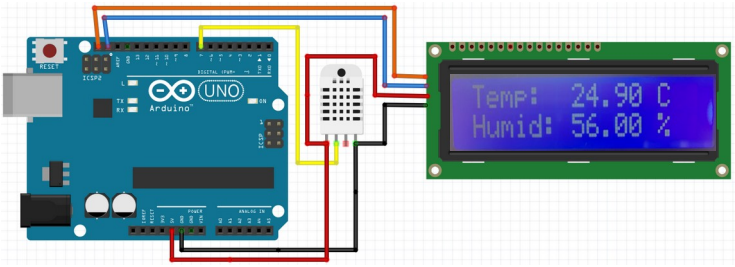
DORSET AMATEUR RADIO SOCIAL NETWORK

Technical Supplement **July 2026** www.darsn.co.uk

In this issue:



Lindsay - M9LIN
Secretary / Treasurer / Squirrel Lover

Bill - M9WEG
Chairman

Tim – M9WWA
Editor

Events in July

12th July
145 Alive & More on 144

17th July - 20th July
Camperham Weekend

18th July - 19th July
Support your Parks Weekend

29th July - 5th July
World Wide Sprint Award

25th July
Chippenham Radio Rally

See page 4 for more.

Nets

Mondays	No Darsn Net
Tuesdays	145.400 FM
Wednesdays	70.375 FM
Thursdays	Zoom Chat
Fridays	No Net
Saturdays	GB3OF
Sundays	144.375 USB

All details can be found on our Facebook page

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Callsign Changes

Peter G0PDF was G0JJI
Lins M9LIN was 2E0VDD
Tim M9WWA was 2E0TPH
Bill M9WEG was 2E0WEG
Mark M9LEG was 2E0VOV
Jon M9VFR was 2E0WJD
Other Callsigns you may hear
David M0KYN (Club Callsign Holder)
Reece M7DVX
Martin M7HQU
Neale M7NED
Dave G7RSD
Glyn M6OVN
Mike G3SED
Ron 2E0JPD
Roger M0RJL

Your Projects Wanted !

Have you got a project that you would like to share with us?

You can submit articles / projects for inclusion here by sending them to the Editor.

Submissions should be tested and be of your own work. We cannot and will not publish anything we feel is Copyrighted material.

Anything is considered.

DARSN NETS!

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Saturdays	GB3OF
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No DARSN Net on a Monday BUT, you are all welcome to Join in the Monday Evening Net on 145.375MHz (FM) hosted by Poole Radio Society.

Check out the NETS Page for more details on Nets in the area.

DARSN would like to thank all of our volunteers who give up their time and resources to run the Nets. You are very much appreciated.

Misc News

You can now make donations to the upkeep of the repeater GB3OF. Donations are put towards the maintenance and future proofing. It does cost money to run and to keep the lights on.

We would appreciate a donation, no matter how small or insignificant you think it is. Every little bit helps.

To make a donation, scan the QR Code to the right or visit the Donation Page.

All of the Arduino code that is used in the Newsletter articles can be found online at https://www.wavewizards.org/arduino/ for those who are not viewing the Newsletter in it's intended form. Any questions, please ask me.

You will also find the links to respective libraries and code on the respective page.

For those who wonder what Digital Modes sound like on air, I encourage you to take a look at https://wb8nut.com/digital/ where you can find more information on each mode and the ability to play a short segment so you can identify what different modes sound like on air.

There is plenty of information but please remember that there are frequencies listed that are unique to the U.S. APRS springs to mind, 144.390 in the U.S and 144.800 here in the U.K (Europe)

Don't forget that the Bandplans can be found on the RSGB Website in different formats. My favourite is "Tabbed HTML" which can be found here:

https://rsgb.services/public/bandplans/html/260125_rsgb_band_plan_2026.htm

Whilst I am going through some RSGB News, I would like to point out that the OLD QSL Card Address has now changed. If you are a RSGB Member and wish to use the QSL Card service, you now have to send your cards to:

RSGB QSL Bureau
PO Box 73
20 St. Loyes Street
Bedford
MK40 1ZL

If you wish to use a quicker service, you can send directly to D.A.R.C or upload your .adi file to them, there is a cost involved however and you can find out more by going to: https://qslshop.de/DARC-QSL-Service-GmbH_1

You can still pay a small fee if you are NOT a member and get your incoming cards sent to your address. For more information please go and take a look at:

https://rsgb.org/main/operating/qsl-bureau/

You will need to send envelopes to your QSL Sub Manager

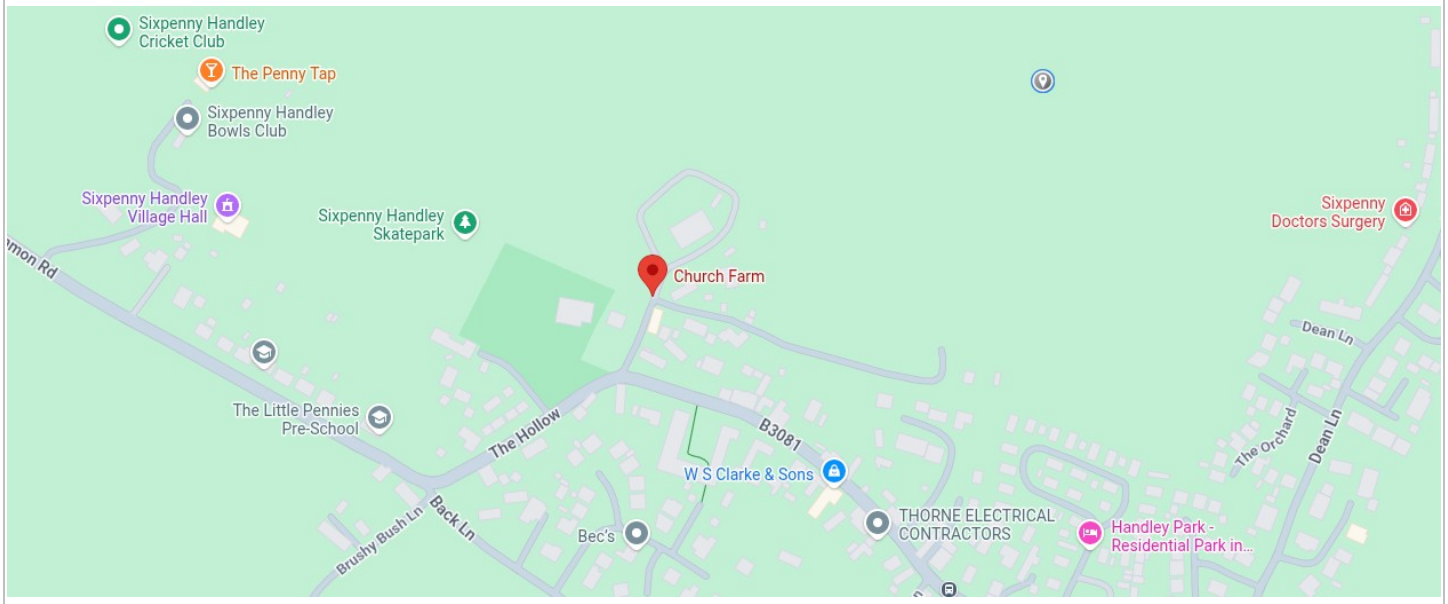
Start	End	DXCC	Callsign	Qsl Route
July				
02 July	11 July	Ogasawara	JD1	LoTW
03 July	14 July	Greenland	OX	LoTW
04 July	23 July	Crete	SV9	LoTW
07 July	04 August	Benin	TY5FR	LoTW
08 July	17 July	Sardinia	IS0	LoTW
11 July	24 July	Crete	SV9	LoTW
22 July	14 August	South Cook Is	E51KEE	LoTW
23 July	08 August	Azerbaijan	4K	LoTW
26 July	06 August	South Cook Is	E51CZZ	IK2DUW
August				
05 August	10 August	Bahamas	C6AYM	LoTW
15 August	16 August	Namibia	V55LH	LoTW
15 August	22 August	St Lucia	J68TT	LoTW
18 August	29 August	Canary Is	EA8	IZ1GDB (B/d)

Events Guide

We are planning lots of events for 2026. I will try to dedicate a full page every issue so you can see whats coming up!

Camper ham weekend Friday to Monday, nightly charges apply for campers , day visitors are also welcome, but a donation of £5 per day would be welcome to the club funds - free tea and coffee available.

Church Farm Caravan and Camping Park, High Street, Sixpenny Handley, Nr Salisbury, Wiltshire, SP5 5ND



You can find all our Events on our Facebook Group, Darsn Website or Wavewizards.org

The next 145Alive event takes place on the 12th July 2026

As usual I (M9WWA) will be QRV from Westbury White Horse in Wiltshire (IO81WG) but this time I will be taking the beam with me and not just the vertical "Whitestick"

Reece (M7DVX) will be operating from Hardys Monument (IO80RQ)
You can find more details on Nets near you at 145alive.com

Operational Frequencies are yet to be allocated. We will keep you updated.

There are normally 5 scheduled events per year.

Winter - 3rd Full Weekend of January. January 16-17, 2027
Spring - 3rd Full Weekend of April. April 18-19, 2026
Summer - 3rd Full Weekend of July. July 18-19, 2026
Autumn - 3rd Full Weekend of October. October 17-18, 2026

First full week of the new year. January 1-7, 2027

July and August see the peak of the Ham Radio Rally events.

Please support your local Radio Rally. There are often facilities such as Tea, Coffee and the all important Bacon Roll.

We will be attending Flight Refueling Rally with a mixture of goods and DARSN Merch up for sale. Come look us up and pick up a bargain.

https://rsgb.org/main/news/rallies/

The next DARSN Camperham Weekend is taking place on the 17th - 20th July

This event has been one of our best attended events since DARSN was founded.
Located at Sixpenny Handley (See Page 5 Above)

Come play Radio and chill with a beer and a friendly chat. You are welcome to stay over for the night if you wish or just pop in for a few hours. Whatever your choice, pop along and say hello.

We look forward to seeing you!

World Wide Sprint Award

29th June - 5th July

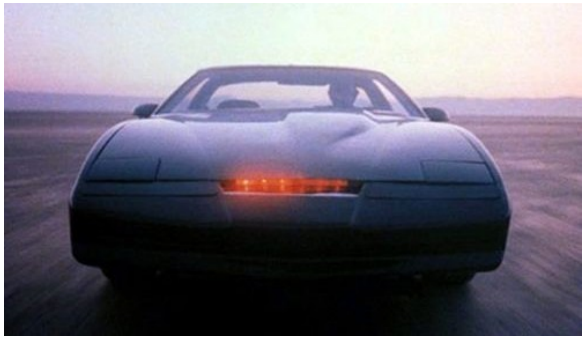
Come and get involved with the best known contest on the planet!

Starts 00:00 UTC June 29th until 23:59 UTC July 5th

For more information head on over to https://hamaward.cloud/wwa/rules

Digital Circuits – An Introduction

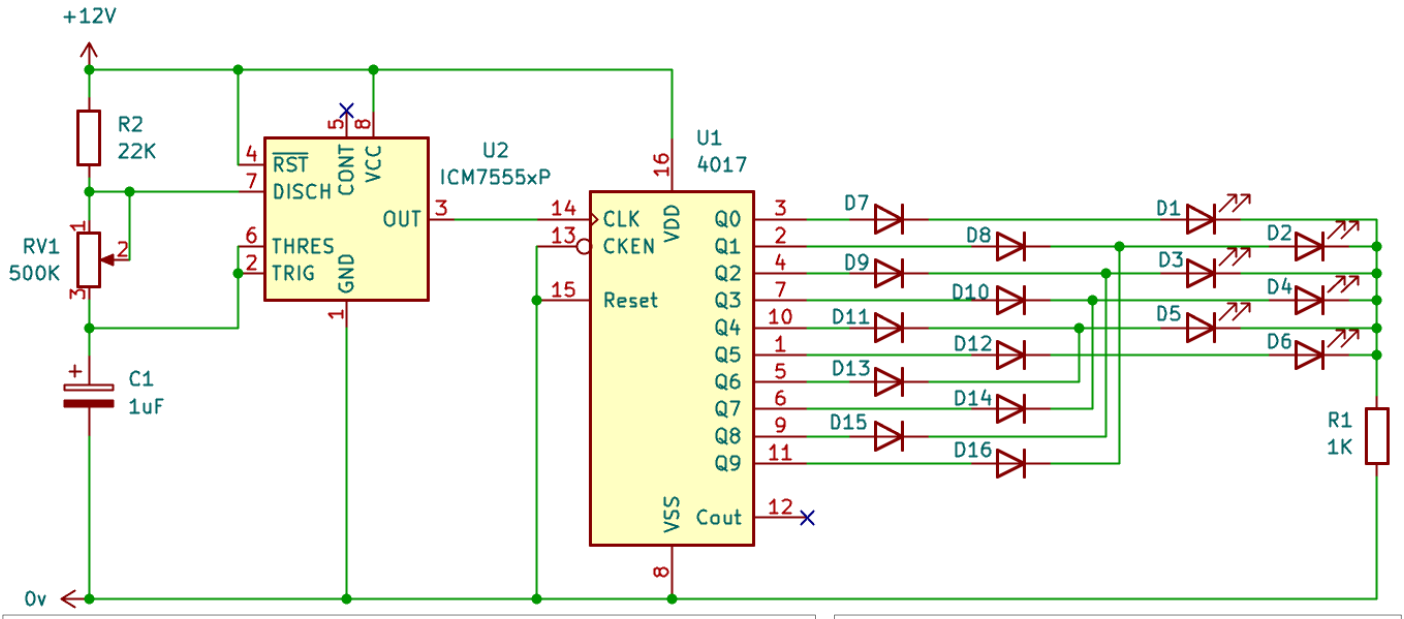
When someone mentions Digital Electronics, one sometimes conjures up images of complex interconnected FPGA devices or circuits where you think you might require a Phd in Sub Molecular Microscopy. This is certainly not the case and it is quite easy to get started in Digital Electronics. It does not have to be complex or a steep learning curve. In the 1980's we had one particular TV series called Knight Rider, a car that was not just Bullet proof but sported "Pursuit Mode" and a rather fancy looking arrangement of LED's tucked into the front grill. This is a simple light chaser circuit and it's surprisingly easy to overlook this as a "Digital" circuit.



For this circuit, we are going to need a 555 Timer I.C and a CD4017 Logic chip. These are both powered by a single ended supply and a few very easy to get components.

The 555 Timer I.C. will provide a clock signal. The signal is fed into the CD4017 and each time a rising edge is detected by the 4017, the output will change. We can use this change to illuminate the connected LED's

Lets take a look at the circuit...



How does it work?

The 555 Timer I.C is set as a Multi-vibrator Oscillator (Astable)
This produces a clock pulse that can be set by RV1 to a speed of your liking. The clock signal is then fed into the 4017 Counter and every pulse received by the 4017 will increment the LED output accordingly.

The Diodes D13, 14, 15 and 16 are used to reverse the light sweep.
D1 to D6 can be any junk box LED.
You can use a Triac or a Transistor to switch heavier loads or higher voltage for things like circus lights etc.

Bill of Materials

D1 – D6 = Red Led
D7 – D16 = 1N4148 Small Signal Diodes
R1 = 1K Resistor
R2 = 22K Resistor
RV1 = 500K Potentiometer
C1 = 1uF Electrolytic Capacitor
U1 = 4017 Johnson Counter (CD4017 also works)
U2 = 555 Timer I.C (Any Manufacturer will work)

For more information about this circuit please feel free to head on over to https://www.wavewizards.org/projects/knight-rider-led/ where I will have more detailed information and a full run down of how to use and adapt this circuit for other things. We will also cover Transistor Switching in another Newsletter.
Digital Electronics does not have to be Scary!

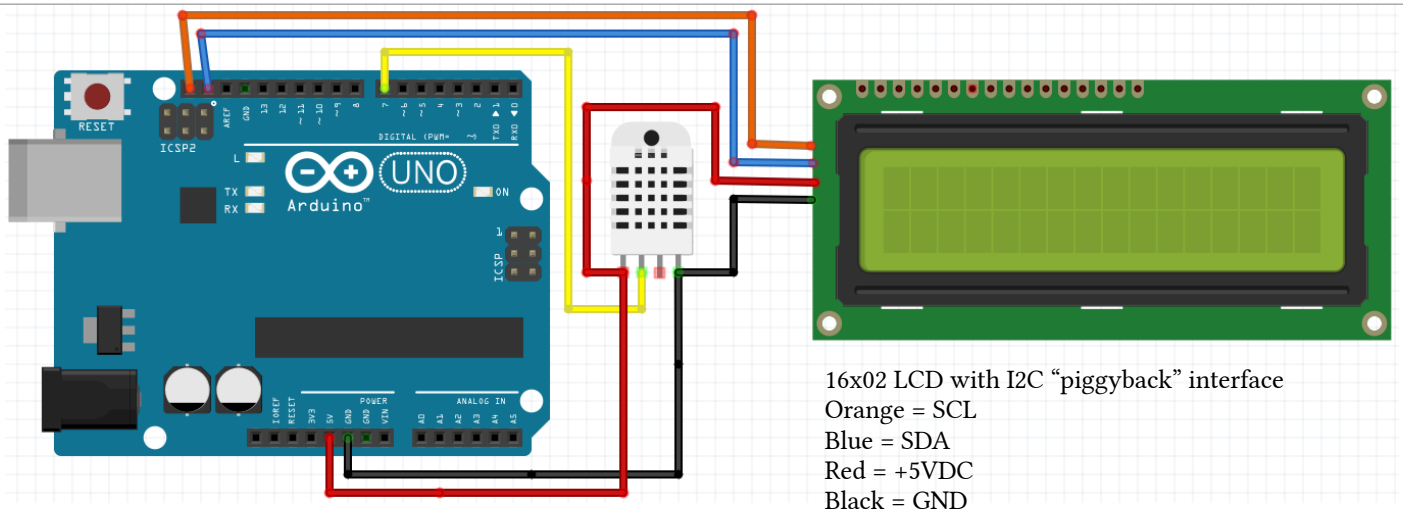
Arduino Temperature Display

Like most of us that struggle to sleep during hot weather, I was quite frustrated at not being able to maintain a healthy sleep pattern. One evening saw temperatures of 40°C with 70% Humidity.

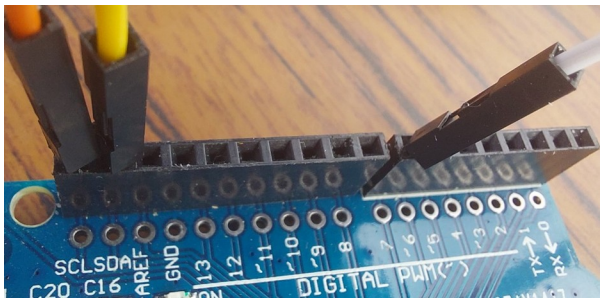
Being unable to sleep and with my mind racing off on bizarre tangents, I decided to build a quick and easy Arduino Temperature Display. The temperature and Humidity sensor is the venerable DHT11, a sensor that has been around for many years. It is not the most accurate (5%) and the update rate is quite slow at two updates per second but it nonetheless, gets the job done. We simply do not need Millions of samples per second and eight decimal points of resolution!

Hardware:
1 x Arduino UNO R3
1 x DHT11 Temperature / Humidity Sensor (The DHT22 also works and is pin for pin compatible)
1 x LCD 16x02 with I2C Adapter

Please excuse the crudity of the image, I didn't have time to build it to scale or to paint it.



16x02 LCD with I2C "piggyback" interface
Orange = SCL
Blue = SDA
Red = +5VDC
Black = GND



Connect the LCD to the Arduino

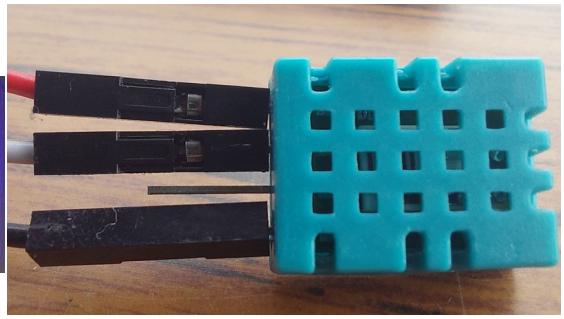
The SCL and SDA Pins on the UNO R3 can be found at the Leftmost edge

Connect the SCL and SDA Pins to the LCD
Connect POWER and GND to the LCD

You are now connected – on to the Sensor

The DHT11 / DHT22 sensor should be connected to POWER 5VDC (Red), Pin 7 (White) and GND (Black). Notice that the third pin is NOT connected. That is it for the hardware connection. Now its time to upload the Arduino code. I will also release a version in a later Newsletter that will log the Temperature and Humidity values to an SD card for Data plotting over time. I also plan to release a custom weather station for the Winter Special that has a 433MHz Telemetry Link.

Pop along to the Wavewizards Site for full instructions.



SSTV

SSTV (Slow Scan TeleVision) is a long standing Datamode that Hams around the world have enjoyed on a regular basis.

Lets take a look at how easy it is to get started.

Firstly we need to get Audio in and out of your Transceiver.
This is easy, all we need is a Digital Modes Interface like the one we published last month. Download it from HERE

You can use this one too! Or this One!

Once the interface is complete and connected, we also need a way to control the Transceiver PTT so we can send the image out.

If you are running an older Transceiver you could use VOX but if you do, make sure the system keys up the Transceiver in good time.

We can use USB control. Interface controllers are easy to obtain and make. You can purchase a ready made interface for your radio quite cheaply. Just make sure that the Audio cables are also supplied, this will save you some hassle and will get you on the air quite quickly. All we need to do after you have the interface is use some software.

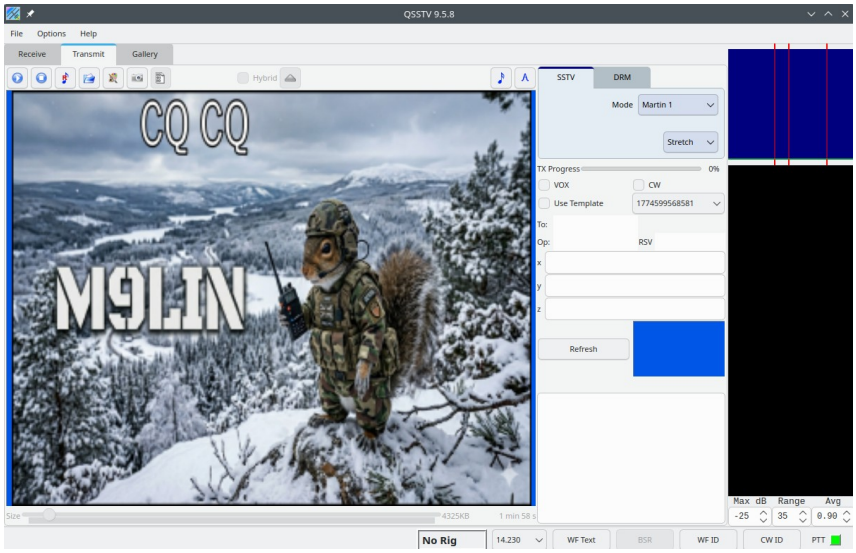
Popular Interfaces:
Digirig Signalink If you are purchasing from a UK shop, please check the prices. One dealer is £40 more expensive than getting it shipped direct to you from the states....

For Windows users, you could start out with MMSSTV, a very popular software package that is easy to use and well suited for beginners. Linux users can utilise QSSTV for the win, this also supports DRM modes and auto upload of received images to an FTP server! Check out your Distributions Repository, it may well be in the list ready to go!

Let me pass the windows users to this guide, I do not run Windows software on my systems thus cannot grab screenshots to make your life easy. https://mcbainsite.co.uk/a-guide-to-mmsstv/

Linux users can follow this excellent guide to setup QSSTV

Using my FT-891 with the Digirig DR-891 is seamless. Simply plug the unit in and connect to either a Tablet, Phone or Laptop. Inside the configuration menu, you will see USB Audio Device for both Microphone and Speaker Output. Select the devices and save. All you need to do now to send an image. Use the guides above and make an image Template. Select the image you wish to transmit. Double check your Transceiver frequency. Most activity can be found on 14.230 USB. When you are ready hit transmit.



Check out some SSTV images HERE

Do not forget to lower your power, a 100 Watt Radio should be set to no more than about 40 Watts. I would also suggest sitting on receive only for a while and practice importing the received image, you will want to add the RS report and most transmit their received image back so they can see how good their signal is traveling

Practice at this part before you go live. Different software has different quirks. Learn how to set up templates for a reply before you do anything. This will save you panicking when someone does reply!

14.230 USB
7.165 LSB
144.500 USB
432.500 USB Have fun!

Wordsearch

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

Ham
Operator
Frequency
Wavelength
Modulation
Transceiver
Antenna
Dipole
Yagi
Beam
SSB

FM
CW
Morse
QSL
QRM
QRN
QSO
DX
Propagation
Ionosphere
Satellite

Repeater
VHF
UHF
HF
Band
Filter
Amplifier
SWR
Match
Ground
Counterpoise

Coax
Transmitter
Receiver
Signal
Noise
Sine
Oscillator

Well, that's this end of the July Newsletter. I hope you have enjoyed this issue.
We have had to scale back the size of the Newsletter until the Autumn.

The Editor would also like to go and play Radio and I hope this resonates with you.

Join the Facebook Group to get the newsletter or view it online https://www.darsn.co.uk.
You can also download the archive at www.wavewizards.org/newsletter

As usual, a huge thanks to everyone who go out and participate in events and meet ups.
Until next time, keep those finals warm. 73's Tim [M9WWA - Ed]

Make a Donation https://pay.collctiv.com/dorset-amateur-radio-social-network-running-costs-33420

Lots of merchandise available check out the website for details, let me know if you would like anything.

Caps, t-shirts, key rings, sweatshirts, hoodies, chopping boards, pens, lanyards, note books, mugs etc

We are a not for profit club and all proceeds go towards keeping the club going.

Thank you for your support M9LIN