



Founded 1969

# T.D.A.R.S.

Telford & District Amateur Radio Society

## News Letter

G3ZME G6ZME

Issue 215 Date Dec. 2005

Dawley Bank Community Centre, Bank Road, Dawley, Telford, Shropshire. TF4 2AZ

# Forthcoming programme

- Dec 14** Christmas Dinner—Allscott Inn.
- Dec 21** Christmas Social at Club HQ. Talk to those you missed last week !
- Dec 28** HQ Closed. TDARS Net on 3657 KHz and 144.6 MHz after 8 pm.
- Jan 4** Open Evening / OTA / Committee. Welcome 2006...
- Jan 11** Crystal Sets, using real galena & Cat's Whiskers. M1RKH
- Jan 18** Video Evening. Another special selection
- Jan 25** Ten Minute Topics. Short talks, including the New TDARS Operating Competition
- Feb 1** First-in-the-Month—G3ZME net on 3.657 KHz +/- QRM, Committee
- Feb 8** Under a Fiver Construction Competition
- Feb 15** Club Project—Product Recall (!). Bring it along—finished or un-built.
- Feb 22** "Climbing K2" - Mike's (G3JKX) Elecraft K2 Project in the flesh.
- March 1** Open Evening / OTA / Committee
- March 8** Stan Brown G4LU. Topic T.B.D. Not to be missed...

**CLUB MEETINGS EVERY WEDNESDAY AT Bank Road Community Centre, Bank Road, Dawley Bank. Rooms available from 7:30 pm. Note: HQ Closed Dec. 28th 2005  
ALL WELCOME. COME AND MEET EVERYONE !**

For Foundation & Intermediate training, contact Mike G3JKX tel: 01952 299677, mjstreetg3jkx@aol.com). Advanced course contact Eric M0KZB tel: 01743 240286,

# Editorial

Propagation conditions on the HF bands have been almost as miserable as the weather lately. So, it's a good time to do a bit of home construction indoors.

Amateur Radio has lots of facets, from 'rag-chewing' to contesting, from making your own basic antenna tuning unit to interfacing your PC with the latest software and radio. Luckily, none are mutually exclusive—you can be a 'dabbler' in all sides of the hobby, or even make a serious stab at just one or two aspects.

However, I would maintain that if you don't do any home construction beyond putting a plug on the end of a lead, you're missing out on one of the most enjoyable and rewarding aspects of the hobby. At one time there wasn't much choice—you made your own equipment or you were rich! For example, the equivalent to a multi testmeter which you can buy today from as little as £5 in Maplin cost 11 guineas (£11.55)—or about £250 in today's money! So, my first couple of testmeters were built in a wooden box, using a meter given to me by Harry G3FRY and odd resistors scrounged from the local Radio Club in Cheltenham. The test-prods were bared ends of insulated wire stiffened with solder and filed to a point. As all equipment then used valves with at least 250 volts on the anodes, one took considerable care when checking circuits! However, as a survivor from a 3KV TWT PSU that bit me a few years ago, 250 jolts were no big deal. The rule, I was told, was always to test higher voltages with one hand in your pocket, so there wasn't an electron path via your heart... Actually, that didn't really work in practice as you needed both hands just to hold the test prods in the right places, and of course the negative prod usually was at ground potential, so.....

Usually, we've had a modest number of entries in our two annual Club Construction Competitions. The first in February is called the 'Under a Fiver' - the idea being that the main components, excluding case and perhaps an odd chip that cost several quid, cost no more than about £5; in other words it's a simple weekender type of widget. I suggest the latest club project would be OK for entry. The second follows in March and can be almost anything. This year's entries were down in number. Will you do something to put that right in 2006?

**MIV**

## **TDARS Information and pictures Web Site [www.tdars.org.uk](http://www.tdars.org.uk)**

CHAIRMAN: Dylan Jones M1IHM ( 276400)

VICE-CHAIRMAN: Malcolm Seeby 2E1DJM (282418)

SECRETARY: Mike Street G3JKX (299677)

TREASURER: Jim Wakenell G8UGL (684173)

CURATOR: Derek Southey G0EYX (01785 604904)

NEWSLETTER EDITOR: Martyn Vincent G3UKV (255416)

Committee: Steve M1GIZ; Richard M1RKH; Mike G4NKC; Simon G0UFE; Richard, G0VXG;

Assistant Curator: Kevin Hutchinson G8UPF (01746 764556)

QSL Manager : Malcolm 2E1DJM; Trophies Manager: Eric M0KZB

**CLUB NET: SUNDAYS 144.600 FM AFTER 9 PM. GB3TF ALSO MONITORED FOR ANYONE NOT ABLE TO OPERATE ON 2 METRES.**

**ALSO FIRST WEDNESDAY IN MONTH AFTER 2000 HRS LOCAL TIME ON 3657 KHz +/- QRM.**

# Ephemera: Club News

- ✂ About 28 Members, wives and friends have booked a **Christmas Dinner this year.** Apologies to anyone who did not receive a Booking Form, but at the time of the October newsletter, I did not have a menu etc available. I circulated the Form at every meeting in November, and sent it out on the Club Reflector as well as pinning spares on the Noticeboard. I also phoned round people who I knew had come in previous years.
- ✂ **The Club Project** (Low voltage PSU protection circuit) has been adopted by no less than 16 members. If you've not yet got your "bits", speak to Dylan (Tel 276400) ASAP. The cost is £12 for everything. **One slight mod:** Some loads (eg a transceiver) may have capacitors across the 13.8 volt line which hold their charge for a while, even when the supply volts are removed. In such cases, if the over-voltage trip cuts out due to excess voltage, there is a problem. The 741 chip sees a residual voltage (from the load) as a "reset", and so the relay closes. Again the over-voltage is detected, and the relay opens. The result is that the relay "chatters", and the over-voltage continues. So, it's important that a diode (any silicon—eg 1N4148) is fitted between pins 3 and 6 of the chip. It's easiest to retro fit it on the track side of the board.. The + end (banded) goes to pin 3. This mod cures the problem. I have spare diodes if needed by anyone.
- ✂ **A second note** for this project. The relay supplied is a bit different to the prototype shown on the construction notes. The relay coil connections use the pins marked 85 and 86. The centre pin is not used. The remaining pins marked 30 and 87 have the heavy current flow and form the switch when the reset button is pressed. Use heavy gauge wire to these pins, which can be connected either way round. If any of this is not clear, or you want help in any way, don't hesitate to contact one of the Committee. We'll get it working for you !
- ✂ The November **surplus equipment sale** was not very well supported in terms of members bringing items to sell. However, about £26 was raised for club funds, and we had a fair number of 'belly laughs' & groans. As usual, a number of Free Gifts accompanied some sales!
- ✂ Richard's (G0VXG) talk about **making Printed Circuit Boards** was well received, and as a result the Club's PCB developing light-box has been booked-out for the first time for many moons. Richard showed us software for drawing up circuits and arranging PCB layout (from Maplin, about £20) as well as his bubble-bath and sundry items for etching the board. It was all done in a very short time, with excellent results. The other Richard (M1RKH) showed us an alternative method whilst copper etching was taking place. This uses iron-on etch-resist film (instead of photo-resist), and also gives excellent results. For this, a laser printer or photo-copier is used to transfer the etch-resist layout. Maplin now stock an alternative etching chemical (sodium persulphate ?) to the rather corrosive Ferric Chloride.

G3ZME

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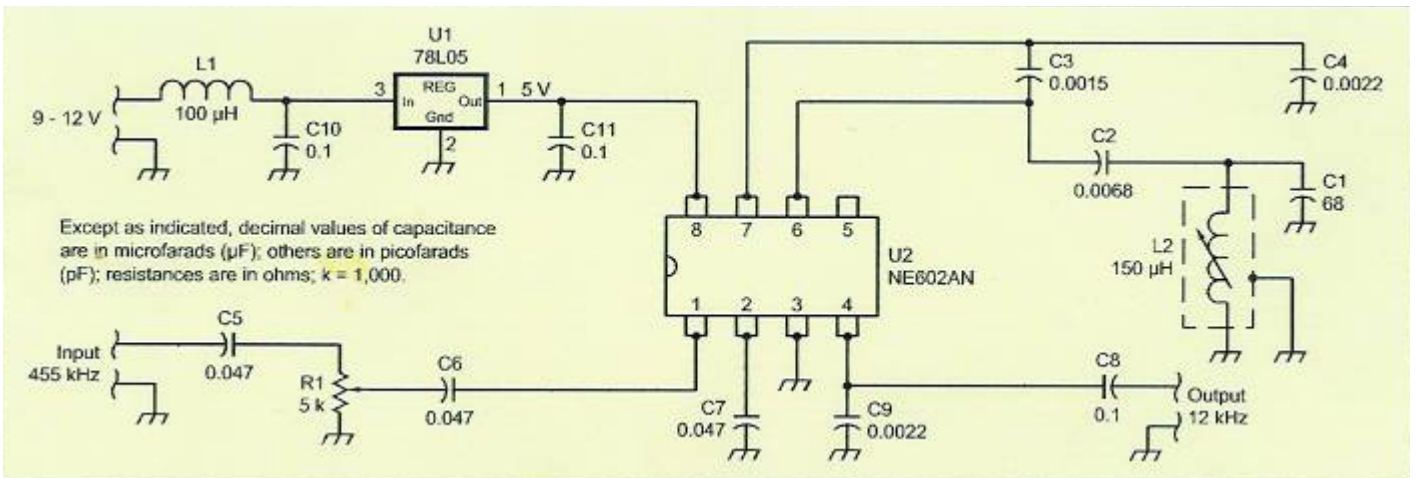






## Digital Radio Mondiale (DRM) —Edited extract from QST Oct. 2003

Locally, there has been some interest shown in DRM—a digital AM radio system with near FM quality sound. It can integrate data with text, and can even show images with a suitable receiver. Already there are 5, 9 and 10 KHz bandwidth versions, and they are appearing rapidly on the short wave broadcast bands, especially in the day-time. All the information is contained within a large number of closely spaced carriers. The first transmissions came 'live' in 2003. To convert an existing receiver, tap in from a normal receiver **before** the IF filtering (455 KHz in the circuit below), then down-convert to 12 KHz (circuit below) and feed into a PC sound card. Finally download suitable software (eg [www.drmrx.org/](http://www.drmrx.org/)) to decode the data. (60 euros). (If you're interested, I can let you have a copy of the full October 2003 QST article. Richard M1RKH is also building a suitable receiver from recent Elektor Mag. —Ed.)



A new trophy was presented to the RSGB on 25 February by members of the Telford & District ARS in recognition of the acquisition of the 50 MHz band. The 'Telford Trophy' is to be awarded to the winner of the RSGB's 50 MHz contest each year, at the VHF Convention. The trophy is a scale model of Telford's famous Iron Bridge and is constructed from more than 2,000 screws, nails, nuts and hooks and was created for the Telford & DARS by Gerry Foxall, a local artist specialising in scrap metal sculptures. Seen in the photograph (taken at RSGB HQ) are G3IMP, the RLO for Shropshire, G3UKV, GOCZD and G8UGL.

RADCOM MAY 88

**Photo** taken for RSGB Rad-Com—May 1988— at RSGB HQ. The caption reads "...in recognition of the acquisition of the 50 MHz band. The Telford Trophy is to be awarded to the winner of the RSGB's 50 MHz contest each year....a scale model of Telford's (sic—actually Abraham Darby's) famous Iron Bridge and is constructed from more than 2000 screws, nails, nuts and hooks..... Created by Gerry Foxall, a local artist specialising in scrap metal sculptures. "

From L to R, a youthful G3UKV, G8UGL, G3IMP (Syd Poole, silent key 1993) and Martyn Kinder GOCZD (who now lives near Crewe).

