



FIVE AND NINE PLUS

THE OFFICIAL NEWSLETTER
OF THE
APPLEDORE AND DISTRICT
AMATEUR RADIO CLUB

Club Callsigns: G2FKO and GX2FKO
Web Site : www.adarc.co.uk

CLUB'S OFFICERS

President	John Jeffers	G0UNB	
Chairman	Terry Adams	G4CHD	
Vice Chairman	Dave Lawrence	G0PGK	
Secretary	Alan Fisher	M6CCH	01237 422833 Email: fisheralan@btinternet.com
Treasurer	Laurence Soutter	G4XHK	
Committee	Mike Hammond	G3PGA	
	John Lovell	M0JKL	
	Graham Bailey	G1ZTJ	
QSL Manager	John Lovell	M0JKL	
Web Master	John Lovell	M0JKL	
Editor	Terry Adams	G4CHD	

July, 2013

EDITORIAL

Welcome to another Newsletter.
At last the Summer weather has arrived and with it the visitors etc. - so a chance to hear some new callsigns on vhf.

This month's meeting is our annual **Bring and Buy** and provides an opportunity to either stock up on more goodies or make room in the shack for them or just a chance to come and have a cuppa and chinwag with friends. Either way we look forward to seeing as many of you as can make it.

Many of you will have heard about the **shock emergency that had Helen (G0EOA)** airlifted to Hospital. However I am delighted to report via Jim (M3VJM) that Helen should be back home by the time you receive this Newsletter and we wish Helen a continued recovery (a photo of Helen can be found later in this Newsletter). Several other members have also required hospital treatment of late and we wish them a speedy recovery.

On Sunday, July 7th, I went to the **Truro Rally** and only bought some aerial wire (I keep cutting through the aerial every time I trim the hedge !!) I didn't see any other Club members and I think that dealers must be finding it really hard justifying all the effort in attending Rallies. However, they are a great way to meet people - I met a mutual acquaintance of Beryl (G1SVP) - and was glad I went. Ofcom has been most accommodating in supporting **RSGBs 100 year celebrations** and have agreed to issue an NoV to any UK amateur who wishes to use the special commemorative '**V**' prefix. The NoVs for these special



prefixes GV,MV and 2V are now available for download from www.rsgb.org/centenarynov

Please note that these NoVs are **valid ONLY** from **0001 BST on 5th July until 2359 BST on 31st July 2013**

So, enjoy this Newsletter

Terry (G4CHD)

CLUB MEETINGS

Unless otherwise stated, Meetings are held at the Appledore Football Social Club starting at 7.30pm for 8.00pm.

Visitors are always welcome.

For further information, contact Alan (M6CCH)

July 15th	Club Bring & Buy
August 19th	Natter Night
September 16th	Antenna Analysers - Comparison and Demo
October 21st	Mountains & Canyons of SW USA by John (M0JKL) This is our annual Open Meeting
November 18th	Back to Basics : The Superhet by Terry (G4CHD)
December 16th	Club Christmas Party
January 20th	Audio Recording - Practical Demo by Laurence (G4XHK) & John (M0JKL)
February 17th	Radio Quiz by John (M0JKL)
March 17th	Club AGM
April 21st	'Plan B' by Steve (G6SQX)

AMATEUR RADIO IN THE COUNTRY - JULY 21st

Upton Bridge Farm, Long Sutton, TA10 9NJ
Amateur radio, QRP and homebrew in a country setting

Contact : Tim Walford (G3PCJ) walfor@globalnet.co.uk

REPORT ON THE JUNE MEETING

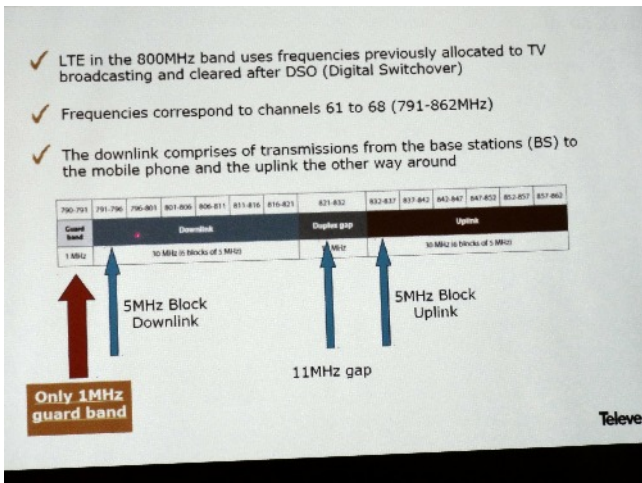
Implications of the 4G TV Band takeover by Graham (G1ZTJ)



Many members will receive their TV via Huntshaw Cross and so tonight's talk was of particular relevance to them. Graham explained how the mobile phone industry has rapidly developed from the early bulky handsets to the speed hungry handsets of today. The latest technology is designated as 4G and to achieve the faster speeds, more frequency bandwidth is

needed and Ofcom in its infinite wisdom has handed over channels 61 to 69, some of which were used by Huntshaw Cross. The outcome is the need to retune all TV sets (which should have already been done by now), but the real test will come in July when the 4G transmissions will commence.

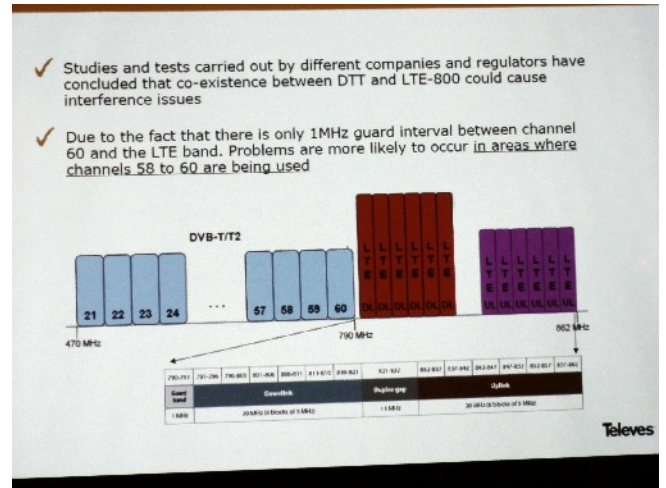
The uplink frequencies used by handsets which could be geographically anywhere is therefore allocated lower frequencies to minimise interference. However, the downlink used by fixed base stations will be using the higher frequencies which are close to the Huntshaw Cross TV frequency allocations and may pose a threat of interference in some circumstances.



Over the whole country, it has been estimated that a possible 2-3 million households may have interference problems which will necessitate an in line filter. Only 1 per household will be provided - tough if you have more than 1 TV !!

Filters should be labelled with the number 800 and there are 3 types of filter - LC (basic), ceramic, and cavity (expensive) and will be based upon one of three channels 58, 59, and 60 - and will come in both indoor and outdoor types.

In addition, the use a plastic boxes and single screened cable will be problematical in some circumstances.



Even the future could present more problems as the Government looks to grab even more bandwidth for the hungry mobile sector eg channels 31 to 38 could be released. One wonders whether the hidden agenda is the assumption that in future, TV will be got via either cable, satellite or the internet !!

Graham's knowledge on the subject ensured that those present were given a most informative and fascinating talk and the Club thanked Graham for all the effort in preparing such a great talk.

Terry (G4CHD)

LOCAL REPEATERS

70cm Handy Cross Repeater/Echolink (#221334) Gateway (GB3ND)

User: Listen 433.35MHz– Transmit 434.95MHz
Access 1750Hz Tone (Timeout 4.25 mins)/ 77Hz CTCSS
Repeater keeper is Jeff (G4SOF)

2m Stibb Cross Repeater (GB3DN)

<http://www.g0rql.co.uk/gb3dn.htm>
User: Listen 145.6375MHz - Transmit 145.0375 MHz.
Access 1750 Hz Tone or 77 Hz CTCSS Repeater keeper is Tony (G1BHM).
Yahoo users group for general chat and banter at :-
<http://groups.yahoo.com/group/GB3DN/>

LOCAL SKEDS

Zepp Net: Mon, Tues, Thurs : 145.450 MHz
Wed : via GB3DN 1600 local time

6m Net: Wednesday, 8pm, 51.5MHz FM

HF Net: Friday at 1500 local time
7.145 MHz ± qrm

Slow Morse: This net run by Dave (G3YGJ) has been suspended. Please contact Dave if you require Morse practice.

70cm Net: Sunday, via GB3ND, 1100 - noon local time

CROSSWORD

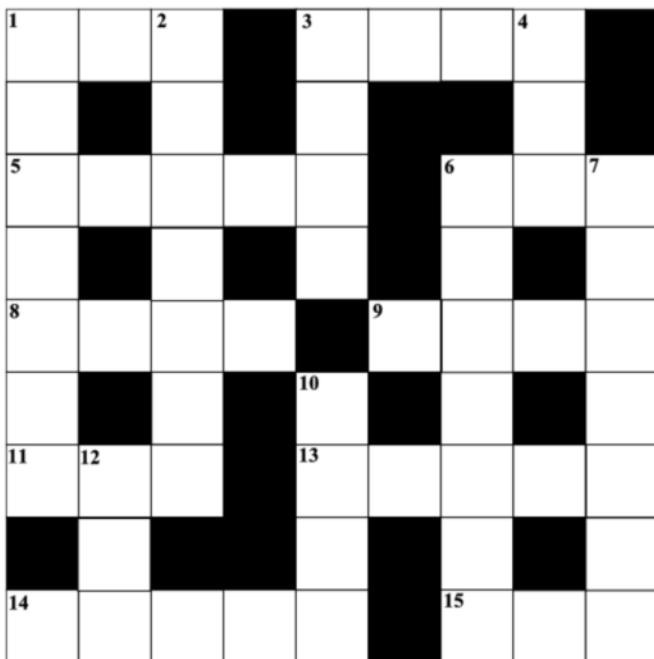
This month's Crossword by Stuart (M1FWD).
The answers will be published in the next month's Newsletter. Good luck !

Clues Across

- 1) MS. Braun, Hitler's wife for a very short time in 1945. Forename? (3)
- 3) Fifty per cent (4)
- 5) 'Valves' in America (5)
- 6) Name for 160-metre amateur radio band (3)
- 8) Term denoting a factor of ten to the power of minus nine (4)
- 9) Native of Oscar Hotel land (4)
- 11) Type of heavy cooking range, originally made in Sierra Mike land (3)
- 13) Common phonetic for 'R' (5)
- 14) Device used to reduce the amplitude on an aerial feeder line (5)
- 15) Port in East Sussex (3)

Clues Down

- 1) Echo Sierra land (7)
- 2) Zulu Alpha land (7)
- 3) Name for the symbol # (4)
- 4) Andy Capp's wife's forename in the Daily Mirror cartoon (3)
- 6) A small capacitor used to tune a radio (7)
- 7) Thermionic valve having five electrodes (7)
- 10) Echo Papa land (4)
- 12) VU land's smallest state (3)



Last month's answers :-

Across 1) Aden 3) Niue 7) operator 9) uda 10) element 13) sec. 14) Sky Blues 15) scan 16) gram

Down 2) diode 4) intense 5) ears 6) primula 8) Palmyra 11) Tesla 12) asps

Stuart (M1FWD)

SUDOKU PUZZLE

The aim is to enter a number into each cell so that **any column, or any row, or any block of cells contains all numbers from 1 to 9**. This month's puzzle is categorised as **Advanced** difficulty.

8		5						
			5	9				4
6	7		2				5	
	5	2	6					3
		6					2	
7			4			5	8	
		1	9			6		8
3			8		6			
							3	2

Terry (G4CHD)

HELEN (G0EOA) - HOSPITAL MOBILE !!

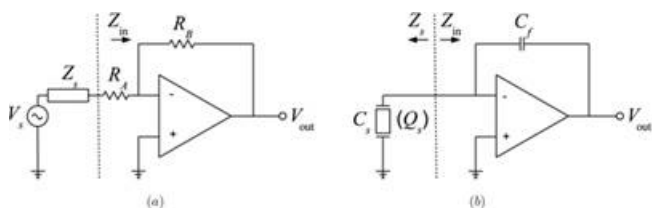


Many thanks to Jim (M3VJM) for this picture of Helen who I am pleased to report is not only now home but put in an appearance to the Tuesday coffee morning this week as seen in the photo opposite
Get well soon Helen.



ANSWER TO LAST MONTH'S TECHNICAL TEASER ON OP AMPS by Dave (M0JAP)

Last month, Dave set the following :-



What's going on here ? Fig a) shows the sort of op-amp we are familiar with and frequently use. But what about Fig b) on the right ? How can that be useful ? Look carefully for the clue.....

Well, thanks to Dave - this is the definitive answer :-

Over the month our editorial office has been inundated by responses containing claimed answers to the teaser repeated below. But not all submissions were correct, indeed very few were - certainly less than a dozen !

Well, of course the clue is the 'Q' and the capacitive source impedance, C_s , in Fig b). So this is termed a charge amplifier or charge integrating amplifier. Unlike the voltage amplifier with which most of us are perhaps more familiar, the charge amplifier may also be thought of as a charge to voltage converter, with low output impedance. Due to the Miller effect, the input impedance is near zero, and therefore stray input and cable capacitances have negligible effect. The transfer function (charge to voltage 'gain') is essentially determined by the feedback capacitance C_f . Where is this useful ? Where sensor sources are capacitive, for example piezo-electric types for vibration measurements. Other examples include nuclear and radiation instrumentation, guitar pick-ups, accelerometers and in integrated form within optical CCD type sensors (camera sensors). You might also be surprised to learn that your dishwasher or washing machine door interlock or vibration sensing system might incorporate such an amplifier, used with a very high output piezo element that costs just a few pence. These amplifiers should not be confused with charge transfer amplifiers, which may be thought of as sampling or clocked amplifiers as used in ADCs, for example.

ANSWER TO LAST MONTH'S WORD PUZZLE by Dave (M0JAP)

Last month we asked:
Rather in the style of BBC R4's Round Britain Quiz:
"What's the connection between a radio receiver and a doctor's prescription ?"

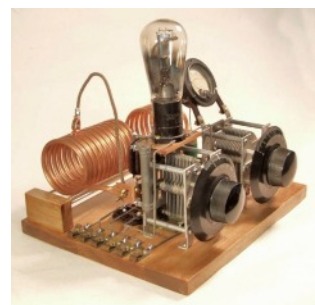
The answer ? is "Rx" or just "Rx" is the symbol to denote prescription, from the Latin verb 'recipe' meaning "take thus". So our receive shorthand for a receiver or receive function also means 'prescription' for a doctor, and the formal symbol he uses is like this:



Who'd a thought it ?

ADVANCE WARNING OF THE HOLSWORTHY ARC RALLY

Need a more modern rig ?
A date for all our diaries -
Sunday Nov 3rd 2013
doors open 10 am.
All enquiries Don G0RQL.
g0rql@hotmail.com



So that's it for this month.

If any member has an article that they feel would be of interest to Club members, please send it in to me and it will make your Club Newsletter all the more interesting.

Enjoy the read

Terry (G4CHD)