



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	Mike Hammond	G3PGA	
Secretary	Alan Fisher	M6CCH	01237 422833 Email: fisheralan@btinternet.com
Treasurer	Mike Wogden	G4KXQ	
Committee	Laurence Soutter	G4XHK	
	John Lovell	G3JKL	
	Graham Bailey	G1ZTJ	
QSL Manager	John Lovell	G3JKL	
Web Master	John Lovell	G3JKL	
Editor	Terry Adams	G4CHD	

May, 2014

EDITORIAL

Many thanks to all those who have already renewed their Club membership, but a gentle reminder that Club membership should be **renewed before the end of May** (£13 together with a completed new membership form).



Many apologies for the succession of **senior moments** in your last 5&9 regarding the date of our last Meeting but I'm relieved to say that it didn't prevent there being a good attendance for Steve's excellent talk - see Report later in this Newsletter.

This month's talk will be by yours truly and is another **'Back to Basics' look at HF Propagation** but with more emphasis on the use of propagation indexes to try and predict propagation conditions. It is 2 years since I gave a similar talk but now with more emphasis on prediction, I hope this won't put you off and hope to see many of you there on May 19th.

This month I have included an article by myself which compares the amateur **radio license in the 1970's with the license of today**. It may jog some memories, or you may find some corrections, or just raise some issues for future discussion! Either way, I hope you enjoy the read.

The Club is still pursuing a topic for the Open Meeting in August and it is hoped to have details confirmed by our next Newsletter.

So, enjoy your Newsletter and hopefully see many of you next Monday evening

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)

May 19th	Back to Basics - "Propagation and Understanding Prediction Data" by Terry (G4CHD)
June 16th	"SDR on the cheap" by Mike (G4KXQ)
July 21st	Club "Bring & Buy"
August 18th	Open Meeting - Topic TBA
September 15th	"History of Radio in North Devon" by Peter Christie
October 20th	Brief History of Policing Terrorism' by Alan (M6CCH)
November 17th	A Light Hearted Radio Quiz - by John (G3JKL)
December 15th	Club Christmas Party
January 19th	"Contests - Beauty or a Beast?" by Terry (G4CHD) & Mike (G3PGA)
February 16th	"Whisper & WebSDRs" by Mike (G4KXQ)
March 16th	Club AGM
April 20th	TBA

BIT OF HISTORY



REPORT ON THE APRIL MEETING

FINDING THE WAY WITH APRS AND A RASBERRY PI by Steve (G6SQX)

There was a good attendance for Steve's talk which as always had been very well researched and prepared. This was evident by the excellent slide and practical demonstration which Steve gave to illustrate how a vhf/uhf handheld fitted with APRS can integrate into a map plotting system which can be used when assisting outward bound type activities.



Steve's enthusiasm and eagerness to answer the many questions at the end of the talk made this a most enjoyable and interesting evening, and I would like to thank Steve on behalf of the Club for all his hard work.

Terry (G4CHD)

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.**

Terry (G4CHD)

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

CROSSWORD

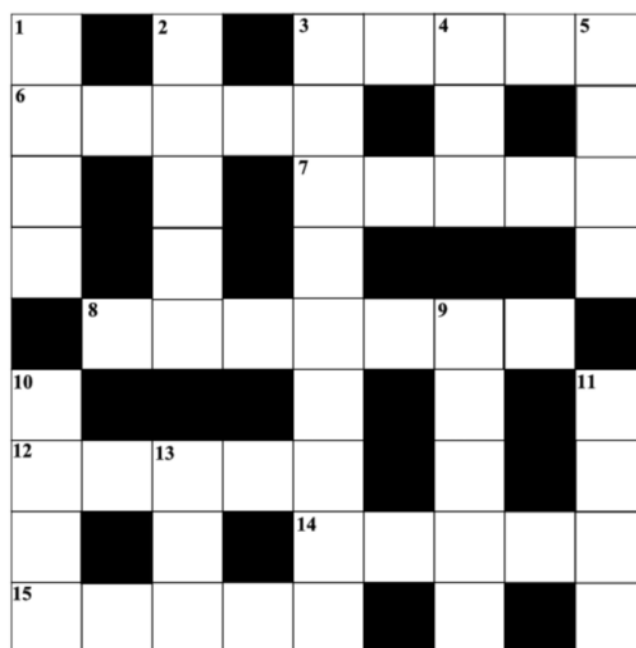
This month's Crossword is by Stuart (M1FWD). The answers will be published in the next month's Newsletter. Good luck !

Clues Across

- Spots or stains of ink, etc. (5)
- A set of radiating aerofoils round a hub on a helicopter (5)
- City of Honshu, Juliet Alpha land (5)
- Uses a fusible alloy to join less fusible metals or Wires (7)
- Five Zulu land (5)
- The 'Final Frontier'? (5)
- An official examination of accounts (5)

Clues Down

- An arduous journey (4)
- A kind of fountain pen having a point instead of a split nib (5)
- Disseminate (information) widely (9)
- Mature reproductive cells of female animals (3)
- A celestial body appearing as a luminous point in the night sky (4)
- Device activating changes in an electric circuit (5)
- A unit of cloud cover, equal to one eighth of the sky (4)
- Seven days (4)
- ? Off - it is alleged that some amateurs do this during QSO's ! (3)



Last month's answers :-

Across 1) icicle 6) Lima 7) Crimea 9) alcoholic
11) Uranus 12) Bear 13) erects

Down 2) circle 3) composure 4) elaborate 5) Jan
8) minuet 10) Abe

Stuart (M1FWD)

LOCAL SKEDS

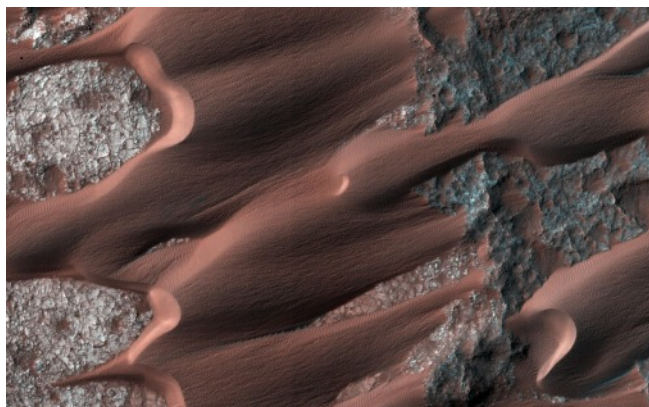
- Zepp Net:** **Mon, Tues, Thurs :**
145.450 MHz Wed
via GB3DN 1600 local time
- 6m Net:** **Wednesday, 8pm, 51.480 MHz FM**
- HF Net:** **Friday at 1500 local time**
7.145 MHz ± qrm
- Slow Morse:** Run by **Dave (G3YGJ)** every
Tuesday and Thursday, 7pm clock time
on 145.250 mode FM.
- 70cm Net:** **Sunday, via GB3ND, 1100 - noon**
local time.
Available on Echolink node 221334

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/>

NASA PHOTOGRAPHS



Dave (G3YGJ) sent me the following information and photo above of sand dunes on Mars - and I have difficulty with my compact digital camera her on Earth !!
Nili Patera is one of the most active dune fields on Mars. As such, it is continuously monitored with the HiRISE (High Resolution Imaging Science Experiment) camera, a science instrument aboard NASA's Mars Reconnaissance Orbiter, with a new image acquired about every six weeks. By

monitoring the sand dune changes, we can determine how winds vary seasonally and year-to-year. This observation is one of the more recent Nili images, acquired on March 1, 2014. Compared to an image acquired on Nov. 22, 2012, changes are obvious. The ripples on the dunes have moved, as well as some of the dune boundaries, such as the one at upper left. New landslides on the central dune's lee face are apparent. Such changes, in just 16 months (and finer scale changes have been seen in just a couple of weeks), demonstrate the effectiveness of wind in modifying the Martian landscape. HiRISE is one of six instruments on NASA's Mars Reconnaissance Orbiter. The University of Arizona, Tucson, operates the orbiter's HiRISE camera, which was built by Ball Aerospace & Technologies Corp., Boulder, Colo. NASA's Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Mars Reconnaissance Orbiter Project for the NASA Science Mission Directorate, Washington. > More information and image products Image Credit: NASA/JPL-Caltech/Univ. of Arizona Caption: Nathan Bridges

However, the same site included the following photograph which with this month's talk topic, seemed relevant as it shows the various layers of the earth's atmosphere :-



If any member has written 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)

COMPARISON OF THE LICENSING RULES FOR THE USE OF AMATEUR CALLSIGNS

PRE AND POST OFCOM

The following article represents the author's personal views and was written to hopefully generate some discussion regarding a comparison of historic and present callsign use and any ambiguities therein.

DEPT OF TRADE & INDUSTRY AMATEUR RADIO LICENCE (A or B)

This historic Licence which was certainly **around in the 1970's** when I was first Licensed, was issued with the emphasis on identification and location of any station causing interference to either domestic or other users of a shared band.

As a result, callsigns and their prefixes/suffixes indicated the exact whereabouts of a station in the event of an interference problem in order that any offending station could be quickly contacted and closed down whilst investigations into the cause of the interference was pursued.

The Licence permitted operation from the following locations using the specified suffix :-

Main Address - normally your home address as specified in the Licence for your callsign. Consequently, this address was registered with the Licensing Authority and appeared in the Callbook (unless details were withheld). It was to be used in CQ calls, and given at the start and end of each QSO (or every 15 mins for longer QSOs) and must be repeated if you QSY to another frequency.

Alternative Premises - operation from a fixed location (ie one having a postal address) details of which had previously been lodged (min 7 days prior) with the Licensing Body. Consequently, there was no need to give details of your alternative address over the air and your callsign required no suffix.

Temporary Premises - with a **/A suffix** or **Temporary Location** - with a **/P suffix** indicated operation from fixed temporary premises or location for a period of 4 weeks max. Since the Licensing Body did not have details of these, its position had to be included whenever your /A or /P callsign was given using either a postcode, latitude and longitude, National Grid Reference, or IARU 6 digit locator, or described to an accuracy of 5 km max.

Pedestrian - used with a **/P suffix** also. It is interesting that Pedestrian operation was considered as /P and not /M.

Vehicle or Vessel - used with a **/M suffix** indicated operation from a vehicle or vessel (**not on the sea**) or within any estuary, dock or harbour. Interestingly, it did not specify whether the vehicle/vessel had to be truly mobile or temporarily stationary. The assumption was that the vehicle/vessel was moving or stationary for a short time so that any interference caused would be either transient or of short duration. In practice, the interpretation of the definition of /M was vague and often assumed to be from a vehicle or vessel that was CAPABLE of moving but in fact remained static for a considerable period of time! (should this have been /P ?). The use of /M was also often used to indicate the use of mobile equipment and thus attracted the attention of a DX station. Note that the Licence **prohibited use from an aircraft or public transport vehicle**.

Operation from a different country in the UK to that specified for the Main Address - **prefix** added to callsign thus :- **G** for England, **GM** for Scotland, **GW** for Wales, **GI** for Northern Ireland, **GJ** for Jersey, **GU** for Guernsey, and **GD** for the Isle of Man. Hence, unlike Commercial Radio Stations which use multiple transmitting sites around the World without the need to announce from which site you are actually receiving the transmission, with amateur radio callsigns, the transmitting location is specified - eg a Welsh amateur on holiday in Scotland will use the Scottish prefix as above.

Logbook - In all of the above cases, a Logbook (indelible record in one book - not loose leaf) had to be maintained. Entries had to include location details for any /P or /A operation. A separate Logbook could be used for /M or Pedestrian /P operation which was completed at the end of the journey.

As a result of the above regulations, any offending station causing interference could be readily identified and located, their Logbook checked, and if necessary, the station closed down immediately whilst the cause of the interference was investigated.

Unfortunately, this happened to me a few times despite the fact that the local Interference Officer was a local ham! In all cases, it was the domestic (TV) installation which was found to be deficient.

Useful references :-

Highfields Amateur Radio Club Website - <http://highfields-arc.co.uk/call/aboutcalls.htm>

David Pratt (G4DMP) Website - <http://www.g4dmp.co.uk/>

Pre 2000 Callsign Allocations :-

The Table below shows the approx dates when early callsigns were issued.

Callsign	Issued	Comment
G2 + two letters	1920 - 1939	
G3 + two letters	1937 - 1938	
G4 + two letters	1938 - 1939	
G5 + two letters	1921 - 1939	
G6 + two letters	1921 - 1939	
G8 + two letters	1936 - 1937	
G0 + 3 letters	1984 - 1996	
G1 + 3 letters	1983 - 1988	Class B License (vhf/uhf only) - now Full License
G2 + 3 letters	1920 - 1939, & 1946 -	Originally Artificial Aerial use but reissued in 1946 as Full Licenses
G3 + 3 letters	1946 - 1971	
G4 + 3 letters	1971 - 1984	
G5 + 3 letters/home callsign	1966 - 2006	Reciprocal Licenses
G6 + 3 letters	1981 - 1983	Fast Scan TV
G7 + 3 letters	1988 - 1996	Class B License (vhf/uhf only) - now Full License
G8 + 3 letters	1964 - 1981	Class B License (vhf/uhf only) - now Full License
M1 + 3 letters	1996 - 2003	Class B License (vhf/uhf only) - now Full License
Note : QAA - QZZ not normally allocated		

OFCOM AMATEUR RADIO LICENCE

This Licence, currently in use, has a different emphasis compared to the earlier one and to me appears to be far more liberal and has far less emphasis on interference identification. Comparing the two Licences reveals the following general differences:

The Licensee may operate from any of the following, but note that the Licensee **may** use /A, /P/, /M, or /MM as appropriate but it appears not to be obligatory :-

Main Station Address - as per the Main Address in the earlier Licence.

Alternative Address - (/A) as per Temporary Premises in the earlier Licence ie from a fixed postal address in the UK. Operation using your callsign without any suffix from Alternative Premises having given prior notification is not now allowed.

Temporary Location- (/P) as per Temporary Location in the earlier Licence.

If the location of the Radio Equipment is given (which as per /A, /P etc is not obligatory), then the same methods as in the earlier Licence are recommended

Mobile - (/M) - ie in or on any vehicle or conveyance, on the Licensee as a Pedestrian, or on any vessel on Inland Waters. Similar to the earlier Licence but now Pedestrian mobile is /M and not /P. It is not clear whether operating from a conveyance implies that operation from public transport is now allowed.

Maritime Mobile (/MM) - is now allowed with a Full Licence.

Use from an **Aircraft or Airborne Vehicle** (full size or models, or free or tethered balloons) **is not allowed**.

Operation from a different country in the UK to that specified for the Main Address - same prefixes as per earlier Licence must be used.

Logbook - the new Licence only requires a Log to be kept at the request of either a person acting for Ofcom or the Master of a vessel.

Finally, the ability to now use the **internet to remotely control your Home Station** whilst on holiday abroad raises the issue as to what callsign prefix if any should be used - eg if using your transmitter/aerial installation in Bideford via the internet from your holiday villa in Spain, what callsign should you use ?! Indeed, I can see some amateurs who have difficulty in erecting a decent aerial, perhaps in the future renting a field somewhere - or anywhere and remotely controlling the equipment from their home location, in which case, should their Home Address callsign be used?! However, the Ofcom Licence has a section on **Remote Control Operation** which states that such operation must be consistent with the terms of the Licence. If the use of the callsign with or without prefixes/suffixes refers to the **location of the Radio Equipment** and not the Licensee, then the situation is covered by the new Licence. It should be noted that the new Licence prohibits the installation of Radio Equipment capable of Remote Control Operation for general unsupervised use by other Amateurs.

Terry (G4CHD)