



# 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](http://www.adarc.co.uk)

### CLUB'S OFFICERS

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October, 2015

### EDITORIAL

Welcome to another Club 5&9 Newsletter.

**This month's October meeting is open to members' family and friends** and will be a talk on the "History of Bideford" by our local history expert **Peter Christie**. This will be a wonderful evening's entertainment and should be a fascinating insight into our wonderful town. So please try to **bring someone along on the night** and make the evening a great success.



Unfortunately, John's (G3JKL) expedition to Lundy coincided with a week of poor radio conditions and some horrendous weather. John's talk in November will therefore be something to look forward to since many of us work DX expeditions without perhaps fully appreciating everything that goes into their planning and organisation.

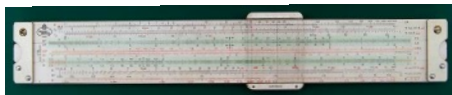
On page 3 there is a most interesting article by Steve Hemenway (VY1SK) on removing extraneous noise from an H.F. radio signal. This was very kindly sent to me by David (2E0IXX).

So, enjoy the Newsletter

Terry (G4CHD)

### A 1950's SCIENTIFIC CALCULATOR

Yes, I used one similar to this throughout my studies - it's called a slide rule. Thought mine - a Faber Castell - was as good as technology would ever get!!



### CLUB MEETINGS

Meetings are held at the Appledore Football Social Club starting at 7.30pm for 8.00pm. Visitors always welcome. For further information, contact Alan (M6CCH) - details in the top panel.

- October 19th** **Open Meeting** - "History of Bideford" by Peter Christie
- November 16th** "MX0LDG Operations from Lundy" by John (G3JKL)
- December 14th** "Club Christmas Party" (open meeting)
- January 18th** "Radio Quiz" by John (G3JKL)
- February 15th** "Whistles to Radios - Police Communications" by Alan (M6CCH)
- March 21st** "Club AGM"
- April 18th** "QSLing - Traditional to the latest methods of confirming a QSO" by John (G3JKL)

### ANOTHER BLAST FROM THE PAST

Anyone remember the KW2000 HF Transceiver?



## REPORT ON THE SEPTEMBER MEETING

### Bring & Buy

There was an excellent attendance at this Meeting with members eager to hunt out special bargains or alternatively to sell unwanted gear. Add to this a cuppa and a good old chinwag and you have all the ingredients for an excellent evening out.

All in all a very enjoyable evening and many thanks to the Committee for organising the event.

Terry (G4CHD)

### LOCAL SKEDS

**Zepp Net:** Mon, Tues, Thurs : 145.450 MHz 4pm  
Wed via GB3DN - 4pm

**6m Net:** Wednesday, 8pm, 51.480 MHz FM

**HF Net:** Friday at 3pm 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, 11am - 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/>

### CROSSWORD

This month's Crossword is by Stuart (M1FWD).

The answers will be published in next month's Newsletter. Good luck !



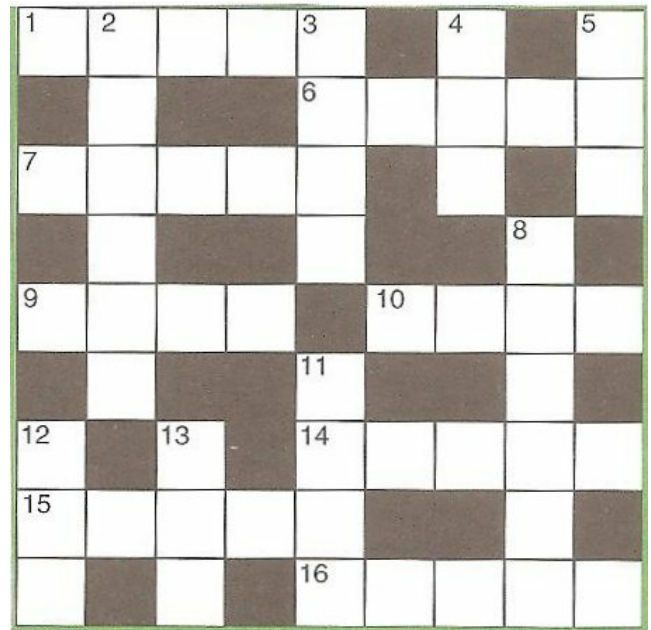
#### Clues Across

- 1) Greeting (5)
- 6) ? electricity – electric polarization in a substance (especially crystal) resulting from the application of mechanical stress (5)
- 7) A thermionic valve having two electrodes (5)
- 9) Essential component in the conversion of low voltage to high voltage (4)
- 10) Strongly audible (4)
- 14) Sound formed in the larynx and uttered by the mouth (5)

- 15) North ? – Papa Five land (5)
- 16) Continues for a specified time (5)

#### Clues Down

- 2) Thomas ? – 1847-1931, developed the phonograph, the motion picture camera and a practical electric light Bulb (6)
- 3) Electrical circuit with a break in the conducting Path (4)
- 4) The official currency of Zulu Alpha land (3)
- 5) ? Black - BBC TV series of annual snooker tournaments, 1969-2007 (3)
- 8) Of sound - sweet and soothing (6)
- 11) Ellipsoidal (4)
- 12) One of a pair of long narrow devices fastened to the feet, for travelling over snow (3)
- 13) A luminous discharge between two electrodes (3)



#### Last month's answers :-

**Across** 3) power 6) spoor 7) outer 8) Solomon  
12) Orono 14) Libya 15) gross

**Down** 1) Oslo 2) Tokyo 3) protocols 4) Wat 5) rare  
9) Oadby 10) long 11) beam 13) Odo  
Stuart (M1FWD)

### AN INTERESTING ARTICLE BROUGHT TO MY ATTENTION BY DAVID (2E0IXX)

Many thanks David for sending me the article on the next page which many members will find fascinating.

*I have just been talking to Steve (VYISK) in Canada and he has ask me to forward this article to you. He is a most interesting man talk to and would like to get in touch with some UK operators to set-up interference free communications on 40 meters (see next page - just using a cheap dongle). He has promised to send me more information if we can get anyone interested, just using a cheap dongle.*

Dave (2E0IXX)

**A method to remove the extraneous noise from an H.F. radio signal.**

A technique which the station has used for many years, requires two radios. One radio tuned above or below the signal desired.

Our studies have shown that most noises broadband in nature, and can be found above and below the desired signal. Our technique uses simple algebraic subtraction of the audio signal recovered from the secondary receiver.

We then have the original signal, S+N. Then we use N only from the second receiver. The results that we're after are  $S + N - N = S$  only. This gives a near FM quality on the H F bands.

The simplest procedure is to use a simple audio transformer with two primaries. These transformers can readily be obtained from the local radio supply house for a few dollars.

The technique then is to provide signal plus noise from receiver number one, and noise only from receiver number two. Our primary winding number one is S+N, and primary winding number two is N only, BUT this signal is inserted 180° out of phase with winding number one.

Now comes the problem! These two signals must be very carefully balanced in amplitude, or the technique will not work properly.

We recommend against the use of a single turn potentiometer, (270° rotation), but rather use a 10 turn, helical potentiometer, such as the Bourns Helipot ®. This, then gives you 3600° of rotation, allowing you easy access to the resolution needed for excellent usage.

A problem with this technique is that it requires the secondary receiver. That can present an untenable cost to the average operator. We had at one time a FLEX 1500 SDR receiver ® committed to this task.

A great little receiver, and it works very well being utilized as receiver number two only. But the cost, and size, even though very small, prevented usage in a mobile configuration.

How do you overcome this cost problem? The most apparent answer was through the use of cheap SDR Dongles. These are found on Ebay, Amazon, and many other sources.

Relatively inexpensive SDR to USB general coverage receivers are readily available from a variety of sources for less than USD\$ 20 to 30 dollars.

As we have to use a laptop, or a good grade tablet to control this system, a USB Port should be readily available. As every laptop, and good grade tablet will have a stereo connector, usually 3.5 MM, this permits the use of two SDR radios from a single laptop.

One procedure was to modify the program used for two band satellite communications. That is to allow tracking, or automatic frequency steering of the secondary receiver. This based on wherever the first receiver is tuned. A 'hit and miss' programme to be sure, but we are slowly working the bugs out of this technique.

More technical data to follow. ie; part numbers for the two or three components necessary.

Steve Hemenway (VY1SK)

**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.**

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

Terry (G4CHD)

So that's it for this month - I hope everyone enjoys the read

Best 73s de Terry (G4CHD)