An Amateur Radio publication for the Microwave Enthusiast

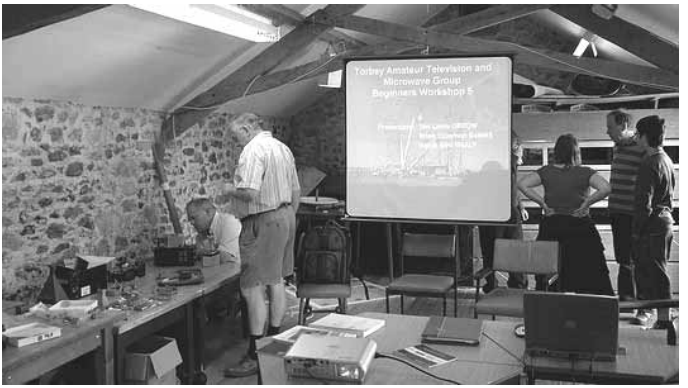
scatterpoint

Published by the UK Microwave Group

2007 JUNE

Beginners' Workshop visits the South West …

The fifth in the series of UKuG Microwave Workshops for Beginners was held in Torbay on the 9th of June. Hosted by the Torbay ATV and Microwave Group and delivered by G4NNS and his team, it was another very successful event. (Read the report on page 12)



In this issue ...

Latest News …

- Another successful UKuG Beginners' Workshop
- Four more UK beacons approved by Ofcom
- Best ever activity in Lowband Contest

The next edition of Scatterpoint is the July-August issue, due to be published during the first week of August. There will be no July Scatterpoint. This normal procedure as Scatterpoint appears just 10 times a year.

WELCOME TO ALL NEW MEMBERS OF UKuG

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From the Editor's Desk

Hello once again,

The summer microwave season got off to a good start with excellent UK and Eu activity in the June Lowband Contest. Let's hope that this trend continues throughout the coming months.

On the spectrum management scene, Murray Niman G6JYB, now RSGB Spectrum Manager, has been working very hard on our behalf. Check our Group website www.microwavers.org, for the latest updates regarding happenings with Ofcom, beacon applications and reports from various meetings that Murray has attended.

This issue of Scatterpoint was due to be published at least 10 days before it did come out. That target couldn't be met however as we were so short of articles that we had to wait until we received something fill the many empty pages! Dave, G6KIE and Ian,G8KQW, saved the day with really interesting contributions and thankfully prevented me from expanding my own article even more than you see it in this edition! Many thanks chaps.

If any one of you have short articles or microwave news then please share it with the rest of us. Scatterpoint is your newsletter after all.

This is the last issue of the present subscription for many of you. Please renew your subs for 2007-8 as soon as possible after you receive Scatterpoint, if you wish to maintain continuity.

Best wishes from Peter G3PHO, Editor

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News, views and articles for this newsletter are always welcome. Please send them to G3PHO (preferably by email) to the address shown lower left. **The closing date is the Friday at the end of the first full week of the month** if you want your material to be published in the next issue.

PLEASE RENEW YOUR SUBSCRIPTION IF YOU JOINED OR RENEWED IN JUNE LAST YEAR

WANTED!

YOUR ARTICLES AND NEWS

- **Activity News only** should be sent to: **scatterpoint@microwavers.org** and not to the editor's personal. address. This way both the editor and the Activity News Columnist, Robin Lucas, G8APZ, will receive the information.
- **Technical articles and other items** should be sent to G3PHO at: **editor@microwavers.org**

SUBSCRIPTION ENQUIRIES SHOULD BE SENT TO THE UKuG GROUP SECRETARY AT THE ADDRESS SHOWN AT THE TOP OF THIS PAGE AND NOT TO THE EDITOR OF SCATTERPOINT

NEWS & VIEWS FROM AROUND THE AMATEUR MICROWAVE WORLD

UKuG MICROWAVE WORKSHOPS

G4NNS, G4ALY and G8KQW have just run the **fifth** of the Microwave Beginners' Workshops, this time in Torbay.

Starting with the Sheffield Workshop in May 2006, UKuG has encouraged local groups to run similar events for newcomers to amateur microwaves. The Torbay event is the last one to be organised so far and, up to now, we have no news of any other group planning to stage a similar meeting for local amateurs. If you are interested in setting up a workshop in your area then please go ahead! We have loads of support material for you in the form of CDs, past Scatterpoint samples, and even personnel. So far, we have supported workshops at Sheffield in South Yorkshire, Wimborne in Dorset, Martlesham in Suffolk, Telford in Shropshire and now Torbay in Devon. Workshops are desperately needed in the Scottish Lowlands, NE England, Lancashire and the Kent/Sussex regions.

There's no doubt of the popularity of these events. UKuG has gained many members over the past 12 months as a result of them being held. If you have an interest in enthusing fellow radio amateurs about our exciting and challenging corner of the hobby then please consider organising a workshop in your area. Contact your local amateur radio club and certainly liaise with the UKuG (via the Chairman) as help is there for you.

Failing that, you might consider giving a talk at your local club. In spite of the general downward trend in technical expertise among newer amateur radio licensees these days, your editor has always managed to interest clubs he has given talks to over the past few years. Talks need to be couched in fairly general terms, avoiding detailed technical information but concentrating on a highly visual but informative approach. Once you get people interested, they can always come to a workshop for a complete indoctrination!

SBRS Website reborn

After being offline for nearly two years, the South Birmingham Radio Society website, **www.sbrs.org.uk** is now operational again.

The 'new' website is still very much in it's infancy but I hope to build on it over the coming weeks. If you have your own pages please put a link to ours on it.

Paul Eden M3CBC
Editor & Webmaster South Birmingham Radio Society
http://www.sbsrs.org.uk/

UKMicrowave Group Statistics

As at 26 April 2007:

- UKuG membership currently stood at 358
- 23 new members had joined UKuG since Martlesham 2006
- 22% members renew using PayPal
- 67% members receive Scatterpoint via e-mail
- 5% members do not have an e-mail address

73 ... Ian Lamb - G8KQW: UKuG Secretary

NO it wasn't an April Fool!

April's Scatterpoint had this super typo:

"The Ofcom document seems to put the 10GHz amateur band into some jeopardy during the time the UK will be staging the Olympic Games in **2102**."

I don't think I need worry when we hold it in **2102** !

Murray, G6JYB

Editor's comment ... *I can only put it down to yet another "senior moment". They are happening at a greater rate these days ... far more frequently than my 10GHz QSOs!*

BEACON NEWS

GB3LEF now active on 3.4GHz

GB3LEF was activated on 30 May 2007 at approximately 1800 BST, on a frequency of 3400.955MHz +/- 1kHz.
Callsign and locator keying is A1a.
ERP is only 5mW until the modifications to the output amplifier are completed.
The beacon is co-sited with 13cm GB3LES and 3cm GB3LEX at **IO92IQ**.
Initial ERP is approx -30dB with respect to GB3LES.
Reception or even 'no reception' reports will be much appreciated.

73 Geoff G3TQF
Email: 75337.1352@compuserve.com

NORWEGIAN BEACON UPDATE

Jan Lustrup, LA3EQ, has supplied the following information:

LA4SHF JO28UO
1296.890 40 watt erp collinear south
2320.850 10 watt erp Log. Per. s.w
3400.850 5 Watt erp Log. Per. s.w.
5760.850 5 Watt erp Log. Per. s.w.
10368.850 100 watt erp Double Horn N / S

LA5SHF JO28UX
1296.820 50 watt erp 4x diamond w.s.w.
10368.820 20 Watt erp 20dB Horn s.w.
24048.820 5 mW 7dBi Horn s.w

23cm Faroe Island beacon SOS

From PA3CWN comes an email dated 1 May 07 in which he makes a plea for help to get a 23cm beacon going in OY land.....

"Tonight I had a chat with Jon OY9JD and he is anxious to get the VHF/UHF beacons back to work again. He is in need for some Kathrein antennas because on the Faroe Islands the weather can get really tough.

He plans to setup beacons for 6m to 23cm and the question is does anyone has a Kathrein yagi for one of those bands? It may be one which is lying around and not in duty or one that some person knows is in his area and willing to donate, because costs must be kept as low as possible. So please let me know by email at: **pa3cwn@tele2.nl**

European amateurs especially can benefit from the OY beacons, so hopefully the OY beacons will be back on the air soon.

Thanks for your attention and GL to all".
73 from Oene, PA3CWN

Microwave Beacon Approvals - GB3FNM, XGH, MAN , CMS

The latest update from Ofcom, received at the end of May, has some excellent news on the UK Microwave beacon front:

GB3CMS 10GHz - Danbury, Essex. A 10dB power increase to 5W erp is approved. This beacon is within the Charing Cross Radius

GB3XGH 10GHz - Rochdale, nr Manchester 20W erp

In fact these two 10GHz clearances mark the end of a long trail dating back to the 1990s for these applications - most welcome!

GB3FNM, a whole new cluster, has been approved at Farnham for 5.7, 24 and 47GHz, the latter 47GHz one being a pioneer as it's the first GB3 licence on that band (although Bell Hill has G8BKE/P as a personal one)

GB3MAN 24GHz also approved for Rochdale, Manchester. There's more on the Manchester set is at **http://www.gxk.org.uk/beacons/**

The above follows the approvals for 24048.xxx moves of GB3ZME, GB3MHK and GB3DUN in April.

Regards from Murray, G6JYB
RSGB Microwave Manager

New AD9852 DDS Board Available

After much procrastination, followed by prompting by Mike G0MJW to help the RAL beacon upgrade, I finally produced a new batch of PCBs for the batch of AD9852, 300MHz DDS chips that were burning a hole on a shelf.

The PCBs are a considerable improvement on the old ones, with several changes users requested, including a reference input buffer, easier solderability for ad-hoc modifications (ie no resist to scrape off!), better filter breadboarding area. It is also suitable for lead free solder if you want it as the PCB is silver dipped rather than tinned.

Full details are at www.scrbg.org/g4jnt

Andy G4JNT

International Space Colloquium 2007

AMSAT-UK will be holding their 22nd International Space Colloquium at the University of Surrey, Guildford, England from Friday 20th until Sunday 22nd July.

There will a tour of the Surrey Space Centre facilities. This is always popular and provides a unique opportunity to see satellites in various stages of construction.

On Friday, in addition to the main lecture programme, there will be a special "Beginners Workshop" to show newcomers how to use the many Amateur Satellites that are available.

There will be a UoS PhD student poster exhibition. About a dozen post graduate students will be present with posters and exhibits, and they will explaining the projects they are working on.

The RSGB GB4FUN van will be present throughout the event to allow visitors to work the satellites.

The event is open to all Amateurs and SWLs. Either day passes or full packages (comprising overnight accommodation and meals at the University) are available. An online booking service is available with PayPal, Visa and Master Card payments accepted.

For further details contact: Jim Heck G3WGM Tel: 01258 453959
Email: g3wgm@amsat.org
Web: http://www.uk.amsat.org/Colloquium/ (see Travel for maps)

Visitors can also just turn up on the day although AMSAT-UK would appreciate notification if possible.

DEADLINES FOR UKuG CONTEST ENTRIES:

Just a reminder that we have already had several UKuG contests so far this year and that logs are due in 16 days from the end of the contest (In the case of cumulatives this means after the end of the final contest in the series).

The recent Lowband (3rd June) deadline was Tuesday 19th June.

The earlier 3.4GHz standalone contest held on Saturday 5th May had a 21st May deadline which is long past.

However, in past years, the adjudicator has managed to stretch the deadlines a little to encourage entries so it's worth a try!

Please, please send in an entry, no matter how small, as the contest logs are a measure of activity. Recording them in the newsletter and RadCom helps to stimulate further activity and even encourage newcomers into microwaves. CHECKLOGS ARE WELCOME.

OVERSEAS ENTRIES ARE ALSO MOST WELCOME.

The rules and contest calendar can be found at **www.microwavers.org** and also **at www.g3pho.org.uk**

UKuG email addresses

On our new UKuG website I have set up the forwarding aliases for

- **chairman@microwavers.org**
- **secretary@microwavers.org**
- **treasurer@microwavers.org**

I have also setup:

editor@microwavers.org and scatterpoint@microwavers.org

Please use these addresses in future instead of the members' personal ones.

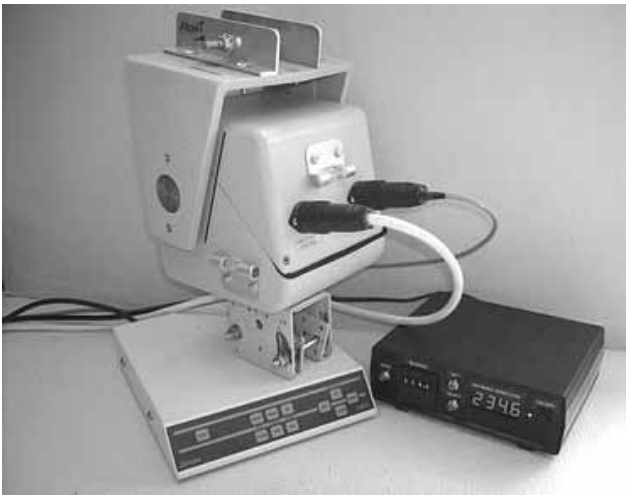
73, Murray, G6JYB

CAR ROOF MOUNTED DISH AND ROTATOR ASSEMBLY

- a new use for a CCTV Mount

By David Banks, G6KIE

Editor comment:
I'm sure that most readers, like myself, have looked with envy at television outside broadcast vans with their large roof mounted satellite dish antennas, fully rotatable from the equipment console inside the van. A dish assembly such as this makes life a lot easier for you don't have to get out of the vehicle during wet weather to rotate the dish. So here's your chance to make a roof mounted system for yourself. Dave and his pal Steve, G1MPW, are very keen portable contest operators, usually from Firle beacon in S.E. England.



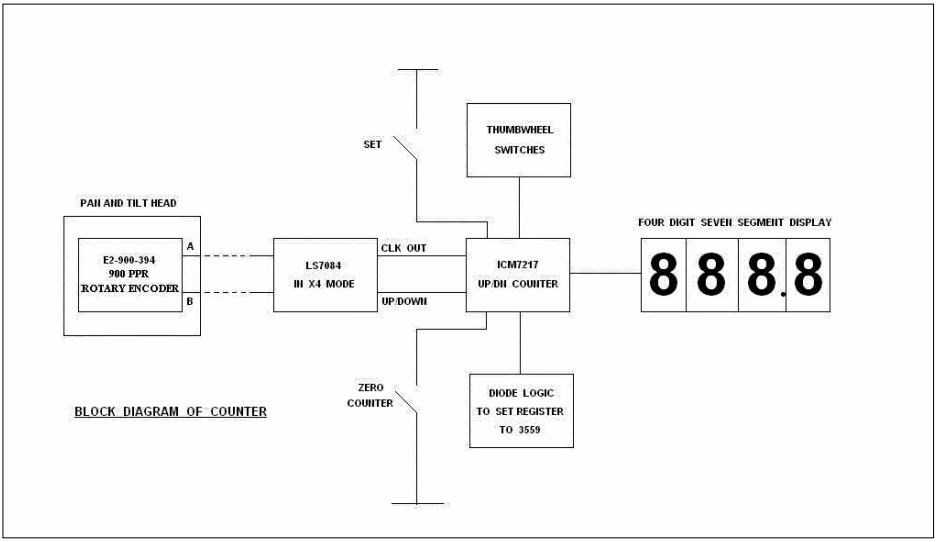
The basis of this rotator is a very substantial CCTV pan and tilt head - the type seen carrying security cameras and lights in every town centre .

The head is a type 560 made by Dennard Ltd of Fleet Hampshire. It contains two 24V AC motors with gearboxes for azimuth and elevation. There is almost zero backlash in the gearing and, although the rotator is not worm driven, it's impossible to rotate by hand and so it should be fine in strong winds. Both axis rotate on large ball bearings. There are adjustable end stops and the whole mechanical assembly is housed in a very strong weather-proof cast aluminium case. The time taken to turn 360 degrees is about 60 seconds.

I found this one, complete with its control box and power supply, at a rally and wondered if I could use it to replace a flimsy photographic head which was hardly up to the job when out portable in strong winds. The only thing lacking was a readout for direction indication.

What I needed was a remote readout which I could set to any particular heading after mounting the head unit on the roof rack. After much playing about with various computer mouse wheels and their encoders I gave up and spent £30 on an E2-900-394 incremental rotary encoder kit from Control Transducers Ltd of Bedford.

This encoder, made by US Digital, is only 17.5mm high and there is just enough room to squeeze it in. I mounted the encoder disk on an extension to the vertical shaft which passes through a platform supporting the encoder body with its optical sensor.



The sensor output consists of 900 pulses per revolution on two channels shifted in phase by 90 degrees. By feeding these into a LS7084 quadrature clock converter operating in its x4 mode, it's possible to obtain 3600 pulses per revolution and also determine which direction the shaft rotates.

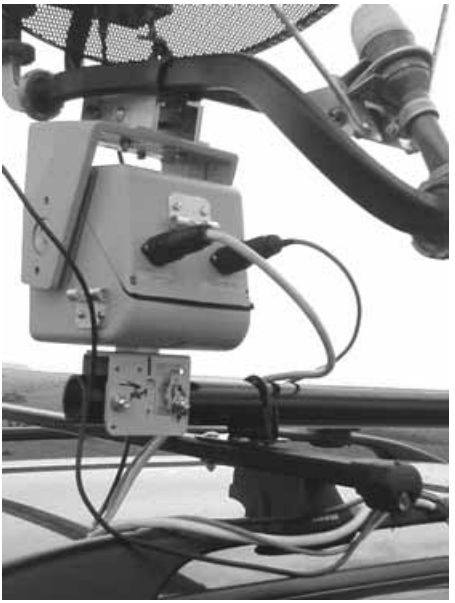
The outputs of the LS7084 feed an ICM7217 pre-settable up-down counter (see diagram above) which can directly drive a four digit seven segment LED display. I placed a decimal point after the third digit from the left to give a readout in tenths of a deg. The LS7084 also tells the counter whether to count up or down.

When the rotator turns clockwise, the counter counts up to 3599 before resetting to zero. When turned anticlockwise, the counter counts down and is loaded with 3599 after it reaches 0. The counter can also be preset to any count.

The LED readout and electronics (see photo right) are fitted into a box, together with four thumbwheel switches and a button which enables the counter to be set to any heading. There is also a button to zero the counter if required.

I managed to obtain an Amphenol C16 series socket from Farnell, similar to the existing motor connector but of the opposite sex to avoid mistakes, which I mounted on the case alongside to carry the sensor signals back. These connectors are water tight and the matching plug is held by a screwed collar.

The rotator , which supplies 24v AC to the head unit, requires mains voltage and so is powered



by an inverter from a 12v battery. To save battery power the inverter is switched off when not required.

The rotator is bolted to a short length of horizontal scaffold tube. This is fixed between the roof rack bars by exhaust pipe clamps. Spirit levels on the rotator housing enable it to be set upright. One plane is set by rotating the tube in the clamps before tightening. The bracket below the unit allows adjustment in the other plane. The dish is fitted to the top elevation platform by locating the feed boom in a channel formed from aluminium angle. A bolt passes through the channel and boom.

When everything is together, the dish is lined-up on a beacon or distant station with a known bearing by using a compass. After 'peaking', the true heading is then entered with the thumbwheel switches to set the readout.

The limit switches have been modified to allow about 10deg overlap in each direction. Elevation is also limited to a few degrees above or below horizontal.

The counter circuit was arrived at after much trial and error and I'm sure could be more elegant, but it works. The block diagram on the previous page shows the general idea.

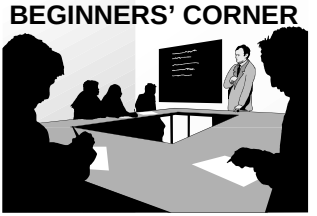
On its first contest day out portable, the rotator performed well. It did not take long to rig and everything lined up easily. There were no problems turning an 80cm dish with the transverter mounted. Small panning movements can be made by pulsing the buttons. No indication of elevation is used but so far that does not seem necessary.

Dave Banks, G6KIE, 7 June 2007

LIGHT WEIGHT PORTABLE MICROWAVE OPERATING

- or Yearning for the Old Days!

- by Peter, G3PHO/P



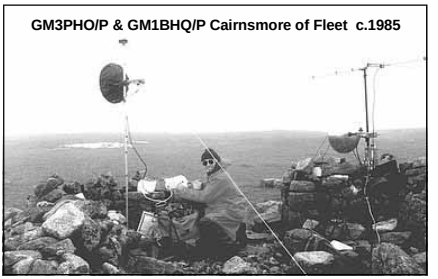
Introduction

Most newcomers to amateur microwaves "wet their feet" on either the 23cm or the 3cm bands. This article will concern itself with the latter band as 23cm lends itself very well to a home station installation and that was admirably covered in last month's Beginners' Corner by GM4CXM.

Simple equipment

The 3cm or 10GHz band is an ideal one on which to begin portable operations as the operator can get away with a small dish antennas or even a horn plus relatively low power (say 250mW output or less) and still get good results, with DX contacts at several hundred kilometres. For some reason, this lightweight approach is very rarely used these days. Several decades ago however, when your scribe was a lot younger than he is now, just about everyone operated /P since almost all of us were using very low powered transmitters (often less than 10mW) on 10GHz wideband FM. Such simple gear demanded line of sight paths for any chance of a successful QSO. It was the very simplicity of the gear in those days that attracted me to microwaves in the first place for I was able to combine portable microwaves with my other major interest, hill and mountain climbing.

In the 1970s, I built a compact wideband FM 10GHz transceiver which was carried in my rucksack, along with a small 12V/6AH Sealed Lead Acid battery, a 45cm dish and short mast support, an IC202 for 144MHz talkback (with HB9CV antenna), food and water for a full day out, wet weather clothing, compass, map, etc ... in fact a load that could be as high as 20 kilogrammes or more! Some of you may think I was crazy but I actually thought this was great fun and I relished in the challenge of climbing Welsh and Lake District mountains, Pennine Hills and the Cairnsmores of Fleet and Carsphairn in SW Scotland, in order to make, what were in those days, very long distance 3cm contacts (up to 245km). I wasn't alone! Lots of other microwavers were doing similar things. I remember Ray Jones, G3NKL, GM3OXX, G1BHQ, G0BTA and others combining microwaving with keeping fit in this manner.


GM3PHO/P & GM1BHQ/P Cairnsmore of Fleet c.1985

How times have changed! Today the average 'portable' 10GHz microwave station runs at least 1 watt of SSB/CW, to dishes 60cm to 1.2m in diameter and includes a multi-element 144MHz yagi on a 3 to 7 metre mast, a 50 watt 2m talkback transceiver and maybe a laptop installed with the KST chat room via GPRS/3G ! All this is powered by one or more heavy leisure batteries or even a petrol generator. Carrying that lot up to the summit of Mt Snowdon would certainly be a challenge!


G3PHO/P IO94MI 2004

Today in the UK, the concept of true portability, i.e. operating away from a vehicle, has, except for G4ZXO/P and G4WYJ/P, just about disappeared from the microwave bands. However, on the VHF and HF bands, backpack portable is flourishing under the **Summits on the Air** programme so why isn't light weight portable microwaving doing the same thing? Are today's microwavers too unfit to walk? Have we become the amateur radio equivalent of TV viewing 'couch potatoes' ?

These days, I cannot help but yearn for the days when everything was small and light enough to be used from locations of great natural

beauty instead of roadside grass verges and carparks! My present day "portable" station doesn't really deserve the name portable. In fact it is more rugged and heavier than many a home station! The two photos on the previous page show how my own station has metamorphosed, over some 20 years, from backpack portable to something approaching a military field comms station! It's my own fault of course and is the result of what some may regard as an unhealthy, competitive streak in my personality ... I don't like "pottering around" during the contests, making a few QSOs and not achieving very much except to "reinvent the wheel" each time I go out. I like to do as well as possible and so have entered all contests, up to now, very seriously. However, after doing this for more years than I care to remember, I've now got that the "been there, done that" feeling! I've lost a lot of enthusiasm for the heavy so-called portable stuff and am looking for something else to keep my interest in microwave operating at a high level. As I now fast approach three score years and ten, my thoughts are turning back to the days of a rucksack on my back and the smell of the heather!

Back in the 1970s I made a number of items for doing light weight portable. The photo right shows all the contents of my rucksack ready for a day out on the hills in those days. Using a modern microwave transverter, such as a barefoot DB6NT system, they could still be used in today's narrowband microwave scene.

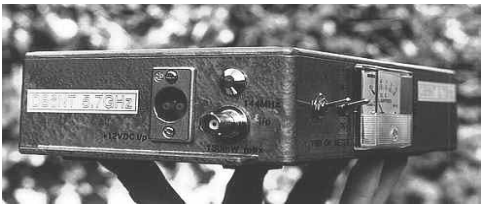
In the 1970s, I soon abandoned the idea of tripod mounted gear and instead I made a very simple 1 metre long , 25mm diameter mast with three short nylon guys. The mast had a brass insert at the top into which the 10GHz transceiver box was "plugged" and rotated, while the mast base was held in position with a short length of thin aluminium rod pushed through two holes drilled a few millimetres from the bottom end of the mast. This rod was then held to the ground with two metal tent pages (see photos left and right). A 35cm "Penny fed" dish, with a long waveguide extension behind it, was fixed to the 10GHz transceiver with ring clamps. The waveguide had simple mast head fitting which slid into the brass boss at the top of the short mast support.

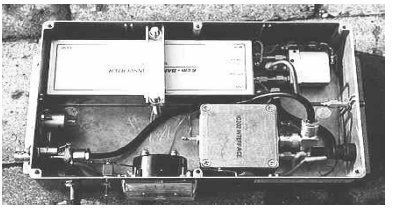
Talkback used a home made 3 element yagi whose elements fastened to its 25mm diameter boom with plastic snap-on pipe clips. A gamma matched driven element ensured a good load for the IC202 144MHz ssb transceiver (run at 3W pep output). Everything was powered by a 12V 7AH Yuasa "dryfit" battery and up to 5 or 6 hours operation was possible.

So where does all this lead us in regard to light weight backpack operating in today's microwave scene? Well, the same beam, small dish and mast can all be used again. I still have them, 30 years later! An FT817 can be used for both talkback **and** IF for a barefoot DB6NT transverter, since the 817 has two VFOs. One could be on 432MHz for the transverter IF while the other stays on 2m for talkback. Or one could use two FT817s since they are very light weight. Even an FT290 and an FT817 wouldn't push the weight up too much.

What results might I obtain you may ask? Long distance contacts on a few mW of wideband FM in the 70s and 80s were relatively easy with lightweight wideband gear. 150 to 200km was possible from high locations using line of sight paths. At sea level, some remarkable longer paths were achieved using super-refraction propagation, a mode much neglected these days. Today, a DB6NT transverter will produce 250mW or so on 10GHz. With a 35cm dish or even a 20dB horn, this is more than enough for several hundred kilometre paths from high sites, even if the paths are non LOS.

A compact transceiver is a very straightforward project. The photo below is of my first 5.7GHz transverter. You could hold it in the palm of your hand... why ever did I later rebuild it in a bigger box and add a 12 watt amplifier? !





What you lose by downsizing your gear you can pick up, to some extent, by choosing excellent /P locations in places where you'd never get a vehicle. The same thing applies to the VHF talkback. Signals won't be as strong as your QRO gear but you'll get out as far as your microwave signal will. Unfortunately, a DB6NT transverter will draw little more current from the 12V battery than the old wideband FM gear did but you'll still get several hours out of it, certainly enough for a pleasant afternoon on the hill. Of course, you wouldn't expect to use your laptop to get the KST chat room from the hill tops! However some modern mobile phones have 3G/GPRS internet access and, with the latest "all you can download in a day for £1" phone contracts, you might still feel KST is a possibility from the summit of Mt. Snowdon!

So folks, who's going to bite the bullet and downsize? Is chasing that new square and new country going to keep you tied to the home station or your high powered portable gear? Can you force yourself to work shorter distances with lower powered equipment? Whose going to get the first S.O.T.A Mountain Goat Award on 10GHz?

If you haven't got your mind tuned into my way of thinking yet then consider the QRP Club. Members of that group could easily choose, like myself, to run the full UK legal output to beam antennas on the HF bands but instead they do things the hard way by using 5 watts or less, often with simple wire antennas. Their satisfaction is in working stations with such basic equipment. How about those home station operators who have never been portable giving the outdoor life a go? Do it now before you become too old!

See/hear you on the hills next year

73 Peter, G3PHO

Photo right:

G3PHO/P on Bleaklow. N. Derbyshire in 1985... over 1 hour walk-in from a road and using lightweight 10GHz equipment.

Photo left:

Dave, G0IVA, a keen mountain man, portable on Snowdon summit with his backpack **47GHz** equipment. Yes, he carried all this gear on his back for over three hours and climbed all 1084m of the hill to work just two stations, but at a UK record distance for the band!

TORBAY MICROWAVE WORKSHOP FOR BEGINNERS

… a report of the meeting held on 3rd June 2007

Photos by G4ALY and text by G8KQW

Over 20 attendees at the **fifth** Beginners' Workshop and listened to G8KQW and G4NNS presenting various aspects of microwaves including spectrum allocation, propagation, equipment and operating techniques. G4ALY made an excellent presentation on the challenges, rewards and satisfaction of operating from IO70 square.

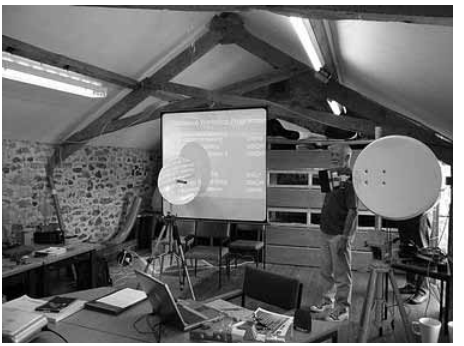
Several practical demonstrations were made including WBFM, ON4KST and two different approaches to running narrowband from both a home and portable QTH. The UKuG "Quickstarter" 3cm project proved very popular … everyone was really interested in this low cost and simple approach.

As with all previous workshops, the attendees received a CD covering all the presentations and including much other useful microwave information.

The Torbay Amateur Television and Microwave Group hosted the event and took video of each presentation for use at club nights and for broadcast on their TV repeater GB3TV. The hosts also installed and ran two beacons (one narrowband on 10368MHz and one wideband on 10450MHz) close to the venue for the day.

Excellent feedback has already been received and UKuG wishes to thank the hosts for their friendliness, enthusiasm and for the excellent facilities they provided.

Brian, G4NNS, outlines the programme for the day



All quite during the break!

Ian, G8KQW demonstrates wideband FM (left) and a 10GHz dish (above)

Squares, ØDX and Initials

Recently, a debate has started on the UK Microwave reflector about the merits of using the EME 'Initials' system, in addition to squares worked and especially for the millimeter wave band contacts. On the reflector I pointed out that we do not need to reinvent the wheel--a good system already exists in the form of the **TOPLIST** on Rainer's, DF6NA's, site.

I know that feelings regarding lists vary from love to loathe and that we used to have a system to record activity in the form of operating ladders, etc. However, for those who are minded to enter information on lists, perhaps we should try to focus our efforts on Rainer's excellent Toplist. Rainer has very kindly offered to modify his lists to cover tropo 'initials' if there is sufficient interest.

For what its worth, my view of the list is that it is quite useful. By looking at what people have achieved, you can get a sense of what is possible, what to strive towards. These lists track individual efforts over long time spans. The people at the top of these lists have spent many years working for these achievements. Inevitably some home locations will be better than others; just as with the London marathon, not all who enter can expect to head the list or even be at the top end -- someone will be at the tail end.

This is about taking part and trying to improve personal performance. On the right you can find information taken from the Toplist for 5.7GHz, 10GHz, 24GHz,and 47GHz. Make of them what you will. It's interesting that the current 10GHz ØDX record is not amongst the data, along with glaring omissions of many successful operators. The inclusion of more operators would make the data more valuable.

Best wishes all, **Gordon, G0EWN**

5.7GHz

	Callsign	Locator	Squares	ODX Tropo		ODX RS	
1	G3XDY	JO02	49	1240	(1)	759	(1)
2	G4BEL	JO02	32	1092	(2)		
3	G4ALY	IO70	28	912	(5)		
4	G4BRK	IO91	25	1083	(3)		
5	G0RRJ	IO91	25	775	(6)	460	(2)
6	G0EWN	IO93	9	967	(4)		
7	G4DDK	JO02	3	233	(7)		

10GHz

	Callsign	Locator	Squares	ODX Tropo		ODX RS	
1	G3XDY	JO02	68	1240	(1)	881	(2)
2	G4EAT	JO01	67	1233	(2)	922	(1)
3	G4BRK	IO91	56	1115	(3)		
4	G4DDK	JO02	47	1005	(6)	654	(5)
5	G4FUF	JO01	39	1052	(5)	691	(4)
6	G0RRJ	IO91	34	770	(9)	593	(7)
7	G4ALY	IO70	34	912	(7)		
8	G3LTF	IO91	28	902	(8)	775	(3)
9	G8DKK	IO91	23	577	(10)	522	(8)
10	G0EWN	IO93	20	1076	(4)	618	(6)
11	GM4JJJ	IO86	5	324	(11)	48	(9)
12	G4RGK	IO91	5	150	(13)		
13	G4HUP	JO02	4	297	(12)		
14	G3NWU	IO94	0	0			

24GHZ

	Callsign	Locator	Squares	ODX Tropo	
1	G4EAT	JO01	11	348	(1)
2	G4DDK	JO02	7	268	(2)
3	G4BRK	IO91	5	112	(4)
4	G0EWN	IO93	1	241	(3)

47GHz

	Callsign	Locator	Squares	ODX Tropo
1	G0EWN/P	IO93FB	2	98
2	G4DDK/P	??	1	39

Editor's note: For several years we have had similar tables running in Scatterpoint and on the web at www.g3pho.org.uk. Sadly, the support for these dropped off so much that they have not been updated and published for some time. At one time, we used to have upwards of 30 entries for the **Annual Operating Ladder** (League Table) and many more for the **All Time Squares/ DX/Countries Ladder**. Both tables can easily be resurrected.... just send in your score to the editor. Full details of how to do this can be found at www.g3pho.org.uk

MOBILE MICROWAVE SHACK FOR SALE

Dihatsu Fourtrack, suitable for mountain top radio operating. New in 1987, 2.7L Diesel, 94,000 miles and in good running order. One owner from new. Complete with Clark's 10m pneumatic telescopic mast, compressor, roof access ladder and platform, heavy duty ladder rack, and internal operating bench.
6 months MOT. £650

Contact: Frank Evans GW8AWM
Tel: 01291-672466
Email: frank@simplehappy.co.uk

Wanted:

HP 22GHZ MIXER
... for HP8569..working or not and any for spares to repair..and gold bond wire.

Wanted:

Circuit for waveteck analyser 1880 circuit.

Contact: Bob, G1EPL(Blackpool)
Email: Bob.OCallaghan@patientline.co.uk

FOR SALE: TIN PLATE BOXES

I have bought in a stock of some of the popular sizes of tin plate enclosure used on many microwave designs. The batch sizes are initially small so the saving is not enormous but it may be more "hassle-free" for those wanting the odd box for a project, and notwanting to bother with pound-euro rates and international carriage charges.

The sizes (in mm) in stock are:
1000102 37 x 74 x 30 at £2.00
1000103 37 x 111 x 30 at £2.50
1000109 74 x 111 x 30 at £4.00

I will stock other sizes if there is a demand. Also if you are not in ahurry I am happy to add a single box of your requirement to my next order (or if I get enough demand, to a bulk "user order") The wait will depend onbuilding up a sufficient quantity to keep the carriage charges reasonable. I will attempt to always have a stock of sizes to cover current microwave projects.

I also still have a supply of 3.5GHz pcb "sweepings" with recoverable good quality APC caps (11 in all at 100pF) http://www.alan.melia.btinternet.co.uk/pix/PApcbs.jpg (the 3 pcbs for **£1 plus postage**) and the Precision Detector pcb http://www.alan.melia.btinternet.co.uk/Pdetpcb.htm (**£5** with printed information inc postage)

Thanks and happy constructing
Alan, G3NYK (the One-Arm Bandit !)

3.4GHz SSPAs FOR SALE

I have some of the **Ionica 3.4GHz PAs** for sale (maybe swap). They produce around **14W linear for 1mW drive**. They will have had a quick test before posting.

For technical info see:
http://www.dc2light.pwp.blueyonder.co.uk/Webpage/9cm.htm
and...
http://www.dc2light.pwp.blueyonder.co.uk/Webpage/9cmpamods.htm

Asking price is **£35 + £5 postage for UK**.
(Overseas postage to Europe at cost).
I can accept Paypal, plus a little to cover charges.

Proceeds will be going to local microwave projects, including beacons.

I may be interested in swapping for some items, eg: working DDS units, two PAs for an Adret 5104 for example.
W-H-Y ??

Please e-mail me direct at: aware@freeuk.com

Cheers & 73 de David GM6BIG

WANTED ...

Heavy duty tripod, suitable for a large dish up to 1.2m diameter and to be used in portable conditions. Ideally it would be an ex outside broadcast microwave link type.

Please email Conrad, **G0RUZ** with details:
conrad@g0ruz.com

Dishes for sale

Peter Young, GW0EME, in North Wales, has a number of Andrew dishes for sale. The photos left show a 1.2m dish that G0EWN recently acquired from him.

He has 3 more of the 1.2m dishes, though he may keep one for his own use. The dishes are from the Andrew Valuline High Performance series---gain at 10GHz 40dbi, beamwidth 1.7deg. G0EWN measured the f/D at .375--ideal for space--maybe of interest to those interested in deep space comms. The dishes have a reinforced rim and are quite light for the size, though they have suffered a little, from being stored outside, in terms of the odd ding/ minor dent.

In a recent test with G3PYB, Gordon, G0EWN, used one of these dishes on the 24GHz band and got an excellent report over 136km, several dB stronger than G3PHO's 60m offset, in spite of Peter's output being 2 watts and Gordon's only half a watt.

If you want a decent dish, maybe with a shepherd's crook type feed attached, then contact Peter at the following address:

Peter Young, 'Crobane', Denbigh, LL16 5NU

Tel: 077330183443

MICROWAVE UPDATE 2007--CALL FOR PAPERS

Any topics related to microwave theory, construction, communication, deployment, propagation, antennas, activity, transmitters, receivers, components, amplifiers, communication modes, LASER and practical experiences welcome. Completed papers and articles should be submitted by August 15. Please submit your papers, articles and abstracts to W2PED pdrexler@hotmail.com or N2UO lu6dw@yahoo.com in MSWord or as a PDF. Diagrams, photos and illustrations should be in black & white. Hard copies may be mailed to PAUL E DREXLER, 28 West Squan RD, Clarksburg NJ 08510

MICROWAVE UPDATE 2007 October 18-19-20

Historic Valley Forge Philadelphia, Pennsylvania
Thursday sightseeing or possible surplus tour
Conference Fri & Sat; Flea Market Fri night
Vendors on site; Banquet Sat night; Door prizes and raffles
Hosted by the Pack Rats--Mt Airy VHF Radio Club
Spouses, friends and family invited; hospitality room
Alternative family/spouse programs available
$79 early-bird registration until September 1st includes Conference, proceedings, and banquet.
$89 from 1 Sept– 1 Oct; $99 thereafter. Extra banquet.
Tickets $39. Special hotel rate $92 per night
Full info and registration at www.microwaveupdate.org
Abstracts, papers and presentations may be sent to W2PED pdrexler@hotmail.com or N2UO lu6dw@yahoo.com
Questions to chairpersons K3TUF Phil@k3tuf.com
Or KB3HCL@arrl.net

SDR with an FT290

For those like myself, who use the FT290R Mk1 as a tuneable IF on the microwave bands, the article in the May2007 Radcom may be of interest.

It explains how to provide an easy IF monitoring point on the 10.8Mhz Rx IF to enable one of the small Softrock SDRs to be connected. The article goes on to describe how this may then be used to look at 2m band signals, but no doubt, connected to a microwave transverter, could also be used to monitor weak microwave signals too.

73 de Chris G8BKE

By Robin Lucas G8APZ

This month's column, written by Robin, G8APZ, sees some activity reports which were held over because of shortage of space in the May issue. We start with a summary of the April activity days and the May IARU contest.

ACTIVITY DAYS

From: **Dave G0DJA, Bolsover, IO93IF <dave.g0dja@tiscali.co.uk>**
On the 1st April Activity day I managed 8 contacts on **23cm** (all UK stations) the furthest being Ray GM4CXM who seems to be a good signal here at any time. The rest were stations I regularly hear: G0EWN, M0ELS, G3UKV, G3XDY and G4DDK although G8JVM was a new one.

During the 22nd April All-band Activity Day contacts were made on **23cm** with G4KIY (108km), G8VR (277km), G4FSG (214km), GM4CXM (361km) and G7NCG (119km).

However, I was only active on and off between about 15:00 and 18:00 UTC mainly because I'd forgotten that it was an 'All Band' day as most people seemed to be arranging **10GHz** and **24GHz** contacts. That will teach me to keep an eye on the calendar! **Dave G0DJA**

From: **SAM JEWELL, G4DDK (JO02PA) <jewell@btinternet.com>**
Activity 22 April from Shropshire - Thanks to G3UKV and the team for the QSOs on **13cm** and **9cm** on the 22nd April Activity Day. It is a shame that **24GHz** didn't go, but humidity was gradually rising here all day and we did have thundery rain late afternoon.

Signals on **24GHz**, with G3UYM/P, only just worked at about 97km. Signals with G4BEL, near Ely, were a little down on normal. G4BAO (near Cambridge) MAY just have detected my scattery signals on **24GHz**. We did have a full quieting **10GHz** FM QSO, however!
73 de **Sam, G4DDK**

From: **Mike G0DPS, Leeds**
I have tested the **3cms** transverter with contacts on 22nd April with G3LRP, Wakefield and M0DTS, Rob at Yarm, 106 km, on barefoot power. I have now got a 2.5 watt amp ready to fit to the transverter, so I should be heard a bit better !!
Mike G0DPS

From: **Chris Towns, G8BKE <eightgoes@yahoo.co.uk>**
Activity report 22 April:
Peter G3PYB, and myself were out portable today in Hampshire doing some tests on **47GHz** & **76GHz** over a 30km path but despite operating close to 144.175 heard no other stations.
73 de **Chris G8BKE**

OTHER ACTIVITY

John, G3XDY, JO02OB <g3xdy@btinternet.com>
17th April - The **1.3/2.3GHz** UKAC this month saw reasonable levels of activity. Good contacts on **23cm** were DF9IC (JN48), DK5QN (JO42), GM4CXM (IO75) worked easily now Ray has more power, SK7MW (JO65) on aircraft scatter, OZ1FF (JO45), GM4LBV (IO86). On **13cm** DF9IC was the best of the bunch.

21st April - DL7QY (JN59) and 22nd April F9OE (IN78) on **1.3GHz**.

24th April was the Microwave NAC in Scandinavia. **13cm** QSOs were made with DF9IC (JN48) and 5Q1A (JO45) (OZ1FF with an exotic club callsign), and signals were exchanged with SK7MW but the QSO was incomplete.

Conditions improved on 27th April, with SM6EAN (JO57) in the log on **23cm**, OZ1CTZ (JO46) and SM6AFV (JO67) on **6cm**, with SM6AFV also worked on **13cm** and **3cm**.

The 29th saw the first real rainscatter DX this year on **3cm** with F6APE (IN97) worked.
1st May brought OZ3ZW and OZ2LD (JO54) on **13cm** for a new square, plus very strong signals from GM3UAG (IO87) on **23cm** and a good QSO on **13cm** too. SM6EAN was 59 on **3cm**, and was followed by a **6cm** QSO with him and then OZ9ZZ (JO46) and GM4LBV. 73 **John**

From: **Dave G0DJA, Bolsover, IO93IF**
On 28th April, I heard the DB0JH and DK2MN beacons for the first time, and on the 1st of May I was able to work OZ1FF (663km) and OZ2LD (861km), both using CW. OZ1FF was my 1st Scandinavian station on **23cm**, a new square and a new country, and the first contact that I've made that is over over 500km (663km). I'd been listening to LA4SHF and even heard GB3NO for the first time, but when Kjeld suggested (on KST) that I listen for him, I tuned there to hear him working G3NEO and worked him after that. OZ2LD made it my second contact with Denmark, another new square and another milestone for me - first contact over 800km (861km) on **23cm**. **Dave, G0DJA**

From: **Robin G8APZ (Brentwood, JO01DO) <g8apz@g8apz.org.uk>**
I was pleased to work a few French stations this month on **3cm**, all on SSB. On 25th April, I worked F5PEJ (JN09) 231Km. On 29th April, F1PYR/p, F1DBE/p, and F1FEM/p were all at the same site in JN19 at 307Km, followed by F4DRU (JN18) at 409Km, and F6DKW (JN18) 344Km.
73, Robin

From: **Graham Murchie, G4FSG, JO02 <graham.murchie@btinternet.com>**
I have now been on **9cm** for 2 months (one month with a 'real' antenna) and **13cm** for one month and now have a 76el QLY for 13 and 112el QLY for **9cm**. Both seem to be working well but desperately need masthead pre-amps for both bands as I have 20m of feeder in each case. Despite this I have worked 5 countries (G, OZ, SM, ON, PA0) and 11 squares on 2320 and 2 countries (G, PA0) and 5 squares on 3400. Best DX on **13cm** was on 2 May when SM6EAN was wkd at 917km. **23cm** is also going much better now that I have a pre-amp at the masthead. The pre-amp means that I have heard fairly regularly all **23cm** UK beacons except for GB3EDN (which has not been knowingly heard in Suffolk for 30 years (ever?)) and GB3MCB for which I have to beam straight through GB3MHL 5Km away. There are vague signs of something on Spectran but nothing positively identified yet!! **73, Graham, G4FSG**

From: **Martin Andrew, GM6VXB <gm6vxb@btinternet.com>**
I have had my second contact on **10GHz**. The first was to MM0DQP in IO88KI while we were both testing last month. The second was on 3rd May to Kjeld, OZ1FF, 658KM with 5/3-5/5 reports on SSB. I also heard LA5SHF briefly.

Both contacts were done portable from the front of my house in IO97AQ87 10M ASL, using 10Watts, 80cm offset dish, receive NF approximately 1.8db, due mostly to a piece of semi-rigid from the transceiver to the feed.

I still have a lot of setting up to do, -13KHz off frequency, and dish pointing still not quite right, and a better transmission line to the feed is required.

I also have **23cm** available, but the **13cm** and **9cm** equipment is in bits at the moment having a major rebuild. I will try to be more active this year, though work commitments make this somewhat difficult.
73, Martin

MAY CONTEST ROUNDUP

From: **Martyn, G3UKV <ukv@ukv.me.uk>**
Activity was quite low, especially during the day, and no one seemed to have a good word to say about propagation conditions.

On **3.4 GHz**, we worked 8 stations, including G0UPU, G8IFT/P (Shenlow), G3PHO/P (Birkrigg Common), GD0EMG (Best DX @ 228 Km), G3LRP, G4BEL, M0GHZ and G4BRK - in that order.

On **10GHz**, G8KQW/P (Shenlow), G8VZT/P (Winter Hill), G4NNS, G4EAT, G3VKV, G3GNR/P (Dartmoor - 222 Km), GD0EMG (Best DX @ 228 Km), G3LRP, G3DVV, G4BEL, M0GHZ and G4BRK.

We took the **24GHz** gear, but only managed 4 line-of-sight QSOs this time, the best being G8VZT/P and G7MRF/P on Winter Hill at 125Km.

Hopes of taking advantage of the T-Mobile "Web 'N Walk" (£1 a day) GPRS fizzled out when the phone wouldn't talk to the laptop on a newly purchased cable, and the Orange link dropped out when the laptop battery went flat. The lap-top power cable brought for the purpose turned out to be the wrong one! So, that was the end of KST. At least our **3.4 GHz** entry will declare we only used 2 metre talkback for assistance....! Jim G8UGL and Kevin G8UPF were helping with the stations. **Martyn, G3UKV**

John, G3XDY, JO02OB <g3xdy@btinternet.com>
The contest on the first weekend of May saw good conditions to Scandinavia on the Saturday evening. LA3EQ (JO28), DC6UW (JO44), OZ9ZZ, OZ1CTZ, SK7MW, OZ2LD, and SM7ECM were worked on **1.3GHz**, with **2.3GHz** finding OZ1CTZ, SK7MW, OZ2LD and GD0EMG. On **5.7GHz** OZ1CTZ and SK7MW were also in the log, the icing on the cake was SK7MW on **3cm**.

On the Sunday morning the bands opened to Northern then central Germany. On **23cm** the log included DK6AS (JO52), DK1CB (JO53), DK6AJ (JO52), DF6IY (JN48), DL0GTH (JO50) plus nice DX to DM7A, OK2KKW and DG5NFF in JO60. **13cm** included DL0GTH, DK6AS, DK1CB, and DM7A. Time to try the higher bands was rather limited so few contacts were made compared with Saturday night.
73, John G3XDY

From: **Neil Whiting, G4BRK <neil@g4brk.net>**
My sustained efforts to get the dish back up (complete with new **6cm** horn feed (G4NNS design) and dual-band, dual-dipole feed for **9cm** and **13cm**) meant I wasn't on until 7pm.

I am pleased with the results on the new system during the contest, though conditions were well below normal (MHL peaking 529 instead on normal 569, PA6NL was a struggle on **23cm** instead of the normal 59).
73, Neil G4BRK

From: **Robin Lucas, G8APZ with M1CRO/p (JO01pu), Walton-on-the-Naze, Essex**
The **6cm** receiver failed after only one local QSO, so the least said the better!

On **3cm** we made 28.5 contacts in 17 different grid squares. Conditions seemed normal most of the time, but there were times when they were quite good. Here

are the ten best QSOs (seven of which were on SSB):- HB9AMH/p(JN37)672Km (58 reports on SSB!), GD0EMG(IO74)471Km (one way), DH8AG(JO31) 428Km, DJ5BV(JO30)424Km, DK2MN(JO32)412Km, F6DKW(JN18)349Km, PA0WMX(JO21)328Km, F1PYR/p (JN19)312Km, F1DBE/p(JN19)312Km, and PE1MMP (JO21)310Km.

On **24GHz**, we made 3.5 contacts, the best being a one way with G4BAO at 88Km. There are many more people with **24GHz** than we managed to test with, and it remains a problem in contacting them to try and arrange a test. Tests with two PA stations failed to produce signals over the very misty North Sea.
73, Robin

South Birmingham RS on Shenlow Hill, IO92GB during the May RSGB contest is pictured below. G3FYX and G8KQW were operating on **76GHz** At the left hand tripod is G8KQW/P **24GHz** and **47GHz**. In the centre is G8KQW/P **76GHz** and the equipment being operated is G3FYX/P on **76GHz**

IO84 ACTIVATION

Peter, G3PHO/p activated this square on **3.4GHz** during the early May contest but his plans all fell apart due to a vital piece of kit being left at home (see last month's newsletter). All was not lost though, since Peter worked seven stations on **23cm**, three on **24GHz** (GD0EMG at 100km, G7MRF/P and G8VZT/P Winter Hill, IO83RO at around 74km) and two on **3.4GHz** GD0EMG (IO74QD) and G3ZME/P Brown Clee (190km).

John, G4EAT, JO01HR was very pleased and said "Thanks for the new square on **23cms** Peter. Looking through my records, I see I had not worked IO84 on any of the bands from **70cms** up. Rare activity so well done and I hope others will plan some future /P operation from IO84".

Neil, G4BRK added, "There is some native activity in IO84 - G3JYP came back to a CQ during the 1st May Tuesday **23cm** event"

24GHz F/G4NNS/p in France

From: **Brian Coleman, G4NNS, IO91FF <brian-coleman@tiscali.co.uk>**
During a visit to Christian F1DLT (JN27 in the Franche Comte region) I was able to operate **24GHz** from the Roche Morey at 440m ASL in JN27UR. We had planned the operation some weeks ahead, gambling on good weather and on the day were not disappointed. We had arranged rendezvous with a number of stations including several in the Paris area but at about 300Km those proved just too optimistic.

I had been asked to provide **10GHz** for antenna alignment and, after consultation with John G8ACE, who has much more **24GHz** portable experience than I, and to keep the equipment load to a minimum, I took just a barefoot DB6NT transverter and a 20dB horn which I had built in about 1970 !

On the morning of 22nd April we got up bright and early (05:30), loaded Christian's car and set off on the one hour drive to Roche Morey collecting Jean Pierre F5OAU on the way.

Initially we started to set up the equipment on top of a large cairn at the summit but it soon became apparent that the path towards Paris was obstructed by trees so we decamped to the side of the hill facing Paris. This was all very well but we were now obstructed to the east where we had potential skeds with HB9AMH and F1EJK. Nevertheless, we set up shop and quickly heard from Andre F1PYR, Hervé F5HRY and Maurice F6DKW on the 2m talk back.

When we listened on **10GHz** it soon became apparent that the path / propagation to Paris was just not good enough for **24GHz**. Worth a try though ! By this time Arnold HB9AMH/P and Michel F1EJK/P had checked in on 2m so we decamped again back to the top of the cairn.

There were still some tree top obstructions but we quickly found HB9AMH/P JN37OE at 128Km on **10GHz** at 59+ and switched to **24GHz** to complete a nice QSO with 58 / 59 reports a new square on **24GHz** for Arnold. We then linked up with Michel on **10GHz** and moved to **24GHz** for a nice QSO 55/57 with some QSB with F1EJK/P in JN37KT at about 80Km. JN27 was a new square for Michel and only his QSO #2 on **24GHz**.

The HB9G **10GHz** beacon was obstructed by a tree close by the cairn and was not very strong . We could not find the HB9G **24GHz** beacon probably for the same reason.

We packed up, satisfied with a good mornings work and arrived back at Christian's home QTH in good time for a pre lunch aperitif.

The two photos on the following page show what we got up to.

73 from Brian, G4NNS

Jean Pierre F5OAU on top of the cairn with Christian F1DLT operating the 2m talkback. F1DLT is in black

After Robin G8APZ had sent in this month's Activity News Column to the editor, some more emails arrived just before publication date. They are included in the column below.

Many thanks to Robin for editing the above section of Scatterpoint for the first time ... the first of many I hope!

Peter, G3PHO, Scatterpoint Editor.

Late news…

Ray James, GM4CXM, IO75TW heard the LA4SHF beacon on 1296.886MHz on 1st May for the first time ever. It was received at 419 which Ray was very pleased with since he has a range of hills 1500' high to get over in that direction.

3 June 2007: UKuG Lowband Contest

From Ray, GM4CXM IO75TW: The best UKuG Low Bands contest yet, despite reports of poor conditions. Nothing was heard on 23cm from the continent but 20 UK contacts made of which 11 were over 500km. I'd never worked so many JO02/IO91 stations before during a uW contest! Despite some regulars being absent, it was a very good turnout and thanks to all who made an appearance, in particular the portables.

Nothing was heard on the 144.175MHz talkback whenever I checked or called.

I look forward to seeing how things fair in the next UKuG contest that includes 23cm. Not long to wait! November 4/12/20/28 and December 6 for the "Autumn Cumulatives". I will either be participating or Christmas shopping! 73 Ray GM4CXM

From Sam, G4DDK (JO02PA): What an excellent and well-supported Lowband contest yesterday. I am not sure I have ever seen so many UK stations active at one time. Absolutely brilliant. I was unable to be active for the full period, but whilst I was I was impressed by the variety of 'dx' on offer. There was hardly a dull moment. A couple of observations:

Once again our times were out of sync with the European VHF field day contest(s). These all finished at 14:00utc. As conditions improved towards the evening I guess our timing was a LOT better than on the continent. However, with virtually no activity from the mainland after 14:00z, we may never know how good it might have been! It was certainly good the night before.

I tried not to use KST to set up contacts, preferring instead to call on 23cm. This was very productive towards Europe but almost a complete waste of time inland. Nobody seemed to be listening or calling CQ. Are we missing something here?

The use of KST, when there were so many stations active across Europe, was clearly a problem as those who did use it were having their messages scroll off screen every few minutes. This lead to (potential) lost contacts and a great deal of frustration.

After 14:00UTC it was worth (the only option....?) using KST and my scoring rate went up markedly. 144.175 produced NO QSOs.

These are not gripes, but merely my observations on an otherwise excellent contest. 73 from Sam, G3DDK

From Peter, G3PHO operating as G3RCM/P (IO93FL)
I decided to activate our Sheffield Amateur Radio Club callsign for this contest in an effort to encourage others in the club to take an interest in microwaves. I announcedit all well in advance on our club reflector and invited members to come to the site just 10kM north of Sheffield. You've guessed it... no one turned up! Still, Conrad (G0RUZ) and myself had great fun if not some stress! We had intended to run 200W on 13cm but Conrad's PA died a few hours before and he spent a lot of time at home during the contest morning trying to get things right. As a result he arrived two and a half hour's late and found me doing nothing as he had got the 23 and 13cm antennas!! Just one QSO, on 9cm with G8AIM, was made before Conrad arrived. In effect we started the contest at around midday BST and ended up with 21 worked on 23cm, 11 on 9cm and 7 on 13cm(where we had just 2 watts RF available...n where near the score we had intended.

Best DX:23cm: DJ5BV (JO30KI) 671km
13cm: G8KQW(IO91OC) 267km
9cm: GM4LBV(IO86RQ) 364km

Activity, but not conditions, seemed very good. Many thanks to all who came on the bands that day and

GMs…you came out in force!

Our Vodafone GPRS played up all day, dropping out like clockwork every 12 minutes so it was useless for KST chatroom talkback. We used 144MHz to some advantage where we liaised with many stations.(F6DKW was a very good signal all day on 2m talkback) and called CQ on 23cm. We also received several direct calls (tailenders) on all three bands, including 3.4GHz! Once contact was established on 23cm we used that band as talkback for attempts on the higher bands.

From Phil, G3TCU : We too had a good day on **Coombe Gibbet, IO91GI,** yesterday, signing **G4SJH/P**, with Barry G4SJH on 13, and Dave G1EHF on 9cm.
It was my best ever session on 23cm, working 36 stations including GM, GW, PA, DL & Fs.

Also it was the first occasion I've had a solid connection to KST all day! Using a Vodafone data card set, for GPRS only, we used about 2MB costing around £4 (*surely £8? …editor*) for the day. I wonder if they'll follow the Orange lead and offer a £1 cap per day? *(Yes, they have just done so.. Editor).* Thanks for all the QSOs yesterday. 73, Phil G3TCU

GM4CXM 1296MHz CONTACTS OVER 500 KM

4/3/07	**LOC**	**Km**
G4BRK	IO91HP	516
G4EAT	JO01HR	571
PI4Z	JO11WM	731
M0GHZ	IO81VK	520
G0JBA	JO01KD	635
PA6NL	JO21BX	708
G3XDY	JO02OB	564
1/4/07		
SM6HYG	JO58RG	988
6/4/07		
G0RRJ	IO91FE	560
G8DKK	IO91VX	518
12/4/07		
G8KQW	IO91OC	587
15/4/07		
G8APZ	JO01DO	571
16/4/07		
G4DDK	JO02PA	571
25/4/07		
G8VR	JO01RJ	634
30/4/07		
OZ1FF	JO45BO	782
1/5/07		
SM6AFV	JO67GQ	1045
OZ2LD	JO54TU	1016
OZ1CTZ	JO46OE	843
OZ9ZZ	JO46QK	851
SM6ESG	JO67CC	1024
PA2DW	JO22GD	718
SM6EAN	JO57WQ	1007

Beacons heard during the slight lift at the end of April and start of May.

As usual: SK6MHI, SK6UHI, OZ1UHF, DB0VC.

New ones: PI7QHN, OZ5SHF and, more interestingly, LA4SHF and LA5SHF.

LA4SHF was heard for the first time on a direct bearing despite being screened in that direction by a range of hills reaching 1,500 feet asl 15km away.

I normally receive the GB3ANG beacon via a reflection off Broad Law at a bearing of 122 degrees. Listening on this bearing produced both LA4SHF and LA5SHF, the latter being inaudible on a direct bearing.

Equipment used:
FT736R DL2AM PA 150W 4 x 44EL WIMO @ 11m + SP23MK2 LNA

73 **Ray GM4CXM IO75TW**

May 5.7 and 10GHz Cumulatives:

From: Bob Short, G3GNR:
<sweetpea@bobg3gnr.plus.com>
Conditions were not that good . Our best dx was G4EAT at 328k
Others worked on 10GHz :
G4NNS, G3FYX, G3JMY, G1MPW/p, G4EAT, G4ZXO/p
G4WYJ/p, G4WGE/p, G4RFR/p, G3PYB/p, G0LFI/p
G4ALY
Our 10GHz gear (we had no 5.7GHz) was 10W to an 80cm offset dish and 144MHz talk back only(no KST) 200w to a 5 element yagi . **73 from Bob G3GNR.**

From: Steve Cooke G1MPW
<s.cooke375@btinternet.coSteve
G1MPW and Dave G6KIE operated from their usual site of Firle Beacon JO00AU . They found things a bit quiet to start with but it picked up in the afternoon - and the weather was kind all day. The final tally was 16 QSOs - the best DX was G3PHO/P at 346Km. Steve would like to thank G4ALY + G3GNR - both had to endure his suspect CW - but at least it worked in the end!

Dave was using his roof rack mounted system for the first time - it worked very well all day and will come in to its own the first time it rains . Based on a CCTV mount , it's accurate to 0.1 degree and completely repeatable .

Steve had to resort to KST in the end to dig out the last few contacts - and that seemed to work ok after being forced to use GPRS instead of the 3G connection that kept dropping out.

The best thing about the first cumulative of the year is that they are all new squares - Steve worked 11 squares on Sunday and says he only managed 14 all last year ! **73 from Steve and Dave**

AIRCRAFT SCATTER– G4ALY

Peter. G3LRP. and myself have been doing aircraft scatter tests on a daily basis for about three years, using the 23/6/3/9cm bands over a path of 399km. On the whole they have been totally successful, with odd times when, even with aircraft in between us, it has failed. However, these occasions have been very rare.

To start with, we did this without any external assistance, but I was inquisitive to see where if possible the aircraft were flying which were assisting us. Now we both run SBS1 systems and software and as far as I can see the best flight corridor at my end of the path is the east/west one, passing just north of Bristol. With the software you can click on an aircraft (virtually realtime) and it will put up a bearing line to that aircraft, if you pick one which shows a flight path (as the program gives the course of the aircraft) almost but not always as the plane hits the bearing of 28 degrees which is the direct path to Peter I hear a reflection from Peter. Depending on the flight path of the plane, the reflections can last some time. SBS1 does not make the contact possible, but it gives you an idea when aircraft are about. When the screen (radar) is blank one can assume that reflections are less likely but not necessarily so as a lot of aircraft are still not fitted with this system.

Using digital modes could be more problematical because of doppler shift. When I am receiving a/c scatter signals I have one hand on the tuning knob and in some cases have to adjust tuning quite rapidly to keep the signal readable up to about a maximum of 8-9 kHz. The EME boys use software to overcome this but the offset is usually a predicted one and can be written into software.

I could be wrong but with a/c scatter this as far as I know is not the case. We use quite fast morse and it has been known for us to get a complete qso off one aircraft if we are on our toes. I will get flamed now, I am sure, by saying I still think **that CW is the way to go** for a/c and weak signal. I found computer programs boring after the first few attempts.

That 's why I gave up digital comms on satellites. Sitting in the garden with a cup of tea watching the aerials going up and down and round and round and then checking it the shack, to find lots of downloaded traffic at 9k6, became meaningless. Getting it to work was the most interesting part. Meteor scatter is a different matter but even then computers appear to be really doing the hard work. Good luck with your aircraft scatter testing. It's a really interesting branch of this hobby of ours.
73 from Ralph G4ALY