



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	Terry Adams	G4CHD	Committee	Dave Cottle	G4XWQ
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December 2018

EDITORIAL

This month's Meeting which is a **week earlier** is on **December 10th** and is our **Christmas Party** to which friends and family are most welcome. As in previous years, there is no charge but please try to **bring along a raffle prize**. This is a great way to get into the Xmas spirit so hope to see you there. There are plenty of puzzles and articles this month to keep you occupied and a big thank you to **Stuart (M1FWD)** for all his Crosswords as **this month's is his 100th !!!**



Finally, on behalf of your Committee, may I wish everyone a Very Merry Christmas and a Happy Healthy New Year. So hope everyone enjoys the read

Terry (G4CHD)

REPORT ON THE NOVEMBER MEETING

Autumn Bring & Buy

Another excellent attendance and plenty of bargains were quickly snapped up. A super evening which was enjoyed by all.

CLUB MEETINGS

Meetings are held at the Appledore Football Social Club starting at 7.30pm for 8.00pm. Visitors are always welcome.

- Dec 10th Christmas Party (note - is 1 week early)
- Jan 21st Internet Radio by Alan (2E0EUZ)
- Feb 18th EMC in Amateur Radio by Chris (G0FJY)
- Mch 18th Club AGM
- Apl 15th TBA

For further information, contact the acting Secretary, Alan (2E0EUZ) - see above for contact details.

HP OFFICEJET 5610 FOR SALE

Conveniently print, fax, scan and copy
Up to 4800 x 1200-optimised dpi colour and 1200-input dpi
Print and copy at up to 20 ppm in laser-quality black, up to 13 ppm in rich colour.

Little used and hence in very good condition.
For further information contact Fred and Helen at



helenaldridge@hotmail.com



LOCAL SKEDS

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

2m Net: Mon/Tues/Wed : 145.450MHz
10.45 - 12.00 noon

Friday Night 2m Net: Friday : 145.450 FM, 8 - 9pm (NEW)

6m/2m Net: Has now moved to 145.475MHz
Wednesday, 8 - 9pm until conditions improve on 6m

HF Net: Friday at 3pm 7.134 MHz ± qrm
If conditions poor - 145.450 MHz

70cm Net: Sunday, via GB3ND, 11am - noon
Available on Echolink node 221334

Top Band Net: Sunday 1.860 MHz
(LSB - 32W pep max) 9.30 - 10.15am
Contact Dave (G4XWQ) for details

LOCAL REPEATERS

**70cm Handy Cross Repeater/Echolink (#221334)
Gateway (GB3ND)**
User: Listen 433.35 MHz– Transmit 434.95 MHz
Access 1750 Hz Tone (Timeout 4.25 mins)/ 77 Hz CTCSS
Repeater keeper is Jeff (G4SOF)

2m Stibb Cross Repeater (GB3DN)
<http://www.g0rql.co.uk/gb3dn.htm>
User: Listen 145.6375 MHz - Transmit 145.0375 MHz.
Access 1750 Hz Tone or 77 Hz CTCSS
Repeater keeper is Tony (G1BHM)

**70cm Twitchen (nr South Molton) Analogue
Repeater (GB3SF)**
User: Listen 430.9375 MHz - Transmit 438.5375 MHz
Access 77Hz CTCSS
Repeater keeper is Steve (G6SQX)

APRS Digipeater (MB7VE)
Frequency 144.800 MHz
Repeater keeper is Steve (G6SQX)

TUESDAY COFFEE MORNINGS DATES



There will be **NO** coffee mornings at Bear Street, Christ Church, Barnstaple on the following dates :-

December 25th, January 1st, February 19th

CROSSWORD



Many thanks to Stuart (M1FWD) for **this month's 100th Crossword.**

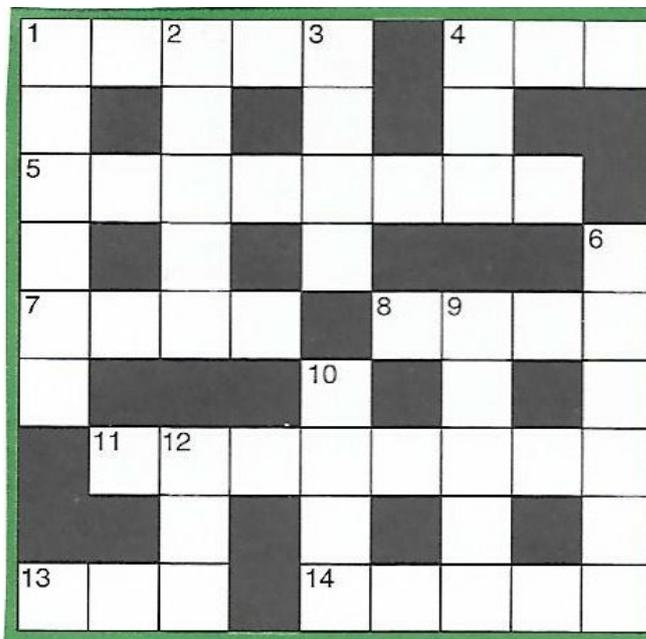
The answers are in next month's Newsletter. Good luck !

CLUES ACROSS

- 1) Term used for a gadget whose real name has been forgotten (5)
- 4) Famous brand of multimeters and other electrical measuring instruments (3)
- 5) The sending of promotional material to a large number of people (8)
- 7) Wild mountain goat (4)
- 8) Payment transfer from one bank account to another (4)
- 11) A type of 19th century reed organ (8)
- 13) Equipment needed for a specific purpose (3)
- 14) Place a corpse in a grave (5)

CLUES DOWN

- 1) Charlie Five (C5) land (6)
- 2) Former name of Nine Quebec (9Q) land (5)
- 3) French department No. 60 (4)
- 4) One of Shakespeare's plays had much of this about nothing (3)
- 6) One of Santa's reindeer (6)
- 9) Lacking the ability or strength to move (5)
- 10) Desert in Juliet Tango (JT) land (4)
- 12) What many of us do too much of at Christmas (3)



Last month's answers :-

ANSWERS ACROSS: 1) Togo 3) chic 7) frequency
8) She 10) ale 12) amplitude 13) null 14) Sten

ANSWERS DOWN: 2) Oprah 4) Honda
5) Clyde 6) Cumbria 8) Spain
9) expel 11) ledge



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

Terry (G4CHD)

WORDSEARCH

Many thanks to Mike (G4KXQ) for the following seasonal puzzle :-

Find all of the following words in the grid

AERIAL ATU CONNECTOR CRIMP DIPOLE
 HEXBEAM ICOM KENWOOD PSK RADIO
 RECEIVER RTTY RTTY SATELLITE SOLDER
 SPEAKER SSTV SWR TRANSCEIVER
 TRANSMITTER YAESU YAGI

K	H	Q	P	N	B	Q	V	L	O	T	V	J	Q	K
Y	A	L	Y	S	H	F	D	Y	K	C	D	M	E	A
T	A	A	T	U	K	Z	Z	A	B	A	Y	A	T	Z
T	T	G	H	A	A	P	I	E	P	R	Y	E	I	T
R	I	R	I	E	F	M	L	S	Q	E	R	B	L	R
H	K	E	S	R	E	I	S	U	F	V	O	X	L	A
R	E	T	Z	I	P	R	P	R	U	I	T	E	E	N
K	N	T	R	A	M	C	E	A	I	E	C	H	T	S
I	W	I	F	L	O	X	A	D	S	C	E	H	A	C
D	O	M	E	P	C	O	K	I	R	E	N	C	S	E
O	O	S	L	V	I	N	E	O	E	R	N	R	O	I
A	D	N	O	S	O	I	R	H	D	V	O	T	C	V
C	S	A	P	S	T	V	P	W	L	S	C	T	Y	E
X	W	R	I	T	J	A	J	G	O	P	G	Y	R	R
L	R	T	D	V	B	D	P	H	S	U	S	Q	J	B

QUIZ



Again a big thank you to Mike (G4KXQ) for the following multichoice quiz - good luck!

- The ARX-2B antenna is made by which company?
 - HyGain
 - Comet
 - Diamond
 - Cushcraft
- The well known father of Morse code, Samuel F. B. Morse, built his home and resided in what city and state?
 - Woodbridge, VA.
 - Poughkepsie, NY.
 - Newington, CT.
 - New Castle, IN.
- If DATV is used in the 146-147MHz band what is the recommended maximum bandwidth as measured at the transmitter output in order to ensure protection of other users above 147MHz and amateur satellite users below 146 MHz.
 - 200kHz
 - 500kHz
 - 700kHz
 - 800kHz
- Where was WWV located before it was moved to Fort Collins, Colorado?
 - Greenbelt, Maryland
 - Washington, DC
 - Syracuse, New York
 - Santa Barbara, California
- 5U4GB commonly refers to
 - A new DXCC entity
 - A vacuum tube rectifier
 - A solid state rectifier
 - A station in Niger, DXCC #187
- The International Amateur Radio Union was created when?
 - 1919
 - 1922
 - 1925
 - 1928
- Christmas Island has the following Amateur Radio Prefix:
 - VK2
 - VR2
 - VK9
- The Kenwood TS-520 was first made in what year?
 - 1946
 - 1951
 - 1973
 - 1999





9. What is the smallest DXCC-entity in the world?

- A. Luxemburg
- B. Andorra
- C. Singapore
- D. S.M.O.M. (Sovereign Military Order of Malta)

10. During a QSO with a station in eastern Switzerland, you learn that your radio-friend speaks English and:

- A. Triestian
- B. Romansch
- C. Austrian
- D. Slovenian

11. What is the maximum output power for a class A licensee on the HF Bands in Germany.

- A. 75W PEP
- B. 100W PEP
- C. 400W PEP
- D. 750W PEP

The answers are given at the end of this Newsletter.

FREQUENCY OFFSET TUNE (FOT)

An excellent article from Mike (G4KXQ) which will answer all you ever wanted to know on FOT.

FOT – Frequency, Offset and Tone

One question we often hear from new hams (and maybe some not-so-new hams) is “why can’t I get into the repeater?” They get their hands on a new radio, set it up to use one of the local repeaters and it’s not working. Now what?

There can be a whole bunch of reasons why you can’t get into a repeater so it is difficult to come up with a quick fix for all situations. However, in this article we’ll talk about some basic troubleshooting steps to help diagnose the problem. For this article, I am assuming that your first rig is a handheld vhf/uhf transceiver but the general approach will work with mobile or base transceivers, too.

FOT

Many times the problem is due to not having the transceiver programmed correctly. The key things we have to pay attention to are: **F**requency, **O**ffset and **T**one (**FOT**). To access a repeater you need to have its **F**requency entered into your radio, have its transmit **O**ffset set correctly and have the right CTCSS **T**one turned on. You might not need to check all of these things in that exact order but it is a good way to approach the problem. Using the programming software (and suitable cable) for your radio can be a big help.

Frequency –First you need to program in the frequency of the repeater you want to access. The actual key strokes or knob turns will depend on the particular model of radio so consult your operating manual. The frequency you enter is the *repeater transmit frequency* which will be your *receive frequency*. Repeaters are always referred to by their transmit frequency, which can be found in an online or printed repeater directory.



Offset – Next, we need to make sure the proper transmit offset is programmed into the radio.

This is the difference in frequency between the repeater transmit frequency and its receive frequency. Your transceiver will automatically shift your frequency when you transmit, *if* you have the right offset programmed. In most parts of Europe, the standard offset is 600 kHz on the 2m band and 1.6 MHz or 7.6 MHz on the 70cm band, and can be either in the positive (+) or negative (-) direction. Your repeater directory will list the offset and direction. Most radios will default to the standard offset but you may have to select + or – offset. Usually a + or – symbol will appear in the display to indicate the offset selected.

As an example, our local repeater GB3ND is on **433.3500** MHz on the 70cm Band with a + 1.6 MHz offset. So you would enter **433.350** MHz into your radio, make sure the offset is set to 1.6 MHz and select + as the offset direction. You can verify that your radio is programmed correctly if you see **433.3500**MHz displayed during receive, which should change to **434.9500** MHz when you push the transmit button.

Tone – For most repeaters, you will need to transmit a CTCSS tone to access the repeater. (CTCSS is Continuous Tone Coded Squelch System.) Repeaters with *carrier access* do not require a tone, so you can skip this step. This is normally a two-step process: set the tone frequency and then enable the tone. Sometimes this is done with one selection (with “Off” being an option for the tone frequency). Some radios have separate settings for the transmit tone and receive tone. For now, just leave the receive tone off, since it can be a source of confusion. The tone that you need to set is your *transmit tone*. Most radios display a “T” somewhere on the display when the tone is enabled. Again, check your operating manual. The standard tone for repeaters in the South west of England both VHF and UHF is 77Hz.

Kerchunk

At this point, you should be ready to try accessing the repeater. After listening on frequency for a minute, transmit and identify using your callsign. On most repeaters, you will hear a short transmission coming back from the repeater along with a courtesy beep. A courtesy beep is just a short audio tone or tone sequence that occurs after someone finishes transmitting. If you hear the beep, then you accessed the repeater. Congratulations! Go ahead and make a call and see if someone will come back to you.

Troubleshooting

What if you don’t hear the repeater coming back to you? Then we need to go into troubleshooting mode. If the radio is new, you might wonder if it is even working properly. The quality level of today’s equipment is quite good, so most likely your radio is just fine. Still, you may want to check it out.

First, you can check to make sure your radio is receiving properly. Most modern Handhelds have a Broadcast FM Receiver so try and listen to BBC Radio 2 on 88.5 Mhz. You’ll want to set this frequency as simply as possible...use the keypad or VFO mode to enter it directly.





Next, you might want to know that your radio is able to transmit a signal. The best way to do this is find a local ham nearby that can run a simplex check with you. By nearby, I mean within 5 miles or so, because we want someone so close that there is no question about whether they should be able to contact us. Program your radio to a 2m simplex frequency such as 145.500 MHz (the National 2m FM Simplex Frequency). For this test, we do NOT want the transmit offset turned on...the radio needs to be set to *simplex*. You can double check this by looking at the display when transmitting—it should show 145.500 MHz (transmit frequency is the same as the receive frequency). For this test, we don't care about the transmit tone...it can be on or off. Have the other ham give you a call and see if you can contact him. If you happen to have a second transceiver, you can try this test yourself – just see if each radio can hear the other one. One warning: do this on a simplex frequency. Trying to go through a repeater can really confused things because you may not have the offset and tone set properly. Even more confusing is that one radio can “desense” the other radio, which means that the other radio’s receiver will be overloaded and not able to receive the repeater’s signal. Using simplex keeps things simple.

The final thing to check is whether your signal is able to reach the repeater. Well, that is a bit of a challenge! For starters, are you sure you are within range of the repeater? Have you ever heard a signal from this repeater, and was it full scale on your S meter? You may want to ask local hams about whether you should be able to hit the repeater from your location *with the radio you are using*. For that matter, you might want to check if the repeater is actually on the air – they do go down from time to time.

This brings us to an important point about the use of handheld transceivers. They are really, really handy. How else can you carry a complete ham radio station in your hand? Well, the tradeoff is that an HT operates with relatively low power (5 watts or less) and has a compromised antenna. (The standard *rubber duck antenna* on an HT is a *very convenient crummy antenna*.) You may need to add some extra umph to your signal by improving the antenna. Some good dual band choices are a longer whip such as the Diamond RH77CA, SRH77CA, or SRJ77CA
<http://universal-radio.com/catalog/hamantht/2368.html>
 or a magnetic-mount mobile antenna placed on a vehicle or on other metal object.

INTERVIEW WITH DEAN (G0UIL) ON RADIO SOMERSET

Many thanks to Steve (G6SQX) for the following. Dean G0UIL's excellent interview with Andy Bennett on BBC Radio Somerset about his recent RSGB constructors award and interest in Amateur Radio was broadcast recently.



The audio files can be downloaded from :-

<https://www.dropbox.com/sh/d29r4xd88mzxwt/m/AAC8YhMBXb9ZgGC5eqK2WsD5a?dl=0>



Once again - a Very Merry Christmas and a Happy Healthy New Year.

Enjoy this month's Newsletter

Terry (G4CHD)

Quiz Answers
 1 (D), 2 (B), 3 (C), 4 (A), 5 (B), 6 (C), 7 (C), 8 (C), 9 (D), 10 (B), 11 (D)

