

TDARS



Newsletter



Issue 249

www.TDARS.org.uk

Programme

December 2011

www.telfordhamfest.co.uk

December 14 Christmas Dinner £16.50 at The Duck at Allscott. Bookings now please

December 21 Mulled Wine and Mince Pie Social evening (LWVH)

December 28 Informal Night—OTA and ragchewing

January 1 (Sunday) 9am net—on 144.600 MHz, 3657 KHz and 'TF all monitored for signs of life.....

January 4 On-the-Air and Committee Meeting at LWVH

January 11 Indoor Bowls Competition: TDARS vs Little Wenlock regulars

January 18 Video Evening. MOPNN (club events 2011) & G3JKX (RSGB) videos.

January 25 Using Surface Mount Components. Practical —bring your project along.

February 1 Committee Meeting. Venue to be confirmed.

February 8 Under £5 Construction Competition. Bring along a novelty, perhaps ?

February 15 The UK Activity Contests(UKAC). By Dave G0CER. A good club approach

February 22 Shack Oddities. Bring along something unusual and explain ... !

February 29 Planning TDARS Portable, Special Event and Contest events 2012

March 7 V/HF On-the-Air & Committee Meeting LWVH.

March 14 Main Construction and Novice Constructors' Competition.

March 21 "AMSAT" by Paul 2E1EUB. Guest Speaker (and Trophy Winner 2011)

For Amateur Radio Exam Training—enquiries to Mike G3JKX (01952 299677)

For Morse Training and Morse Proficiency Tests Martyn G3UKV or Eric M0KZB.

For Equipment Loans & Returns contact Ricky M0RKY or Simon M3SET

Radio Amateur Exams: Latest News: www.tdars.org.uk/html/trainingFoundation.html

G3ZME Telford & District Amateur Radio Society. *Founded 1969* **G6ZME**
Village Hall, Malthouse Bank, Little Wenlock, Telford. Shropshire. TF6 5BG

QTC? News & Information

**TDARS MEETINGS EVERY WEDNESDAY AT LITTLE WENLOCK VILLAGE HALL UNLESS INDICATED OTHERWISE ON THE FRONT PAGE PROGRAMME.
ROOM BOOKED FROM 7PM - 10PM. MEETINGS USUALLY COMMENCE AT 8PM
Please return borrowed equipment promptly**

Club Projects Last Newsletter, a fourth project was omitted from the text (blame the aging Editor). This is a HF/VHF/UHF Antenna Analyser, initially designed by VK5JST. This was also a popular project, and a good number are being built by Members. Using normal leaded components, it works up to about 150 MHz, but using SMDs, it's good for up to 500 MHz (ie 70cm+). Rob M0TOY brought along the essential parts for this project recently, and demonstrated (using the Club's excellent Elmo overhead camera with great magnification) how he goes about



Photo: M0RJS

mounting those tiny surface mount components on to the PCB. At times, you could almost hear a pin drop as each chip went into place and Rob gave an occasional commentary. Quite a few present who previously thought SMDs were too difficult to work with, felt perhaps they could give them a go. The clever part of this design is that the signal generation essential to analyse any antenna is provided by an external QRP transmitter (eg 2/70 handheld, or FT817), which greatly simplifies and cheapens the project. Definitely follows the KISS approach.

The other three projects are also moving forward. Richard G0VXG has found a very promising chip that could be used as a programmable control device for a range of remote control applications via radio. The parts for the HF baluns have been distributed, and a couple of finished coax baluns have been brought to club to help and guide others. The coax in-line SO239 sockets are due shortly from China to complete this project. Meanwhile, Rob 'TOY has developed the outboard (or is that inboard ?) CTCSS PCB and has sourced most of the components. He mentions that due to audio filtering in rigs, the best results may be achieved by connecting the unit within a 2/70 transceiver, rather than simply fitting it in parallel with the microphone input plug or socket. PCB size may be about 25 x 13mm, so SMDs again !

TDARS will have another go at entering the RSGB's Club of the Year Award 2011. We missed out to Wythall Club in 2010, here in Region 5 (West Midlands). RSGB say the competition "Concentrates on your club's contribution to promoting amateur radio, its contribution to training and education, charitable activities and general club activities." This time there are trophies for each Regional winner as well as an overall National winner (Reading & DARC in 2010) chosen from all Regions. Right then, the gloves are off



The dates of the Olympic Torch being carried through Shropshire in 2012 have been announced—May 24 and 30th. Our most likely involvement will be on **Wednesday 30th May** when it comes through Much Wenlock, but the earlier date may be appropriate too.

A useful bi-product of our HamFest in September was a speaker who has agreed to come to TDARS and give a **talk about AMSAT** (Amateur Satellites organisation). Paul Robinson 2E1EUB was approached by Richard 'RKH' after he received the prestigious G5RV Award for his work on behalf of AMSAT. The RSGB President, Dave Wilson, made the presentation during the HamFest. The date of Paul's presentation to TDARS is March 21st, the week before our AGM. The subject of Guest Speaker at the 2012 Telford Hamfest (Sept. 2nd) has also been raised with Paul !

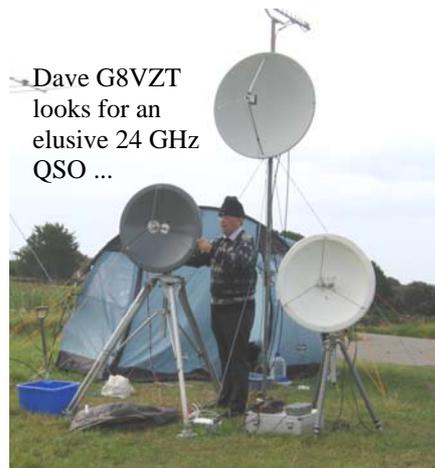
Congratulations to John M6BAF who recently purchased a Yaesu FT817, and using an internal battery pack has been using it /portable on the HF bands. John recently had his first HF SSB QSO on 10metres with an Italian, which was quite remarkable, since as well as running QRP (2.5 watts), the antenna was just a short loaded whip (Watson ATX Walkabout) screwed straight into the rig. Quite an achievement on SSB.

The **160 metre ('top band') Club Calls contest** took place early in November. GX3ZME was operated from Richard's (G0VXG) QTH in Jackfield, Operators were Dave G4EIX, Richard and Martyn G3UKV. They had a total of 84 QSOs, with only two of them being with stations that were neither a Club Station, or Club Member. The claimed score was 1302 points, which is comparable to previous years.

The group of Club Members who have gone out portable this summer, **activating the microwave bands**, particularly 5.7, 10 and 24 GHz, have come up trumps. There were 5 monthly sessions held on Sundays, including August when they operated from Guernsey (GP3ZME/P). The best 3 scores from each entry station are totalled up to give a Cumulative score, and G3ZME/P came FIRST on all three bands. As a result, we won 3 Trophies—the G3KEU trophy for 5.7 GHz, the G3KEU Memorial trophy on 10 GHz, and the G0RRJ Memorial trophy on 24 GHz. Those involved include Mike G4NKC, Dave G8VZT, Jim G8UGL, Martyn G3UKV, Kevin G8UPF, Richard M1RKH. A number of members hope to go to Martlesham uWave Roundtable in April 2012 to collect the bunch! All these Trophies, incidentally, have been donated in memory of well-known, but SK, microwave operators and experimenters. A couple of shots from GP3ZME/P, Guernsey :-



Jim G8UGL on 10 GHz,
taking it seriously ...

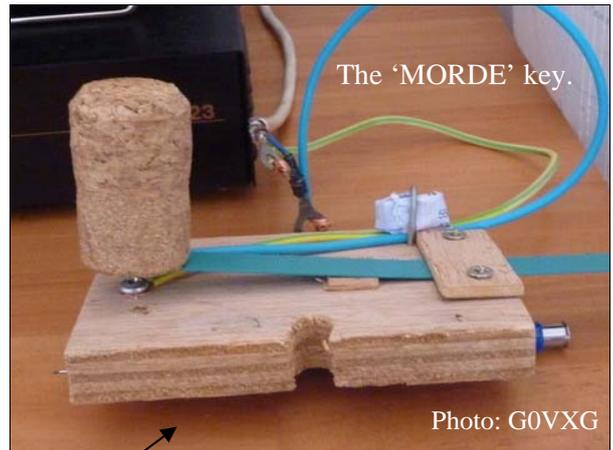


Dave G8VZT
looks for an
elusive 24 GHz
QSO ...

Don, M0FHM, recently gave an unusual talk to the Club about his **visit to Bosnia** in the early '90s. At times it was quite moving, and his fellow travellers were certainly an odd bunch. Some of them rather dubious characters. There was only one illustration available, but nonetheless, it was a fascinating insight into those times in Eastern Europe.

Dave, G0CER October report: "I took my 817 up to Shetland last week and only worked one station in CT2 .. this was a grand failure due to the self-catering having extremely well-sealing windows (and I would too with their winds!). I couldn't bring the coax in and probably my wire dipole would have blown away. The internal vertical and 2.5w just wasn't enough. Anyway we spent so much time doing holiday things I never got chance outside except for a short while."

Morse code learning and operating has been given another push by Eric M0KZB, ably supported by Paul M0PNN. This time, even the learning of the dits and dahs for each character has been covered, with a big emphasis on rhythm. Current candidates include Martin 2E0TRO, David M0YDH, Rob M0TOY and Eddie G6SXD of Bridgnorth. From about 8pm each Tuesday, Thursday and Sunday on 144.600 MHz FM. They are moving on to sending CW, and so are looking around for suitable audio oscillators and morse keys. Quite entertaining at times ! Rob has intentions of making his own morse key, whilst Richard G0VXG had to also make his own whilst at his Menorca QTH recently, having left his usual brass pounder at home. Looks quite serviceable !



More **trainees for the Foundation and Intermediate radio amateurs' exam** are in the pipeline. Mike G3JKX continues his sterling work in this direction, helped by several other club members. The next 2-session Foundation course starts on Sat. 10th December, with the exam the following Saturday afternoon. Candidates include Rob's brother (John) and John's (M6BAF) son Robin aged 11. An Intermediate course (usually 7 Saturday morning sessions) will start in early 2012, so long as there are at least 5 candidates. For latest details, contact Mike G3JKX (details page 2) and see the TDARS Homepage (L/H side 'Training & exams').

The next **NEWSLETTER** early in February will be **issue number 250**. I hope to receive a bit more input than this edition, which has been distinctly thin. As well as featuring whatever **YOU** send in, it will have a new style front-page, thanks to Bob's 'RJS creative graphics.

Dave G0CER is giving a talk on February 15th to TDARS on the topic of the **UK Activity Contests**. As he says, these contests give an opportunity for any club member who has equipment for the VHF/UHF/SHF bands to play a part in promoting our Society—no matter how limited (or extensive) their station may be. Dave 'CER and David M0EMM have sent in entries for most months of 2011, and Martyn G3UKV has also entered a few SHF results too. As of now (6 Dec—most results include up to October), the results are as follows:-

50MHz TDARS 21 of 54clubs. 'CER 3438 pts, 34th of 163 stations. 'EMM 2359pts, 50th of 163

70MHz TDARS 12 of 31clubs. 'CER 825 pts, 27th of 68 stns. 'EMM 1320pts, 16th of 68

144MHz TDARS 33 of 78 clubs. 'CER 4203pts, 50th of 311 stns. 'EMM 414, 209th of 311

432MHz TDARS 21 of 71 clubs. 'CER 3106pts, 38th of 170 stns. 'EMM 1105pts, 74 of 170

1296MHz TDARS 27 of 28 clubs. 'EMM 250 pts, 15th of 15 stns.

2320MHz TDARS 9 of 9 clubs. 'UKV 571 pts, 12th of 15 stns.

3400MHz TDARS 4 of 6 clubs. 'UKV 2000 pts, 2nd of 3 stns.

Here's Martyn's 'UKV 3400 MHz mast-mounted transverter and dish. (plus antennas for 2m, 70cm and 23cm)



Mike's Piece

Did you know that there is **Google Moon** and **Google Mars**?

Look at **SKETCHUP** for a designing that conservatory project or new shack!
Using **ANONYMOUSE.org** let you surf the web without disclosing who you are.
ilounge.com gives hints, tips and troubleshooting iPods.

only2clicks.com sets up a home page which has links to all the sites you use often
dafont.com has 7,500 free fonts for your use
panda.com lets you send very large files (e.g. pickies) very fast

whatsonwhen.com shows events/exhibitions/attractions from the world.
londontheatre.co.uk shows what's on, what's coming off, plus seating plans of theatres
rottentomatoes.com gives a roundup of film critics' opinions.

cricinfo.com gives all about cricket.
radiocator.com shows thousands of radio stations to listen to on the net
blind.com has clever ways of searching for video clips.

anagrammer.com does what it says on the box
show.com shows how to do everything
weather.com the best WX site.

kiva.org lets you lend small sums to business projects in the developing world
rated people.com shows user reviews of local tradesmen. Type in the job and get quotes.
hoopla.co.uk shows sale prices of homes near you. **upmystreet.com** is another site.

DesigMyRoom.com choose colours, furniture, fittings and finishes. Then publish!
homeforexchange.com has good spread of house swaps for hold.
kelkoo.co.uk lets you type in what you want to buy and comes up with the best prices.

journey planner.tfl.gov.uk lets you type in a starting point and destination in London and gives the best bus/tube routes.
abebooks.co.uk the best site for second hand books.

73 Mike G3JKX

www.subbrit.org.uk/category This one from **Dave GOCER**.

“Subterrenea Brittanica by a group who explore anything man made around Britain - plenty of Cold War buildings, factories and transmitter sites (inc Criggion - might be some photos or info not found elsewhere ?)

Don't blame me if you lose the next three days lost in history! “ (Dave, e-mail)

*Christmas
Greetings*

SURFACE MOUNT DEVICES (SMDs) AND SURFACE MOUNT COMPONENTS (SMCs)

Many projects now use SMDs (or SMC—same thing!) , including at least two of the current TDARS projects. Like anything different, it may seem to be a bit of a challenge, and perhaps awkward at first. Most of us feel secure pushing component leads or legs through holes in a PCB, Veroboard or whatever, and wrapping leads round connection pins and those larger components - and then soldering.

BUT—do not give up—HELP is at hand !

Rob demonstrated very graphically (page 3) during one of our Project Evenings how it is done. One of the problems is holding a SMC in the correct location on a board, whilst trying to solder with one hand holding the iron, the other the solder. Few of us are born with 3 or more hands. Here's the jig which Rob has made for this purpose, fairly similar to one designed by Richard 'VXG a year or two ago. (Richard used a clothes peg mounted above a wooden work-board)

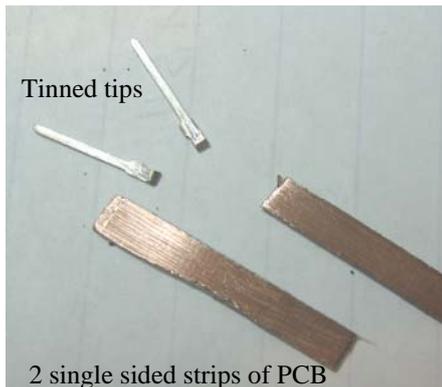


The Frame is simply twin stiff wire, anchored to the R/H edge of the board, and ending up with a 2-screw connector sleeve—the lower one being an oversize screw which can easily be loosened or tightened to grip the holding tool (tip). A selection of these holding bits are shown by the PCB, cut to match a variety of SMCs. [There's even a small plastic pocket (yellow, r/h edge) to store these bits !]

The pencilled + on the baseboard is where you place the PCB and SMC as a 'target' for exact positioning. Hopefully the rest is fairly self-explanatory. No more jumping SMCs!

Photo: MOTOY

On a similar theme, Martyn G3UKV fairly recently bought an **Atlas LCR** measuring instrument by Peak Elec. Design co.. Very useful, especially for capacitors and inductances. (0.5pF to 10 000 uF and 1 uH to 10H respectively). It comes with a pair of normal spring-loaded probes, but any additional probes cost £20+ each extra! Again, with SMDs (SMCs), it is tricky to make firm contact between the probes and the component, especially as you have to hold them firmly for a few moments until the instrument makes up its mind. At the recent G-QRP rally, I spotted a tweezer device made in the far-east of which I thought I could make a Chinese copy (beat them at their own game !!). It works, and now lives in the LCR pouch. The new probes are glued inside the 'jaws' of an old pair of tweezers, with the tips protruding enough to touch the contacts of the SMC to be measured.



PROBE COMPONENTS



SOLDERED WIRES AND TIPS



Clip existing Atlas probes to hold wires
Finally glue new probes to inside edge of old pair of tweezers. Tips protrude for contact:

READY TO MEASURE A SMC...

