

FROM THE EDITORS

May 1992

Many thanks to all those who have contributed news and articles this month. We would still like to hear from more of you!

Enclosed with this issue is a loose sheet. It is for you to fill in and return to the editor who will pass it on to G4KNZ. Steve in turn will update the Microwave Directory and we should, hopefully, be able to publish this useful aid to operating in the near future. If you forget to do it we will have supplies of the form available at NEC to jog your memory!

WELCOME BACK!

The "6 Metre and Up DXer", our sister newsletter which went out of print some months ago, has now reappeared under a new logo....VHF UHF DXer.... and is edited and published by Dave Hardy, G8ROU. A pilot edition fell through your editor's letterbox the other day and it made interesting reading. Dave is doing this independently and its success obviously depends on the support of amateurs. The VHF UHF DXer comes in small booklet form like the Microwave Newsletter and is available at the subscription of £5.00 for six issues in 1992 (hopefully it will be monthly in 1993). Subs are slightly higher for overseas readers. Contact Dave for full details: Dave Hardy, Thorntree House, Wensley, Matlock, Derbyshire DE4 2LL, England.

VHF UHF DXer also covers the "low" microwave bands of 1.3GHz and 2.3GHz.

FOR SALE

SSB Products XRM-1 10GHz receive converter. Needs 5mW 2556 LO injection. In current daily use and works fine. Price £110 ono. Contact Bryan, G8DKK, tel 0462 678712.

BEACON NEWS

--firstly from notes by Steve, G4LRT.

GB3LES LEICESTER - this beacon was return to service on 29 March this year. The support mast suffered damage in the winter gales, putting both GB3LES and GB3LEX off the air, The 13cm beacon has been retuned for full power out of 3 watts and readjusted to its allocated frequency. Unfortunately the waveguide feed for the 10GHz beacon was damaged and it will be a few weeks before new lengths can be made up and fitted.

The former GB3UOS beacon (3.4GHz Sheffield) has been donated to the Leicester group and is being refurbished by Steve, G4LRT. It is hoped to have this working from the GB3LE* site in the near future.

23cm BEACONS - GB310W is now operational again on 1296.90MHz and GB3CLE is QRV on 1296.91MHz, albeit at a very much reduced signal strength into the G4LRT receiver.

DUTCH PERSONAL BEACONS - we gave the frequencies of PA0EZ and DBOEZ incorrectly last month. Thanks to John, G4BYV, we have them corrected as:

PA0EZ 3400.020MHz

DBOEZ 3400.389MHz

(Continued on the next page.....)

BEACON NEWS, continued :

The following notes are a "cut 'n paste" from the Report of the Southern Group Microwave Round Table held at Chilton in March this year. Many thanks to Ted, G4ELM, for an excellent and detailed report, as usual.

The GB3SEE beacon continued to be operational and had undergone a crystal change to remove the frequency instability problem. The signal should also be stronger than before and plans were in hand to increase it still further by the addition of a power amplifier stage.

John, GØAPI (on behalf of the Bournemouth/Poole Repeater/Beacon group) reported that GB3SCX was now built and working as a narrowband beacon and would be installed on its registered site as soon as possible - maybe as early as April - but that permission for a site change to a much improved location would be sought. The beacon would have to be remotely controlled on the latter site requiring a well presented shut-down procedure.

GB3IOW was reported operational on 1.3 GHz (1,296.900 MHz) and GB3DUN would be running 15 Watts soon. GB3RPE was undergoing tests on 10 GHz (as GB3UCS). GB3ALD was reported as having a keying fault last year but news of any repair had not been received.

There was no response to a request for any new information on personal beacons.

ROUND TABLE REPORTS

LEEDS - 10 MARCH 1992

This meeting of northern microwave enthusiasts was organised by the Yorkshire Microwave Group through G3PYB. It attracted DX in the shape of Gordon, G0/WB6YLI and some fifteen others, mainly from the Yorkshire/Lancashire area. Although attendance was well down on previous occasions, a good meeting was had by all. As usual it was the conversation that was the most valuable part of the event, many ideas being traded amongst amateurs. A discussion on talkback, however, led to several strong opinions being expressed on the merits and demerits of 70cm. Nevertheless it was generally accepted that that band was essential if British stations were to work the Continentals on the microwave bands, especially 3.4GHz up. A call for bonus points for fully "back pack" portable stations in the cumulatives was heard and will be discussed with those who organise these events.

The RSGB Microwave Committee was represented by its chairman, G3PFR and your two newsletter editors, G8AGN and G3PHD.

Some interesting equipment was on view...three "White Boxes", a very small WDG transverter for 10GHz narrowband (built by G3NKL) and G3PYB's offset dish arrangement for 10GHz were among the items. A small number of "bring and buy" items traded hands. Test gear was intensively used and included frequency and power measuring equipment.

Many thanks are due to Peter, G3PYB for his organisation and to YTV Leeds for their kind hospitality.

CHILTON - 1 MARCH 1992

The Southern Group had a record attendance of 54 amateurs at the Round Table held at the Rutherford Appleton Laboratory, Chilton. A number of "new" faces were present and an excellent turn out of RSGB Microwave Committee members - G3WDG, G3JVL, G4KGC,

G3YGF, G4DDK and G4ELM. Excellent test gear facilities were on hand and the Components Service did its usual brisk business.

As part of the morning session G3JVL, Mike Walters, gave a very practical and informative talk entitled "Real DX on 10GHz". Some of his main points are listed herewith:

- * Portable operation from "high spots" during recognised contest events runs the risk of missing interesting propagation conditions since these usually occur when /P weather conditions are at their worse! (SEE THIS MONTH'S ACTIVITY NEWS!!)
- * Recent home station activity had increased and contacts of up to 300km were now becoming regular events, particularly if the home station runs several watts of RF. Under "lift" conditions these distances can (& have already) exceed 600km.
- * It is better to be operational with "excess" feeder losses than not to be operational at all from home, since the capability of being able to come on the band instantly allows the use of favourable (if transitory) lifts for DX working.
- * An accuracy of 1 degree for dish setting on 10GHz is essential! High resolution and accurate pointing could be worth up to 20dB!
- * Flexi-guide or elliptical waveguide from transverter to antenna are much better than long coax lines with transitions. The use of unplated brass waveguide for external feeder runs is NOT recommended as oxidation can attack the inner surfaces, making the system much more lossy than copper or plated waveguide used in the same conditions.
- * DX openings on 10GHz may occur much more frequently than we might think. We must develop the habit of checking our bands in a "downwards" direction rather than from 432MHz up!
- * Rainscatter offers excellent DX potential as even a relatively casual band check may reveal stations without resorting to talk back. "Random" contacts are becoming more common as rainscatter effects allow stations "off beam" to hear each other by chance. It does not have to be raining at both ends of the path but a rain shower at one or more points along the path is essential. Monitor the BBC weather forecasts at 6.30pm since their "rain radar" pictures show the location of useful rain showers.
- * Dish elevations of up to 30 degrees have been used for rainscatter tests. Best results were often achieved with a 3 degree elevation which placed the 3dB beamwidth point on the local horizon.
- * It is very worthwhile to attempt to improve the Noise Figure of the receiver front-end except where the feeder system is known to be lossy. The initial use of low cost FETs is advisable, together with full control of transmitter switching circuitry to avoid destruction of the devices.

As at Leeds, the importance of maintaining wideband on 10GHz and 24GHz was underlined as a way of getting new operators onto the bands.

G3WDG gave a short talk on the 10GHz narrowband kits that he has produced. Construction hints and news of further items was also included.

The next Round Table will be held at CRAWLEY on Sunday, 21 June 1992. The Autumn meeting is scheduled for Sunday, 18 October 1992, possibly at Wimborne, Dorset.

(MANY THANKS TO TED, G4ELM, FOR THE EXCELLENT REPORT.....EDITORS)

60 cm Amstrad dishes (the black perforated steel version) are widely available from satellite TV dealers for about L30. The dish is normally fed by a horn which forms an integral part of the so-called "Blue Hat" LNB. This horn is of the stepped diameter, dual-mode, conical type which has almost equal vertical and horizontal plane radiation patterns, resulting in dish illumination which is much better than that achievable using a penny feed in a focal plane dish. Fig 2 shows the calculated vertical and horizontal radiation patterns of the Amstrad feed horn when operating at its nominal centre frequency of 11.3 GHz. When used at 10.368 GHz, however, Fig 3 shows that the horn has a much poorer vertical plane performance and a barely adequate match. For many purposes, this performance is probably still adequate, but if you are interested in ultimate performance, then it might be worthwhile altering the horn dimensions so that it again has radiation characteristics at 10.368 GHz which are similar to those at 11.3 GHz. After some computer modelling, it was found that the simplest solution was to scale all of the horn internal dimensions by the ratio of the frequencies ie by 11.3/10.37 and the resulting horn characteristics are shown in Fig 4. The internal dimensions of the new horn are shown in Fig 1. When making the new horn, to be consistent with the original Amstrad design, I also included a 7.6 mm wide flange at the horn aperture. The new horn throat diameter is 20 mm and this matches the inside diameter of standard 22 mm water pipe. A transition to rectangular waveguide 16 was made using the tool I described in an earlier issue of the Newsletter (or see vol 3 of the Microwave Manual).

Fig. 1 CROSS SECTION THROUGH A CYLINDRICAL HORN FEED FOR THE AMSTRAD 60cm DISH. (All dimensions are internal and in millimetres)

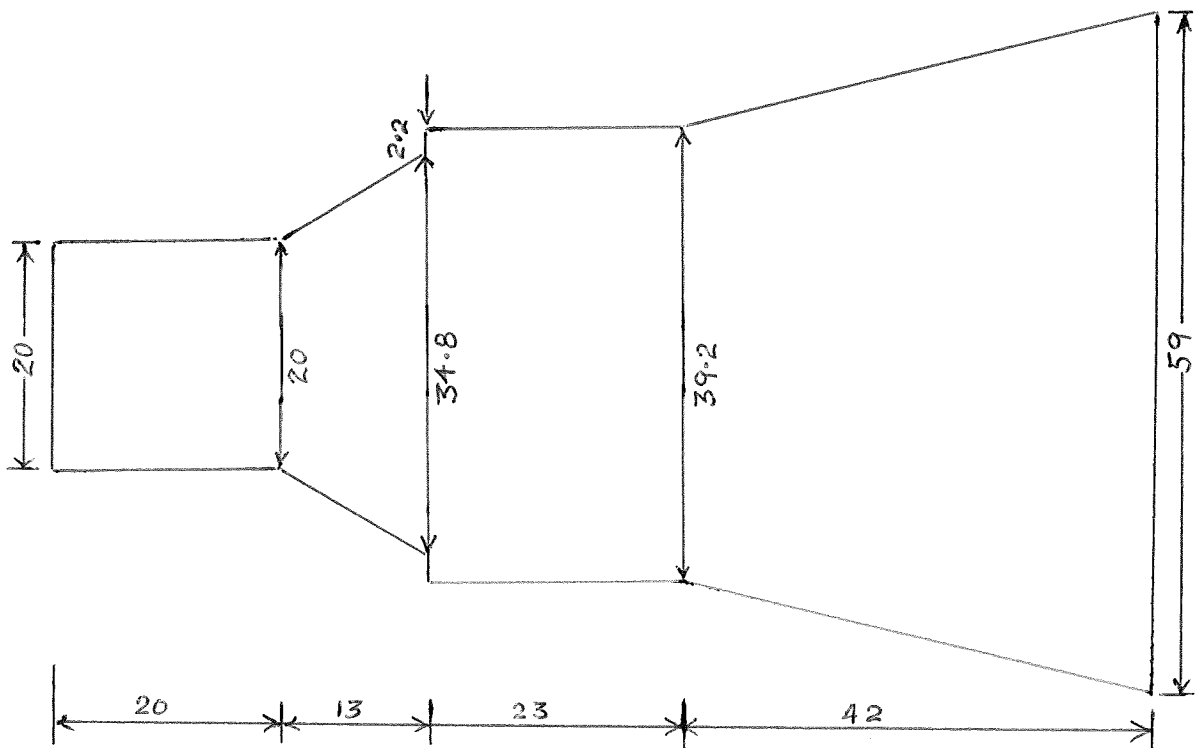
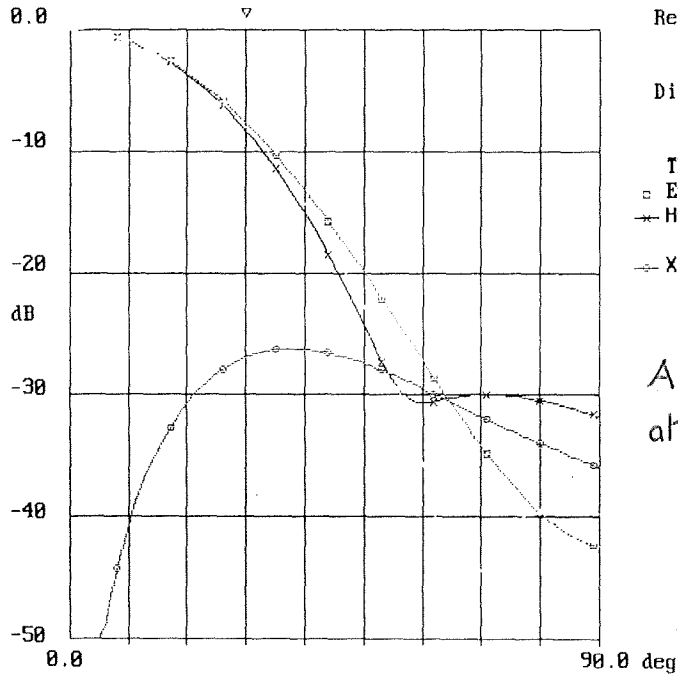


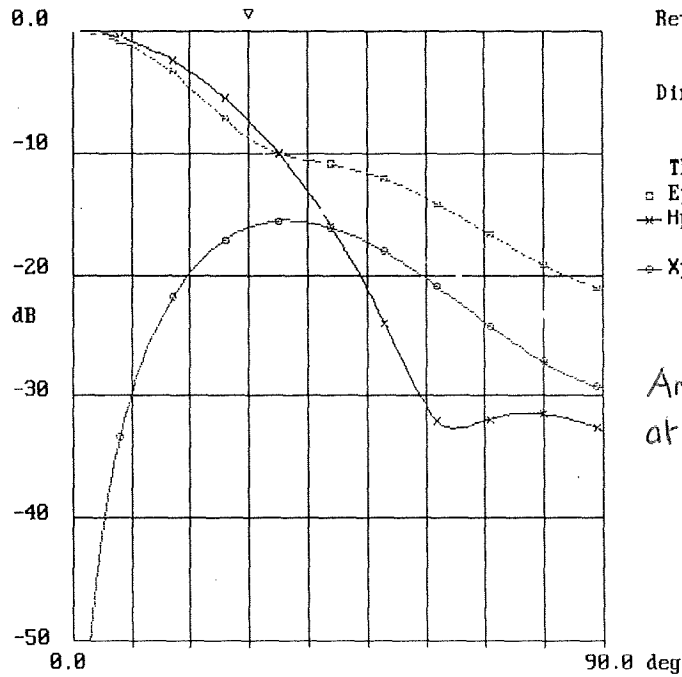
Fig.2



Return loss= -24.05 dB
Directivity= 14.31 dBi
Theta = 30.00 deg
□ Eplane= -7.60 dB
+ Hplane= -8.32 dB
△ Xplane= -26.97 dB

Amstrad Horn
at 11.3 GHz

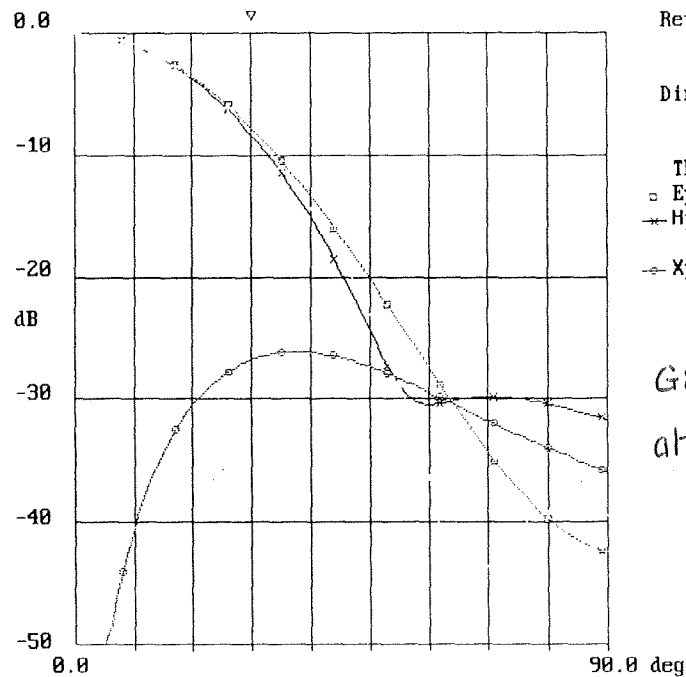
Fig.3



Return loss= -9.64 dB
Directivity= 12.97 dBi
Theta = 30.00 deg
□ Eplane= -8.65 dB
+ Hplane= -7.29 dB
△ Xplane= -16.12 dB

Amstrad Horn
at 10.368 GHz

Fig.4



Return loss= -26.23 dB
Directivity= 14.35 dBi
Theta = 30.00 deg
□ Eplane= -7.69 dB
+ Hplane= -8.35 dB
△ Xplane= -26.79 dB

GBAGN Horn
at 10.368 GHz

Experiences with the G3WDG 003 Transmit Converter Bryan Harber G8DKK

Construction of the 003 proved to be not too difficult but some interesting problems occurred during subsequent alignment and testing.

Initially I had some problems with the adjustment of the cavity resonators, particularly the final output resonator. Careful removal of the probe pins showed that these had been made too short (caused by use of a poor quality vernier caliper) and longer ones were made up and inserted. The problem with adjustment of the resonators was now solved only to be replaced with a marginal stability problem. This turned out to be located in the stage following the mixer and was cured by a return to slightly shorter probe pins for this cavity only. All was now well and a full set of measurements made and recorded (& supplied to G3WDG for his records).

Following subsequent packaging into the transverter chassis and testing after wiring up, measurements with a power meter indicated a small pulse of output power as the supply voltage was applied to the transmit module. Although this is not a big problem for low power operation, I was concerned with the potential effect at the output of the TWT! I concluded the effect was due to a capacitor charge time problem in the 7660 negative voltage generator which causes the FETs to turn on momentarily in the zero bias condition with subsequently high gain.

A simple cure for this is to remove zener diode Z1 from the FRE023 board and to feed the 7660 with a resistor and zener diode arrangement shown in the attached diagram. A wire is then taken from the resistor to the +12V feedthru which carries the supply for the LO modamp. This arrangement operates by providing negative bias voltage to the FETs in the WDG003 unit at all times whether in transmit or receive modes.

It is also possible that I still have a residual marginal stability situation which contributes to the problem but I have experienced no further problems since implementing the changes described above.

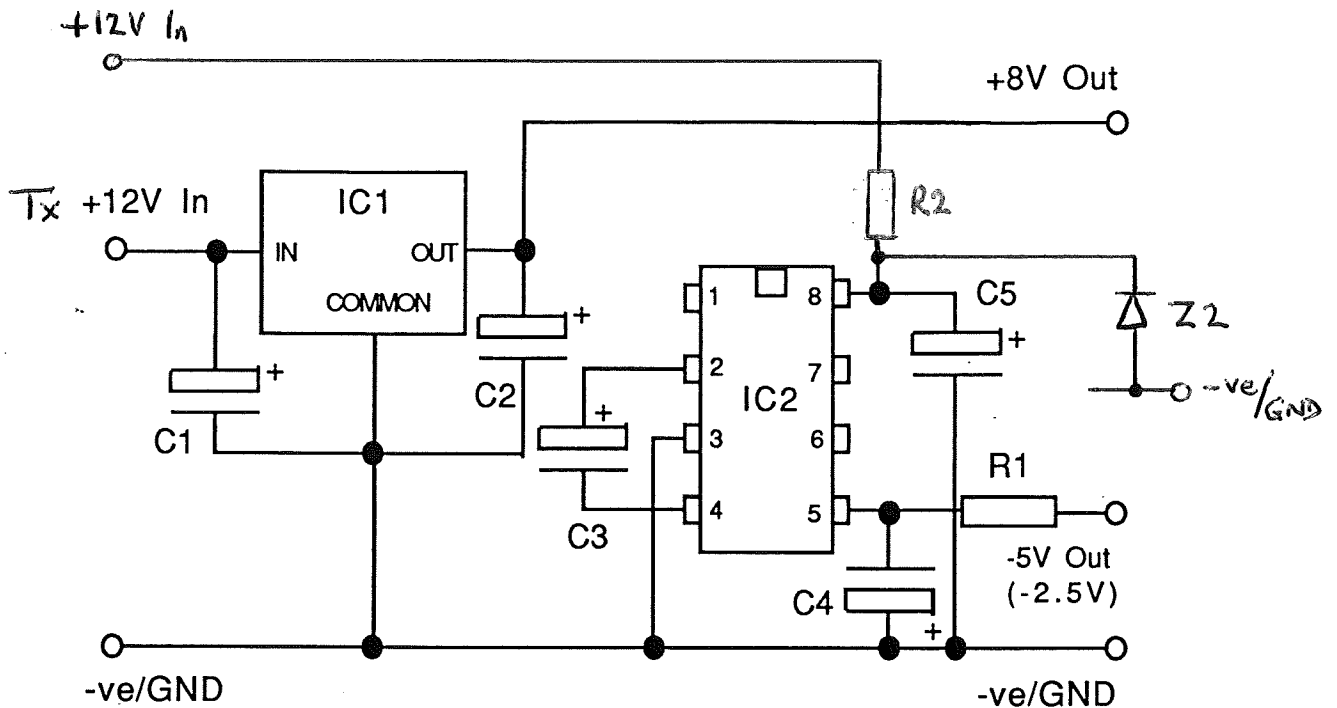


Fig 1

MODIFIED REGULATOR CIRCUIT Values shown below are for new components only.
See WDG003 construction manual for the remaining circuit values.

- Z2 5V1 400mW zener diode
- R2 470 ohm 1/4 watt metal film

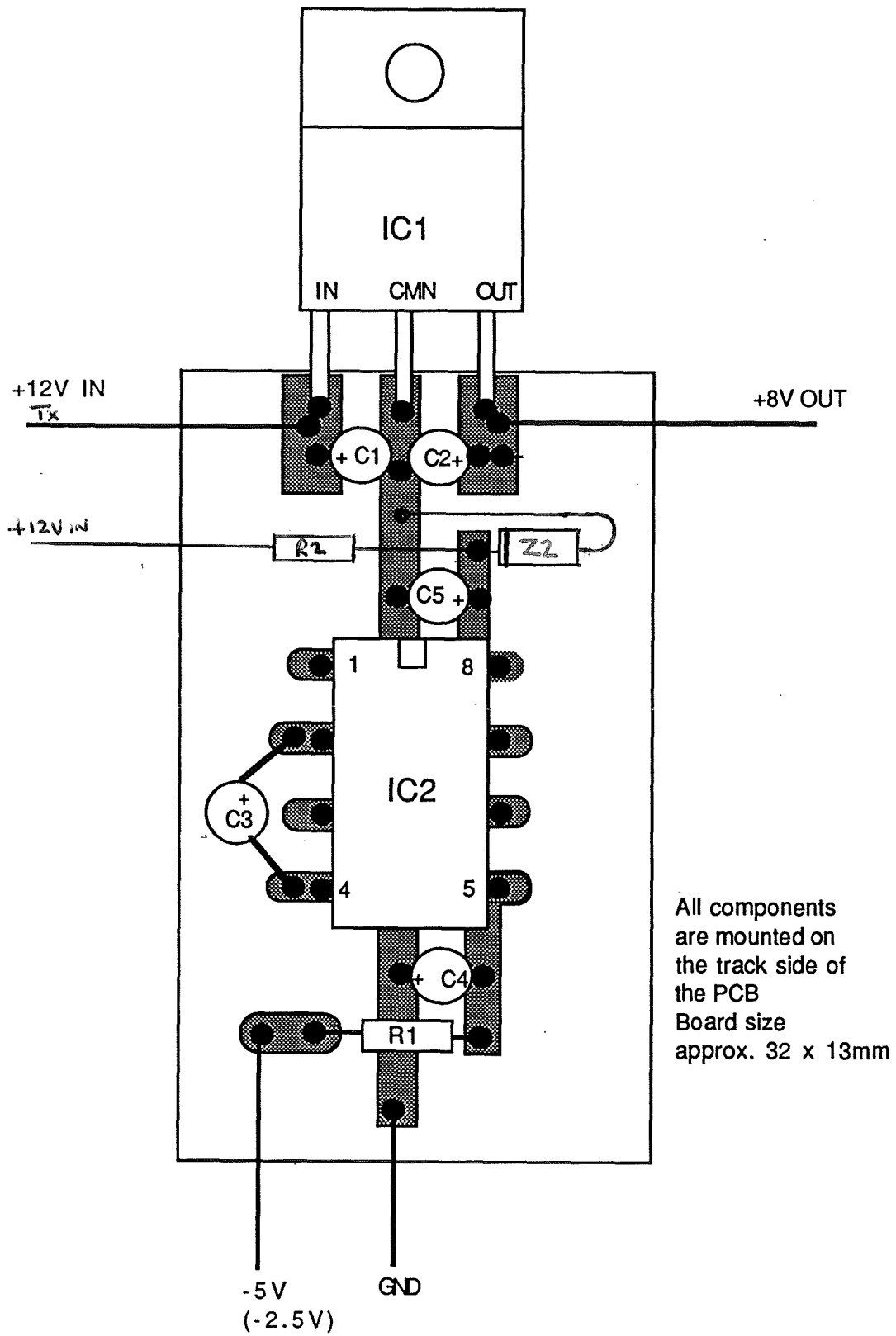


Fig 2 Regulator layout

LIGHT WAVE NEWS

We have a letter from Angel, HB9SLV, who is a keen lightwave enthusiast. He enclosed details of Sharp laser diodes that are available from the USA at very low prices. Angel hopes to use these diodes in an amateur transmitter eventually but hasn't much information on how to modulate them, the modulator being fairly critical as it is easy to overload the diode. In spite of these minor irritations Angel still feels that laser diodes are a much better way to go than the low power HeNe lasers previously described in the Newsletter and at present in use by a few UK amateurs. The advantages of the diodes are:

- * Low price
- * small size and weight
- * mechanically sturdy
- * can be modulated
- * powerful (those above are 5mW devices)
- * visible light output
- * no high voltage supplies required

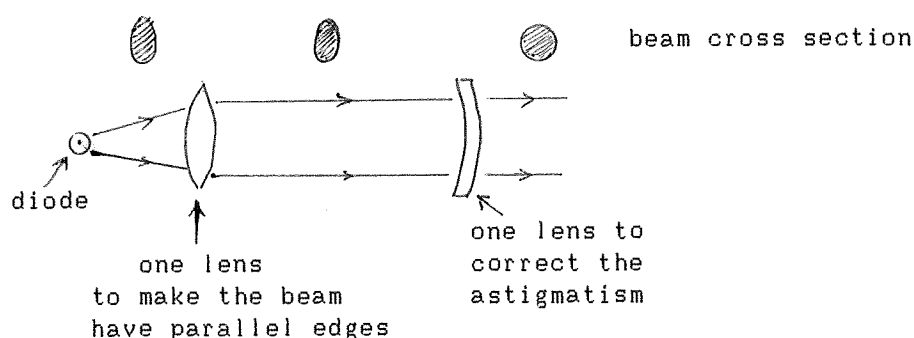
The Sharp laser diodes can be obtained as part number LT022MC (5mW at 780nm, single transverse mode) for \$5.00 US each from:

TIMELINE, 1480 W.Artesia Blvd., Gardena, California 90247, USA.

There is a minimum order of \$20 and minimum handling charge of \$5. Use your Visa or Mastercard for convenience.

Angel comments that if we ever thought that 10GHz and up were "hilltop portable" bands then lightwave communications for amateurs will be hill top only and night time only! That is unless we can obtain narrowband optical filters and well-collimated optics.

One objection to the use of laser diodes is that their beam is not cylindrical like those from HeNE laser tubes. It is conical, the section of the cone being elliptical. However this can easily be corrected with lenses that are available in "any eyeglass store", as Angel puts it.



Angel would be interested in hearing from any amateur who is experimenting in the lightwave field. While you are writing to him you may as well let the editors of the Newsletter also know of your work! There is a slow but important growth of interest in amateur communication at the THz frequencies. HB9SLV's address is: MR. Angel Vilaseca, 9 Chemin des Pralies, 1261 Bogis-Bossey, Switzerland.

ALL ITEMS FOR THE NEWSLETTER should be sent to either of the following editors, to arrive by the last Friday of the month:

Peter Day, G3PHO, 146 Springvale Road, SHEFFIELD S6 3NU. (Tel. 0742 681216)
Barry Chambers, G8AGN, 345 Redmires Road, SHEFFIELD S10 4LD. (Tel 0742 304888)

24GHz OPERATORS

The following table lists those people believed to be qrv on the 24GHz band.

Most people are using WB gear, with G3BNL thought to be the only UK person with fully working narrowband gear at the moment. Several people are building (or thinking about building) NB gear, the approaches being either to use G3BNL's PLL system or by direct multiplying from as high a frequency as possible. One idea due to G3JVL is to use the second harmonic from a TWT driven at 12GHz; it may be higher than imagined!

Call	Name	Phone	Location	Gear	BestDX
G0DJA	Dave Gullick <i>ACKRILL</i>	0924-240577	Yorks	WB	
G2DSP	Ron Allen	0243-823684	Sussex	WB	
G3BNL	Les Sharrock	0280-703512	Northants	NBFM	151km
G3FNQ	Dennis Bagshaw	0704-78100	Merseyside	WB	126km
G3FYX	Roy Emery	0454-778288	Avon	WB	144km
G3NKL	Ray Jones	0772-784997	Lancs	WB	126km
G3NWU	John Thompson	0429-74842	Cleveland	WB	<i>96km</i>
G3PHO	Peter Day	0742-681216	S.Yorks	WB	126km
GW3PPF	Phil Schorah	0222-66310	S.Glam	WB	144km
G3PYB	Peter Blakeborough	0532-892726	W.Yorks	WB	135km
G3UYM	Harold Groves	0462-433878	Herts	WB	24km
GM3WIL	Dave Cossar	0292-79217	Ayrshire	WB	96km
G3YGF	Julian Gannaway	0794-40008	Wilts	WB	37km
G3ZME	Martyn Vincent	0952-55416	Salop	WB	87km
G4ETU	Terry Allen	0243-575463	W.Sussex	WB	
G4KNZ	Steve Davies	0344-484744	Berks	WB	126km
G4UQI	Andy Lether	0772-713849	Lancs	WB	38km
G6XM	Bill James	0837-52923	Devon	WB	
G8AGN	Barry Chambers	0742-304888	S.Yorks	WB	135km
G8AYY	Paul Gaskin	021-783-2996	W.Midlands	WB	
G8KQW	Ian Lamb	0635-33462	Berks	WB	12km
G8SWZ	Glyn Davies	0902-753975	W.Midlands	WB	

Total stations QRV = 22

Notes:

1. The BestDX column is the all-time best dx worked (2-way), to the best of my knowledge. Several people are interested in beating the 150km mark on wideband, which is proving quite difficult.

2. Other calls who were qrv, but not heard of lately: G3JHM, G4EFT, GW4LXO, G8ASP, G8MWR.

3. Please send any updates or corrections to either Steve G4KNZ (at 14 Herondale, Birch Hill, Bracknell, RG12 7ZT) or to the newsletter editors.

With this number of stations, there is the potential for maybe half a dozen or so qso's during the cumulatives, depending upon location.

ACTIVITY NEWS ** NEWS AND VIEWS FROM THE WORLD ABOVE 1000MHZ **

This month's mailbag is refreshingly full in comparison with earlier days...perhaps a sign of increased microwave activity this "season! We will "kick off" with the Operating Ladder:

1992 OPERATING LADDER (SINCE 1.1.92). RANKED THIS MONTH ON STATIONS WORKED (COL.B)					
BAND GHz	POS.	CALLSIGN	BEST DX (km) (A)	STATIONS WKD (B)	MULTIPLIED SCORE (A x B)
2.3	1	G4DDK (Home)	211	2	422
3.4	1	G4PMK (Home)	661	4	2644
5.7	1	G4PMK (Home)	61	2	122
10	1	G3BNL (HOME)	599	25	14975
	2	G3ZME/P	239	19	4541
	=3	G3PHO/P	238	16	3808
	=3	G3JMY/P	211	16	3376
	5	G4DDK (Home)	434	15	6510
	=6	G4JNT/P	180	12	2160
	=6	GOAPI/P	179	12	2148
	=8	G4PMK (Home)	182	7	1274
	=8	G8DKK (Home)	114	7	798
	=10	G4BRK (Home)	125	6	750
	=10	G8AGN/P	125	6	750
	=12	G4JNT (Home)	215	5	1075
	=12	2E1AJE(Home)	205	5	1025
	14	G3JMY (Home)	112	3	336
24	1	G4KNZ/P	37	2	74

NEXT MONTH'S LADDER WILL BE RANKED ON THE MULTIPLIED SCORE (COLUMNS A x B). Rules for ladder entry can be found on page 12 of last month's newsletter.

The bands covered by the Ladder have been extended down to 2.3GHz as at least one station has sent in an entry for that band. The 10GHz rankings look interesting in that over half the entries are from home stations, including the leader with a fine DX of 599km.

Our first letter is from Roy, G3FYX of Bristol. During the openings on 10GHz to the Continent in the early part of the year, he worked PAOEZ and G3LQR. Roy runs a regular 3cm sked with Les, G3BNL, signals ranging from 229 to 599 during lifts. G3FYX has continued to push the limits on the 24GHz band. He recently attempted the Dartmoor - Priscelly path on this band (153km), GW3PPF/P being at the Welsh end. The 10GHz link worked first time but the 24GHz signals were at first absent until GW3PPF/P relocated some 200 feet LOWER (to clear an obstruction). At this point Roy was able to receive a very weak signal on 24GHz wideband, finally peaking to a readable 'phone transmission. Unfortunately GW3PPF/P was not able to hear anything of Roy. Nevertheless this is a fine achievement and suggests that a record-breaking 24GHz wideband contact is not very far away. On 10GHz narrowband Roy is nearing the completion of his high power portable station after finishing the G4JNT TWT power supply. He has a WDG system to drive it. Roy and his "sidekick" Tim, G3KEU, are planning to activate the Irish Republic during the JUNE cumulative this year. Details are as follows:

LOCATION: Wicklow Mountains (South of Dublin)
25km NW of Wicklow and at 2000 feet asl.

DATES: Saturday, Sunday and Monday of the Cumulative weekend.
13,14 & 15 June 1992

BANDS: 24GHz wideband, 10GHz n/band, 1296MHz, 432MHz and 144MHz.
Bands between 10GHz and 1.2GHz may also be available.

TALKBACK: 144.175MHz

CALLSIGNS: Not yet decided. Operators include G3FYX, G3KEU and G8IYG

This DXpedition is a fine opportunity for many a 10GHz operator to work a new country, new square and best Dx all in one!

Ted, G3JMY was pleased to work G3PHO/P on 10GHz nb during the April Cumulative as the 211km is Ted's best DX so far. He was at Charterhouse, in the Mendips, and was using his new TX/RX described in a previous Newsletter. From that site he also heard the new Bournemouth beacon, GB3SCX on 10368.250MHz. Several of Ted's contacts that day arose out of initial calls directly on 10GHz, with no talkback, a feature also experienced by your scribe! Ted has been experimenting with a 20-slotted waveguide antenna which is to be used on the 3cm ATV repeater applied for by the Severnside TV Group. Although it is single-sided and therefore not a true "omni", it transmitted and received well over about 270 degrees, at a distance of 67km. Ted expects the antenna to radiate well around most of the Bristol area. TV output will be around 300mW from a G3WDG006 on 10.150GHz, the antenna being some 900 feet asl. It should be a very useful beacon to all interested in 10GHz work, TVers or otherwise. It will operate on FM, phase-locked to a crystal source. Ted would welcome any comments on his idea to feed a separate, dedicated beacon into this antenna, via a suitable coupling system, along with the TV repeater.

Next, we hear from Sam, G4DDK of Ipswich. He has been working some excellent 10GHz DX of late and is now, we believe, up to 11 squares squares worked from his home station! During the poor conditions on the May 432MHz and Up contest he worked five stations on 10GHz PA0EZ(268km), PEOMAR(194km), G4PUB/P(10km), G3ZFP(128km) and PA3FPQ(323km). On the 13cm band he managed only G4PUB/P due to an equipment fault at the DDK end. Sam's Ladder update appears on the previous page. It is a delight to see a Ladder entry from Sam's daughter, 2E1AJE. With Sam's home 3cm station wound down to 3 watts output she worked five stations in the April Cumulative....G8KQW/P (205km), G3ZFP(128km), G4EZP and G4FUF (Benfleet) and G3LQR (25km). As Sam says, there are at least two more novices who could submit a Ladder entry

Martyn, G3ZME/P used the "old faithful" site at Brown Clee for the April contest and had 20 contacts, 19 of them two way. He was particularly pleased to breach the Pennine barrier at last with a contact with G4EQD at home in Scunthorpe, Lincs. Even better was a 208km QSO with G3's PYB/P and ZTR/P, both on Garriby Hill, East of York. Many other good distances were worked, including G4JNT/P at Bell Hill, Dorset(180km). Only one station was heard offering 3cm wideband. Martyn has now removed all his wideband gear from the portable station. One feature of the April contest was the unremitting wind which loosened all the SMA connections on Martyn's rig. One WG16 flange actually had "unsoldered" itself from the waveguide! Finally he would like everyone to know that he is now QRV with 800mW of narrowband on 10GHz from home. He can be contacted for skeds on (tel) 0952 255416 or via packet on GB7PMB.

A first time contributor is Neil, G4BRK of Highworth, Wilts. Thanks for writing OM. Neil has just finished a DDK004-WDG002-WDG003 system in time for the April Cumulative. In a "mad rush" to become QRV he hurriedly made a horn feed for a 60cm satellite dish, lined up the tx/rx with only a 2metre rig and a doppler module(!) and joined G3FYX on Hackpen Hill. After a frustrating period of getting no

reception, he found the fault (wiring error) and proceeded to have a great time working the narrowband DX! Neil's best DX was 125km with G3ZME/P and a one way over 162km with G4FUF. The results are now firmly on the Operating Ladder!

Steve, G4KNZ, is operating on 24GHz ONLY this year, alternating between sites on the Berks/Hants Downs and sites further North in the Midlands/Welsh border. The wideband gear for this band is 50mW TX and a separate RX to a 18 inch dish. April Cumulative contacts were with G3FYX/P (Hackpen Hill, 26km) and G3YGF (Dean Hill, at home) over 37km.

Andy, G4JNT, of Southampton, activated Bell Hill, Dorset (I080UU59) with GOAPI. During the April Cumulative, 3cm conditions were not good, the weather being even worse! Best DX was G3ZME/P (Brown Clee, 182km) although G3PH0/P heard him over 256km from Merryton Low, no return signal being heard. Andy is now on packet (via GB7XJZ). HIS SITE DATABASE AND LOCATION CONVERSION PROGRAMS ARE IN THE FILES SECTION OF THIS BBS FOR DOWNLOADING IF ANYONE IS INTERESTED.

John, G4BYV, of Dereham, Norfolk, found that during the May 432 UP contest not only PAOs but DLs and Gs were on the new 3.4GHz frequency only. What do readers think now? He passes on the useful tip that Dow Corning Bath seal (silicone rubber) makes an excellent substitute for the "lossy rubber" used to stabilise amplifiers by lining the box lids with it. John worked AN square for a new one in the May contest.

A welcome note from Chris, G8BKE, reports a trip to Scotland over Easter when he worked GM8BJF on 3cm SSB over a 50km path to the GM's home. Both stations used WDG rigs. The GM has a personal beacon on 10368.100MHz. GM4ISM is also active on 10GHz nb, together with a number of other GMs. A beacon for 3cm nb is planned for Blackhill in Central Scotland. This is good news! WOULD ACTIVE GM STATIONS PLEASE WRITE INTO THE NEWSLETTER! PLEASE COME ON IN THE CUMULATIVES! Chris has been copying GB3SCX from his home QTH at Barton on Sea, Hampshire. It has an excellent signal over 15km. Chris would like to thank all those concerned with its installation.

The builder of the said beacon is our next contributor, John, GOAPI, of Wimborne, Dorset. John has now begun to take this Newsletter and is active on 10GHz narrowband once again. Licensed as G8MCP in 1976 he made a JVL system/dustbin lid antenna combo along with G8MCQ. He joined the Practical Wireless staff as technical editor in 1980 and was responsible for the 18 inch PW dish, of which over 1000 were sold (who is using them all??). A lot of 10GHz operators made the PW Exe wideband tx/rx. John built the SCX beacon over this winter and also managed to make his own narrowband system (DDK/WDG line up) He has 300mW of 3cm available from a fully waterproof portable station (it rains a lot down there!). He has a number of interesting 1C202 tips which we will included next month. During the April Contest he worked alongside G4JNT/P at Bell Hill and worked 12 stations, 5 squares and several QSOs over 170km for a first time out! GB3SCX is received will at John's home QTH, some 13km away and over a very obstructed path. (Nice to hear from you John ...editors)

Paul, G8AYY, was on Barr Beacon and Stile Cop during the April event but did not work anyone and it was repeated in the May 432 Up contest on 10 and 24GHz. Paul is not too happy with the inaccuracy of the IARU Locator system and the "1 point per km" scoring system. He agrees with G4JNT on the Locator's unsuitability for accurate bearing calculations. (We always use 6 figure NGRs...editor).

Bryan, G8DKK, of Letchworth, sends the welcome article found on pages 6/7. Many thanks indeed OM. He runs 10GHz skeds from home, working G3ZFP, G3LQR, G4DDK, G3JVL and GOBPU. The April Contest produced QSO's including G8KQW/P at 110km. Bryan should have a 6 watt TWT going soon. Ring him on 0462 678712 for skeds.

Your scribe, G3PH0, found atrocious weather at Merryton Low during the April contest but had some good rainscatter contacts on 10GHz CW/SSB. Of 13 stations worked the best was G3JMY/P (Mendips, 211km) although G4JNT/P was hrd over 254km. G3FNQ's beacon (Southport) was loud and clear on 10368.190MHz. That's it! 73 for now.