

# DORSET AMATEUR RADIO SOCIAL NETWORK

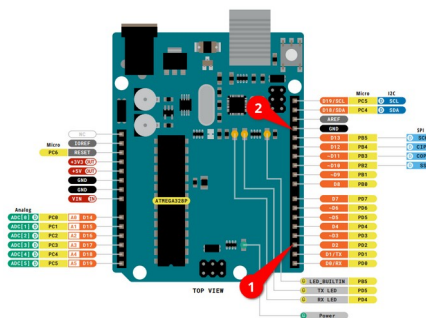
Technical Supplement

MAY 2026

www.darsn.co.uk

In this issue:

- Introducing the Arduino (Continued)
- Bio of the Month – Stuart VE9CF
- RF Sensing Circuit – 2m 30 Watt Amplifier
- DARSN Celebrates it's First Year
- CamperHam events are here!



Lindsay - M9LIN  
Secretary / Treasurer



Bill - M9WEG  
Chairman



Tim – M9WWA  
Editor

## Events in May

Three Okefords Preservation  
Society  
16<sup>th</sup> and 17<sup>th</sup> May

Camperham Weekend  
Church Farm  
29th May 1st June

See page 5 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



## Contact Us:

Lindsay  
[darsn2025@outlook.com](mailto:darsn2025@outlook.com)  
[www.darsn.co.uk](http://www.darsn.co.uk)

Bill  
(Via Lindsay)

Tim  
[admin@wavewizards.org](mailto:admin@wavewizards.org)  
[www.wavewizards.org](http://www.wavewizards.org)

## 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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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.

## GB3OF – New Net!

GB3OF is home to the Saturday evening Net. The existing Net on 10m (28.375) will be put on hold as some members of the Social Network are unable to work Net Control from their location. This may be a permanent move, we are not sure yet and we need your feedback.

We would love to have a widely used net and we believe that this change will bring accessibility to those unable to get on HF.

If you have any suggestions as to how we can accommodate you and your requirements then please speak up and let us hear your ideas, suggestions and concerns.

Early indications show that the change is favourable and that we have a potentially larger audience who wish to participate.

Let us have your views. Contact details on page one.

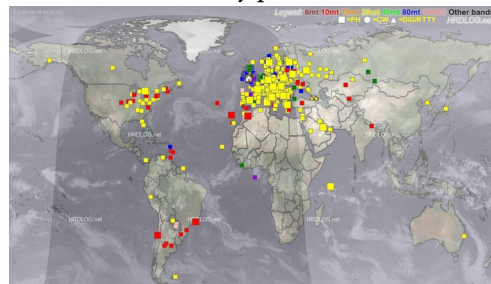


## G3DAR / GX3DAR

We have had very little interest in the Clublog signups. As a result of this we ask that anyone using the club callsigns in any capacity to send an .ADIF file from your log to one of the admin staff (Tim or Lindsay).

We will then import the log into the Wavelog system so that we can deal with QSL and OQRS requests. You are of course, welcome to keep a copy of your log for your purposes.

The other reason behind this is to be able to provide an up to date map of the world that shows the contacts made during DARSN events, Field Days and Camperham events. One such map is shown below for my personal contacts.



## Other News

145Alive now has it's own website instead of depending on Facebook. This makes it easier to make an account at [145Alive.com](#) and register yourself as a Net Controller or a "Participant" making it easy to see popular Nets. Check it out.

The recent 145Alive and POTA event was a huge success – see Page 7 and 8 for details

Build your own Test Equipment coming in Autumn / Winter

**Happy Birthday DARSN, it's our first Birthday (April) and things have been going strong. We have had loads of support from all of our members, too many to list in this small box. You can check out the official [DARSN](#) website for more event information or head over to [wawewizards](#) for other events in the area.**

## Bio of the Month – Stuart (VE9CF)

Location: Saint-Antoine, New Brunswick, Canada. Former Callsigns: VE4SRC, VE6SRC, VE9SRC

Hello everyone! I am Stuart, operating from the beautiful village of Saint-Antoine, NB. My journey in the world of amateur radio spans over 35 years, fuelled by a lifelong fascination with the magic of hitting the airwaves and connecting with operators across the globe.

My passion for radio began as a boy in my hometown of Niagara Falls, Ontario, tuning an AM radio to hunt for distant stations across Canada and the US. This early curiosity led me to join the Canadian Armed Forces in 1988 as a Radio Operator. During my service, I had the honour of being stationed at several bases across the country:

CFB Shilo, MB (VE4SRC): Where I spent hours at the ham shack with my lifelong friend Mike (VA7BZ).

Penhold & Calgary, AB (VE6SRC): Continuing my operations in the West.

Moncton, NB (VE9CF / VE9SRC): Bringing my radio journey back to the East Coast.

I owe a great deal of my technical foundation to Mike (VA7BZ) and my CB radio mentor, Leroy. Their guidance and our hours of discussion are a big reason why I'm a licensed operator today.

Following my military service, I built a long career as an IT professional in Calgary and eventually founded an IT marketing firm. During this two-decade period, I took a hiatus from ham radio to focus on business and family—a story I know many "re-born" operators returning to the hobby after their careers wind down share!

In 2022, I sold my firm and entered semi-retirement. By the autumn of 2023, the "radio bug" had bitten me once again, and I happily jumped back on the air as VE9CF.



## Bio of the Month – Stuart (VE9CF)

### Operating Philosophy: DX, Contesting & Portable Ops

While I enjoyed a stint with Parks On The Air (POTA) for a couple of years, I decided to step back from the programme in 2026 to avoid the behind-the-scenes politics and repetitive nature. I wanted to return to the core reasons I still turn on the radio:

**DXing:** The thrill of the chase and making distant contacts brings me the greatest joy.

**Contesting:** It perfectly complements my DX work, sharpens my skills, and keeps my logs busy (with nearly 90,000 QSOs logged on Club Log since 2024!).

**Portable Operations:** I love taking my gear to historical sites, roadside parks, and lighthouses throughout the Canadian Maritimes. Through these outdoor adventures, I'm learning more about conservation while pursuing DX contacts from nature reserves.

### Community, Awards & QSL Info

I'm incredibly passionate about connecting with the ham community. I manage a WhatsApp community for operators worldwide to share DX info and antenna projects.

To help promote activity in our beautiful province and honour our military, I've established and sponsor several awards, including: Worked All New Brunswick & Worked All New Brunswick Parks

New Brunswick Military History Award (For portable operations at military historical locations)  
Canadian Forces Appreciation Month (I operated special event station VC9CAF in Nov 2025)

### Connecting & QSL:

QSL: Clublog or Bureau ONLY.

Website & Video: Check out my portable adventures and YouTube videos at [outnaboot.ca](http://outnaboot.ca).

Whether we cross paths during a contest, a quiet evening of DXing, or while I'm operating portable from a maritime lighthouse, I look forward to getting you in the log!

73,  
Stuart, VE9CF

The Editor would like to thank Stuart for participating in the "Bio of the Month" for this Newsletter. I have worked Stuart many times with my 2E0TPH and M9WWA callsigns,

Please see Stuarts [qrz.com](http://qrz.com) page and check out the awards he has earned. I am quite impressed.

Stuarts signal is quite easy to identify, just look for a solid 5/9+ on your Bandscope! The first time I got Stuart in the log I had to turn back the RF Gain a little as I was genuinely concerned for my radio's front end. His signal was booming across into the Island of Portland, one of my favourite spots to operate from. I do subscribe to Stuarts YouTube channel and I do enjoy the content that he posts.

Just to finish off, I would like to extend a well deserved thanks to Stuart for his contribution to the Ham Radio community and for carrying that Spirit and Discipline across the bands.

Thanks Stuart, until next time. 73. de M9WWA

## 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!



**CAMPERHAM**  
WEEKENDS AT CHURCH FARM!

**DATES FOR YOUR DIARY** 😊

- 29th May – 1st June
- 26th June – 29th June
- 17th July – 20th July
- 28th Aug – 31st Aug

Caravans, campervans and tents welcome – let me know if you can make it 😊🙏

Day visitors are welcome but please consider a £5 donation to the club funds 😊🙏

**2EOVDD**



**G3DAR**  
((...))

**DEMONSTRATION STALL**  
— AT —  
**THE THREE OKEFORDS PRESERVATION SOCIETY RALLY**

**16<sup>TH</sup>/17<sup>TH</sup> MAY 2026**

*Come along and*  
**SUPPORT THE CLUB AND THE RALLY**

LET'S SPREAD THE WORD OF AMATEUR RADIO 📻

COMMUNICATE  
EXPLORE  
EDUCATE  
ENJOY ❤️

**ENTRANCE CHARGES APPLY**  
**M9LIN** 😊

It's that time of year again!

Camperham Weekends are back on the menu.

Join us on the 29<sup>th</sup> May until June 1<sup>st</sup> and enjoy a weekend with like minded folk!

You are welcome to stay for the entire weekend or just pop along for a few hours, the choice is yours. Just make sure to bring along your Radio kit and prepare for some DX hunting. There will be refreshments, Tea and Coffee are provided at no cost but we would ask for a contribution to the funds in order to repeat these events.

16<sup>th</sup> and 17<sup>th</sup> of May, we will be putting on a Demonstration Stall at The Three Okefords Preservation Society. We will be demonstrating SSTV and other modes as appropriate and offering the opportunity for visitors to take the mic and say hello to people around the world.

Check out what is on at:

<https://www.threeokefordsrally.co.uk/>

Look forward to seeing you there!

You can find all our Events on our [Facebook Group](#), [Darsn Website](#) or [Wavewizards.org](#)

## DX News

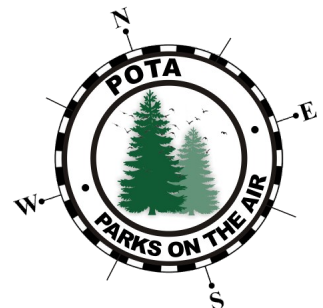
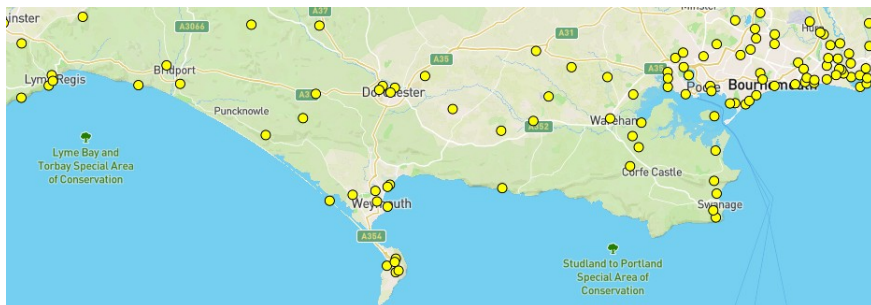
From	To	DXCC	Call	QSL Via	Details
2026 May04	2026 May09	South Cook Is	E51TLM	K7TLM (B/d)	By K7TLM KD7YZE fm Rarotonga I (IOTA OC-013); 28.060m 28.385 MHz; CW SSB; 5w, end-fed wire; QSL direct w/ SASE or SAE w/ 2GS
2026 May05	2026 Jul20	French Polynesia	FO	LoTW	By F6BCW as FO/F6BCW fm Tikehau,Tuamotu; 80-6m; CW SSB; QSL via F6EXV or Club Log OQRS
2026 May08	2026 May09	Jersey	MJ	LoTW	By KO7T as MJ/KO7T fm IOTA EU-013; 17-10m; CW SSB FT8 RTTY; QSL via Club Log OQRS
2026 May10	2026 May19	Iceland	TF	LoTW	By WE9G as TF/WE9G fm Borg (IOTA EU-021); HF; mainly FT8, some CW SSB; QSL via WE9G (B/d) or Club Log OQRS
2026 May13	2026 May21	St Kitts & Nevis	V4	LoTW	By EI8KN as V4/EI8KN and EI7BR as V4/EI7BR fm Basseterre, St Kitts; @W5JON; 160-6m, incl 60m; SSB FT8, some CW; also using V49B in CQ WPX CW; QSL via Club Log OQRS or EI8KN direct
2026 May14	2026 May22	Tonga	A31AA	LoTW	By JH3QFL fm Nuku'alofa; HF; 500w, and 100w on 6m; FT8 on 80-6m; QSL via JH3QFL direct
2026 May17	2026 May19	Wales	MW	LoTW	By HB9EMP as MW/HB9EMP; HF; holiday style operation; QSL via HB9EMP direct w/ SAE + 3 greenstamps
2026 May20	2026 Jun19	Namibia	V5	LoTW	By N7XOB as V5/N7XOB; 7.165 and 14.265 MHz; SSB
2026 May24	2026 Jun01	St Kitts & Nevis	V4	LoTW	By WW6W as V4/WW6W fm St Kitts I; QRV for CQWW WPX CW Contest; QSL via WW6W direct
2026 May25	2026 May28	Ascension I	ZD8KX	eQSL	By MOHXC; HF; CW FT8 FT4; QSL via eQSL
2026 May25	2026 Jun03	Chatham Is	ZL7IO	LoTW	By ZL3IO; 160-10m; CW SSB + digital; QRV for CQ WPX CW; QSL via DK7AO
2026 May26	2026 Jun02	Martinique	T03E	LoTW	By AB2E; @FM5BH; QRV for CQ WPX CW Contest
2026 May26	2026 Jun06	Bolivia	CP7DX	Club Log OQRS	By LU1FM LU1HF LU2JCW LU3FR LU3VED LU6FOV LU7HN LU8VCC LU9FHF fm Tarija (FG78pl); 160-2m, incl 60m; CW SSB FT8; QSL via LU1FM; QRV for CQ WPX CW Contest
2026 May27	2026 Jun08	Bonaire	PJ4CB	WA7RAR Direct	By WA7RAR fm various Bonaire locations, some POTA; 20-10m; SSB CW; 1/4 wave telescoping vertical; no SASE or green stamp required for QSL
2026 May28	2026 Jun01	Maldives	8Q7QR	JJ1DQR	By JJ1DQR; HF; holiday style operation; QRV for CQ WPX CW
2026 Jun03	2026 Jun12	Tanzania	5H1KB	LoTW	By DL2SBY fm Zanzibar I; focus on 6m; QSL via DL2SBY direct
2026 Jun08	2026 Jul07	Tanzania	5H3DX	LoTW	By NK80 fm Dodoma; 40-6m; CW FT8 FT4; 100w; dipole, vertical, longwire
2026 Jun10	2026 Jun18	Palau	T88AR	LoTW	By JA6UBY fm Koror; 160-6m; FT8 FT4 SSB FM (on 10m); QSL via JA6UBY
2026 Jun10	2026 Jun24	St Martin	FS	LoTW	By K9EL as FS/K9EL; 80-6m, focus on 6m; CW FT8; QSL via Club Log OQRS
2026 Jun12	2026 Jun29	Curacao	PJ2	LoTW	By PH2M as PJ2/PH2M; 80-6m, including 60m; mainly FT8 FT4, some SSB
2026 Jun19	2026 Jun22	Palau	T88TB	LoTW	By JA0JHQ fm Koror IOTA OC-099, P77fi); HF; QRV for All Asian DX CW Contest; QSL via JA0JHQ direct
2026 Jun20	2026 Jun22	Armenia	EK	DL2JRM (B/d)	By DL2JRM as EK/DL2JRM; CW SSB
2026 Jun27	2026 Jul14	St Pierre & Miquelon	FP	LoTW	By KV1J as FP/KV1J; 80-6m; SSB CW FT8; QSL via Club Log OQRS or KV1J direct; QRV for IARU contest and CQ VHF Contest

## Past Events

The DARSN meet up on the 25<sup>th</sup> April at “The World’s End” was it’s usual comical get together. Thanks to everyone who attended.



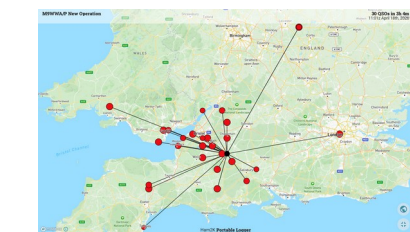
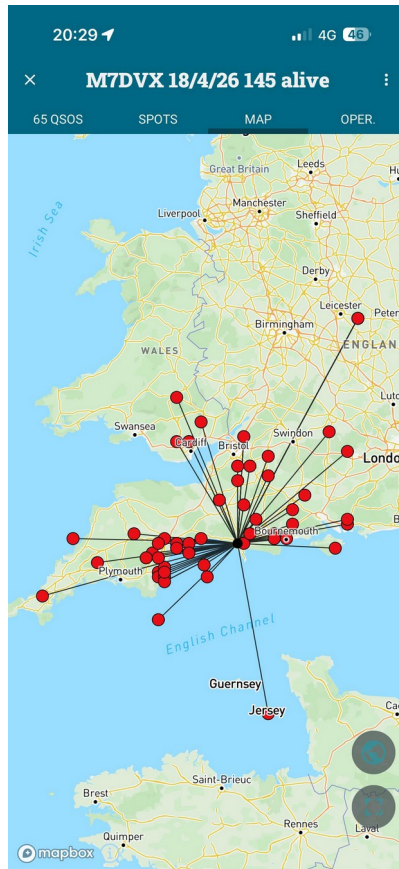
The “Support your Parks Weekend” took place on the 18<sup>th</sup> and 19<sup>th</sup> of April. I decided to take part after popping in to Martins (M7HQU) Sunday afternoon SSB Net. I made my way to “The Valley of the Stones” located half a mile away from Hardys Monument. Despite the bands being in poor shape, I managed to get some contacts on 40m and 20m, enough to qualify for an “Activation”. GB-0589 happens to be just one of many POTA sites across the South Dorset area. We are spoiled for choice and when the weather gets better, I will be attempting a mass activation weekend. I aim to activate 10 in one weekend, not an easy thing to achieve at all. The next “Support your Parks” Weekend is July 18-19, 2026



## Past Events (Continued)



Myself and Reece had great results from the 145Alive and “More on 144” events held on the 18<sup>th</sup> April. Reece (M7DVX) was operating from his usual perch at Hardys Monument (IO80RQ) and managed a whopping 65 contacts in total. Reece was certainly getting the logging practice in and thoroughly enjoyed the challenge.



I (M9WWA) managed to get 30 in the log in the 3 hours allocated. I also managed to hook up most of the other stations that called in, with the other stronger stations to give them a few extra in their logs.

My thanks go to Andrea (2E0MIZ) who, as always, was booming across from the Bath area and to everyone else that got the microphone handed to them for some extra contacts.

I will be printing physical QSL cards in the future and will be sending those out specifically for the 145Alive events. Expect those cards in or around late June.



I do have an OQRS server running courtesy of Wavelog. You can view the 145Alive log at: <https://wavewizards.org/wavelog/index.php/visitor/145Alive18Apr26>

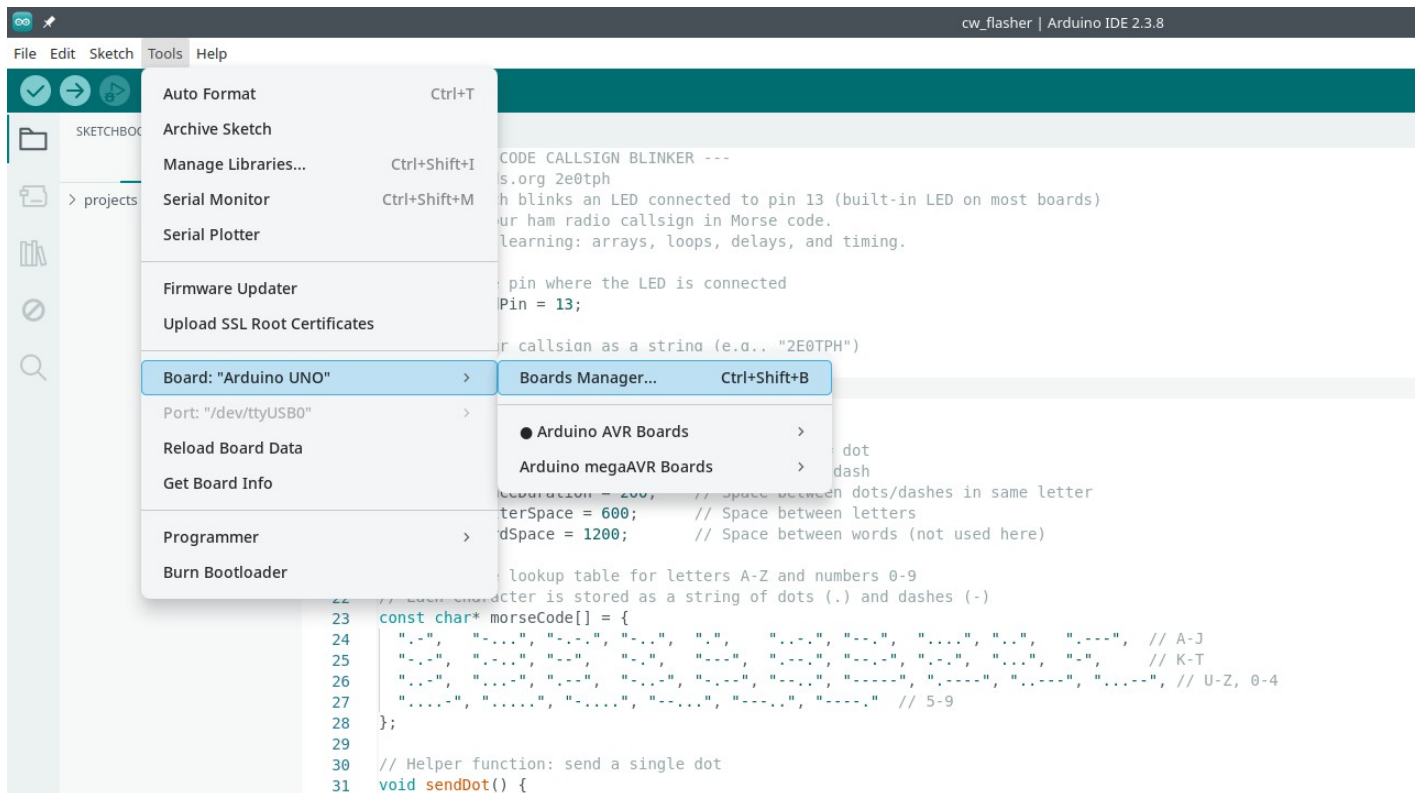
Reece and I would like to thank everybody who managed to work our stations.

## Introduction to Arduino

In last months Newsletter we had an Introduction to Arduino. I uploaded a .ZIP file to my server and to the DARSN Facebook group for you to download. I trust that you were able to follow the instructions and get the code working.

The Code will work on the Arduino UNO R3 and the Arduino Nano. If you have had any problems please reach out on the Facebook group for support. I Might have missed out a small detail about the “Boards Manager” that is just a little bit critical.

The Boards Manager setting allows the code compiler to convert the code into something that the Micro Controller can execute. Some boards are different to others and it is possible to get connection or compilation errors when the correct board is not selected in the IDE (Integrated Development Environment). If you have purchased a “Compatible” board from a reseller, you might find that you have to manually select your board in order for it to work. First of all, find the Board Manager Section:



The Arduino IDE will now open the Manager settings. The code I have written should run on ANY Arduino Compatible device including the newer Q Range that comes equipped with WiFi and Bluetooth.

The image on the next page will show you what boards are supported by the package. Use the search feature to display the board you wish to use. It should be noted that this particular package may already be installed, you should check anyway.

The listing of supported boards will be shown and we can see the UNO board listed as supported. If this package is not already installed then go ahead and install it. You should be good to go, the board status is shown lower right in the IDE:



Windows Users will see something else in place of /dev/ttyUSB0 (Often Comxx where xx is the Com port Number)

So long as the device says connected, you are good to go

# Arduino – Callsign Blinker / Flasher

The screenshot shows the Arduino IDE interface. On the left, the Boards Manager is open, displaying the 'UNO' board selected. A red arrow points to the 'UNO' board. On the right, the code editor shows the 'cw\_flasher.ino' file. A red arrow points to the line 'const char callsign[] = "M9WVA";' in the code. A text box is overlaid on the Boards Manager, listing various boards included in the package.

Boards included in this package: Arduino UNO Mini, Arduino Mega or Mega 2560, Arduino Micro, Arduino Ethernet, Arduino Fio, Arduino BT, LilyPad Arduino, Arduino Robot Control, Arduino UNO, Arduino Duemilanove or Diecimila, Arduino Robot Motor, Arduino Gemma, Adafruit Circuit Playground, Arduino Yún Mini, Arduino Industrial 101, Linino One, Arduino Nano, Arduino Leonardo ETH, Arduino Mini, Arduino Pro or Pro Mini, Arduino NG or Pro Mini, Arduino Yún, Arduino Mega ADK, Arduino Leonardo, Arduino Esplora, LilyPad Arduino USB, Arduino UNO WiFi

```
1 // --- MORSE CODE CALLSIGN BLINKER ---
2 // Wavewizards.org 2e0tph
3 // This sketch blinks an LED connected to pin 13 (built-in LED on most boards)
4 // to send your ham radio callsign in Morse code.
5 // Great for learning: arrays, loops, delays, and timing.
6
7 // Define the pin where the LED is connected
8 const int ledPin = 13;
9
10 // Define your callsign as a string (e.g., "2E0TPH")
11 const char callsign[] = "2E0TPH";
12
13 // Morse code timing (in milliseconds)
14 // const int dotDuration = 200; // Short duration for a dot
15 // const int dashDuration = 600; // Long duration for a dash
16 // const int spaceDuration = 200; // Space between dots/dashes in same letter
17 // const int letterSpace = 600; // Space between letters
18 // const int wordSpace = 1200; // Space between words (not used here)
19
20 // Morse code lookup table for letters A-Z and numbers 0-9
21 // Each character is stored as a string of dots (.) and dashes (-)
22 const char* morseCode[] = {
23   ".-", ".--", ".-.-", "-.-", "-.", "-..", "-...", "-.-.-", "-.-.-.", // A-J
24   ".-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", // K-T
25   "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", // U-Z, 0-4
26   ".-.-.-.", "-.-.-.-", "-.-.-.-", "-.-.-.-", "-.-.-.-" // 5-9
27 };
28
29 // Helper function: send a single dot
30 void sendDot() {
31   digitalWrite(ledPin, HIGH); // Turn LED on
32   delay(dotDuration); // Wait for dot duration
33   digitalWrite(ledPin, LOW); // Turn LED off
34 }
```

The screenshot shows the Arduino IDE interface. On the left, the Boards Manager is open, displaying the 'UNO' board selected. A red arrow points to the 'UNO' board. On the right, the code editor shows the 'cw\_flasher.ino' file. A red arrow points to the line 'const char callsign[] = "M9WVA";' in the code.

```
1 // --- MORSE CODE CALLSIGN BLINKER ---
2 // Wavewizards.org M9WVA
3 // This sketch blinks an LED connected to pin 13 (built-in LED on most boards)
4 // to send your ham radio callsign in Morse code.
5 // Great for learning: arrays, loops, delays, and timing.
6
7 // Define the pin where the LED is connected
8 const int ledPin = 13;
9
10 // Define your callsign as a string (e.g., "M9WVA")
11 // You can change this to your own callsign!
12 const char callsign[] = "M9WVA";
13
14 // Morse code timing (in milliseconds)
15 // const int dotDuration = 200; // Short duration for a dot
16 // const int dashDuration = 600; // Long duration for a dash
17 // const int spaceDuration = 200; // Space between dots/dashes in same letter
18 // const int letterSpace = 600; // Space between letters
19 // const int wordSpace = 1200; // Space between words (not used here)
20
21 // Morse code lookup table for letters A-Z and numbers 0-9
22 // Each character is stored as a string of dots (.) and dashes (-)
23 const char* morseCode[] = {
24   ".-", ".--", ".-.-", "-.-", "-.", "-..", "-...", "-.-.-", "-.-.-.", // A-J
25   ".-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", // K-T
26   "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", "-.-.-.", // U-Z, 0-4
27   ".-.-.-.", "-.-.-.-", "-.-.-.-", "-.-.-.-", "-.-.-.-" // 5-9
28 };
29
30 // Helper function: send a single dot
31 void sendDot() {
32   digitalWrite(ledPin, HIGH); // Turn LED on
33   delay(dotDuration); // Wait for dot duration
34   digitalWrite(ledPin, LOW); // Turn LED off
35 }
```

The above image shows support for the Arduino UNO board we are using.

[Left]  
On line 12 of the Code (1) change your callsign to your own and then click the right arrow (2)

The code will now be checked for any errors and then uploaded to the Uno.

The Uno will reboot and after a second you should see the onboard LED start to flash your callsign in Morse.

You can change the timings by playing with the code at line 15 to 19

If you mess up simply UNDO (CTRL + Z) or reload the sketch from a backup.

Don't be afraid to have a play.

## Arduino – CW Keyer

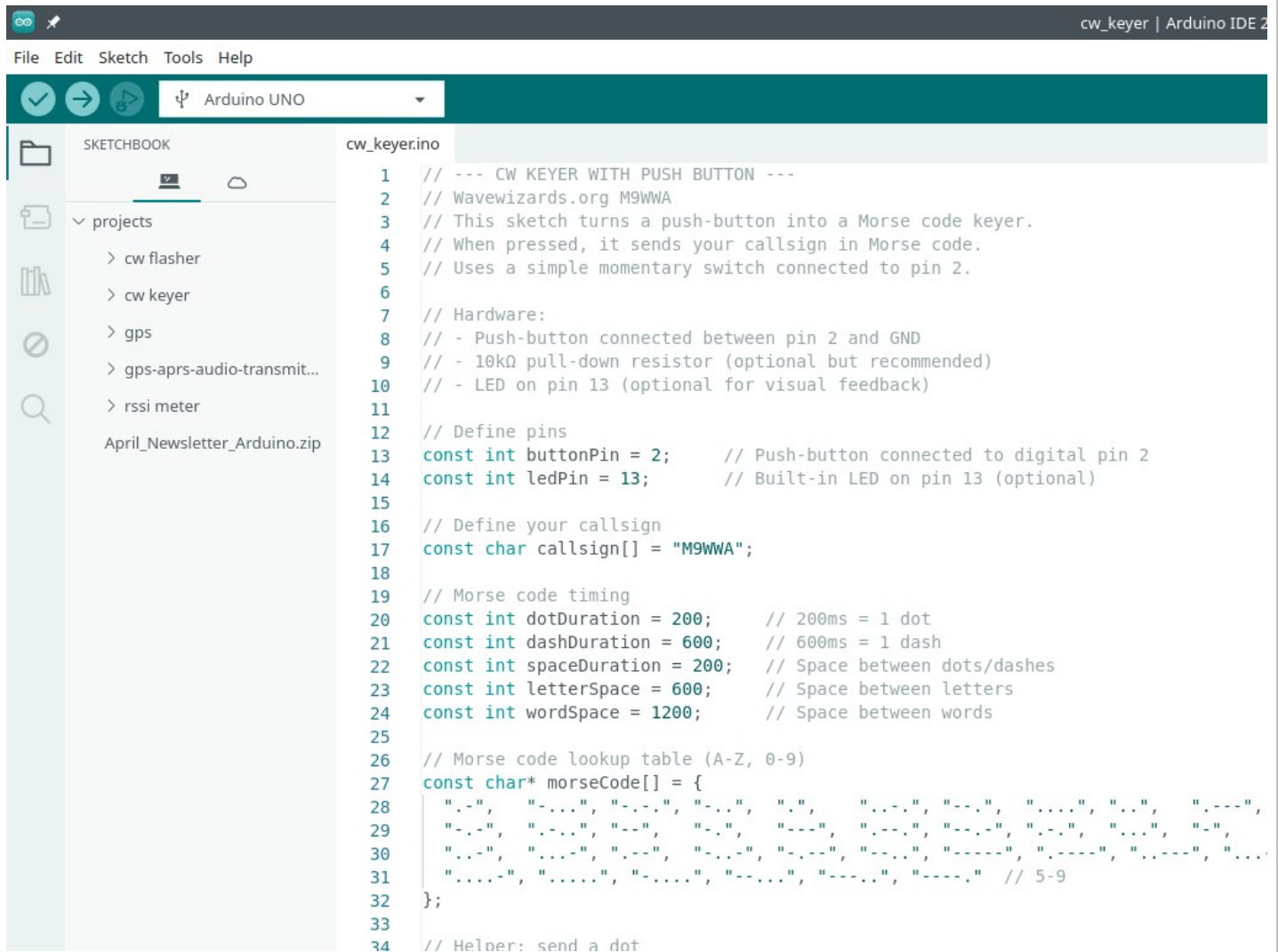
You will notice inside the .ZIP file that there is a second file called CW\_Keyer.ino  
Extract this file from the .ZIP and use the Arduino IDE to open it.

This is the same code as before but you can connect a button between Pin 2 and GND  
When you press the button you will start the Morse output.

What good is this I hear you cry, well, what if you connected the output to a Piezo Transducer to make audio or maybe you could use this piece of code to activate after every 3 minutes to send a repeater identifier. You could use the output to activate a PTT on another piece of equipment or connect to a line input to record your own callsign in Morse.

You can, just for now, connect the “Trigger” pin to GND every time you wish to see your callsign flashed on the LED.

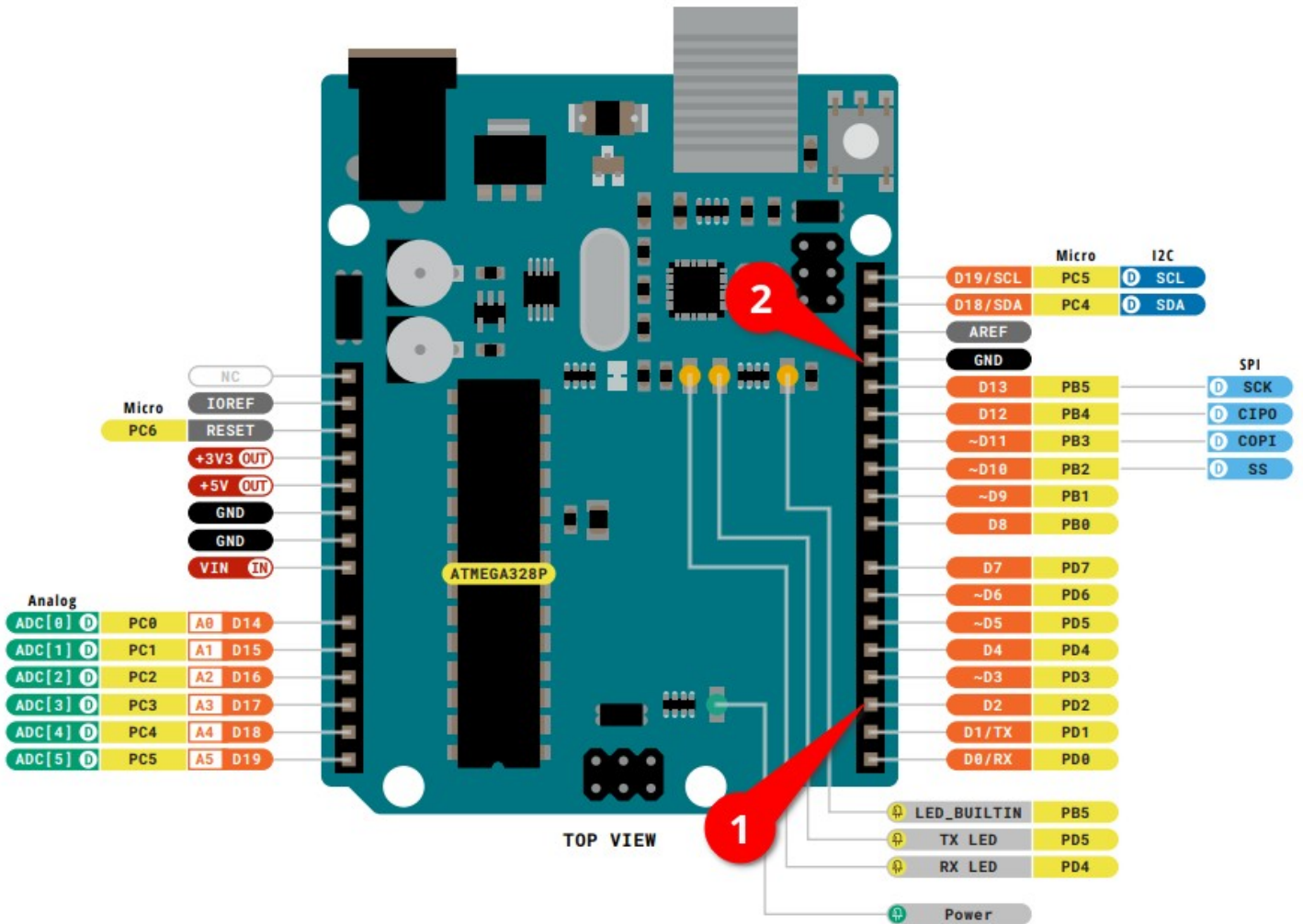
Same as before, just change your callsign to what you want to see and upload it to the Arduino and as before, the Morse code speed can be adjusted in Lines 20 to 24



```
1 // --- CW KEYER WITH PUSH BUTTON ---
2 // Wavewizards.org M9WWA
3 // This sketch turns a push-button into a Morse code keyer.
4 // When pressed, it sends your callsign in Morse code.
5 // Uses a simple momentary switch connected to pin 2.
6
7 // Hardware:
8 // - Push-button connected between pin 2 and GND
9 // - 10kΩ pull-down resistor (optional but recommended)
10 // - LED on pin 13 (optional for visual feedback)
11
12 // Define pins
13 const int buttonPin = 2; // Push-button connected to digital pin 2
14 const int ledPin = 13; // Built-in LED on pin 13 (optional)
15
16 // Define your callsign
17 const char callsign[] = "M9WWA";
18
19 // Morse code timing
20 const int dotDuration = 200; // 200ms = 1 dot
21 const int dashDuration = 600; // 600ms = 1 dash
22 const int spaceDuration = 200; // Space between dots/dashes
23 const int letterSpace = 600; // Space between letters
24 const int wordSpace = 1200; // Space between words
25
26 // Morse code lookup table (A-Z, 0-9)
27 const char* morseCode[] = {
28   ".-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.",
29   ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.",
30   ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.",
31   ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-.", ".-.-." // 5-9
32 };
33
34 // Helper: send a dot
```

Change your callsign on Line 17 and upload the code to the Arduino. Now connect a switch or simply short out momentarily, Pin 2 and the GND Pin. The flasher will now start.

## Arduino – Other Projects



The switch or shorting wire should be made between the pins marked on the above diagram.

Pin2 (Red Marker 1) can be shorted to the GND Pin (Red Marker 2)

There are many projects being developed including a Foxhunt Transmitter Controller with External shut down control and CW Identifier and an APRS Digipeater. I am also working on a project that should be finished quite soon and details will be announced when it is ready.

We also have other projects that due to cost and complexity will be coming out towards the later part of this year. I am giving away no spoilers here, this is a labour of love..

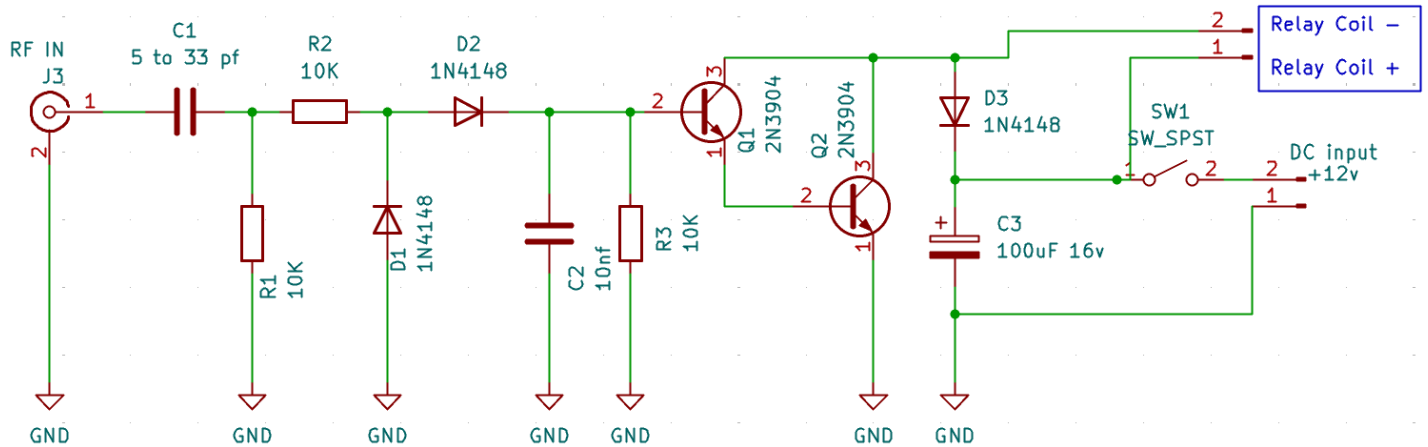
We will visit these projects in a later Newsletter

In the meantime, please reach out to me on the [Facebook group](#) or by [Email](#)

“The only silly question is the one that no one asks” – Fat Bloke on a hill [aka The Editor]

## RF Sensing Circuit – Part One of Two

There may be occasions when you need to control something with RF. One such scenario is a 145MHz Linear Amplifier where we need to control when the transmit output is on. This circuit is the first part of a two meter Linear Amplifier. Lets take a look at the circuit.



How does it work?

If you are using this circuit as a Linear Amplifier switch, the full circuit, including the PA stage will be in the next issue.

The RF comes in on the left side coax connector and C1 takes care of any DC Bias that might be present. R1, R2, D1 and D2 convert the RF energy into a voltage. C2 and R3 take care of small transient noises which then drives the base of Q1.

Q1 switches on and brings the output high to switch on Q2. This basically forms a switch to control the Relay Coil.

If we follow the DC input voltage through the physical on/off switch we can see that the voltage is fed into the Relay Coil (+ side) and flows out the other side of the coil to be brought back. This completes the circuit and allows the coil to energise. Now, we obviously know that when a coil (or Inductor) collapses you get “Back EMF” so D3 and C3 sorts that out.

Applications:

We are going to use this circuit to drive a Power Amplifier stage in our next issue but this is not the only application.

It is perfectly within reach to use this circuit to drive some logic. Lets say we have a repeater and we need to start a timer when the repeater is in use to send an ident or to connect the Audio from such as device to lets say, an Echolink node. We could use the circuit to signal that the repeater is currently receiving a signal and thus we should not feed Audio from another source to disrupt the conversation taking place. Think of it as a “Busy Lock Out” or “Tx Inhibit” for other sources.

You could use the circuit to pull down a GPIO pin on a Micro controller in order for anything else to happen. There really is no limit as to what you can control. It’s all down to your imagination.

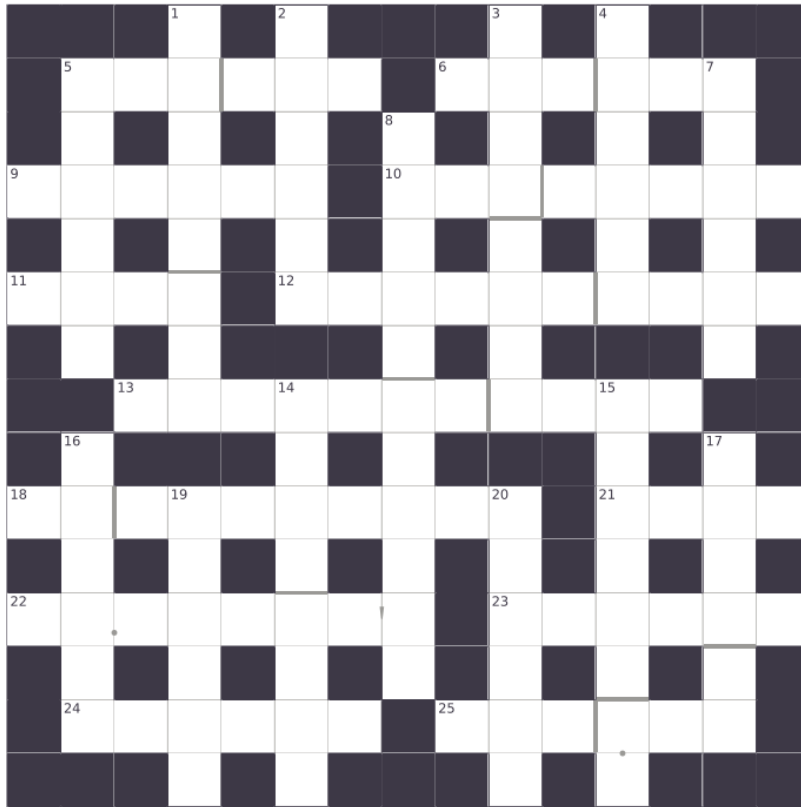
Another use would be to use a Micro controller to sample the RF frequency and select a relay based on the Frequency. Imagine having an antenna farm with a plethora of Antennas and you only need one feedline from your shack!

The maximum recommended RF Power would be around 10 Watts. Not much in the grand scheme of things and yes, there are much better solutions but if you use the circuit as a sampling device for logic level control, it should be plain sailing however, there are also some downsides to connecting this to a “T” piece from your transmitter output. Not really a problem for VHF/UHF but be careful at HF and use some Mini-8 coax for connecting the Relay. We will cover this in the next issue along with the PA circuit that will give you around 30 Watts out for 5 to 6 Watts in.

I hope you find this helpful and as always, feel free to email me with any questions. [m9wwa@wavewizards.org](mailto:m9wwa@wavewizards.org)

# May Crossword

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**Across**

- 5** 8 lines of Data (3,3)
- 6** Diego Manny and Squirrel (3,3)
- 9** Breakfast Food (6)
- 10** An Ex Partner (3,5)
- 11** Commander of USS Enterprise (4)
- 12** Another name for a Traffic Cone (6,4)
- 13** Hospitals do this (7,4)
- 18** A Process of Etching involving Light (2,8)
- 21** Another name for Amplification Factor (4)
- 22** Irish Saint (2.5'1)
- 23** A Pub Term, get them in. (6)
- 24** Someone that lives in an immoral way (6)
- 25** Feline Drops (3,3)

**Down**

- 1** A Majestic Insect (5,3)
- 2** A person who operates outside established norms (6)
- 3** Strawberry Fields Forever (4,4)
- 4** Noun - Countable and Uncountable (6)
- 5** Salad Dressing and Links to Roman Empire (6)
- 7** Previous Friend (6)
- 8** Sea going Party (5,6)
- 14** Fine Particles found on an orbiting Satellite (4,4)
- 15** A Detective played by Tom (6,1.1)
- 16** I See You (6)
- 17** Bound by Design (4,2)
- 19** \* \*\*\*\*\* the spot (6)
- 20** A build up of (6)

# May Wordsearch

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

Find the following words in the puzzle.

Words are hidden  and  and  and  and 

AMPLIFIER	DATAMODE	INTERFACE	PCB	SINUSOIDAL	VHF
ANALYSER	DIODE	INVERTED V	PETER	SLOPER	WAVEFORM
ARBITRARY	DIPOLE	KENWOOD	PWM	SOLDER	WILLIAM
ARDUINO	ENDFED	LEADING	REECE	TIM	YAESU
ATU	FALLING	EDGE	RESISTER	TRIANGLE	ZENER
BAOFENG	EDGE	LINDSAY	SCOPE	TRIO	
CAPACITOR	FLUX	LONGWAVE	SHORTWAVE	TWEEZERS	
CIRCUIT	FUNCTION	MOBILE	SIGNAL	UHF	
	ICOM	MULTIMETER			

Well, that's this end of the May Newsletter. I hope you have enjoyed this issue.

- Coming in the June issue:
- Bio of the Month – Mark M5MKW
- Audio Level Peak Meter
- Part Two – Build a 2m Linear Amplifier (PA Stage and Full Schematic)
- Echolink Control Interface
- Portable GPS display with Lat/Long, Altimeter, Bearing and Maidenhead Grid
- Take off Angles of Antennas – Incidence Angle
- Setting up a live Audio Stream



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Please get in touch before you order online and ask about payment methods

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Thank you for your support M9LIN

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