

TARS TALK

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ROGER WESTERN 1946 – 2022.

Derrick G3LHJ



It is with sadness I report that Roger passed away on the 24th of April 2022.

As most of you will have known that Roger had a serious fall from a ladder at his home whilst clearing leaves from the gutter, this was back in October 2019, since then he had spent much of his time in Hospital and a Nursing Home.

Roger had been a Member & a Life Member of TARS for many years. It all started when both his parents became Radio Amateurs - George his Father G3LFL & Gee his mother G3NQD.

I can remember Roger in the late 50's coming from school on his lunch break & meeting up with his Mother Gee at TARS HQ in Bath Lane, then getting on Air with G3NJA mostly on Top Band to

join in the Lunch Time net. I mentored Roger on his CW & he was soon up to 21 WPM. CW came natural to him, he became a super CW operator, in 1964 he obtained his Call Sign G3SXW. We were both sponsored and joined the FOC (First Class CW Operators Club) in 1965 - Roger's number was 847 and mine 841. During his time in FOC he held the positions of Secretary (1987-92) & (2011-2014), President (1987) and Vice President (1992). He was made a Honorary Member of FOC in 2017.

He was an avid Contester, he lived in Iran from 1976 to 1979 to do with his work & had the Call Sign EP2IA. We had lots of QSO's with him. At the end of 1979 when the situation in Iran became unsettled, I remember fixing up some SSB skeds on 15M & getting Gee up to my station to have chats with her son. Soon after that Roger returned home.

His Contesting took him all over the world, many of his DXpedition trips were with his good pal Nigel G3TXF. There is a table of "Set Foot on DXCC" which is the number of Countries you have set foot on, and Roger's score was way over 100 different Countries. He was also a Founder member of the "Voodoo Contest Group". They operated in the CQ WW DX CW Contests and did those contests in many African Countries. Roger was also a member of the "Three A,s Contest Group" again operating in the CQ WW DWX CW Contests in the European Countries. For his CW

DXpeditions and Contesting he was inducted into both the CQ Contest Hall of Fame (1998) and the CQ DX Hall of Fame (2007).

When Roger's Mum passed away he took her Ashes up to Haytor Rock, and since then it's been a ritual of Roger coming down from his home in London during September and going up to Haytor. He then always called into see me for a Cupa & chat. On a few occasions he managed to organize his visit to coincide with a TARS Monthly meeting and gave us some excellent Talks on his DXpeditions with photos and usually a Quiz to make it more interesting. Roger's legacy also included 4 books he wrote on DXing & Contesting. His first one was "Up Two. Adventures of a DXpeditioner". They are all very popular, there are 1 or 2 in the TARS cupboard.

He will be sadly missed by both Clubs and Amateur Radio in general, our condolences to Virginia his partner and Russel his son.

RIP ole Pal. de Derrick G3LHJ. TARS President.

Chairman's Ramble

Jeff MOWSZ

Hello to all and welcome to Tars Talk.

Well the Committee survived the AGM and we are still here to see the club through into the rest of this year. I thank the club for their support and for their faith in me to continue as your Chairman for another year. We will as usual do our very best to push the club forward.

We have gained some new Committee members too and I would like to welcome them to the team. We will be making very good use of their skills as the time goes on.

One of the things we wanted to do was to increase the representation of the Foundation and Intermediate licence holders on the Club Committee as their views and experiences as they enter the hobby could be very valuable to us in developing TARS. I can say that we have been successful in this and that bodes well for the club going forward. We have also lost one of our Committee and my thanks go to Ken Harper G4EKH for his contributions over the time he has been with us.

The club is once again growing and gaining members plus we have been very successful, possibly more than many other clubs have been, in retaining our existing membership too. It all goes to show that the membership has a great commitment to TARS and that is a wonderful thing.

I am very aware that there are a few who still do not feel confident to join us

on a Friday yet, but I hope that changes as the time moves on.

I have, as you know, continued to keep you up informed with things via my emailed "Message from the Chairman" updates and I will continue with that as well as providing other information via our website and Social Media as appropriate.

We have also now got our YouTube channel working and a number of the recent club events have been published there and links sent to the members so that those who wish to see what we are up to are able to. I think we all agree that things like this makes the club more inclusive and caters for our less able members who may struggle to come along on the Club nights.

We have had some very interesting presentations from John 2E0SPS on contest logging, integration of Log4OM and QRZ. The final part was how the TARS Robot is integrated and logs uploaded to it to help with winning club trophies.

This should help all those budding contesters out there and hopefully add a few to the TARS team.

The contests etc are all still ongoing with Derrick G3LHJ leading on behalf of the Club HF Contesters.

We also have a VHF Contest Manager now so that too is being brought more to the fore.

We have also had the Ciphers and Code Breaking presentation from Don G4NNP which was a very well supported night and an excellent and

informative evening. All I can say to Don is “knaht uoy” I am sure he and most of you will be able to work out that simple Cipher! There is more to come on this subject too so watch this space.

The “Bring something interesting” night was a lot of fun with everything from a Sailmakers Palm to an R1155 receiver present. We may do another of those as they are very easy and generate great conversation. Thanks to all those who brought things and were willing to talk about them.

Please also check out the calendar on the website as it is being updated much more regularly and the events that we have planned are all showing there.

A couple to that will be of interest coming up are a “build night” where we intend to construct, test and demonstrate antennas for portable use. We are currently asking those interested in building their own to let us know and we hope to procure all the bits needed at a good rate to keep the costs down for members.

We also have the “DSP Free night”. Most operators know the benefits of Digital Signal Processing in their modern rigs when working on the crowded bands, but it was not always that way. There was a time that Radios were full of glowing bottles and “digital control” was prodding a switch with your index finger! The same way that CAT control was the family pet lying on top of the warm rig casually playing with the VFO with a paw!

To that end, and to show that we don't always need all the electronics to pull a signal out of the air, we have been very lucky to secure a talk from one of our own members, Ian Nutt who is a renowned authority on all things Eddystone. He is bringing along a selection of sets of various ages to demonstrate and to give a talk on the history of the Eddystone company. I very much look forward to that evening being as I have a fondness for valves and I know many others are too.

We have had a number of offers of other talks and demonstrations and we are currently finding slots and programming these in. Hopefully there will be something of interest to all of our membership.

As I said last issue, if you can offer a talk on a subject or bring in an item of equipment that demonstrate and answer questions on, we will be very happy to find you a slot.

Our goal is to get back to having something on a very regular basis but not to make it every week as we know that some come along to catch up with their mates and have a good chat.

On the subject of chat can I also take the opportunity to encourage more to the Club Nets? It gets a bit lonely there sometimes when it's only the Net Controller and maybe one other. They are a chance to catch up, let others know what you are doing and to be social.

We have noted that the Friday net from the Club room does not always

happen, and there are reasons for this. Primarily, if there is something going on that night such as a talk or demonstration, the rig is not always taken out and set up. We will be addressing this so that it is there and available as often as possible and especially on the nights we are setting aside just for general chat and camaraderie. I would encourage all members who come along to get on the radio and use it when it is out. I would especially encourage our newer members and the more inexperienced as it's a perfect chance to use HF whilst there are experienced folks who can help to improve your proficiency.

We are still working on a brief for what we need the updated website to do and how we get there.

The Committee are on the case with this and we will update you in due course with progress.

Ideally when any new site goes live, it will be worth the wait so we want to get it right.

I spoke last TT about merchandise and we are still working on that to make sure we get something that is good quality and suitable for the club. We are also looking to procure locally. There have been a few issues with various suppliers but it was discussed at the last Committee meeting and people are tasked with pushing it forward.

This year is the 75th Anniversary of TARS as you will all know. We plan to do a number of club events

surrounding this and it will have its own special call sign which Lin M0TCF has now secured. Our thanks go to him for doing this.

It's also the Queens Jubilee and TARS plan another SES to commemorate this which is no likely to take place in Courtenay Park close to the Air Raid Shelter. Our plans for the middle of Newton Abbot with an antenna to the top of the Clock tower as stopped by the Council as there are issues with the roof of the tower and they did not want us up there for safety reasons.

The regular Business Meetings are back and are in the Calendar; however, we are reserving the option to be a little "flexible" with these to enable us to bring you a good variety of events and activities. Sometimes if there is a clash and the event cannot be done at another time due to availability, the BM will be moved or kept short to accommodate. That said, we are certain that we want and need to keep our members very up to date with the Club business.

Keep your eyes on the calendar. There is a lot going on.

We have also put another group of Club members through their exams so we are still growing our own and encouraging new operators to develop under the guidance of the Club and our excellent trainers.

It proves that whatever the RSGB and other "authorities" throw at us, the Club is resourceful and can develop something to fit in the gaps they leave.

Overall, the whole ethos of Amateur Radio is one of self-education, but there is nothing better than coming into the club and saying....."how do I do this" and a whole bunch of other members all dive in and offer solutions and experience. Self-help is great, but helping each other is even better.

I hope that you can see that TARS is moving forward rapidly with an excellent future ahead of it.

Thank you for your ongoing support and proactivity. It's nice to be back and sharing what we love now that the worst of the pandemic and restrictions are behind us.

See you in the Club room.....don't forget to sign the book!!

Please keep safe and well and I hope to speak to a few more of you on the air.

Best 73s
Jeff M0WSZ
TARS Chairman

Equipment available for Loan

Buddipole, mast, tripod guy wires etc. it does 40m to 2m.

Also extended whips, balun and coil to enable 80m (am waiting the 2nd coil and counter poise)

Happy to loan for Society events and also if members are going away.

It packs down into a 2ft long bag and takes about 5 mins to assemble.

Contact Steve Daniels , G6UIM

Re-Birth of a Cessna 152 G-BMFZ - Part 1 Jeff Hocking M0WSZ

Background

From a young age, I have always been fascinated by flying and all things flight related including the early flight simulators that ran on computers with 4 colour EGA monitors. But, with work and other commitments in my life I never fulfilled the dream of getting the Pilots Licence.

However, an Ex Girlfriend of mine who knew of the dream bought me a trial flight out of Exeter in a C152 G-BUEG and I was hooked. I signed up at Bodmin for a course and started flying the two school aircraft G-CEYH and G-BNSM. SM or Scary Mike as it was lovingly known became the plane I flew the most.

In the meantime I had put a decent sim together with some Saitek gear and multi screens. I was flying MS Flight Simulator 2004 and then FSX at that time but gradually I decided to migrate to XPlane and when Version 11 came out I made the jump. Xplane is now the basis of my Sim.

Then I suffered a personal tragedy when after a few dizzy spells and a visit to the MRI I was diagnosed with an inner ear condition that unless in full remission would render me "unfit to fly" as a Pilot in Command. My training stopped as there was no point continuing. I was a hairsbreadth away from my Solo flight too so it was big blow!!!

OK....so rolling with the punches I vowed I would continue to fly in the only other way open to me and that was Simulation. The multi-screen was good but not immersive enough for me so I needed to improve on this.

Finding the Aircraft

I started building a wood frame much as many others have done on YouTube channels which does improve the immersion. Part way through I realised that even this was not going to do it for me and nothing short of total immersion would do.

Luck struck when on a visit to the airfield for a coffee, I had a walk around and languishing behind the hangar in a very sad state was the stripped out remains of G-BMFZ a Reims Cessna 152 and the second to last off the production line in France. She had been crashed after a Runway excursion and flipped over back in 2010 and had been used as a donor for any good bits ever since. I thought my lucky day had arrived when I spoke to the Engineer and the Airfield Manager and they said if I wanted to take it away for a donation to the Flying Club funds I could. I agreed a price and Foxtrot Zulu became mine rather than going to the scrap heap.



Foxtrot Zulu in flight



OOPS!!! A rather sad end to a beautiful aircraft.....Or Is It???

Thanks to a good friend and TARS member with a big van, we went down, cut the tail off as that was no use to me and placed the rest of the fuselage and the doors I was able to rescue from the workshop into the van and brought her home to my house.



Home in the Driveway

Thanks to 6 of my mates again mostly TARS members who then turned up to help me move the fuselage down my neighbours path and over the fence into my garden room for the very reasonable fee of a few beers in the garden and a bowl of my home made

Chilli. FZ flew down the street at about 8ft AGL held aloft by the guys much to the amusement and dismay of the neighbours who came out to watch what the crazy fool with the aircraft in his drive was doing next.

Once in the garden, “they” or rather Linden M0TCF insisted I “flew it” into the new “Hangar” so I was bundled into the fuselage sat on a box with a yoke in my hands and they then picked me up and carried the aircraft with me aboard into the “hangar” and set it down on the frame I had prepared.

FZ was home, landed and was about to embark on a new life as my Simulator.



Now the work really starts

The first job was to get her clean, remove the cobwebs and associated insects, clean out the leaves and debris that had collected under the floors etc, remove all non-essential bits to be disposed of and anything I could use carefully set aside for refurb and preparation to go back in. This included the badly damaged headlining which needed a lot of fibreglass work by me to repair the cracks and splits,

the lower instrument panel which was badly crazed and scuffed and was sanded, repainted and re-lettered before several coats of clear coat to seal it all.

Next up was looking at how things that remained could be used. I wanted realism so by using the original control cables for the elevators and ailerons attached to springs and bungees in suitable locations I had a working yoke with the appropriate travels. Rudders were more difficult but more on that below.

The second Yoke for the Co-Pilot incidentally came from Florida from a Cessna breakers....again thanks to EBay.....I didn't realise I would have to pay import duty on it though but I guess HMRC want every drop of blood they can get.

Getting the yoke to talk to the PC was achieved with potentiometers moved by the yoke and linked to the analogue inputs of a Leo Bodnar joystick controller card and then calibrated in XPlane. The pots work well but have limited travel so I may yet swap these out with Hall Effect potentiometers. The benefit of Hall Effect is that they give a greater resolution over a smaller angle if you select the correct type and being contactless they suffer from no noise or spikes from the wiping contact.

The rudders involved designing and fabricating rudder tubes loosely based on the original Cessna design. I am lucky to have a good friend with an engineering workshop who was able to make what I needed to the drawings I

gave him. Amazing work...thank you Mr Tanner (G4VTO).

Again realism came in and I wanted Toe brakes. On a real Cessna 152, the toe brakes are a pair of master cylinders directly connected to the pedals by a cam and pressed down as the toe brake is moved forward. I simulated this by using a strong furniture gas strut that fitted in the same space that the original master cylinder took up. Hall effect sensors were fitted to some bracketry and fixings I designed in Sketch-up and 3D printed.

These again worked with the Bodnar card using analogue inputs.

I still have work to do on the P2 side to fit toe brakes there but at the moment XPlane 11 will not accept 2 inputs doing one function. The new version 12 however will so refinements are yet to come.

The pedals themselves were fabricated in steel by a local company, again to my drawings and based on Cessna originals I was able to measure at the airfield.

I managed to find a 3D print model of the actual pedal shape as these are not simple. They work on a Pantograph so the movement is horizontal rather than tilt or up and down and the foot rest I designed to accommodate this.

I used this 3D model to make the pilot side but it took so long on the 3D printer, for the P2 seat I made them out of wood.



Aileron Control

I should actually thank Bodmin Flying Club firstly for letting me buy the fuselage and also for letting me spend time inside the two aircraft I used to fly there so I could take measurements and see how things worked. Getting the elevator travel correct and the movement range of the controls was invaluable in getting FZ as close to the real working aircraft as I could.

So.....now using the yoke and pedals and testing with my laptop, FZ was able to “fly” and I could control her with the yoke and pedals.



Toe Brakes

I was very lucky in that the original elevator trim wheel complete with its indicator was still present along with a short section of its chain and cables. 5 turns full up to full down meant using a 1 to 1 gear ratio and a 5 turn potentiometer I could simulate the trim exactly. I got the 10K pot and a sprocket with the same number of teeth as the trim sprocket, made the chain into a continuous loop to link them together and 1 trim control was born.

Throttle and mixture were the easiest to do. A lucky eBay find got me a throttle cable with friction lock. The mixture I made with a 3D printed knob, alloy shaft and a 3D printed frame to carry a linear potentiometer linked to the Bodnar Board.



Throttle Mixture and Flaps

The same frame I used for the mixture pot was modified and adapted to take the end of the cable from the throttle and it was then able to act on the linear potentiometer for the throttle.

Carburettor Heat. Who needs carb heat in a sim it's not going to freeze up....well guess what....I do!! It's all about realism.

The original carb heat control and cable was still in the fuselage so I adapted it to pull a self- resetting type long lever switch. When pulled out, the knob closes the switch by pulling the cable and turn operates the switch which signals the Carb heat has been operated to the software.

She still looked very sad and stripped out so it was time to box in the ends of the wings and make some new interior

panels. Brown paper templates turned into ply panels, some formed with a heat gun and then covered with materials made a big improvement and she looked like a plane again with exception of the big void that was the instrument panel.



Interior refit



Wing ends tidied up

I designed a new instrument panel in AutoCAD and sent it to a laser cutting company who were able to cut the panel to the drawing. A covering of carbon fibre self-adhesive vinyl made for a very good looking panel. But that's all it was.....a nice panel with holes in.



Instrument Panel

So to the instruments. I looked at various options and considered using a PC screen behind the panel but then realised drilling a hole through the middle of the LCD to put the yoke in the right place was a non-starter and I didn't want to try to fit multiple screens behind the panel with all the associated set up problems and alignment. It had to be real "steam" gauges!

I looked at various companies including Simkits and Flight Illusion and although nice instruments the price wasn't..... I thought it was time to challenge my engineering skills so I trawled Ebay and various aircraft breakers and Aviation Engineers and obtained all the main flight instruments as broken or un-airworthy parts. The only ones I had to make from scratch were the Air Speed Indicator, the suction gauge and the ammeter. All the others I had with the exception of the vital altimeter.

For those I needed to make, Sketch-up and the 3D printer became my best friends. I was able to design and

fabricate all the parts I needed to make stepper or servo driven gauges.

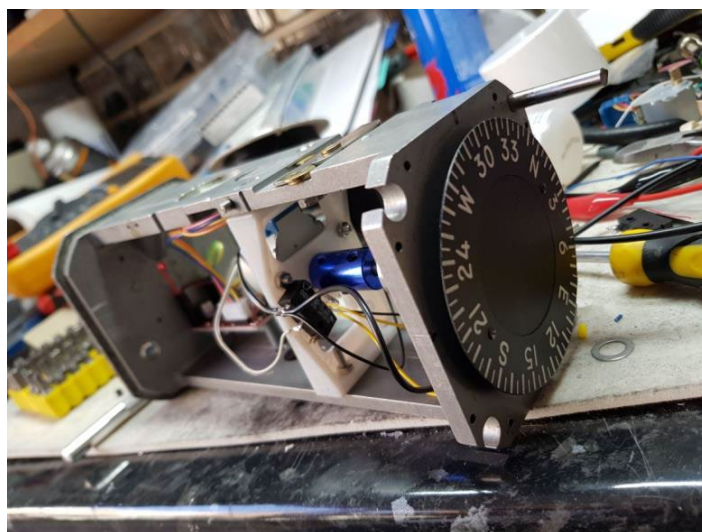
I had already decided on the interface method as I had looked at Mobiflight and others but I settled on SIMVIM Cockpit, as the way it worked, the inputs and outputs it had and could work with, were perfect for my needs. I have to put out a huge thanks to Vlad and Roman, the brains behind SIMVIM for what they do for the Flight Sim Community and for their help and encouragement as FZ came to life. Without them and their huge generosity of spirit and technical skills in creating the interface software and firmware the project would not have been possible for me. I can build and engineer but programming goes totally over my head.

The rest of the gauges were made by stripping out the innards of the original gauges working out the mode of operation and either wiring them so that the PC could activate them directly via the interface cards, designing and installing electronics that would let them mimic the on screen display or simply replacing the mechanical items such as the Attitude indicator and turn coordinator gyros with servos that operated the various indicators. I soon had a set of instruments that worked with my SIMVIM test rig and I knew what inputs they needed.

Servo gauges and fixed rotation stepper gauges are relatively easy as once calibrated they simply move to the desired position or count the steps from the stop to the desired position. The continuous rotation type such as the

Directional Gyro Auto Direction Finder and Compass need a zero point. I fitted optical sensors at first but these didn't work reliably so I stripped them out and fitted micro-switches that sent a Zero Volt reference when they were at the "North up" position.

Once the software reads the zero, it then counts in either direction to place the gauge where it's meant to be.



Inside the Directional Gyro.

To be continued

Jeff Hocking

M0WSZ

Rock and Roll Radio XXXIII

Peter Lewis G4VFG

Recently on the television there was a programme about the development of shops and the latest one was about the seventies. They found some empty shops, in Shepton Mallet and installed some modern families to run them, as they would have been in the seventies.

One was a record shop selling vinyl and cassettes. They had to hire out record players, as they soon discovered that few punters possessed such things, and some youngsters had never heard of them! Young people indeed remarked that they downloaded their stuff, and by coincidence, today as I write this on the news it was announced that illegal downloading is depriving the music industry of millions. It is funny but they said the same about cassette recording in the seventies, and it seems that the more things change, the more they stay the same. The problem though is of the industries making, at least that part that makes equipment that plays music. Records changed from 78 to 45 to 33 rpm, and players changed also. Tapes changed from reel to reel, through cartridge and cassette and DAT to finally bite the dust. Then there was the minidisc, and CD. Many people have sold off their LP records and replaced many with CD, only to be told that this format will be on the way out.

People can no longer afford to tool up with a whole new set of gear to work the latest format, small wonder there is pirate recordings.

The same sort of nonsense has happened with TV and Video, and if the lunatics prevail, then Radio will surely follow, not to mention computers.

No, someone has to wake up and realise that continuing to make equipment with a short life is a bad idea. It may well oil the wheels of commercialism, but it keeps the public poor, and fills the dumps up with useless gear and is bad for the planet, so there!

Returning to the record shop, the punters came back with complaints that records crackled and jumped. What do they know, but this shop didn't have any Garrard SP25's or home-made preamps with scratch and rumble filters or Baxandall tone correction? Had I gone into this guy's shop I would have told him so, and doubtless been dismissed as a smartarse.

Another shop was a boutique, which did rather well, but then cloths remain an interest, indeed an obsession with many.

Some Asians ran a local shop to compete with a local Supermarket by opening "all hours" rather like Ronnie Barker and his Arkwright character.

Big Supermarkets were only just catching on and few opened all night, as many do now.

They even found a schoolkid to ride a Raleigh Chopper bike doing a paper round for peanuts. I recall that I never did a paper round as I did not do mornings. Gardening on a Saturday between 10 and 12 was more civilized. Nowadays I still don't do mornings, but then I'm retired now, so that's okay!

The kid remarked that he preferred playing with his Blackberry or I-Pod. In the seventies these would be things found in a hedgerow. I wonder why so many computer thingies are named after fruit, (how else can today's youth claim its part of their 5 a day) anyway who cares.

The las also thought the money was rubbish and wasn't worth getting out of bed for!

The daughter of this Indian couple felt that running a shop was too much like hard work, and she also said she didn't like curry!

In the seventies 3% of people owned freezers, by the eighties it would rise to over 50%. Big shopping was on the way.

The eighties saw the birth of Yuppies and New Romantics, but in 1980 John Lennon was fatally shot in New York. Whilst being famous for being a member of the Beatles, he was also a man who promoted peace as a concept for life.

He joined an unfortunately ever-increasing number of people who have been killed for expressing their beliefs of peace, freedom and equality.

The eighties would see the start of some of the gadgets that we now take for granted. Nowadays there are psychologists who say that new gadgets create a feel-good factor, which unfortunately will not last for long.

There is evidence that some people can become addicted to the acquisition of new gadgets, in the belief that it will improve their contentment

Built in obsolescence, already mention, and this gadget mania in the current decade all contribute to the burgeoning mountain of useless junk at the local recycling tip. Currently in the UK, 3000 television per day arrive ther and only a few parts can be reused. One assumes that this figure may reduce over the next few years as the digital blip shakes out, although the lure of HD and 3D may continue to fuel the desire for new toys.

Indeed, as this is typed and advent of 3D sound using eight speakers has been announced. After stereo, there was quadrophonic, surround sound and now there is HD sound so do we really need 3D sound, whatever that is.

More likely it is another marketing ply to convince buyers to waster more money, judging by some of the repetitive dross that is appearing in the current charts, a bigger label for the off button would work for me!

In 1979 Buggles recorded "Video killed the radio star". This was quite prophetic, and in 2009 Robbie Williams recorded an album entitled "Reality

killed the video star". Perhaps downloads will end recording stars, but time will tell.

Perversely there are those who believe current internet exposure for music artists has led to a rise in popularity of live music events, which is of benefit to both new and established performers.

For most of the year our bank point Blank kept us busy at weekends. Our lead guitarist decided to move on, but we carried on as a three piece,

We even played a gig at the Dartmoor Prison Social Club. I recall this one, as a guy there remarked that if we were "rubbish" they would find us a cell afterwards. We went down well and got some beer money instead!

The band folded after a couple of evenings at the Golden Lion in Ashburton. This pub was notable for being the HQ of the Monster Raving Looney Party founded by Screaming Lord Such. We fitted in perfectly!

It was therefore time to dust off the disco gear. I had recently purchased a new British made valve amp called Linear from a shop, long gone called Pandora's Box. That old amp still works, and I fired it u recently to see if I could remember the bass line to "The Chain" by Fleetwood Mac famous for being the BBC Formula 1 programme. On that note it is time a cut the HT to the EL34's and wish everyone all the best and good listening.

Pete G4VFG/G20322

Experimenting with Tubes and Measures (AKA Tape Measure Antenna)

M7MYK – Mike Nicholas

I like putting my hands to work on many different things, this time it was to build a tape measure antenna out of.... well, a tape measure (as you would gather from the title) and whatever materials I had laying around my garage.

The purpose behind this was to experiment with getting into 2m repeaters of a further distance from my QTH. I was also going away for a week to North Devon, so wanted a portable antenna I could easily pack in a loaded car.

Looked around on the net for some guidance and found some nice and clear instructions in amongst all the nonsense especially from across the pond.

I came across some instructions which were very detailed and used this document for reference, document can be found at <https://nt1k.com/>

Credits to the following for the document referenced:

Joe Leggio (WB2HOL)
Andy Woolard (AA4XS)
Tom Niderost (K4TMN)

The Build:

Approximately 1 hour to construct, that was including finding the materials in my highly organised garage (the messiest place you may come across).

Basic measurements were:

Tube approximately 1000mm

Reflector element 1050mm

Driver element 892mm, cut into two equal pieces

Director element 450mm

Hairpin wire 127mm

Found a couple of lengths of plastic drainpipe, $\text{\O}40\text{mm}$ and $\text{\O}15\text{mm}$ and cut the $\text{\O}40\text{mm}$ to the required length. I did add a touch more on to the length to hand hold the antenna or mount it. The $\text{\O}15\text{mm}$ I cut some short lengths to act as support for the elements.



Measured where the 3 elements would be placed according to the instructions and used a hacksaw (all I had to hand), cut some gaps and used hot glue to attach the $\text{\O}15\text{mm}$ sections of pipe.



Cut and rounded the ends of the director and reflector elements, cut the driven element to size as the driven element must be separated on the boom.

Stuck the elements on with insulation tape and exposed the bare metal of the driven elements so as making it able to attach the feeder and hairpin.



It was recommended to put 6 turns on the feeder to act as a balun so I did and taped it on.

I used RG58 coax as it's nice and flexible, soldered on a PL259 plug as I didn't have any SO239 sockets, placed some insulation tape on the end of the elements as no matter how hard I tried, I could not smooth the ends enough.

The finished antenna:



The Element lengths need to be fairly accurate, however, the gap between the driven elements is crucial, not down to the millimetre, but to about 2mm. The hairpin match is a piece of 2.5mm² solid cable (had to convert from AWG) at the length of 127mm (5").

Cable tied it on a tripod:



Strapped the tripod to the railing in a monopod style as the wind up in North Devon, 200m above sea level kept blowing the whole thing over:



Before I started transmitting on the antenna, Lin, M0TCF, kindly put the antenna on his analyser where it gave almost perfect results.

Results:

I did put my SWR meter on the antenna once I had mounted it on the tripod, gave me almost 1:1

From my location, IO70VX, I was able to get into GB3EW with ease using my Baofeng UV-5R, had a quick chat with G3UJM, both of us were Q5.

GB3DN, Stibb Cross, is very close to me up there and even with the antenna on the floor, I had crystal clear contact.

Received GB3NC (Roche) very clearly, but unable to open.

Now GB3TR was a pain, I could receive it during the afternoon, but was very scratchy, night-time was clear. I could open the repeater, but several tests with G6YJO proved my audio was not getting through. I even tried my ICOM 207h at 10w output, but that did not get through, however I have discovered an issue with my ICOM 207h, when transmitting it appears to transmit "very wide", that's a story for another day.

All the instructions were listed in imperial measurements; I am of the age where imperial makes no sense to me, luckily, they had them in metric on the 3rd page of instructions, but I didn't realise that until I manually converted every measurement.

Overall, it's brilliant! Portable, very light weight, easy to setup. There are obviously a few down sides to it, the main one being wind! Yes, I could have made the element supports run the full length of the elements but that would then make it a fixed antenna and the mounting on to the tripod I could have worked on a little more, but I didn't have time.

M7MYK – Mike Nicholas

Picture Gallery – TARS Presentation Night 2022



Photos by David M1AEI

Membership Matters

John 2E0SPS

Firstly, I would like thank members for renewing their membership for 2022 and I'm happy to announce that up to 1st May 2022 113 members have renewed their membership this excludes Honorary and Life members, but we are still short of renewals on our 2020/2021 membership base number.

Since the club reopening attendance has been growing week on week and I hope to see many more of you attending the weekly meetings. Our events calendar is being populated with interesting presentations and events.

You can find the calendar @ Torbay Amateur Radio Society - Home (torbayars.org.uk)

The Torbay ARS YouTube was launched in January and the Construction Evening premiered on January 30th 2022. Since that date a further 3 presentations outlining an Introduction to Electronic Logging, Presentation Evening and a very interesting presentation by Don G4NNP on Codebreaking and Enigma have been added to the channel with over 550 views across the line up. The channel has been well received by the membership who are unable to attend club meeting.

Torbay ARS YouTube Channel @ (65)
Torbay Amateur Radio Society -
YouTube

A current list of TARS Members can be found on the TARS website, I regularly update the TARS Facebook Page if any changes are made. If you have a new callsign or changed your email, telephone number or home address please let me know. Also, if you know of any of our members who are sadly now SK please let me know.

I can be contacted either directly at the club, by email membsec.tars@gmail.com, or writing to: The Membership Secretary, c/o Peter Tanner Engineering, Unit 1, Burke Road, Totnes, Devon. TQ9 5XL.

We also heard the sad news of Roger G3SXW who went silent key on 24th April, he was a well-known FOCer, super CW-operator, top CW-contester and DX-peditioner and TARS Life Member.

Please welcome the following new members who joined in 2022

Darrell Jacobs	2E0VCC
Dave Holman	G4OOR
Colin Honey	G7CGI
Michael Summers	M7PEA
Steve Lecaz	M0HXQ

Membership Class	Year to Date	December 2020/2021	Difference
Associate	6	6	0
Family	7	10	-3
Full	89	106	-18
Honorary	9	10	-1
Joint	9	15	-6
Junior	2	1	1
Life	17	18	-1
Free	0	1	-1
Totals:-	139	167	-29

73

John Bogdaniec 2E0SPS

TARS Membership Secretary

*****For Sale*****

Society Embroidered Polo Shirts and Fleece Jackets

Many colours and styles are available, the prices are approximately:

- £20.00 Short Sleeved Polo Shirt
- £22.00 Long Sleeved Polo Shirt
- £22.00 Sweatshirt
- £30.00 Thor (thin) Fleece Jacket
- £35.00 Sigma (thick) Fleece Jacket
- £28.00 Sleeveless Jumper
- £30.00 Long Sleeved Jumper

Sizes follow the standard arrangements S, M, L, XL, 2XL – larger sizes available on request.

Please contact Pam G7SME to place your order, pam@g6fsp.com or

Contest News

TARS Internal Contest Results – 2021

The W8HJ Friendship Trophy							
Place	Call Sign	Name	14MHz	21MHz	28MHz	Bonus	Points
1	G3LHJ	Derrick Webber	96	62	27	40	225
2	M0CHE	Che Letton	107	57	28	20	212
3	2E0SPS	John Bogdaniec	61	44	13	20	138
4	G4ELZ	Jeff Pascoe	80	24	13	0	117
5	2E0EVM	Eddie Scott	56	33	23	0	112
6	G0UWS	Andrew Sharman	49	30	0	0	79
7	G4LZD	Steve Reading	15	9	0	0	30
The Western LF Rose Bowl							
Place	Call Sign	Name	1.8MHz	3.5Mhz	7Mhz	Points	
1	2E0SPS	John Bogdaniec	0	60	69	129	
2	G4ELZ	Jeff Pascoe	4	45	77	126	
3	G3LHJ	Derrick Webber	9	39	64	112	
4	2E0EVM	Eddie Scott	0	46	55	101	
5	G0UWS	Andrew Sharman	0	38	46	84	
6	M0CHE	Che Letton	32	25	18	75	
The G2CWR Memorial Cup							
Place	Call Sign	Name	10Mhz	18Mhz	24 MHz	Points	
1	M0CHE	Che Letton	76	81	43	200	
2	G3LHJ	Derrick Webber	36	57	30	123	
3	2E0SPS	John Bogdaniec	23	54	12	89	
4	G4ELZ	Jeff Pascoe	41	25	11	77	

THE SILENT KEY PREFIX CUP			
Place	Call Sign	Name	Prefixes
1	2E0SPS	John Bogdaniec	3221
2	G3LHJ	Derrick Webber	2746
3	2E0EVM	Eddie Scott	2332
4	M0CHE	Che Letton	1735
5	G0UWS	Andrew Sharman	501
6	G4LZD	Steve Reading	79
The G8UUT 50Mhz Cup			
Place	Call Sign	Name	KM Points
1	G3LHJ	Derrick Webber	12,877,700
2	2E1PEW	Alan Pewsey	4,120,290
3	M0CHE	Che Letton	2,194,948
4	G0UWS	Andy Sharman	1,991,439
5	2E0SPS	John Bogdaniec	445,627
The G3WTV Activity Trophy			
Place	Call Sign	Name	Members
1	G3LHJ	Derrick Webber	37
2	2E0EVM	Eddie Scott	25
3	2E0SPS	John Bogdaniec	24
4	2E1PEW	Alan Pewsey	20
5	G0UWS	Andy Sharman	3
The G4LZD QRP Cup			
Place	Call Sign	Name	Countries
1	G3LHJ	Derrick Webber	74
2	G4ELZ	Jeff Pascoe	35
3	2E1PEW	Alan Pewsey	12
4	2E0SPS	John Bogdaniec	11

The 28Mhz Cup			
Place	Call Sign	Name	Countries
1	G3LHJ	Derrick Webber	17
2	2E0EVM	Eddie Scott	16
3	2E1PEW	Alan Pewsey	13
4	M0CHE	Che Letton	3
5	G4ELZ	Jeff Pascoe	2
THE G3SXW HF DX Challenge Salver			
Place	Call Sign	Name	Points
1	2E0SPS	John Bogdaniec	102
2	2E0EVM	Eddie Scott	86
3	2E1PEW	Alan Pewsey	74
The Sharon Walker HF RTTY Memorial Cup			
P	Call Sign	Name	Points
1	G0UWS	Andy Sharman	49
2	G3LHJ	Derrick Webber	47
3	G4ELZ	Jeff Pascoe	45
4	2E0EVM	Eddie Scott	9
5	2E0SPS	John Bogdaniec	1
HF RESTRICTED CW Award			
Place	Call Sign	Name	Points
1	G3LHJ	Derrick Webber	64
1	G4ELZ	Jeff Pascoe	64
HF RESTRICTED SSB TROPHY			
Place	Call Sign	Name	Points
1	2E0EVM	Eddie Scott	67
2	G0UWS	Andy Sharman	57
3	2E0SPS	John Bogdaniec	45
4	M0CHE	Che Letton	31
5	G4ELZ	Jeff Pascoe	27
6	G3LHJ	Derrick Webber	9

The G7JHE Data Award				
Place	Call Sign	Name	Points	
1	MOCHE	Che Letton	138	
2	2E0SPS	John Bogdaniec	100	
3	G4ELZ	Jeff Pascoe	99	
4	G3LHJ	Derrick Webber	84	
5	2E0EVM	Eddie Scott	63	
The TARS VHF Transmitting Cup				
Place	Call Sign	Name	Km Points	
1	M0CHE	Che Letton	175,653	
2	2E0EVM	Eddie Scott	10,548	
3	G0UWS	Andy Sharman	7,740	
4	2E0SPS	John Bogdaniec	2,246	
5	2E1PEW	Alan Pewsey	597	
6	G3LHJ	Derrick Webber	179	
The TARS Construction Cup				
Place	Call Sign	Name	Item	Points
1	M0WSZ	Jeff Hocking	No Details	Not Supplied
2	G4FCN	Colin Coker	No Details	Not Supplied
3	M0CHE	Che Letton	No Details	Not Supplied
TARS Construction Shield for Kits				
Place	Call Sign	Name	Item	Points
1	G4DCH	Chris Tucker	No Details	Not Supplied
2	M0TCF	Lin Allen	No Details	Not Supplied
3	2E0SPS	John Bogdaniec	No Details	Not Supplied

Best Article in TARS Talk was awarded to Peter Lewis G4VFG for his continuing Rock and Roll Radio articles. The following Trophies were not awarded this year:

- Junior Construction Trophy
- The Sharon Walker Foundation Memorial Cup
- Harpers Thankless Task

.Dates for Your Diary

NOTE: The situation with the Covid-19 virus is changing rapidly. You should check before travelling that the activities announced here are taking place.

Date	Type of Event (Clock Times)	Event	Organiser / details
22 nd May	Monthly Meeting 1930 – 2130	Review of Ofcom EMF requirements	M0KRE
3 rd June	Society Meeting	To be confirmed – Jubilee weekend	-
4 th + 5 th June	Contest 1600 – 2000 0900 – 1200	HF NFD - All bands HF CW Courtney Air Raid Shelter Courtney Park, Newton abbot TQ12 2QZ	2E0EVM
6 th June	Contest 1900 - 2030	80M Club Championship Data PSK63: 3580-3590 kHz RTTY: 3590-3620 kHz	G3LHJ
11 th June	Platinum Jubilee Contest 1000 – 1110 1500 – 1610 2000 – 2110	HF: RS(T) plus Serial Number VHF: RS(T) plus Serial Number plus a 6-character locator HF CW: 3520, 7020 & 14020 kHz VHF: Bands: 2m only HF SSB: 3720, 7120 & 14220 kHz	
15 th June	Contest 1900 - 2030	80M Club Championship CW 3510-3565 kHz - any speed 3565-3570 kHz - 15wpm maximum speed	G3LHJ
23 rd June	Contest 1900 - 2030	80M Club Championship SSB 3600-3775 kHz	G3LHJ
24 th June	Monthly Meeting 1930 – 2130	Ian Nutt - Eddystone User Group	M0KRE
1 st July	Monthly Meeting 1930 – 2130	90/10 Evening	M0KRE

.Dates for Your Diary

NOTE: The situation with the Covid-19 virus is changing rapidly. You should check before travelling that the activities announced here are taking place.

Date	Type of Event (Clock Times)	Event	Organiser / details
3 rd July	Rally 1000 - 1400	Cornish RAC Rally Penair School, St Clement, Truro, Cornwall TR1 1TN £2 admission,	G0FIC
4 th July	Contest 1900 - 2030	80M Club Championship CW 3510-3565 kHz - any speed 3565-3570 kHz - 15wpm maximum speed	G3LHJ
13 th July	Contest 1900 - 2030	80M Club Championship SSB 3600-3775 kHz	G3LHJ
15 th July	Monthly Meeting 1930 – 2130	G4DCH on Antenna Design	M0KRE
17 th July	Contest 0900 - 1600	HF Championship International Low Power Contest	
22 nd July	Monthly Meeting 1930 – 2130	Build-n-buy evening	M0KRE
28 th July	Contest 1900 - 2030	80M Club Championship Data PSK63: 3580-3590 kHz RTTY: 3590-3620 kHz	G3LHJ
29 th July	Monthly Meeting 1930 – 2130	Subject to be confirmed	M0KRE
14 th August	Rally 1000 - 1800	Flight Refuelling ARS Hamfest Cobham Sports and Social Club Ground, Merley, nr Wimborne, Dorset, BH21 3DA. Talk in on S22. Entry £4 (includes car parking).	G3FPM

.Dates for Your Diary

NOTE: The situation with the Covid-19 virus is changing rapidly. You should check before travelling that the activities announced here are taking place.

Date	Type of Event (Clock Times)	Event	Organiser / details
26 th August	Monthly Meeting 1930 – 2130	Subject to be confirmed	M0KRE
28 th August	Rally 1000 – 1400 (Disabled 0930)	Torbay Annual Communications Fair Newton Abbot Racecourse Devon TQ12 3AF	G4VTO
25 th September	Rally	Weston Super Mare RS 7th Radio & Electronics Rally The Campus Community Centre BS24 7DX	Weston super Mare Radio Society
30 th September	Monthly Meeting 1930 – 2130	Subject to be confirmed	M0KRE
28 th October	Monthly Meeting 1930 – 2130	Subject to be confirmed	M0KRE
6 th November	Rally 1000 - 1400	Holsworthy Radio Rally Holsworthy Leisure Centre, Well Park, Western Road, Holsworthy, Devon EX22 6DH	M0OMC
25 th November	Monthly Meeting 1930 – 2130	Subject to be confirmed	M0KRE
23 rd December	Monthly Meeting 1930 – 2130	Christmas Party and Quiz	M0KRE

TARS Useful Information

Meetings: Teignbridge District Scout HQ, Woolborough Street, Newton Abbot
Friday Nights – 1930 to 2230 – light refreshments available for a small charge.
Postal Address for corresponding with the Society: Torbay Amateur Radio Society,
C/O Peter Tanner Engineering, Unit 1 Burke Road, TOTNES, Devon - TQ9 5XL

Local Repeaters

2M Repeater - GB3TR

145.650 - Output

145.050 – Input

CTCSS Tone F - 94.8hz

70cm System Fusion Repeater (C4FM) - GB7TQ

Analogue or Digital Auto Selection. Look at www.gb7tq.co.uk for more info

23cms TV Repeater - GB3TB

Contact the TV Group for further information.

Honorary Secretary - Ken Harper - G0EKH

Other Useful Contacts

South Devon Raynet

Please contact Dave G6FSP (Group Controller) or Colin G4FCN
(Group Treasurer) for more information.

Society Radio Nets

1.982Mhz

Mondays – 20:00

3.663Mhz

Mondays - 10:30, Wednesdays - 10:30,

±QRM/QRN

Fridays (not monthly meeting nights) - 21:15 and
Saturdays - 10:00.

14.270Mhz

Wednesday – 09:30, and Sundays 09:30.

±QRM/QRN

50.155Mhz

Mondays – 20:30

145.575Mhz

Sunday – 12.00 (Noon)

3.545Mhz

Tuesday - 19.30 – Slow Morse Practice sessions

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Centre.

Disclaimer

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editor@tars.org.uk or posted to the editor of TARS TALK. The editor reserves the
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PETER TANNER

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