



# 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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**Vice Chairman** Mike Wogden G4KXQ  
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Keith Luxton G0AYM  
Ben Louder 2E0FTZ  
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August 2021

## EDITORIAL

Welcome to another Club Newsletter.

At this point in time we have nothing planned for this month but the Club have been given the all clear to think about recommencing Meetings at the football clubhouse.

**As a result an email will go out shortly to all members to gather feedback on the when and how to implement this return to wonderful normality.**

So keep an eye open in your Inbox and look forward to hearing from as many of you as possible.

In the mean time - keep safe and keep healthy

Terry (G4CHD)



## CLUB MEETINGS

Due to the present Covid 19 pandemic, **ALL** meetings scheduled to be held at the Appledore Football Social Club have been **CANCELLED** until further notice

## JULY MEETING

### OFCOM'S NEW LICENSE REQUIREMENT TO ASSESS EMF EXPOSURE

by Mike G4KXQ

The Club was extremely fortunate that at very short notice, Mike produced an excellent Zoom presentation on what was involved in making the exposure assessment which is now a



requirement of our amateur radio license. Mike introduced spreadsheets from both Ofcom and the RSGB and explained how to complete the required entries.

This spreadsheet is a prototype for evaluation. It uses the Ofcom calculator v0.1.2 (which will not calculate below 10MHz) for compliance distance. Please feedback on any issues with this calculator.

www.rsgb.org/emf

Notes: Click on yellow boxes to select your station setup and operating conditions. F0 in the beige boxes and save (PDF) or print this sheet as a record of assessment.

|                         |        |                                |                            |        |                          |
|-------------------------|--------|--------------------------------|----------------------------|--------|--------------------------|
| Radio Setup             | Band   | 30m                            | Feeder                     | RG58   | Separation Distances     |
| Select Transmit Mode    | 5W     | Powerlevel                     | Select Cable Type          | RG58   | Half wave                |
| Transmit Wtr            | 0.10Hz | Transceiver                    | Loss per 100m              | -4.2dB | Antenna                  |
| Transmitter Power       | 25.0W  | Mode factor                    | Cable Length m             | 39.8m  | Half wave dipo           |
| Transmit % in 0 minutes | 99.0%  | Average power from Transmitter | Other losses dB            | -0.9dB | Minimum ERP              |
|                         |        | Peak Power from Transmitter    | Feeder loss dB             | -0.8dB | Minimum Antenna Height m |
|                         |        |                                | Average power into Antenna | 5.9W   | ERP                      |
|                         |        |                                | Peak power into Antenna    | 19.5W  | Directivity Factor -dB   |
|                         |        |                                |                            |        | Average ERP              |
|                         |        |                                |                            |        | Peak ERP                 |

10dB Calculator v0.1.2-4ghz v10b 20/06/2021

The Ofcom calculator v 0.1.2 shows 'Not Valid' for frequencies less than 10MHz.

COMPLIANT: No further assessment needed as average power < 10W ERP and peak power < 100W ERP

|                          |       |         |
|--------------------------|-------|---------|
| Minimum ERP              | 5.9W  | 3.0dBu  |
| Minimum Antenna Height m | 6.0m  |         |
| Directivity Factor -dB   | 0dB   |         |
| Average ERP              | 5.9W  | 3.0dBu  |
| Peak ERP                 | 19.5W | 15.1dBu |

Compliance distance is the separation needed to the nearest part of the antenna. We recommend applying the vertical and horizontal separations suggested to define an exclusion zone. If not valid in brown we suggest you consult the recommendations from advanced modelling in the series of papers P4-C, as being written which will be published on the 100dB website. 100dB is also considering including +10MHz ranges to their calculator in a later issue.

|                          |       |         |
|--------------------------|-------|---------|
| Minimum ERP              | 5.9W  | 3.0dBu  |
| Minimum Antenna Height m | 6.0m  |         |
| Directivity Factor -dB   | 0dB   |         |
| Average ERP              | 5.9W  | 3.0dBu  |
| Peak ERP                 | 19.5W | 15.1dBu |

The use of a spreadsheet therefore made the process relatively straight forward. The RSGB version appeared to be more comprehensive and hence perhaps the one which many members will choose - including myself.

Members are reminded that compliance is required after November 18th 2021 for frequencies above 110MHz, after 18th May 2022 for frequencies above 10MHz but below 110MHz, after 18 November 2022 for frequencies below 10MHz.

The talk was brilliantly assisted by a most professional Powerpoint presentation which has become a trademark of Mike's talks and a big thank you to Mike for all his hard work and time spent preparing the talk.

**LOCAL REPEATERS**

**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)

**Fusion/C4FM/WiresX Gateway (MB6DT)**

Frequency 144.8125 MHz.

Keeper Darren (2E0LVC)

**Fusion/C4FM/WiresX Gateway (MB6DN)**

Frequency 144.825 MHz.

Keeper Drew (M0MFS)

**LOCAL NETS**

**Weekday Zepp FM Net:** Mon/Tues/Thurs/Fri :  
 145.450MHz - 4pm - 5pm  
 Wed via GB3DN - 4pm - 5pm  
 Net Control : Len (M0SXY)

**2m Elevenses FM Net:** Mon/Wed/Fri :  
 11 - 12.00 noon via GB3DN  
 Net Control ; Mike (G3PGA)

**Friday Night 2m Net:** Friday : 145.450 FM, 8 - 9pm

**Sunday Top Band Net:** Sunday 1.860 MHz  
 9.30 - 10.15am  
 (LSB - 32W pep max)

**2m SSB Nets:** Wed: 8 - 9pm 144.260MHz  
 USB SSB (Vertical polarised)  
 Sun: approx 10.30am (follows  
 Top Band Net) 144.260MHz  
 USB SSB (Vertical polarised)

**Sunday FM Net:** Sunday: 11 to noon via GB3DN  
 Net Control ; Chris (G0FJY)

**CROSSWORD**

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

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



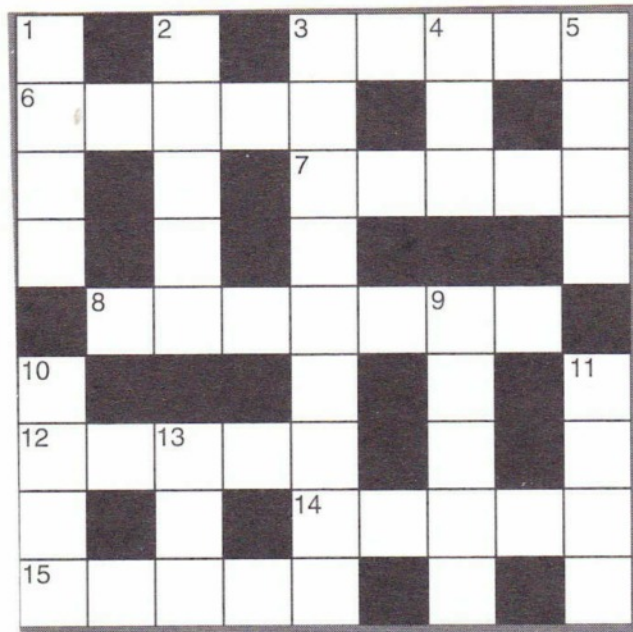
**CLUES ACROSS**

- 3) Relating to the colour (dark) blue (5)
- 6) Nine November (9N) land (5)
- 7) Mountain in Hotel Bravo Nine (HB9) land (5)
- 8) The opposite of 'transmit' (7)
- 12) Nine Hotel (9H) island (5)
- 14) Of or concerning ships (5)
- 15) Well known, famous (5)

**CLUES DOWN**

- 1) An impedance transformer (4)
- 2) In the programme Star Trek, this is the final frontier (5)

- 3) In 2010 this Ohio city was voted the most miserable in the USA (9)
- 4) German producer of electrical equipment (1,1,1)
- 5) A man-eating giant in folklore (4)
- 9) An evacuated electron tube containing a cathode, anode and other control electrodes (5)
- 10) Alpha Four (A4) land (4)
- 11) Converts stored chemical energy into electrical potential energy, as in a battery (4)
- 13) Many (3)



Last month's answers :-

**ANSWERS ACROSS:** 1) Arbor 4) dry 5) heat sink  
 7) silo 8) Oder 11) mazel tov 13) bit 14) Tamil

**ANSWERS DOWN:** 1) aghast 2) brawl 3) rasp 4) DIN  
 6) drivels 9) datum 10) SEAT 12) aft

**A BIT OF NOSTALGIA**

My very first HF transceiver was the Yaesu FT200 which offered 240W input power from a pair of 6JS6A pentode valves which operated at high voltage and low current (as used in TVs).



The FT-200 was advertised as a "superb quality, low cost, versatile transceiver". It covered the 80,40,20,15 and 10 meter bands with 500KHz tuning range on each band with a crystal supplied for 28.5-29MHz.

This hybrid of transistors and valves featured a

transistorised VFO, voltage regulator and calibrator with 12 diodes, 6 transistors and 16 valves overall.

Anyone else remember them - particularly having to neutralise the output valve capacitance to reduce internal feedback which was particularly a problem on the 10m band!

### SUDOKU PUZZLE

The aim is to enter a number into each cell so that any column, or any row, or any block of cells contain all the numbers from 1 to 9  
Terry (G4CHD)

|          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|          |          |          |          |          |          | <b>9</b> | <b>3</b> |          |
|          |          |          |          | <b>6</b> |          | <b>7</b> | <b>1</b> |          |
|          |          | <b>1</b> |          | <b>4</b> |          | <b>6</b> |          |          |
|          |          | <b>6</b> | <b>3</b> | <b>2</b> |          | <b>1</b> |          |          |
| <b>7</b> |          |          |          |          |          |          |          | <b>2</b> |
|          |          | <b>9</b> | <b>6</b> |          | <b>4</b> | <b>5</b> |          |          |
|          |          | <b>2</b> |          |          | <b>5</b> | <b>4</b> |          |          |
|          | <b>1</b> | <b>7</b> |          |          | <b>2</b> |          |          |          |
|          | <b>4</b> | <b>5</b> |          |          |          |          |          |          |

So that's it for this month

Very Best 73s and hope you enjoy the Newsletter  
Terry (G4CHD)

### LATEST SUN SPOT SOLAR CYCLE PLOT

According to the Space Weather Prediction Centre :-

<https://www.swpc.noaa.gov/products/solar-cycle-progression>

The following graph shows that hopefully there's more to come!

