ _ _ _ AND THAT ONE IS FOR
WINNING THE QRP CONTEST. "



CONTAINS QRP GUIDE 1982

80m Valve TX. 10MHz Transceiver. Solid State Linear P.A.
Keyed Sidetone. Crystal Checker. 80m VFO TX. DC. RX
Award-SSB-VHF News Members News



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

Dear Member,

On January 2nd 1982, for the first time since I have had an amateur radio licence, new bands become available for UK amateur radio operators. We in the UK will not only have the 10.1 - 10.15MHz band, but also the 18.068 - 18.168 and 24.89 - 24.99 bands. The latter two will probably only be available to the UK and 3 other countries. It has been suggested that the 10.1MHz band be a CW only, Contest Free band, but little has been said about the other two, as yet I do not know which other countries will have their use.

All of these bands begin on a shared basis, although some of the traffic will soon move from the 10.1MHz band. With this in mind, we have been monitoring these bands for likely suitable QRP Calling Channels. In the UK we suggest that we begin by trying 10106 on the 10.1MHz band, although this appears unsuitable in the USA where 10115 has been suggested. The traffic on the other two bands appears variable and any bandplans have yet to be agreed. It would seem that we need to experience these bands for a while to decide suitable QRP Channels. I suggest for the 18.06 and 24.89MHz bands, as a starting point, we try to follow the example in the UK for the other 100KHz band (7 MHz), and use 30 KHz up from the band edge \pm QRM. Reports from users of these bands would be very welcome so that we may work towards possible internationally acceptable QRP Frequencies.

73 fer nw. May 1982 be a good year for you, *George*

SUBSCRIPTION RENEWALS

Renewal (rates now £3.50 or \$9 US) to Alan Lake, G4DVW, 7 Middleton Close, Nuthall, Nottingham, NG16 1BX. PLEASE QUOTE YOUR MEMBERSHIP NUMBER. Cheques made out to "G-QRP-CLUB". European members may use Giro Cheques. A reminder is automatically stamped onto Sprat for the series of months due between each issue. IF YOU HAVE ALREADY PAID PLEASE IGNORE THE STAMP.

NOW DUE: 0-90,178-200,254-270,351-392,466-524,619-771,1001-1081

OVERDUE: 155-177,233-253,326-350,445-466,616-690,891-1000

THE G-QRP-CLUB QSL CARD

A distinctive Club card, white with blue information and the members call and details in red, is available to members. The card has a novel "Circuit Puzzle" and Club information on the reverse side. Details and an order form can be obtained from the Club Treasurer, Alan Lake, G4DVW.

Club Offers

P.A. TRANSISTORS.

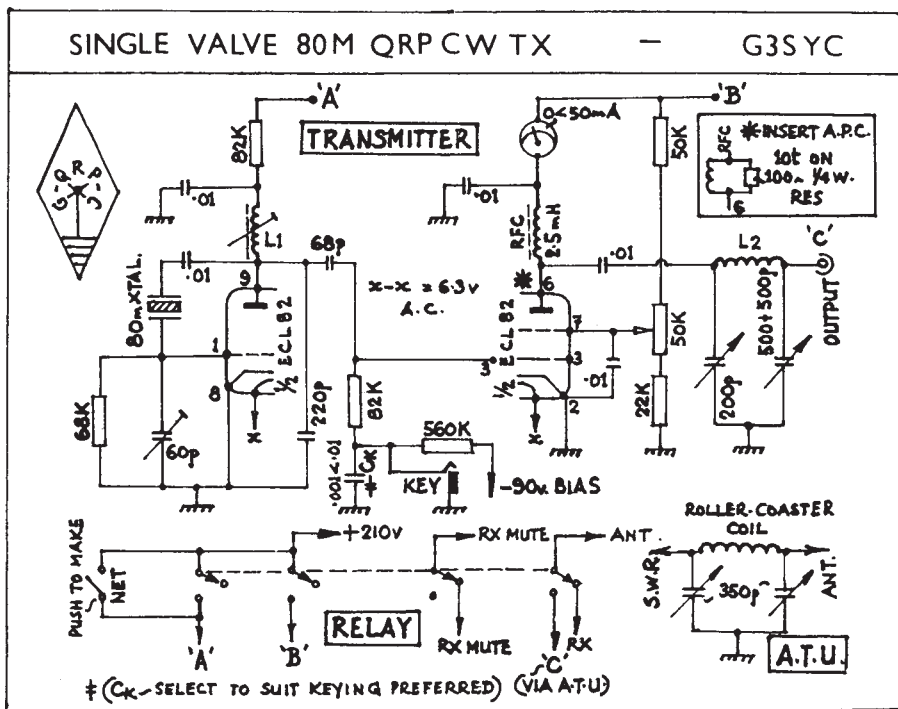
Ever wondered what those computer switching transistors GM30XX used in his OXO TX PA, or G3RJV used in the S.C.D.? They appear to be core storage drivers, said to be OK to 100MHz and capable of about 4 watts D.C. input. The club is able to offer a limited number of these devices at £1 for six. They come on a piece of PCB with short leads. Sent £1 plus a strong SAE to G3RJV (Cheques: G QRP Club)

I.R.C.s

Sending IRCs to DX stations? They now cost 30p each in the UK. The club has some in stock at 5 for £1 plus a SAE to G3RJV.

SINGLE VALVE 80M QRP CW TX

G3SYC



Ever worked Brian, G3SYC on 80? Well a lot of Club members have, in fact Brian has QSOed 98 Club members on 80 and most of Europe with this simple valve transmitter. He has also used it in The R.S.G.B. Low Power Contest in 1980/81. Brian uses 110 feet end fed wire via an SWR meter and the Roller Coaster ATU. The 50K pot in the valve screen allows power levels of 1 - 3 watts to be used.

COILS: L1 - 40t, 28SWG, closewound on 13/32" dia (?) slugged former adjusted for best drive with reliable crystal starting.

L2 - 30t, 24SWG, closewound on 1" dia former.

G3RJV TWENTY TROPHY POSTSCRIPT

Remember the G3RJV 20 Trophy announcement from the last issue of Sprat? LEISN AND BUILD A TRANSCEIVER FOR THE TWENTY METRE BAND USING NO MORE THAN TWENTY COMPONENTS IN THE RECEIVER AND TWENTY COMPONENTS IN THE TRANSMITTER AND SUBMIT A LOG OF TWENTY DXCC COUNTRIES WORKED WITH THE TRANSCEIVER, by September 6th 1982, the 20th birthday of the G3RJV call. Just to clarify a few points I have been asked: The award will be judged on the circuit diagram. So items not normally shown on such a diagram (plugs, sockets, hardware, etc) do not count, simple metering can be described in the text if a meter in the circuit ruins the count! If a VFO or VXO is common to both receive and transmit circuits, its components count can be shared between the transmitter and receiver side in any ratio. A supply switch need not be shown, but any transmit/receive switching ought to be included in the total count. With the interest which is being shown, I may have to think about a prize for two runners up as well as a plaque for the winner!

G3RJV

10 METRE VXO TRANSMITTER CIRCUIT (SPRAT 28)

Siegfried Hari (DK9FN) has written to say that he was the original author of this article when it first appeared in "CQ - DL" 9/77.

Argo Story....

YOUR ARGONAUT GOT A T3 NOTE ON FORTY? A CAUTIONARY TALE FOR 505 OWNERS. The great mystery of the bum 40m signal from G3RJV has been solved. Moving a power supply from the shelf directly above the RJV Argonaut 505 changed the transmit and receive note back from T7 to T9. The field of the mains transformer appears to have been just above the VFO coil. Odd it was only on 40m?

G4DQP TROPHY QRP Winter Sports 1980

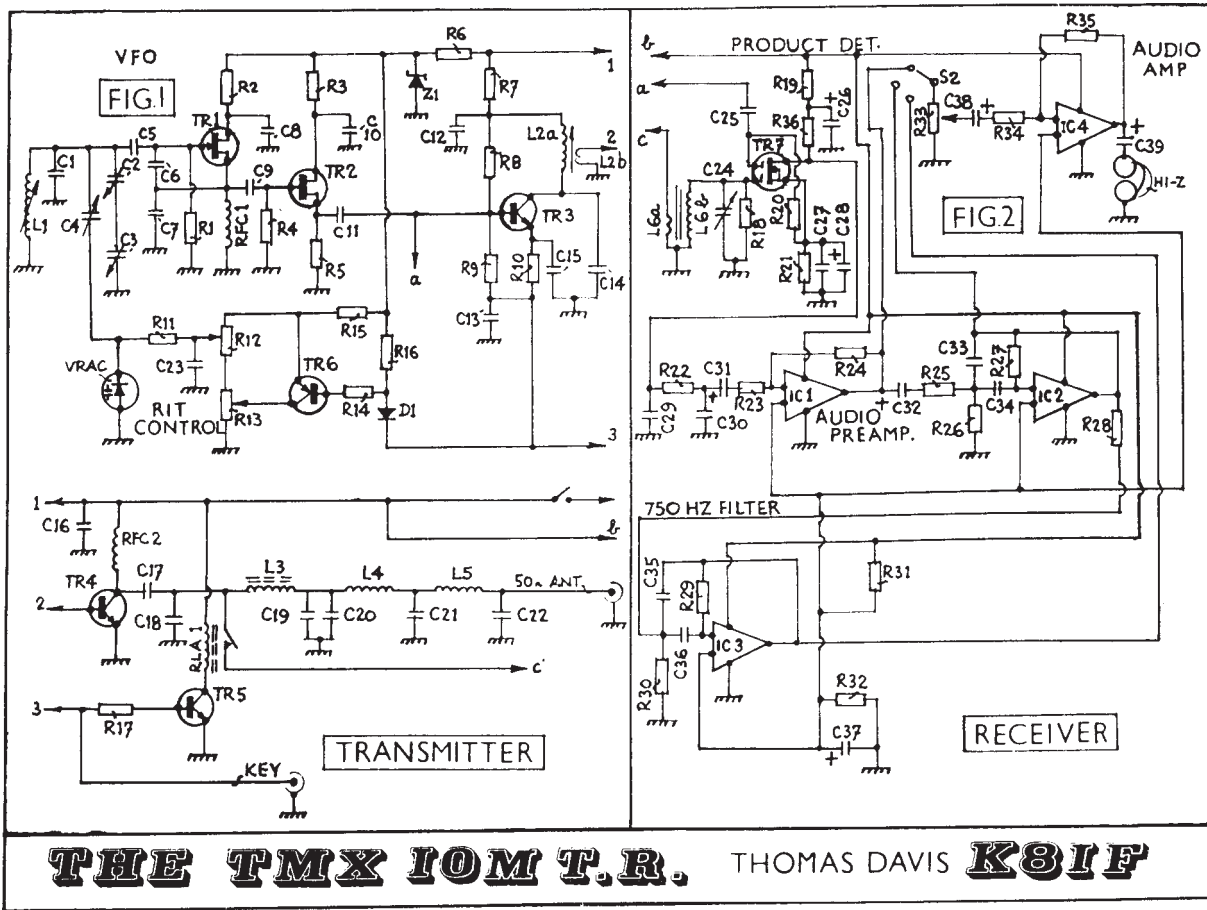
Vince Lewis, G4DQP, has kindly donated a Trophy to the Club. It will be awarded annually to the station who, using simple wire antennas not exceeding 10m in height, makes the most outstanding contribution to the Winter Sports held in any particular year. In deciding who receives the Award your Committee will take into account factors such as the power used, type of equipment, the amount of interest provided for other members and so on.

Winter Sports Logs to G8PG

TMX Transceiver

Parts List

C1,5,7,9:	270pF silver mica (SM)	TR1,2:	2N5486 or MDP102
C2,4:	3-30pF trimmer	TR3:	2N222
C6:	470pF SM	TR4:	MPSU-31 or ECG 222
C8,10,12,13,17,27,28,29:	0.01mfd disc ceramic	TR5:	2N3904
C11,15:	230pF SM	TR6:	2N3906
C14:	180pF SM	TR7:	40673 or 3N204
C16:	0.1mfd disc ceramic	R1,4:	47K, ½ watt
C18:	1500pF SM	R2,3:	100 ohms, ½ watt
C19:	1500pF SM	R5,36:	1K, ½ watt
C24:	80pF trimmer	R6:	180 ohms, ½ watt
C25:	27pF SM	R7:	10 ohms, ½ watt
C26:	20mfd electrolytic	R8,9,15,16:	4.7K, ½ watt
C28,39:	10mfd electrolytic	R10:	390 ohms ½ watt
C30:	0.33mfd disc ceramic	R11,35:	100K, ½ watt
C31,37:	1mfd electrolytic	R13:	10K pot
C32,38:	2.2mfd electrolytic	R14:	5.6K, ½ watt
C33-36:	0.0027mfd disc ceramic	R20:	8.2K, ½ watt
C23:	0.001 mfd disc ceramic	R26,30:	4.3K, ½ watt
C20,22:	300pF SM (see text)	R12:	25K pot
C21:	600pF SM (see text)	R17:	56K, ½ watt
D1:	1N914 diode	R18:	20K, ½ watt
RLA1:	reed relay, 12V norm-ally open	R19,23:	220 ohms, ½ watt
L1:	6 turns 24SWG on ½", slug-tuned form	R21:	120 ohms, ½ watt
L2a:	11 turns 24SWG on ½", slug tuned form	R22,31,32:	3.9K, ½ watt
L2b:	2 turns 24SWG over L2a	R24:	390K, ½ watt
L3:	5½ turns, 24SWG on T-50-2 toroid	R27,29:	1Meg, ½ watt
L4,5:	12½ turns, 24SWG on T-50-2 toroid	R33:	1 Meg pot
L6a:	¾ turns, 24 SWG on T-50-2 toroid over L6b	R34:	1.2K, ½ watt
L6b:	35½ turns, 24SWG on T-50-2 toroid	R25,28:	360K, ½ watt
		RFC1:	100uH choke
		RFC2:	24uH choke
		S1:	SPDT mini toggle switch
		S2:	1 pole, 3 position rotary switch
		IC1-4:	LM307 op amps (or 741)
		Vrac:	varactor diode, 3-34pF
		Z1:	8.2 volt, ½ watt zener diode



THE TMX IOM T.R. THOMAS DAVIS **K8IF**

From QRP ARCI 'QRP Quarterly'

The TMX A Transceiver for the new 10MHz Band

Thom Davis K8IF

The 10MHz band looks interesting and promising for 1982. Conveniently placed between 20 and 40 metres, its propagation characteristics are attractive. And the extra operating room with this new band is welcome too! Its advent gives us a chance to do some experimenting and homebrewing as well. With that in mind, The TMX (30 metre transceiver) was developed.

The TMX is a VFO controlled CW transceiver that puts out about 2.5 watts. The receiver section is a direct conversion design with audio filtering and receiver incremental tuning (RIT). Break-in operation also is included.

A JFET VFO similar to the one that appeared in the July issue of The QRP Quarterly lies at the heart of this rig. I merely changed the LC constants at L1 and C2, 3 for 10.1 to 10.15MHz operation. The VFO is always energised, providing injection to the product detector (TR7) and enhancing frequency stability. The VFO output is amplified by TR3 to drive final transistor TR4 to about 2.5 watts output.

TR3 is keyed during transmit, so is TR5 which opens antenna relay RLA1 and removes the antenna from the product detector input (L6a). RLA1 is a surplus reed relay (normally open), which has an adequate switching time for QSK. However, one may wish to use a diode QSK system instead, with a slight sacrifice in receiver sensitivity. The choice is yours. TR4 is an MPSU-31, which was purchased at a local hamfest for about 50 Cents. The ECG 322 version works just as well, but may cost a little more.

The output of the transmitter section is run through a half wave filter consisting of L4, 5 and C20, 21 and 22. The filter provides better than 40dB attenuation of the second and subsequent harmonics (see Fig. 3). The values for C20 and C22 were achieved by paralleling two 150pF silver mica capacitors. C21 consists of a 100pF and a 500pF capacitor wired in parallel. The windings on L4 and L5 were spread equally over each of the cores for maximum output. TR4 output matching is achieved with a pi-network, 36 to 50 ohms, consisting of C18, L3 and C19. The windings on L3 occupy about one third of the T-50-2 core

In the TMX's early stages of development, an MC1496 IC was used as the product detector, but I encountered several problems, such as AM detection. The change to the 3N204 dual gate Mosfet improved the rigs performance overall. With the addition of audio filtering and the use of low noise operational amps (LM307), the receivers sensitivity is about 1.5 microvolts (10dB S N D/N). IC1 is the preamp, following TR7, and has a gain of about 65dB. IC2 and IC3 make up the active audio filter which was designed for a centre frequency of 750Hz and bandwidths of 150Hz and 110Hz. IC4 is the output amplifier with a gain of about 3.8dB and it drives high impedance headphones. S2 selects the desired filter bandwidth.

The RIT section was not part of the original project, but its simplicity and enhancement of performance make it a welcome addition to the TMX. During receive, R12 can be used to offset the receive frequency plus or minus a few KHz. Changes in the control voltage at R12s wiper cause changes in capacitance in the varactor diode. The amount of this change can be limited by the setting of C4. I have set mine for plus or minus 2.5KHz. During transmit D1 is grounded, causing a predetermined voltage at R12. This predetermined voltage is achieved by setting R13. In my alignment, this voltage is set at 4, which represents the centre frequency of the RIT range.

Alignment of the TMX is as follows:- Bring the VFO into range by monitoring its output on a receiver, or by using a frequency counter, coupled to the base of TR3 through a 0.1mfd capacitor. Set C3 to maximum capacitance and C2 to about half its tuning range. Preset the core of L1 about half way inside the form, and turn the unit on (do not key) and adjust L1 slowly up or down, listening or watching the counter for 10.100MHz. Then adjust C3 for minimum capacitance, and check your frequency. If higher than 10.150MHz, then reduce the capacitance of C2 and repeat. This procedure is repeated until the frequency span is about 50KHz. This will set the frequency coverage of the TMX.

Next, connect a 50 ohm load to the antenna, along with a power meter capable

of measuring about three watts. Preset the core of L2 to about half way down the coil form and remove the frequency counter (if used) and briefly key the rig. While monitoring the output adjust the core of L2 for maximum power output. Be sure to keep the key down for short periods only, you do not want to roast the final transistor. Next "tweak" L3 by compressing or expanding the turns on the core for maximum output. Repeat L2 and repeat the procedure for maximum output - about 2.5 to 2.8 watts.

To adjust the RIT control, measure the voltage at the junction of R11 and C23, with R12 set at its mechanical centre. Adjust R13 for four volts. This approximately sets the centre frequency for the RIT control. Key the transmit section and measure the voltage again (while keyed). Record the reading, unkey the transmitter, and turn R12 until the keyed and unkeyed voltage match. Key the transmitter again and adjust R13 for four volts at the wiper of R12. Mark this setting on the chassis, or record the knob setting, because this is your zero beat frequency. Unkey the transmitter and turn R12 to both extremes. Voltages should be 1.7 (minus offset) and 6.5 (plus offset). C4 sets the amount of RIT swing, determining how far plus or minus centre frequency you can go, i.e. plus or minus 1KHz, 2KHz, etc.

Return the RIT control to zero beat frequency, your recorded centre setting, for matching the receive and transmit frequency.

The receiver can now be peaked, either with a signal generator or an on-the-air signal. Set S2 to the maximum bandwidth position (bypassing IC2 and IC3). Disconnect the 50 ohm load and replace it with an antenna or a signal generator set for a five to ten microvolt signal level. Plug in the headphones and set the volume control (R33) to about half its range. Turn the main tuning capacitor to 10.100MHz and peak C24 for maximum audio level when receiving the signal generators output or an on-the-air signal. Do not fret if you do not have access to a signal generator, I have peaked the rig on RTTY signals at 10.130MHz and came very close to the performance of a laboratory alignment! Next, check the RIT. Set R12 to centre and zero beat a signal. Slowly turn R12 to both extremes. The audio pitch at each extreme should be about the same. If you pass the frequency response of your ears at either end of the range of R12, C4 may be set too high, making your offset greater than plus or minus about 3KHz. You can narrow the swing by reducing the capacitance of C4, but because this will effect the VFO calibration, L1 will also have to be retuned. C4 could be replaced with a fixed value capacitor from 3 to 10pF. The higher capacitance results in a wider RIT swing.

Finally check the audio filtering of IC2 and IC3. Tune a signal at about 1KHz with S2 at its first position (widest bandwidth). Turn S2 to the second position. The audio should drop about 4dB and should drop about 10dB in the third position. The filter bandwidth is 150KHz (second position) and 110KHz (third position).

This completes the alignment of the TMX and now you should be QRV! The entire project was breadboarded, so no printed circuit information is available. Anyone who builds the TMX on a PCB may be willing to let The Club know and supply the etching pattern. Further, any modifications would be welcome, i.e. side tone, diode switching, metering, etc.

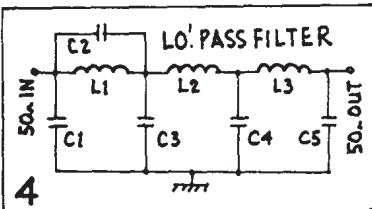
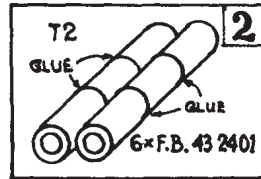
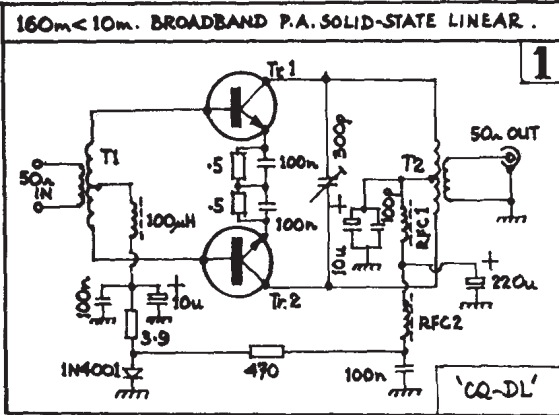
Good luck and hope to see you on thirty metres.

Argonaut Tip By Dave Farris, K5NT

On the back panel of the Ten-Tec Argonaut 509, and perhaps on earlier versions as well, is a switch labelled "Transceive/Receive". This switch becomes either dirty or defective, and causes a significant loss in receiver sensitivity, usually over several seconds. Full sensitivity can be restored by tapping the key.

The cure lies in either shorting across or replacing the switch. Both Ed Popp, K5BOT and I experienced this problem and the above "fix" worked in both cases. The switch is not found on the 515 version.

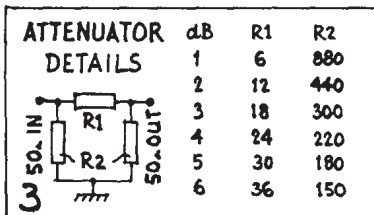
160-10m Solid State Linear P.A.



Or use a GM30XX type of Low Pass Filter from Sprat No. 20

	160m	80m	40m	20m	15/10m
C1	1600pF	800pF	390pF	210pF	105pF
C2	1360pF	680pF	330pF	180pF	90pF
C3	4400pF	2200pF	1100pF	560pF	300pF
C4	5600pF	2800pF	1400pF	750pF	390pF
C5	2300pF	1200pF	560pF	300pF	150pF
L1	2.4uH	1.2uH	0.6uH	0.3uH	0.15uH
L2	3.2uH	1.6uH	0.8uH	0.4uH	0.23uH
L3	4.0uH	2.0uH	1.0uH	0.5uH	0.25uH

Resonance:
L1 + C2 2.8MHz 5.5MHz 11.1MHz 20.8MHz 41.6MHz



E.G. 4 watts transmitter reduced to one watt, use 6dB.

A Broadband Power Amplifier 160m to 10m Solid State Linear

From CQ-DL, November 1980. Translated and supplied by Gunter Dengler.

This amplifier needs about one watt input to give about ten watts output. Care should be taken to reduce the input power if it is above the one watt level (see attenuator circuit).

Although the output is 50 ohm link, it is advisable to use a further low-pass filter to keep unwanted products out of the antenna circuit.

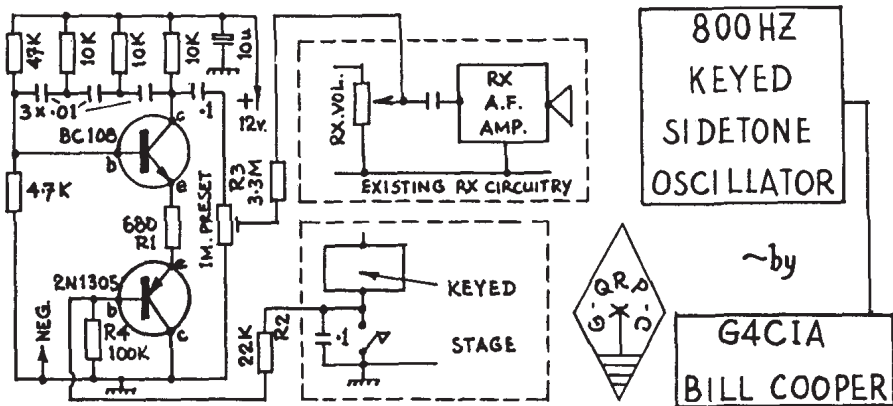
The bias network of the 470 ohm resistor and associated diode give a quiescent current of about 75mA. If different output transistors are used the value of the 470 ohm may have to be altered. The bias current should be about 5 or 10% of the maximum collector current.

Data and Parts List

- | | |
|--|----------------------------------|
| Supply voltage 13.5 volts. | TR1 and TR2 - 2SC1307 or SHT 105 |
| Supply current about 1.8A | T1 - FB 43 2401 Amidon, primary |
| Input power 160m - 20m is 0.5w, 15 - 10m is 1w. | 6 turns of 0.6mm and |
| Output power 160m - 20m is 10w, 15 - 10m is 8w. | secondary 3 turns, |
| Input impedance and output impedance is 50 ohms | centre tapped of 0.6mm. |
| Quiescent Current 50mA - 100mA. | |
| T2 - 6 ferrite beads FB 43 2401 glued together to form a broadband transformer, | |
| primary 5 turns of 0.8mm wire, secondary 5 turns centre tapped of 0.8mm. | |
| RFC1 - 8 turns on an FB 43 2401 with 0.8mm wire. | |
| RFC2 - Ferrite bead with six holes, coded green from VALVO, but Mullard type should suffice. | |
| RFC3 - 100µH | |

References

ARRL Handbook 1976, Solid State Design, etc.



FOR SALE: Prototype of G4DHF 20 to 2m Transverter (SPRAT 26 & 27)
 Built by G4DHF in a smart steel case. £20 inc. post.
 David Johnson, G4DHF, 65 West Street, Bourne. Lincolnshire.

ARGONAUT 515 Owners: Dick Marshall, G4HEP, is interested to hear about any modifications members may have attempted on the 515 and has offered to be a "clearing house" for such ideas so that we might share them through SPRAT or the Datasheet service. Any ideas? Write to Dick: R.T. Marshall, G4HEP, 700 Maidstone Road, Gillingham. Kent.

Wanted: A 3.5 - 4 MHz V.F.O. please state price required. Tommy Williams, 51 Alamein Dr. Winsford. Cheshire. CW17 1DG.

G-QRP-Club Datasheets

As from January 1st 1982 Colin Turner, G3VTT will be handling the datasheets for The U.K. and Europe. Colin has produced a new list of sheets detailed below. U.S.A. and Canadian members can still obtain sheets via Gary Hall, KC4IG at 190 Severt Street, Marion, Virginia, 24354. Gary will supply his current list for a SAE.

WHEN REQUESTING SHEETS PLEASE SEND A LARGE S.A.E. PLUS A 5p HANLLING CHARGE FOR EACH TITLE TO:- COLIN TURNER, G3VTT, "HURLEY", WEAVERING STREET, MAIDSTONE, KENT.

Available Sheets Are :-

General QRP

'The Needle Swings to QRP' By W7OE - A look at QRP in the U.S. a few years ago, complete with a few circuits.

QRP Transmitters

- 'A Low Power Transmitter and Wavemeter' By W6NIF
- 'Transmitter Fundamentals' By W1FB and WA0UZO - QST, December 1979.
- 'The Knobless Wonder' By W6YBP - crystal controlled with no tuning.
- 'The Bren' By G3VTT - DSB/CW, 160 metres TTX - Sprat, 1981.
- 'Single Valve QRP TX' By G3SYC using ECL82, crystal Osc. and PA for 80 metres.
- '3 watt AM transmitter for 144MHz' By G8EPE.
- 'The Tucker Tin' By ZL2AMJ - Two valve SSB/CW transmitter.
- 'The Tuna Tin 2' By W1CER - simple 7MHz two transistor TX - QST.

Power Amplifier Design

- 'A four watt PA' By VE5FP
- 'Boots for QRP Rigs' By W4YVP - QST, July 1981.
- 'The W5TWV 7 Watt PA' By W5TWV - The Milliwatt.
- 'Slippers for a QRP Transceiver' By VE6EA - using an EL84 valve.

Transceivers

- 'The SCD - Parts 1, 2 and 3' By G3RJV - Short Wave Magazine.
- 'The S.C. De Luxe, Parts 1, 2 and 3' By G3RJV - Short Wave Magazine.
- 'G3IGU 80m QRP Transceiver' By G3IGU.
- 'The Ultra Mountaineer' By W7BBX - 7MHz VXO tranceiver.
- 'The JU6 7 - 14MHz Transceiver' By G3DOP - famous design.

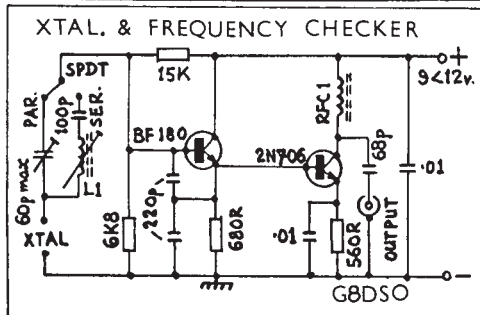
Receivers

- 'The Sideband Mini Tuner' - 80m and 40m DC RX - Ham Radio.
- 'Firex' By G3RJV - simple 7 and 14MHz RX - Short Wave Magazine.
- 'Silver Tern' By SM6259 - Super reflex 15 to 80 metres RX.

General Information

- Complete HW8 Modifications. The Argomate and Complete Argonaut Modifications
- Complete HW7 Modifications. DJ6HP CW Filter.
- The MFJ Range of Filters. Repackaging the Ten-Tec PM3
- Adjustment of Vibroplex keys and the Vibroplex parts list.

Crystal and Frequency Checker. Chris Warwick G8DSO



I wanted to check the frequency and activity of some crystals which were lying around the shack, but my Japanese oscillator did not have enough output to drive the frequency counter

I browsed through some magazines until I came across an item in a Rad-Com of about three years ago on crystal oscillators. This provided the basic circuits and with some fiddling, a design emerged which would check both series and parallel loaded types. I built it and low and behold it did not have enough drive.

Resorting to the gash transistor box once more, a 2N706 was unearthed (but a BC107 would probably do), and an excruciatingly simple amplifier was knocked up, with no calculation, malice or forethought, and low and behold, it worked!

QRP GUIDE FOR 1981

A SPRAT Pullout



QRP DIARY 1982

16/17.1.82	AGCW-DL Winter QRP Contest
6/7.2.82	Italian QRP Contest
27/28.2.82	G - QRP - C Activity CW Weekend
27/28.2.82	ARRL CW DX Competition with QRP Section
6/7.3.82	ARRL SSB DX Competition with QRP Section
20/21.3.82	CQ WPX SSB Contest with QRP Section
18.4.82	R.S.G.B. Low Power Contest
16.5.82	R.S.G.B. RR CW Contest with QRP Section
29/30.5.82	CQ WPX CW Contest with QRP Section
18.7.82	R.S.G.B. 3.5MHz Low Power Field Day
17/18.7.82	WORLD QRP FIELD DAY (Successor to AGCW Summer Contest)
11/12.9.82	G - QRP - C Activity CW Week-end (May be re-allocated to WQF Activity Week-end)
10.10.82	R.S.G.B. 21MHz CW Contest with QRP Section
30/31.10.82	CQ WW SSB Contest with QRP Section
14.11.82	G-QRP-C/ARCI Combined Activity Week-end
27/28.11.82	CQ WW CW Contest with QRP Section
26/31.12.82	G - QRP - C Annual QRP Winter Sports.

NOTE: At the time of publication the ARCI dates had not been received. Their Spring Contest is usually the third week-end in April (17/18th) and their Fall Contest, the third week-end in October (16/17th). Will be confirmed.

Week-end Activity Periods

27th and 28th February 1982

11th and 12th September 1982

1982 QRP Winter Sports

26th to 31st December 1982

The times and frequencies for the above events are as follows, all times in GMT :-

0900 - 1000	14060	1500 - 1730	21060/28060
1000 - 1100	21060/28060	1730 - 2000	14060
1100 - 1200	7030	2000 - 2100	7030
1200 - 1300	3560	2100 - 2200	3560
1300 - 1400	7030	2200 - 2300	14060
1400 - 1500	3560		

Weekly Activity Periods

Sundays from 1100 - 1230 and from 1400 - 1530 on the International CW QRP Calling Frequencies (3560, 7030, 14060, 21060 and 28060). It is suggested that the first half hour of each period be allocated to DX working on the HF bands.

Wednesdays from 2000 Local U.K. time onwards on 3560. This period is mainly for U.K. and Western European stations.

G QRP Club Members Callsign List [Dec.1981]

G2	RD	DWW	ICH	KQT	OAZ	RZP	VRM	ZDR	AYN	CMY	DQF	EQB	FMK	GOF	HJT	IKR	JLW	LBY	MZC	AAL	PWJ	ZWW
	BS	VA	EBA	IEB	KRR	OEP	SCE	VTD	ZEE	AYS	CQK	DQP	EQC	FNL	GOT	HKD	IMG	JKO	LCH	NFR	APR	RCA
	CP	ADB	EDW	IGM	KSK	OIN	SGY	VTT	ZGN	BCY	CRI	DRB	ERA	FQE	GOY	HLP	IMH	JNW	LDG	OHM	ASY	ROO
	NJ	AHS	ENB	IGN	KTX	OJM	SMV	VTZ	ZHP	BDQ	CSM	DRW	ERE	FQQ	GRP	HMC	INM	JQT	LDY	G5	AXO	RRK
	UV	AIP	EPU	IGU	LBT	OJX	SSJ	VXJ	ZJJ	BHO	CUF	DRZ	ERO	FRE	GQL	HMD	IQD	JRE	LEG	BH	BVH	RVD
	ASF	AMF	ESB	IGX	LDO	OKY	SVO	WBO	ZKU	BJS	CUY	DTB	ERT	FSP	GRR	HME	ISO	JUC	LGX	FF	BZT	SEQ
	BON	AMO	FCX	ILO	LGX	ONW	SYC	WFV	ZLA	BJZ	CQC	DTE	ESF	FST	GSA	HMH	ISU	JQX	LIB	IC	EAS	SHR
	BOF	ANQ	FMW	IQF	LHJ	OQJ	TBT	WHU	ZLT	BKQ	CVE	DUT	ETJ	FVE	GSC	HNE	ITA	JZM	LJW	LS	EIU	SNG
	BGG	ASE	FNM	IRM	LJF	OSJ	TKO	WMN	ZNK	BLG	CVF	DVW	ETS	FXI	GTU	HNI	ITC	JZO	LKT	OW	FGY	SRL
	BYP	AVN	FTQ	IRW	LOE	OVJ	TKU	WOV	ZOF	BLM	CWS	DXN	ETZ	FZO	GUO	HNR	ITL	JZV	LKV	CRD	GRT	TAF
	CAV	AWO	FRW	ITL	LQI	OZC	TML	WQW	ZOH	BQC	CZB	DYF	EUW	FZS	GUW	HOM	IUP	KGY	LLO	CSU	HED	T-
	CCH	AWZ	FUH	IUJ	LXQ	PDL	TOG	WWS	ZPF	BSS	CZX	EAM	EYA	GBE	GVH	HPQ	IVJ	KIK	LRL	DQK	IGZ	TOZ
	CCQ	BFR	FVD	IVF	LYE	PLB	TPI	WYF	ZQA	BUE	DBN	EAN	EYD	GBR	GWV	HPV	IVP	KJA	LRY		IQT	TXA
	CGL	BGR	GAQ	JAD	LYK	PKQ	TSS	WXL	ZUL	BVU	DBU	EAX	EYE	GCU	GYA	HQE	IVY	KJJ	LSE	G6	KEN	UAT
	CKM	BOK	GBD	JFM	LYU	PQB	TVU	WZA	ZWH	BWP	DDX	EBO	EYF	GDR	GYM	HQJ	IWC	KKB	LVK	AB	KKS	UED
	CVA	BRL	GET	JIS	MBW	PTO	TBZ	XFG	ZXC	BXL	DEP	EDG	EYS	GED	GYQ	HQV	IYE	KKI	LVM	AAL	KMV	UFY
	CVV	CCB	GGI	JKB	MDQ	PVQ	UDA	XMI	ZXX	BXN	DES	EEM	EZF	GER	GYO	HSG	IZK	KLQ	LWO	AUW	KNA	UQY
	CYN	CCL	GQE	JKY	MPW	PXS	UOV	XPM	G4	BYM	DFV	EFE	FAI	GFK	GZI	HSG	IAJ	KMC	LWP	BAI	LPI	UUK
	FRZ	CEB	GUV	JRD	NEO	PYU	UFZ	XVF	AL	BZB	DGX	EFJ	FAM	GFT	GZJ	HSU	JBR	KOV	LZA	BYG	LVZ	UXH
	HCP	CEL	GWI	JSP	NHC	PZP	UHQ	XXR	HG	CCB	DHF	EHT	FBA	GHM	GZS	HTM	JBL	KFE	MBP	DGL	NGY	VAD
	HII	CSC	HCM	JXQ	NII	RDU	URU	YCC	LV	CCW	DLJ	EHU	FBZ	GIE	GAQ	HTP	JCY	KIN	MEW	DQV	NJZ	VJA
	HKU	CWL	HCT	KAN	NIJ	RFE	UWZ	YHM	OO	CEJ	DKS	EJN	FCU	GIQ	HED	HWU	JDB	KPH	MHY	EQL	NKO	WEW
	HKZ	CWX	HCX	KDL	NJC	RGF	UXE	YJM	ABF	CFW	DMB	EJI	FEI	GIU	HEP	HWZ	JDF	KQG	MIJ	GFP	NLQ	WVB
	HLL	DBU	HDL	KFE	NKS	RIS	UYM	YLL	AEM	CIA	DMH	EKH	FIE	GJA	HEY	HYY	JDL	KUU	MJO		NMQ	VOQ
	G3	DMC	HKO	KFS	NNR	RJF	UZI	YNA	AHF	CIB	DNP	ELZ	FJF	GJW	HFP	ICC	JEA	KVQ	MOU	G8	OOG	XIP
	AM	DNF	HMF	KFZ	NPJ	RJV	VBS	YOV	AJV	CHL	DOP	ENK	FKH	GJY	HFS	IDG	JEP	KWO	MPD	DV	OQX	XQA
	CJ	DOP	HQQ	KII	NQU	ROO	VFA	YUQ	ANF	CKG	DOU	ENW	FLO	GLQ	HGJ	IDL	JEN	KWV	MQR	IB	OWL	XSC
	GB	DPS	HRD	KKQ	NRO	RRD	VKM	YVZ	ASL	CLD	SPM	EOE	FLQ	GKC	HHB	IIN	JIM	KXY	MRK	KB	OXM	XSS
	JU	DRP	HWX	KPP	NTD	RUN	VMU	YXB	ATN	CLN	DPY	EOL	FMD	GMI	HHT	IJH	JJN	KYG	MWM	PGB	PEW	ZBB
		DVL	HZM	KPT	NTM	RYP	VOM	ZDE	AWQ	CLR	DQA	EPW	FMH	GOE	HIH	ILU	JLL	KZL	MWO	VN	PUD	ZNC

GD

3FXN

GI

2DZG

3GTR

3NZZ

3POS

3VYY

4CBG

4CRQ

4FFL

4HVI

4HXL

4IVI

4IVO

4JLF

4KJT

4LXL

6AEJ

8RHE

U.S.A.

EUROPE

GM	4LHA	1	WB2ONA	WA4YRN	6	8	9	WØGK	C31DV	EC8GB	I2VRF	ON6KE	SM6AWZ
3KMG	4LLY	AC1P	WB2QOH	KB4IP	K6MA	K8AEM	AA9N	WØON	CT1DP		I3ESX	ON6NF	SM4DXL
3KNX	4JNF	K1DDC	WB2RZU	N4GR	KA6FRM	K8EEG	AE9G	WØCGA	CT4CH	EI1DA	I3MDU	ON6WJ	SM4FPF
3MXN	6BZF	K1EQA		WD4DSS	KA6IDI	K8IF	A19N	WØCH		EI3CY	I5WUO	ON7CH	SM5ENX
3OXX	8CH	K1GKR	3	WD4FZU	KA6RGC	K8KIR	K9PNG	WØPFR	DA1JS	EI3DY	I7CCF	ON7IR	SM6FQE
3RFR	8PHV	KA1BPC	AF3S	WD4NGD	KD6NL	K8LJQ	K9ZWH	WAØYED	DA4DY	EI3EA	I7NFE	ON7LO	SM6GWM
3RKO	8LDK	KA1CZF	KA3EIN	WN4AEC	W6IRA	K8MX	KA9B	WBØHMM	DF5KB	EI3EM	I7QBH	ON8GP	SM7BMG
3RFQ	8ODL	KA1DYT	W3AEC		W6PQZ	K8BUE	N9CFZ	WBØAJI	DJ1ZB	EI4DZ	I7SVY		SM7EHK
3SPT	8WMU	KA1FEX	W3QF	5	W6SKQ	K8DDI	W9AYH	WBØOKY	DJ4HR	EI5BA	IØSKK	OZ3XH	SM7GUY
3UWX		N1AQK	W3TF	AB5L	W6YVK	K8EDG	W9JKF	WBØROT	DJ5QK	EI6BA	IV3BOZ	OZ8SO	SMØFSM
3WIG	GW	W1EXZ	WA3BME	K5BOT	WA6POC	K8HAN	W9PNE	WBØWGS	DJ7ST	EI6DH			SMØGHU
3XNE	3CIJ	W1FB	WA3FNK	K5HGB	WB6WKM	KM8X	W9SCH	WBØWKY	DK2EB	EI7DN	LA2QAA	PA2LIA	SMØGKF
3ZTA	3COI	W1SZJ	WA3MWR	K5NT	N6WR	N8BF	W9FPP	WDØEAO	DK2NV	EI8CE	LA3BX	PA3ABA	SMØGMG
4CIP	3DEX	WA1JYV	WA3TKU	K5VOL	N6BVZ	N8ALE	W9KFR	WDØEDH	DK2TK	EIØCF	LA4RA	PA3AJU	SMØIIN
4CXP	3ELM	WA1THQ	WA3YZW	KA5EDG	N6CDQ	N8CQA	WB9FRU		DK5RY		LA7YW	PA3BDB	
4EFR	3HAI	WA1ZKP	WH3AAA	KA5DXI		W8JGK	WB9LGZ		DK6AJ	DF8CL		PAØGG	SP5AGU
4ELV	3ITT			KA5ELD	7	W8LCU	WB9QPS		DK9FN		OE1SBA	PAØCWA	
4EWM	3NNB	2	4	KB5B	K7BD	W8WCS	WB9VKU		DK9TZ	F3IM		PAØCWF	YØ6HQ
4FDD	3SB	AI2H	K4AJF	KB5OX	K7BWE	WA8TCG	WB9WIC		DL2FI	F6FWF	ØH2KF	PAØDST	
4FNE	3SSY	KA2ETN	K4BNI	KB5EPU	N7BJU	WA8TER	WD9CIX		DL7DO	F9YZ	ØH5WH	PAØINA	YU3TFW
4FPR	3YBB	KA2KOA	K4DFP	KC5EV	W7EL	WB8BHU			DL7MAM	FØHX		PAØJHS	YU3TPQ
4GIF	3YWE	W2BKH	K4HTJ	KC5YY	W7ZOI	WB8OWM					OK1DKW	PAØLM	YU3TVN
4GNB	3ZFY	W2BYO	K4JHP	N5AMQ	KA7CAU	WB8PJR	KØTBB		EA1QJ	HB9ALF	OK2BMA	PAØWX	YU3UQR
4HBG	4EYG	W2YJR	K4KXX	N5EM	WA7ZBL	WD8AZF	KØUBA		EA2SN	HB9ASJ		PAØYF	YU7EC
4HBM	4GJI	W2AHP	K4NRM	W5QJM	WB7BZQ	WD8BMQ	KAØDGN		EA5ME	HB9BCO	ON1GR	PE1CWU	
4IIR	4KJW	WA2JOC	KC4IG	WA5TFU	WB7BZR	WD8LJF	KAØEDJ		EA7AAW	HB9BYU	ON1OP		
4ITH	4IZJ	WA2KSM	N4FLC	WB5CVE	WB7PFB	WD8NOY	KAØEGJ			HB9IK	ON4PQ	SM1JBM	
4JJG	8GBJ	WA2LZZ	WA4BTL	WB5NGB	WB7QWA		KBØWF		EA8EY		ON5AG	SM5CO	
4JMU	8GLG	WA2VZL	WA4KEJ	WB5VXH			KBØZA		EA8MO	I1OUE	ON5LJ	SM6AOQ	
4LFZ	8HZW	WB2EUF	WA4YMQ	WD5BUG			NØART		EA8OA	I2MXY	ON6GA	SM6AWA	

World

A35DE VK3NQQ
VK3VEU
JH1HTK VK3YNM
VK4PM
KL7IBT VK5ADG
WL7AHR VK4ARJ
VK4NRR
PY2EGM VK5AVE
PY2FNE VK4OI
PY2TU VK4APN
VK5ME
VE1BFL VK5ZGA
VE1QH VK6JS
VE2EZI ZC4AU
VE2ABT
VE3EYH ZE3JO
VE3JFH
VE3KTZ ZL1ABS
VE3LDW ZL1AF
VE4QL ZL1AO
VE5JQ ZL1BTT
VE6ANN ZL1BHT
VE7CKF ZL1BLJ
VE7DHD ZL2ASW
VE7DHM ZL2AUJ
VE7DZR ZL2BJS
ZS6BTY ZL3WL
ZL4IZ
3B8BJ ZL4NL



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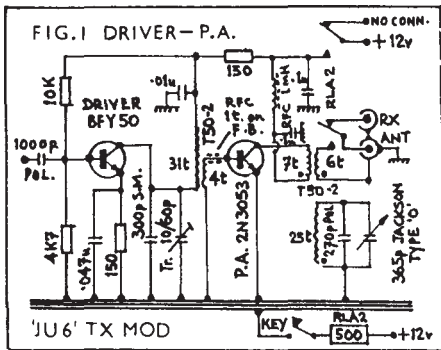
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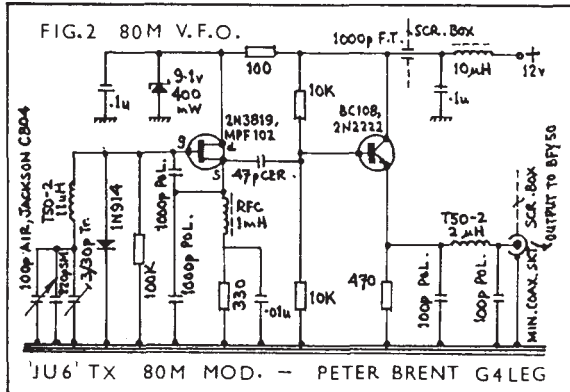
SPRAT material, change of QTH, General Mail to G3RJV, Subscriptions to G4DVW, Award applications to G8PG, Members news and QSLs to G4BUE, SSB matters to G3R00, VHF to G4DHF, Datasheets from G3VTT.
PLEASE QUOTE YOUR MEMBERSHIP NUMBER IN ALL CORRESPONDENCE.



80m VFO Transmitter

Based on the JU6

Peter Brent G4LEG



This circuit is the transmitter side only of the JU6, changed to 80 metre band. The BFY50 driver is altered by removing the F.B. capacitors, to a driver from a VX0. The driver tank is recalculated and more capacitance added to resonate at 3.55MHz (note: no tap on coil).

The 2N3053 PA is altered for single PA tuning control. Note the similarity to "Denco" coils (U.K.). These do not work well at all and the tank details given, though semi-experimental, were found to produce 500mW, measured on a GM30XX wattmeter/dummy load, with 20K O.P.V. VOM.

V.F.O. decoupling and shielding is essential. Supply line radiation gives S5 on an HA600 receiver, dropping to S1 when all shields are in place. Inductances are calculated values and give the range shown in my prototype.

For alignment set the VFO, with trimmer, for 3.5MHz with vanes fully meshed on the main capacitor. Set to 3570, trim driver tuning for maximum reading on D/L or wattmeter with PA capacitor 1/3 to 2/3 open. Peak the PA tuning from the front panel. Note: about 100mW output will be available over the whole range of the driver trimmer; with the values given, only one peak will be found at the VFO frequency.

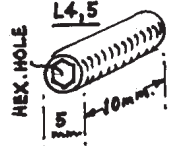
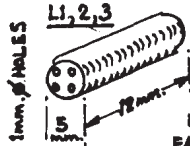
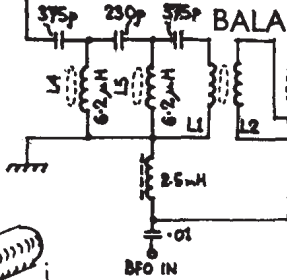
- Note: (a) PA tank redesigned for single panel control. Second harmonic suppression is not as good and clean drive required.
 (b) Driver (VX0) tank re-calculated to suit "parts to hand" toroid; T50-2 is adequate.

The inductance values are approximate calculated values. The VFO coverage given is that obtained with the prototype. For both circuits all decimal capacitor values are disc ceramic, S.M. is silver mica and Poly is polystyrene.

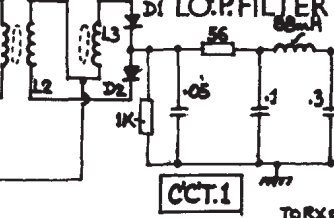
CW SSB QRP DC RX



INPUT FILTER

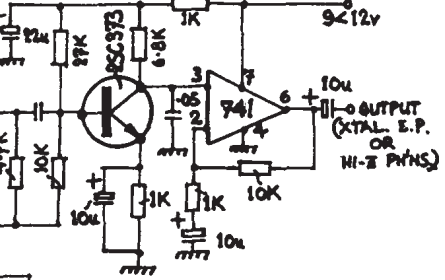


BALANCED DETECTOR



CCT.1

AUDIO AMP



CCT.2

NOTES - INPUT FILTER REMOVES LW/MW B.C. SIGS.
 D1,2 - MATCHED PR. OF GERM. PT-CONTACT DIODES (USE
 D.C. RES.METER TO MATCH FOR FWD. & REV.
 Rz CHOSEN TO SUIT ZENER DIODE. TRANS. EQUIVALENTS :
 2SC373 = 2N3707 = BC184L - 2SC458 = 2N3710 = BC182L .
 Cg (CCT.2) CHOSE FROM 50, 100, 200p.

JOHN BEECH / G8SEQ

WANTED: Issues of SPRAT prior to nr. 22, or copies. Roy Stanley
 W00N, 2212 Sherwood Dr. Cape Girardeau. MO 63701. U.S.A.

Award News G8PG

JACK, P9YZ, THE SILVER TERN TROPHY WINNER.

In our last issue we announced briefly that the Trophy had been won, but we feel that readers would like further details. Jack is a 59 year old aircraft engineer who operates from Merignac. (The news that he had won the trophy arrived on his 59th birthday!). He was first licenced in 1949, but only started QRP operation in May 1978 after buying an Argonaut 509. QRP operation is with a TH3 rotary beam for the hf bands and a W3DZZ for 40/80m. All contacts for the Trophy were made on cw except that with Antarctica, which proved difficult. Jack knew that FB8YI and FB8YH were audible on 14 MHz almost every morning via the long path, and his technique was to listen for them carefully so that he could get one or more calls in before the Wolf Pack started howling! Eventually one morning FB8YI came back with "QRZ QRP?", contact was established and Jack won the Trophy. Collecting the QSLs also called for some effort, but as Jack says "we all know about that!". During his spell of QRP operating Jack has collected other Awards including 5 band DXCC and the award for working 60 countries via Oscar. One can not conclude this account without again thanking Emil for his imagination in devising the Award and his generous donation of the Trophy, other prizes and the certificates. We now await application number two!

FIRST VK QRP DXCC

Congratulations to Rai Taylor, VK7VV (ex-VK7NRT) of being the first VK to qualify for the QRP DXCC Trophy. Rai used an Argo on cw/ssb to do the job. He started life in Wrexham, North Wales, and learned his operating in the RAF.

IMPORTANT YOUR VOTE PLEASE - G2NJ TROPHY 1982

The G2NJ Trophy will be awarded in 1982 for the most outstanding contribution made to the cause of international QRP during the period 1979 to 1981 by a Club member. It is your votes that will decide who receives the Award. Send them to G8PG as soon as possible please.

AWARD NEWS

Apologies to W6YVK whose call was wrongly shown as W6YKV in the last issue. And to G3SYC whose member total is 60, not 40 as shown last time. Anybody know of a home for Award Managers who are getting past it ???

Congratulations to the following members.

QRP Countries; 100 G3DNF.

Worked G QRP Club; 20 GM4JG, 180 (highest score to date) GM3OXX.

Two-way QRP Award; 10 YU3TWN, YU3TFW.

QRP WAC; G4JFN.

DL AGCW WINTER QRP CONTEST 1982.

16/17 January 1982. S.A.S.E. to G8PG for rules.

DL AGCW SUMMER CONTEST 1981

In the 3W Section the 4th to 10th places were taken by Club Members as follows; GW8PG, YU3TFW, YU3TPQ, G3DNF, OK2BMA, DK2TK, I0SKK. In the 9W Section I7CCF was 3rd and OH5WH 8th. We may have had operators in the crew at YU3TVQ who won the multi-operator section.

WQF NEWS

1982 will be a world-wide recruiting year for QRP Clubs - you can help in this by recruiting your friends. The QRP Club of Celje, Yugoslavia have applied for WQF membership. Any WQF correspondence to G8PG, please.

10 MHz QRP

When we get the band watch both 10106 KHz and 10115 for QRP as our American friends may be on the latter.

Members News

Chris Page

G4BUE



How nice when I opened the November issue of C.Q. Magazine the other day to see photos and articles from members VE5JQ, SMØGMG, SM5CCT and GM3RFR regarding their QRPp DXCC Awards - well done to you all.

Your scribe offers his apologies to all who have missed hearing G4BUE on the QRP frequencies of late. The trouble is due to a two storey extension that I am building and unfortunately I have got to take the shack apart for a few months. I hope to be back on the air during the Spring, but in the meantime please keep the letters coming so I can keep in touch with you all. It was nice to attend the Derby Rally and stay for a couple of nights at the RJV household, also nice to meet some members for the first time. I have it on authority that next year GM3ØXX will be venturing south of the border to attend the rally, so keep the date free (when it is announced) so we can have a good gathering of members.

Several of you have mentioned deadlines for news and QSL cards for Sprat. Sprat is published on the last day of March, June, September and December and anything to be included should be with myself or George by the 20th of the preceding month, i.e. 20th of February, May, August and November.

Just a reminder for newer members that the QSL service is provided free of charge to members. Cards for members only should be sent to G4BUE, with the members Club number written in the top right hand corner on the reverse; they will then be sent out with Sprat.

Tony, G4FAI mentions the four watt beacon, VE2TEN on 28218. Reports would be welcomed by the operators in Quebec. Ha-Jo, DJ1ZB mentions that he has been listening on 3560 Wednesday evenings from 2000 U.K. local time (same as GMT at the moment), but has not heard any stations. Members are reminded of this mid-week activity period. If you fancy a QSO over a longer distance, Jim, KL7IBT needs only Europe to complete his WAC. He has been trying since 1973 and would welcome skeds with European stations. Jim can be contacted via P.O. 5388, North Pole, Alaska, 99705.

Al, IØSKK is on the look-out for a second hand Latong UC1 converter for which he is willing to pay 200,000 Lire, (about £90-£100). Colin, G3VTT has been doing a bit of PRO work on behalf of U.K. QRPers. He spent some time in Holland and attended The Day of the Amateur, and met PAØGG and other members of The Benelux QRP Group. Regards are sent to G-QRP-C members from QRPers in the Benelux countries.

The September Activity Week-end seems to have had a mixed reception as the following quotes from your letters and reports will show:- "wonder where all the QRPers were on the Sunday evening/night?" - OK1DKW. "worked lots of Club members and bagged a new one, TL8JM" - GM3ØXX. "very satisfactory...I really did enjoy it" - G4JFN. "all in all I managed five contacts, still all good fun" - G4JZO. "not many QSOs, but I'm very pleased as this was the first test for my homebrew one watt rig" - G4LDG. "most successful of all previous ones" - DJ1ZB. "I found the activity to be very high" - SMØFSM. ""a big disappointment!" - G4EBO. "When I could get on activity seemed good." - G3RJV. "I was very disappointed in the week-end activity seemed very low" - EI6BA. "The bands were very noisy" - DL7MAM. There you are, some members had a ball, others didn't. Just shows that you cannot please all of the people all of the time, hi. Next years events will be held on the week-ends of 27/28th February and 11/12th September in addition to The Winter Sports on 26/31st December. Times and bands are announced elsewhere

in Sprat. Many thanks for all your letters and reports on this years events.

Albert, G4CQK has given up QRP RTTY experiments and has returned to dxing, he has 100 countries worked. Zen, SP5AGU has now worked 102 countries, KA1CZF has worked 96, CT4CH worked 90, and GM3OXX has added a few to raise his total to 172. Should be some more QRPP Trophies going to members soon. Gus, G8PG worked VS6 to take him to 86 worked, with a 120 wire at 15 feet after losing his main antenna in the 90 mph winds in October. It's an ill wind Gus....Another casualty of the October gales was George, G3RJV who was on holiday in Wales with his 20 metre /P rig. He managed 21 countries in a week on 14MHz including FY7, KV4 and a UA9 with the dipole laying on the roof of the house. An earlier week in Cornwall earned George 28 countries with the same set-up with several contacts into the U.S.A.

The ARCI Contest attracted several members, Gordon, G3DNF worked several USA Club members and K8IF was also worked by G3VTT and G3IQF. GM3OXX worked WA6POC and KA1CZF worked several members in Europe from his portable QTH at Cape Cod. Let us hope that next years even does not clash with the Sweepstakes, which caused a lot of QRM.

Peter, HB9IK tells me he came first place in their NFD and 3rd out of 27 in the HB9 National Mountain Day. EI6BA is going well on SSB, Tom working KH6 and VK3 recently and G4BCY has been working all over Europe with his indoor Joystick. OK1EKW after getting married is now back on the bands with a long wire and Jacques, F9YZ tells me he thinks that 220 worked is about the limit. There are some who will disagree with you Jacques!

Roy, G3ZQA points out an error in the coil data for the transmitter in the last copy of Sprat. For RFC2 the wire gauge should be about 28-30. 24 SWG cannot be threaded through the small beads - apologies to members who may have been struggling! Look for a new 10MHz rig from GM3OXX, and I think that several JU6s will be making their debuts on that band on the 1st January.

The Shimizo 105SS QRP transceiver caught the eyes of LL7MAM, G3IQF and G5CRD, all of whom have built them. Bob, G3IQF has built a 1.5 watt outboard PA for his, which he runs from the 100mW output socket for transverter use. EJ1ZB is making slow progress on his new superhet receiver. I must just mention that Zen, SP5AGU during the last two months with his JU6 on 14MHz has made 180 QSOs in 31 countries. Brice, W9PNE celebrated 50 years of radio amateur operating in September. A recent addition to his antenna system has been the ZL2NH two element X beam for 14MHz, which he reckons is two 'S' points over the dipole. On the subject of antennas how about the antenna farm down at EA2SN - a two element 7MHz beam and five element beams for 14, 21 and 28MHz at 75 feet!!!

The July edition of CQ-PA carried a nice three page article on F3IM and QRP, including a nice photograph of Paul and his shack. I hear also that the famous OA8V CQ Magazine article on QRP has appeared in the Czechoslovakian magazine, courtesy of OK1DKW and OK2BMA.

G4JFN has received his AGCW 1000 CW Certificate and "very nice it is too" says Bob. Tony, G4FAI has been experimenting with a 150 feet horizontal loop around his garden for 3.5 and 7MHz. He is quite pleased with the results - no doubt we shall soon receive some information for Sprat (hint hint). GM4JJG is back on the bands, Ronnie having repaired his HW8, and Peter, G4BDQ is building an iambic keyer to help with the CW, he has 77 worked on SSB, but now wants to try and do it the proper way, hi hi (sorry Ian). G4EBO has worked his first ZL with his indoor dipole and also some JAs and W6s. KA1CZF wrote just after he had worked a 4Z4 from a /P location to bring him up to 83. The antenna was the Barker and Williamson (I don't think it is available in the U.K.) whip antenna laying against the wall of the motel!! G4KLQ wonders if any members work QRP from boats all year round? Edd has been working /M from his with a mobile G whip on the roof and a wire netting ground.

In case I miss the Winter Sports due to the bricklaying, let me wish everyone a very happy Christmas and New Year, and thanks a million for all the letters and news that you have given me throughout 1981. Let me hear how your Winter goes, and what you think of the new 10MHz band, (also the 18 and 24MHz bands if the U.K. members can find anyone else to work!!).

Best 73 and QRP dxing

Chris page - G4BUE

A New QRP Award from QRP ARCI



The Triple Crowns of QRP - a new award - will be instituted in 1982 by QRP Amateur Radio Club International (QRP ARCI).

The Triple Crowns are three trophies for the leading scorers in the three categories of The Club's annual spring and fall QSO parties, which are open to members and non-members alike, and special certificates will go to runners-up, say Thom Davies (K8IF), The Club President, and William Lickerson (WA2JOC), The Contest Chairman.

Lickerson and Lavis say the engraved trophies will be awarded to the QRP operators whose combined scores from the spring SSB QSO Party and the fall CW competition top those of other entrants. Trophies will be awarded in these categories :- (1) The top U.S. or Canadian QRP station (2) the leading non W/VE QRP station and (3) the front running novice or technician QRP station (based on results of the fall CW contest only).

To be eligible for one of the triple crowns, operators must enter both QSO parties (except for novices and technicians) because the awards will be based on

their combined scores. Winners will be announced in the January 1983 issue of QRP Quarterly, the Club publication, which also will publish world-wide results. The Triple Crowns of QRP will be awarded in addition to the awards issued for individual performances in the fall and spring QSO parties, whose dates will be announced later, Lavis and Lickerson say. Those contests will continue to cite first and second places overall and top winners from each State, Province and country.

SPRAT AND OVERSEAS POSTAGE

The Club is concerned by some reports from members of the late delivery of SPRAT to overseas members. SPRAT is posted and paid for as an airmail packet (printed rate) and should travel at airmail speed. It may be that the U.K. postal authorities have not been sending SPRAT by air. It would be helpful if overseas members could check the posting date from the postmark on their copy and if the delivery date seems to indicate that the packet has not arrived at the appropriate airmail speed, inform Chris Page, G4BUE. The Club pay airmail rates to ensure that overseas members get their copies in good time.

WANT TO BUY G3RJV ARGONAUT 505?
ABOUT £100.00 RING OR WRITE....

SSB News Ian Keyser G3ROO

Firstly my apologies for the lack of information in the last Sprat. This was due to the slowness of the post. George wrote to us all advising us that the final date had been brought forward, but it did not reach me until the date had passed!

The most important developments that have happened on the SSB scene over the last few months are the skeds. The 14.330 at 1730z is having a very hard time over the last month due to the fact that I have had a change of shift, which makes any evening very difficult. John, LA2QAA was going to take over control, but due to personal reasons now cannot, so Larry, GI4HXL is stepping into the breach and holding the fort. The times at present will remain the same until Larry has had time to think about the situation, but plenty of warning will be given on the sked of any changes. The final point on this sked is that signals are very weak in the U.K., as we are working on back scatter, but most nights there is a path. Outside the U.K. we have several members calling in, Per SM0FSM, is now one of our most regular ones, however there are too many to list here. The best way to find out is to join us, you will be surprised the non-members that call in. For instance, we had a ZL3 the other evening, and Fred, G4HOM and Colin, G3VTT both worked him on SSB. To cap it all Fred was running ten watts PEP to an indoor aerial!

Next bit of sked news is that there is another sked set up on 1885KHz at 1900z on even dates. Please join us on these skeds, it is good to hear each other, and a very good way of exchanging ideas.

Rob, G3IQF has just written to me saying that he has tried to get heard on the sked, but with no luck at present. This shows the problem of the 20 metre sked, but it does keep a sked going for the non G stations, and when Per is on he can hear all of us and tell us that others are calling in. Getting back to Bob, he is running a Shimizu SS105S, with a low power PA unit, only running 1.5 watts. He has had reasonable success on CW and is about to experiment more on SSB.

The final bit of news is the new Marconi Contest, details of this contest are given below. Hope to see you on the skeds, and also in this contest. Work permitting I will be on,

73's

Ian, G3ROO

THE ITALIAN MARCONI QRP CONTEST

6/7th February 1982 from 1500 on 6th to 1700GMT on 7th, SSB power not exceeding 15 watts PEP on 3.5 to 28MHz bands. Call "CQ MARCONI CONTEST" and exchange RS followed by word "LIMA" for QRP class. Score 1 point for contacts with your own country, 2 for same continent, and 5 for other continents. Multiplier of one for each DXCC country worked on each band. QSOs made with non beam antennas count double points. Power bonus of 2 between 1 and 3.9 watts, and four for less than 1 watt. Final score is sum of QSO points on all bands multiplied by sum of DXCC multipliers. Logs to show usual information, separate log for each band and signed declaration as to power, etc. Logs to be sent to M. Capposa, I0OAY, Via Sierra Nevada 99, 100 Rome, Italy, within 45 days of the Contest.

FOR SALE: Unused MFJ949B 300W Deluxe Tuner £65. Vomax Speech processor (great with Argo 509) £65. Hallicrafters SX-101A RX £75. HW8, PSU, Ten Tec AC5 Tuner, Small SWR meter £80. Tim Cook G5DEH. Box 2012, RAF Mildenhall, Suffolk. IP28 8NF.

WANTED: B2 Spares, especially PSU, transmitter key, case, coils, power plugs for TX and RX, knob marked 'transmitter tune', spare valves and any B2 literature. Adrian Heath, G4GDR. Tel: Swindon 762970.

FOR SALE: Heath HR-1680 Rcvr (80-10m) £125, Mizuho 2m CW/SSB Xcvr £75, SWRs - Multimeters - etc. Marvin Wallis, G5CRD. "Quernmore" Cowbeech, Hailsham. East Sussex. BN27 4JL.

WANTED: Straight Key Type Marconi PS No.2134, as sused at coast radio stations. T.P.Wade, G4IDL, QTHR, or Rotherham 874100.

VHF Section David G4DHF

As the numbers of people currently activating 70MHz CW/SSB continue to increase, below are some suggestions for modifying the 20 / 2m transverter recently described in SPRAT to enable coverage of 70MHz. Although I have yet to prove these, they should provide a useful starting point for further experiment.

RECEIVER : SPRAT 26 (For 28 - 70 MHz)

- 1) Change xtal to 42 MHz
- 2) Increase capacitors adjoining xtal (22pF) to 40pF.
- 3) Change mixer drain capacitor (47pF) to 6.8pF to tune 10m band.
- 4) L1,2,3 = 8t. L6,7 = 12t. (Mount coils vertically)

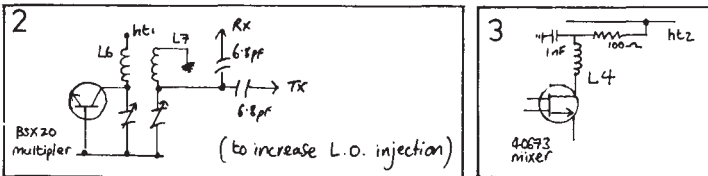
TRANSMITTER : SPRAT 27

- 1) Change C1,2 to 20pF
- 2) L3 = 8t. L4,5,6 = 7t. L8 = 6t. L10 = 5t.

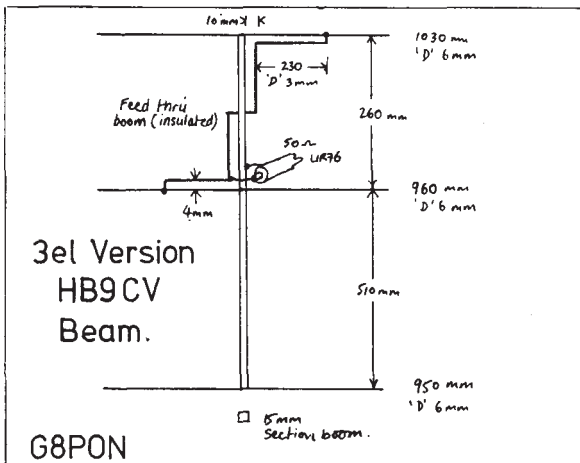
20-2m Transverter Mods

Note the following modifications for the circuits in SPRAT 26/27:

- 1) 1st RF: the 27K resistor and 1nF cap are not required, connect the base of L1 to earth.



- 4) Do not forget the 1nF capacitor on the supply end of coil L5. Without it the oscillator will not start correctly.



I have received from G8PON information on a modified form of the popular HB9CV 2m 2el portable antenna. The original article rather optimistically claimed 6-7db gain over a dipole. In practice the gain is nearer 4.5db. However this handy little antenna will provide a useful 6db+ gain.

DESIGN AND CONSTRUCTION COMPETITION:

In order to tap the wealth of talent, latent among our membership. I am pleased to announce a competition which, I hope, will appeal to your particular type of homebrew. There are two sections of entry, and any of the VHF bands can be used.

VHF Design & Construction Competition

Section 1: Design and build a 'pocket portable' VHF transceiver (FM, AM, fixed or multi-channel) that will provide communication over a range of at least 1Km in open country, using an antenna that is an integral part of the device. When not in use the unit must be small enough to be carried in the jacket pocket.

Section 2: Design and build an SSB (CW) transceiver that is used primarily for portable / mobile operation.

Trophies will be awarded to the winners in each section, for the constructor showing the most original approach to the problem, and whose overall design solves (or rather compromises!) the problems of frequency stability, frequency coverage, receiver performance and operating convenience. The winners will be published in future issues of SPRAT. All designs to reach me, please, by JUNE 1982.

David G4DHF

65 West Street, Bourne, Lincolnshire. PE10 9PA. (07782)5367.

Membership Changes:

New QTH:

127 G3URU 44 Middleton Ave. Littleover. Derby. DE3 6DL.
182 G4BXN 17 Redfern Grove, Sheffield. S19 6LQ.
187 G4ATN "The Willows" Lambrook Rd. Shepton Beauchamp. Somerset. TA19 0LZ
298 M. Jones. 6 Dodgson Dr. Llandudno. Gwynedd. LL30 1AJ.
449 G3LDO 66 Arundel Rd. Angmering, West Sussex.
537 G3PKQ 36 Hillside Gnds. Walthamstow. London E17.
459 SM5CCT Frunktvagen 33. S-155 00 NYKVARN. Sweden.
588 G2HII "Moorcroft" Bech Garth, Hutton-Le-Hole N. Yorks. YO6 6UD.
781 G8UED 30 Frost Rd. Bournemouth. Dorset. BH11 8HP.
831 K1EQA/6 5881 Midway Dr. Huntington Beach. CA 92648. U.S.A.
1095 G6EWY 38 Ridley Rd. Lydney. Glos. GL15 5BC.
1096 G8XSS 54 Whitecroft Rd. West Moor, Newcastle upon Tyne. NE12 0EY.
1103 EI5EJ/G4LLO 70 Bloomfield Dr. Athlone. Co. Westmeath. Ireland.

New Callsigns:

146: GM4LLY (ex GMSWFE) 368: F. Stevens G4IJH 394: C.R. Ayling G4HSU
428: now G4NFR 534: A. Oates G4MOU 812: C.N. Austin G4MEW
918: KC5YY (ex KA5HEK) 929: G.Z. Szczapanski G4MPD 942: M.D. Lynch EI3EM
959: R. Ratcliffe G4LRY 985: now G6GFP 1063: now G4MWO
1094: N8CQA (ex KA8DFJ) 1098: S.G. Thomas G6EQL (correct QTH Aigburth)

Resignations: 102 158 798 948 962 1012

We regret to report the death of two members: 1120 (R. Salmon), 721 (W2LTG)

New Members

1210 G. Reid, 704 Teetshorn St., Houston, TX 77009, U.S.A.
1211 D. Fletcher, 52 Frances Str., Cheadle, Cheshire, SK8 2AL.
1212 GM8CH M. Reston, 12 First Ave., Netherlee, Glasgow, G44 3UB.
1213 G3HWX B. Whitty, 'Fourways', Morris Lne, Halsall, Orskirk, Lancs.
1214 G8RRK G. Prince, 23 Oaklands, Old Buckenham, Attlesborough, Norfolk
1215 G3LOE W. Roberts, 13 Brean Road, Stafford, ST17 0PA.
1216 EA2SN J. Iza, Gasteizko Hiribidea 48-7, Victoria-Gasteiz, Euskadi,
1217 VE7DHD T. Davies, 936 St. Patrick Str., Victoria, B.C., V8S4X5^{Spain}.
1218 P. Bookbinder, 21 Walker Rd., Maidenhead, Berks. Canada.

1219 G4MQR G.Blower, 25 Wellington Square, Oxford, OX12JA.
 1220 GM6BZF N.Gillies, 49 Lade Braes, Dalgety Bay, Fife, KY115SS
 1221 GW3SB T.Bryant, GlynCoed, Victoria Rd., Maesycwmmmer, Hengoed,
 1222 ON1GR M.DeMoor, Vrdestraat 13, B-9720 De Pinte, Belgium ^{Mid.Glamorgan.}
 1223 DA4DY R.Turnbull, 5 Fd. Force HQ and Sig. Sq., B.F.P.O.36.
 1224 VK6JS J.Swiney, 59 Collova Way, Wattleup 6166, W. Australia.
 1225 N4FLC F.Stewart, 7049 Carrabelle Key, Mobile, Alabama, USA 36609
 1226 YU7EC R.Zivko, J.Marinkovica 1, 23000 Zrenjahin, Yugoslavia.
 1227 KA6RGC L.Wilson, 1438 Lucille Ave., Los Angeles, CA 90026, USA
 1228 G8AIU S.Palmer, 87 Layhams Rd., West Wickham, Kent, BR4 9HE.
 1229 G8ZWW F.Filham, 260 Summerhouse Drive, Wilmington, Kent, DA2 7PB.
 1230 GM4LHA G.Reoch, 62 Alexander Ave., Eaglesham, Glasgow, G76 ODW.
 1231 A.Ogunlockum, c/o Mrs. Ogunlokum, N.E.P.A., P.M.B.2185
 1232 G4DPM D.Malin, 1828 Coventry Rd., Yardley, Birmingham. ^{Kaduna, Nigeria.}
 1233 G4JQT I.Liston-Smith, 1 Grove Rd., Sonning Common, Nr.Reading,
 1234 DF8CL W.Grau, Aindorfestrasse 124, 8000 Munchen 21, W.Germany. ^{Berks.}
 1235 G4MIJ R.Hunt, 7 Eden Pk, Gainford, Darlington, Co.Durham, DL2 3DB.
 1236 G4CQC J.Calder, 59 Queens Cres., Gorleston, Gt.Yarmouth, Norfolk.
 1237 J.Duckett, Corn Riggs, Hollands Lane, Kelsall, Tarpoley,
 1238 G3TIS J.Clarke, Yeomans Cottage, The Street Brook, Ashford, ^{Cheshire.}
 1239 G4MZC B.Horsman, 18 Blackstone Cl., Farnborough, Hants. ^{Kent.}
 1240 N9CFZ J.Kovarik, NSHS (Staff) NRCM, Portsmouth, Virginia 23708, USA
 1241 F6FWF J.Portie, Residence St-Jean, 71 Av.Mal De Lattre de Tassigny,
 81000 ALBI, France.
 1242 KBOWF J.Dreiling, 3164 Belmont, Parsons, Kansas 67357, USA.
 1243 N5EM E.Manuel, 10430 Sagevale, Houston, Texas, 77089, USA.
 1244 G3HCX J.Arundel, 1 Crest Drive, Carleton, Pontefract, WF8 2RA.
 1245 YU3UQR R.Krizanec, Bezenskova 1, 63000 CELJE, Yugoslavia.
 1246 KA2KOA C.Whiting, H.D.4, Box 135, Hudson, N.Y.12534, USA.
 1247 GI4IYO K.Burnside, 23 Dermott Walk, Comber, C.Down, N.Ire., BT23 5UN.
 1248 W7ZOI 7700 S.W.Danielle Ave., Beaverton, Oregon, 97005, USA.
 1249 G4ITL B.Salt, 135 Kingsland, Harlow, Essex, CM18 6XW.
 1250 G4MWM F. Avenia, 62 Manchester Rd., Swinton, Manchester, M271ET
 1251 G4HGJ G.Caruthers, 96 High St., Sandhurst, Nr. Camberley, Surrey.
 1252 G4MRK 14 Dunmore Ave., Fulwell, Sunderland, SR6 8ET.
 1253 G6DG1 S.Keen, 27 Netheravon Rd., Chiswick, W4., London.
 1255 G8KKS B.Davies, 7 Fulton Cl., Bromsgrove, Worcs. B60 2HA
 1256 G4MJ0 A.Thompson, 19 Unity St., Riddlesden, Keighley, W.Yorks.

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