

Newsletter

Chesham & District Amateur Radio Society

www.g3mdg.org.uk

October 2022

We meet the 2nd and 4th Wednesdays of the month at the Ashley Green Village Hall, Ashley Green, HP5 3PP

Welcome

On the 8th of September it was with sadness we learned of the death of Queen Elizabeth II, she passed away peacefully at Balmoral, her husband Prince Philip, Duke of Edinburgh (SK) was the RSGB's former patron, as a tribute I have included 2 articles on Royal ships and Amateur Radio in this months newsletter.

This month I continue the theme with yet another Kanga kit, having purchased the QRP End Fed Half Wave A.T.U. at the G-QRP Convention in Telford for my Yaesu FT817ND, I have now added the Transmatch A.T.U. (Angie built this in an afternoon) to its arsenal.

James (M0JCQ) is our roving reporter in Zanzibar, read about his holiday and its connection with Chesham.

Dave (G8FMC) is mentioned in Practical Wireless this month, check it out in *2022 PW 144MHz QRP Contest*.

Yet another exotic location for one of Jeremy's (G3XZG) QSO's this month.

This month we have plenty to read about - enjoy...

Bryan M0IHY

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Contact details

Chairman	- Jeremy Brown (G3XZG)	Secretary	- Malcolm Appleby (G3ZNU)	Treasurer	- Matt Whitchurch (M1DTG)
	- Guy Plunkett (M0GUY)		- Dave Keston (G8FMC)		

All the above are members of the committee and can be contacted on cdars-committee@googlegroups.com

Editor - Bryan Page (M0IHY)

Chairman's Ramble

Good morning all and as I came out of the meeting last evening, it suddenly really felt like winter. I'm hoping that's not going to be repeated for a while, particularly as we plan to spend a few days in Sussex, near Bognor in fact. I may well take the handheld, as there is the chance of getting up on to the downs, if the weather is good. But that's enough of my plans which may, or more likely may not, come to fruition.

We have had a busy month, with SSB field-day at the beginning, in which our claimed score so far seems to compare well with others in the same section, the beginnings of the winter affiliated societies series on 70 MHz and two meetings.

At the informal meeting on 14th September, Bryan talked about and brought the ATU made at the QRP convention, details of which were in last month's newsletter, and on the 28th, we had a very informative talk on HF antennas from Roger G3MEH, which I suspect may spill over into a part 2 at some point in the new year. Both meetings were well attended and it was especially pleasing to have a good turn-out for Roger.

The Ashley Green community association who run the hall have raised the hourly rate for rental, which the committee felt was completely justified in light of the rising costs of heating. The new rate is not uneconomic for us, though we may need to consider proposing a small increase in subs at the AGM.

We have completed the review of club equipment and are looking at offering items which are surplus to requirements, initially to members, before perhaps putting them on eBay, and this will also help with funding, and perhaps reduce the storage space we need.

This month, we have two more meetings, plus the 50 MHz leg of the Affiliated Societies contests, as well as our usual nets.

Thanks to Malcolm, we have recorded Roger's talk and will put this on the website. This seemed better than trying to use Zoom as he had a number of drawings for which he needed a laptop and the club projector. We will be looking at Zoom again for the formal meetings over the winter.

I cannot finish without mentioning two members, Dave G8FMC and James M0JCQ. Dave is to pick up a certificate as contest winner and James is to give a presentation at the forthcoming RSGB convention. Great work both. Dave I know is a little sheepish about it, as the actual winner is not an RSGB member, but no matter, go for it.

Once again thanks to all, committee and members for the support in continuing to run and participate in a lively radio club.

73, Jeremy G3XZG

Editor's Muse

Angie built most of the Kanga QRP Mini Transmatch ATU, it was her first attempt at soldering and a good job she made of it, now we have to check it out, possibly using the 9-band Watson HF/VHF/UHF mag-mount vertical (acquired at the G-QRP Convention on the 4th of September) and our FT-817ND.

We (Angie (M6WTL) and I) thoroughly enjoyed our trip to the G-QRP Convention in Telford on the 3rd and 4th of September, so much so that we're contemplating going again next year.

Bryan M0IHY

Amateur radio and the Royal ships

Credit: Various Internet websites

This is the story of a man and his quest with the Royal vessel the “Queen Mary” and W6RO.



Nate Brightman, Long Beach, CA

K6OSC 1917 - 2016

First Call: KN6OSC in 1958 Other Call(s): G5BRI

“Spark” Behind Queen Mary W6RO Amateur Station Nate Brightman, K6OSC, SK

Nate Brightman, K6OSC, called the “spark” behind W6RO, the Amateur Radio station aboard the Queen Mary in Long Beach, California, died on October 29. He was 99. An ARRL member, Brightman, who lived in Long Beach, had served as the W6RO Wireless Room Manager for 34 years, plus another 10 years arranging for the GB5QM “Last Voyage” Amateur Radio operation and establishing W6RO, which is licensed to the Associated Radio Amateurs of Long Beach.

Nate Brightman, K6OSC

In 2013, Brightman reluctantly resigned as W6RO Wireless Room Manager, citing recent illness and his advanced age as reasons for his decision. In his farewell statement, Brightman said ham radio operations now aboard some 90 museum ships such as the Queen Mary have introduced Amateur Radio to millions of people. “This means of introducing Amateur Radio to the public is the biggest publicity stunt ever for Amateur Radio, and we should be proud that it all started with W6RO!” he said.

In the process of spearheading Amateur Radio aboard the Queen Mary, Brightman balanced the tasks of recruiting hundreds of operators, garnering equipment donations from leading manufacturers, and maintaining excellent relations with “The Queen’s” management. He earned an ARRL Special Service Award for his efforts in 2004.

Much of this information is from the column in World Radio Magazine by Lenore Jensen, W6NAZ (SK). “Who’s Who in Amateur Radio”

In 1967 when Nate read that the City of Long Beach planned to buy and bring the luxury liner, the Queen Mary, to its beautiful harbor as a tourist attraction, he thought, “How could we of ARALB make Amateur Radio part of the long voyage from England?” Nate initiated phone calls, paper work and official permission pleas galore to both countries. Finally, it happened: permission was granted and the ARALB club members supported a project to send club member Al Lee (W6KQI), to operate amateur radio aboard the ship for ARALB. Not only was he the first American amateur to operate a maritime mobile station licensed by the British General Post Office, using the call GB5QM, but also the first time an amateur was given permission to operate on a British vessel.

Amateur radio and the Royal ships

On June 20, 1974, Nate submitted a "Proposal for Amateur Radio Operation Aboard the Queen Mary" to Marvin M. Wolff, then the Operations Director of the ship. The proposal outlined how the Radio Room could be refurbished and how amateur radio equipment could be used alongside the ship's maritime radio equipment. The purpose was to restore the room to its original use, appearance and atmosphere as much as possible.

Nate Brightman - K6OSC (SK), has been in love with this Queen for more than three decades, and has seen his dream for her fulfilled. The dream of Nate and his fellow club members of the Associated Radio Amateurs of Long Beach came to fruition in 1979 when the Queen Mary again began to operate a Radio Room aboard the ship. The go-ahead was given and Nate and his fellow club members, along with the Queen Mary staff, proceeded full steam ahead with amateur radio station W6RO. On April 22, 1979, the ARALB celebrated the Grand Opening of the Wireless Room from which W6RO would operate. "We particularly wanted the operators to be able to answer questions from the public, hoping to attract newcomers to our hobby" said Nate. Since then, volunteer amateur radio operators operate the station daily. Operators are not required to be members of the ARALB; operation is open to any licensed amateur.

Nate insists that special recognition be given to the manufacturers who have provided all the radios and antennas and particularly to Mr. Joseph F. Prevratil, CEO of the RMS Foundation/Queen Mary Seaport, (operators of the Queen Mary) who has always been very supportive of the amateur radio operation.

Answering the question of what brought Nate to his devotion to amateur radio, Nate replied, "In 1957, when his son Howard (now K6OSD) was in the sixth grade, he told me that he wanted to be an amateur radio operator. We studied together and received our calls in 1957." Nate's community work hasn't been solely with W6RO. He's diplomatically tried to keep Long Beach officials aware of amateur needs and interests, public service work and emergency abilities.

He persuaded the city to raise a 30 foot antenna limit to 60 feet. Nate offered amateur radio to the 1982 Long Beach Annual Marathon and the ARALB has supported it since. For three years Nate inspired Operation Library with demo ham stations in all the city libraries, hoping to attract people to our hobby. He has taught amateur radio to blind teens making schematic circuit boards using rope symbols glued to panels. In 1966, 1976 and 1977, Nate served as President of ARALB. From 1999 to 2001, he was President of the Long Beach IBM Users Group. He brought ARALB members into the Red Cross where Nate has been a member of the Disaster Service team for more than 26 years. He held many positions over the years including Director of Operations. For his work with W6RO in the Wireless Room, Nate received the Dayton Hamvention Special Achievement Award in 1991. For ten years, Nate, on behalf of the ARALB, has been collecting food for the City of Signal Hill's canned food drive and has collected thousands of cans of food for the needy of the City of Signal Hill.

He made headlines on March 24, 1968 when he, together with a ham on a tuna boat, arranged for a shipment of Hemophil, a blood clotting medicine to be flown to Peru for Hemophiliacs about to undergo surgery. This required holding up a TWA flight for an hour as the medication was just coming off the production line to be flown from the manufacturer, Hyland Labs, by sheriff's Helicopter to the airport. Another time he made the newspaper was in February 1969 when he was the first one to locate a tuna boat that was commandeered and taken to a Peruvian port. His information was the first time the U.S. State Department learned where the tuna boat was. He was able to do this because he regularly kept a regular early morning schedule with Martin Jacobs (WB6RKR) [SK] who was a fisherman on the boat. He gave Nate information as he heard the footsteps of the Peruvian soldier's walk to the other end of the tuna boat. This information was relayed to the U.S. State Department by the Press Telegram and was the first word they had of where the tuna boat was taken by its captors.

When the Battleship, New Jersey, was on its way to Vietnam, Nate got a call at work from the Long Beach Press Telegram asking him if could go home and run phone patches for the sailors who wanted to contact their families waiting in Long Beach. Nate spent the whole day running patches until the ship arrived. After the ship arrived in Long Beach, Nate and his wife, Evelyn (WA6ZTW), were given a personal escorted tour of the entire ship.

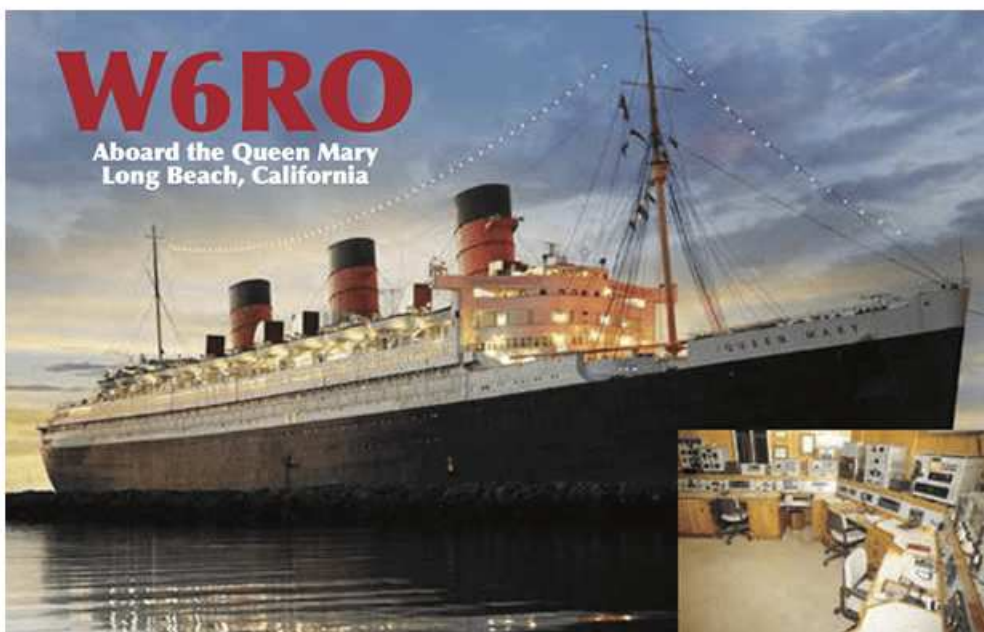
Amateur radio and the Royal ships

Nate received a ARRL Public Service Award for his work relaying messages during the Managua Earthquake, December 23, 1972. In January 1982 the ARALB presented Nate with the "Radio Amateur of the Year" Award. Nate served as President of the ARALB in 1966, 1976 and 1977 as well as many years on the Board of Directors. In 2001, Nate celebrated his 44th year as a member of the ARALB. For his dedicated service, in 2001 the ARALB awarded him a Lifetime Membership.

Nate became a Silent Key on October 29th, 2016.



In the Shack, aboard the Queen Mary



One of the W6RO QSL cards

The Royal vessel the “Queen Mary”

Credit: <https://queenmary.com/history/amateur-radio/>

Radio During the Queen Mary’s Decades at Sea

Like all other vessels of her era, the Queen Mary used maritime MF and HF radio frequencies to communicate with other ships and with shoreside high seas radio stations. Most of the world’s shipping lines contracted with radio companies to provide equipment and skilled radiomen for their ships, the largest being Marconi’s Wireless Telegraph Company. Cunard Lines selected the much smaller International Marine Radio Company to provide their ships with radio equipment and operators. IMRC designed and custom-built most of the equipment used on Cunard liners, and employed the radiomen who maintained and operated it. Some of that IMRC-built equipment is still on display in the Wireless Room. IMRC radiomen sailed on every voyage of the Queen Mary, using the radio callsign GBTT, providing communications in support of intership safety, navigation, weather, news reports, ship’s business, crew and passenger messages, and even radio-to-landline telephone calling for those who would pay the rather high prices for that service. Except for the ship-to-shore radiotelephone calls, most other traffic was passed using Morse code radiotelegraphy. In this era, radiotelegraphy was more efficient and reliable, being able to get through noise and signal fading much better than the AM and SSB voice modes.

Even into the 1950s and 1960s when Amateur Radio became increasingly popular, IMRC radiomen weren’t much interested in tuning-in and operating on the ham radio frequencies. Indeed, after working a watch of four to six hours of pretty much constantly sending and copying Morse code traffic, the radiomen had little desire to do more of the same on the ham bands on their own time.

Amateur Radio Station GB5QM on the Queen Mary’s Last Great Cruise

Amateur radio first came aboard the Queen Mary for her Last Great Cruise in 1967. Upon learning that the City of Long Beach was considering the purchase of the Queen Mary to serve as a larger-than-life icon of its emerging status as an ‘International City’, Long Beach resident and radio amateur Nate Brightman, K6OSC, fell head-over-heels in love with the idea. He bent every ear and pulled every string he could to convince city leaders to go ahead with the deal. They heard him, and the purchase was made. Then, learning about the emerging plans for a Last Great Cruise to deliver the liner to Long Beach, Brightman hatched a plan to place an amateur radio station aboard the ship to contact and converse with radio amateurs around the world during the Queen Mary’s Last Great Cruise.

Brightman had to overcome many significant impediments to this project. The Cunard Line, US State Department, and the British Government all had to be brought into agreement to permit this event to happen. When all was arranged, Long Beach radio amateur Al Lee, W6KQI, led a team of amateurs as they flew to England, boarded the Queen Mary, installed their radio equipment, and broadcast from the Queen Mary at sea using the British-issued callsign GB5QM during the Last Great Cruise. Every radio amateur around the world who made contact with GB5QM was sent a commemorative ‘QSL’ (confirmation of radio contact) certificate. One of these certificates is still on display in the radio display room.



Nate Brightman, K6OSC, founder of W6RO aboard the Queen Mary

The Royal vessel the “Queen Mary”

W6RO Aboard the Queen Mary in Long Beach

Nate Brightman’s vision for amateur radio aboard the Queen Mary did not end when she reached her final mooring in Long Beach. He was already at work on a plan to establish a permanent amateur radio station aboard the ship. This proved to be his most daunting undertaking ever, requiring 11 years of persistent negotiating to convince City and ship officials to grant his aspiration. Space was approved on the Sports deck in the structure originally housing the ship’s squash court. This was an ideal location as it provided direct access to the roof overhead for antennas and was in a position to be passed by visiting tourists as they exited the wheelhouse and officer’s quarters exhibits. Construction was funded by the City, and the console was re-created from Brightman’s own photos of the ship’s original Wireless Telecommunications console, formerly located on the Promenade deck portside, photos which he shot during a VIP tour shortly after the ship’s arrival in Long Beach in 1967.

Amateur radio equipment for the Queen Mary’s new Wireless Room was donated by the Swan Radio Company of Oceanside upon Brightman’s request to the company’s founder, Herb Johnson. The equipment and antennas were installed, some of the ship’s original radio equipment was added for display, and the new Wireless Room was opened for operation on April 22, 1979. From that date forward, volunteer radio amateurs from the local ham radio club, the Associated Radio Amateurs of Long Beach, as well as others from all over southern California, have staffed the Wireless Room, making radio contact with hams across the US and around the world and demonstrating ham radio to the ship’s tourists as they pass by. Many of them still use Morse code.

Brightman served as manager of the station from 1979 until his retirement in 2013 – nearly 35 years! The station was re-dedicated as ‘The Nate Brightman Wireless Room’ in 2007 in his honor. W6RO enjoys worldwide fame on the ham radio bands. Amateurs who make an on-air contact with the station are sent the very popular W6RO ‘QSL’ card commemorating their exchange with the Queen Mary.

Be sure to stop by the Wireless Room on your tour of the Queen Mary. And, if you’re lucky enough to encounter one of the volunteer radio amateurs there, enjoy a conversation about all things radio.



The Queen Mary in Long Beach



The W6RO Nate Brightman Radio Room

M0JCQ, Zanzibar and Chesham

It was the 7th of September, I checked my emails, one stood out from the rest, this is what it said:

Hello Bryan,

I hope you and Angie are both well. Here's a little snippet for the next newsletter..

Now, although not strictly amateur related, this following bit has a random link back to Chesham! While on holiday in Zanzibar (5H1) Christina and I went on a cultural community tour of the small fishing village we stayed in. The tour itself showed us typical life on the island, with seaweed farming, coconut rope making, a visit to the local medicine women, as well as visiting a primary school (with children exuding more energy than a Russian amp!).

So where's this going? It turns out the head guide had links to Chesham. He mentioned it first, then our collective mouths dropped in unison. He had been taught English and Geography by a teacher from Chesham, many years ago. She stayed on the island, and this encounter and education helped him setup the tours and continue to make a big difference in his community. In the photo below, he's the guy to the right (I'm in the middle - 5 days into food poisoning!). A small, tenuous link, but an important one for him and his community!

To try and bring some RF into this, you notice that in the Southern hemisphere and this near to the equator, the satellite dishes point almost vertically up!

73 James M0JCQ

It seems wherever you go in the world, you're not far away and James and Christina's experience has shown us just that!! I'm not sure whether this falls into the '6 degrees of separation' category?



James (M0JCQ - centre) and the head guide (right)



Seaweed farming



Coconut rope making



Local medicine woman

M0JCQ, Zanzibar and Chesham



A child cycling to/from school.



Note the dish is near vertical, indicating the satellite is almost directly overhead, as it would be on the equator.

Kanga QRP Mini Transmatch A.T.U.

Thanks to Kanga for permission to reproduce this document.

Kanga QRP Mini Transmatch ATU (MTM-ATU) Full kit

The MTM-ATU uses a well know and effective Transmatch circuit with a resistive bridge SWR LED indicator. The transmatch will work from 3.5MHz to 30MHz, It is suitable for Power levels up to around 10 watts when matched. Works well with SW Receivers too.

The best antenna in my opinion is whatever you can put up in the space you have, after all ANY antenna is better than no antenna. This often is a none resonant length of wire that we want to work on multiple bands. The problem is that such an antenna is likely to be a poor match for our modern transceiver and if we are not careful we can cause damage to our radio. The way to protect the radio is to transfer the power from radio to the antenna. If the antenna is a poor match it's rather like throwing a ball at a wall, most of the power bounces back into the radio causing the PA to run very hot and often we can damage the output stage resulting in big bill for a new output stage.



Now you may think an ATU tunes the antenna allowing it to be used on our chosen frequency but it does not, the ATU is just an impedance matching device that allows better power transfer into the antenna, no ATU can make a bad antenna a good one. Yes you will see an improvement in performance because power is now at least getting into the wire from the PA and so some will radiate, likewise on receive more signal will be transferred into the receiver due to better impedance matching. Depending on the frequency of interest the impedance of the antenna will change from a few ohms to a few thousand ohms. No ATU will tune all antennas on all frequencies or if it does the efficiency will be very low with often little power reaching the antenna itself.

Remember a dummy load will give you a good match but that doesn't make it a good antenna!

In an ideal world we would all use cut to length resonant antennas but we live in the real world and so most of us, especially if we operate portable have to make do with what we have. Therefore a good ATU is a very helpful piece of equipment. With limited power it's important to transfer as much of our power as possible with as little loss as possible.

There are many different ATU types L match being one of the most common but although they all provide matching the efficiency can vary a lot, also most do not provide any additional filtering of the signal so pass multiple harmonics that may be present in the radios output.

Enter the transmatch

Well the transmatch is a more complicated ATU than many other designs but it does have a couple of advantages. The transmatch design provides a Band pass type filter which can really help reduce unwanted out of band interference. From an efficiency point of view the transmatch is also very good, much better than the simple traditional L-Match circuits. I also find that a transmatch of this design are faster to tune as there is no need to switch inductors, just two controls to adjust gives a faster match.

This project will build a very small Transmatch, The smallest desktop mounting unit I have seen.

Kanga QRP Mini Transmatch A.T.U.

Let me start by saying I do not take any credit for the design or the principal of the Transmatch ATU. The original work seems to have been done by Charlie Lofgren W6JJZ and over the years many variations have been seen, the Kanga QRP Mini Transmatch combines his work with a well-known resistive SWR bridge to build a very compact unit.

Parts List

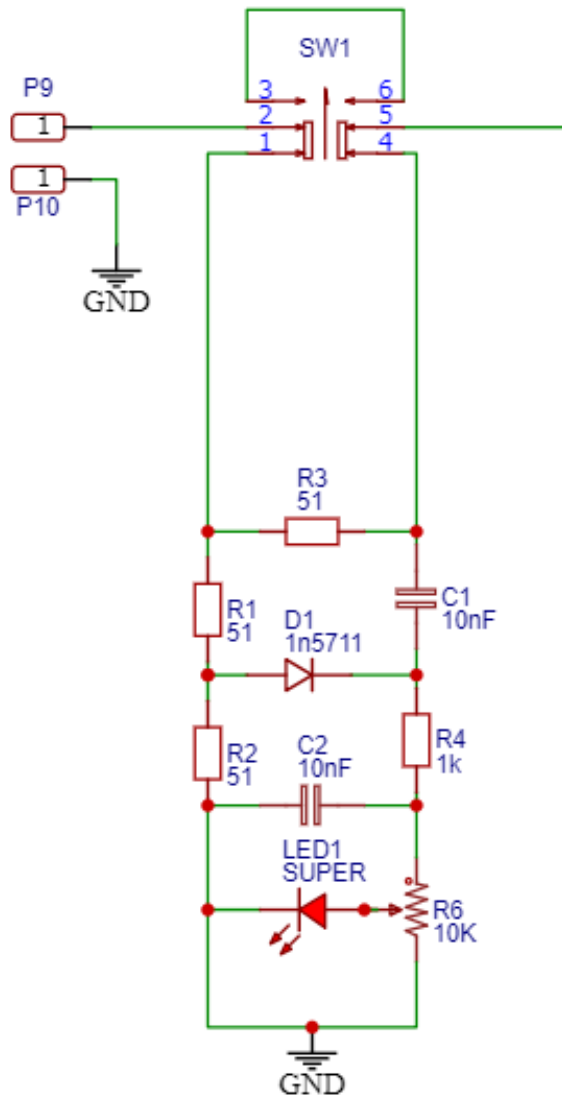
Check you have all the parts before we begin building

Qty	Item
1	Transmatch case
1	Transmatch Front Panel
1	Transmatch PCB
2	Rear Panels (BNC or SO239)
1	DPST Switch
1	SPST switch
1	R2, R3, R4 51 Ohm 2 Watt Resistor
1	R1 1K 1/4w Resistor
1	R5 Sensitivity Adjust 10K Trimmer
1	C1, C2 10nF Disk Capacitor
1	1 x IN5711 Diode
1	T68-2 Core
1	1m 0.5mm Enamelled Copper wire (Colour 1)
1	250mm 0.5mm Enamelled Copper wire (Colour 2)
2	2 x 270pf Dual Poly Capacitors
1	1 x Foam insulation tape
1	1 x 5mm RED LED
2	2 x SO239 or BNC Sockets (Depends on version)
8	8 x 10mm SO239 mounting screws
8	8 x M3 fixing nuts
2	2 x M3 Solder Tags
4	4 x M2.5 4mm var cap mounting screws
2	2 x M2.5 12mm Shaft extender Screws
2	2 x 10mm shaft extenders
2	Two control knobs
4	4 x Stick on feet
1 or 2	Connecting single core Cable 350mm (or 2 x 150mm cables)

The Mini transmatch can be broken down into two sections, the first is a resistive SWR bridge.

This is the same circuit as used in our little SWR Indicator bridge kit.

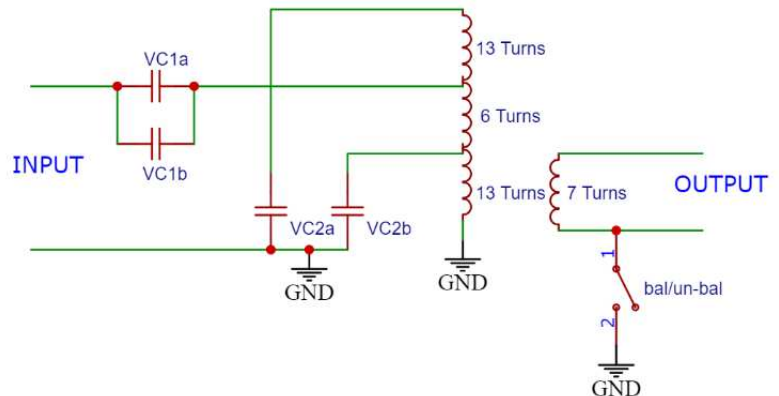
Kanga QRP Mini Transmatch A.T.U.



This section can be switched IN or OUT by a two way toggle switch, when in circuit the bridge will light the LED if the antenna is presenting an impedance higher (or Lower) than 50 ohms, if the impedance is matched the LED will go out. Depending on the power level in use the LED can be either too bright and doesn't go out when matched or to dim and hard to see. This circuit has an adjustable sensitive trimmer and it is best to adjust this to suit your most likely used power level.

The second part of the transmatch is the ATU section.

The ATU section uses a T68-2 core comprising of 13/6/13 turns on the primary and 7 turns on the secondary, the output can be isolated by means of a grounded toggle switch so the user can use either balance or unbalanced antennas.



The number of turns on the output stage could be adjusted to work with lower impedance antennas (try just 3 or 4 turns if you want to play) the only problem with reconfiguring this setup is that efficiency can suffer.

The Toroidal and its windings are the most difficult part of the build and if not right the ATU will not work correctly.



There are many videos on YouTube showing how to wind them that may help. But here are the instructions you need to make the coil. If you are reading this from the paper instructions you may want to look on the instruction page on my web site for a copy in colour that may be easier to follow. Find the first colour wire (its about 1m long) pass it through the toroidal as shown here, leave the one end about 50mm long. This counts as one turn, every time the wire passes through the core it counts as a turn,

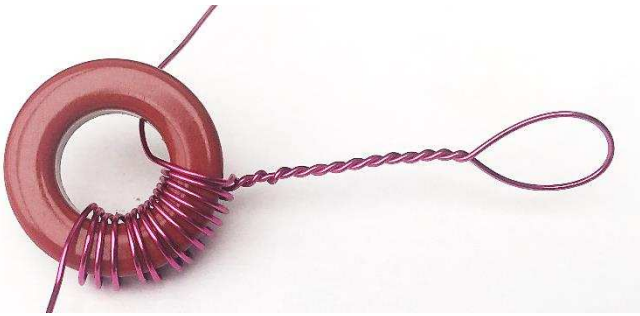


Continue to wind the wire for a total of 13 turns as in the picture on the right.

Note the direction that I have wound it.

Kanga QRP Mini Transmatch A.T.U.

Now we need to form a loop.



Form a loop about 30-50mm long as shown here, feed the wire back into the core and wind for another 6 turns.

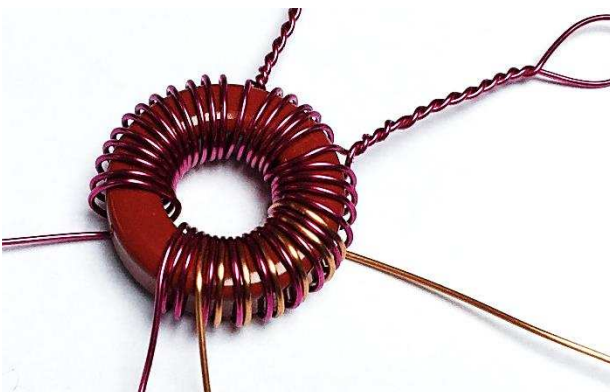
The toroidal should be looking like this now.



Now form another loop as before and then continue to wind the toroidal with another 13 turns.

So far we should have 13 turns then a loop followed by 6 turns and a loop and a final 13 turns. Double check that you have this correct before we move on. A good way to count the turns is to use a digital camera (phone) and take a picture, zoom into the picture on the screen and then you can count the turns much easier than trying to count them on such as small core.

That completes the main windings but we still have one more winding to do.



Now find the 2nd coloured wire, it is much shorter than the first wire (only about 25cm).

If you are using paper instructions you may find it hard to see this picture so look on my website for a colour copy if that helps. Now this winding is only 7 turns but you need to wind them BETWEEN the winding already on the core, start 3 turns from the end of the coil and very carefully wind this new coil so the copper wire is between the turns of the purple coil. Look carefully at the picture and make sure you wind the second coil in the same direction as the picture shows.

Kanga QRP Mini Transmatch A.T.U.

Hopefully you will produce a nice neat set of windings, take your time this is a very important part of the transmatch and the performance will be reduced if this is not done correctly.

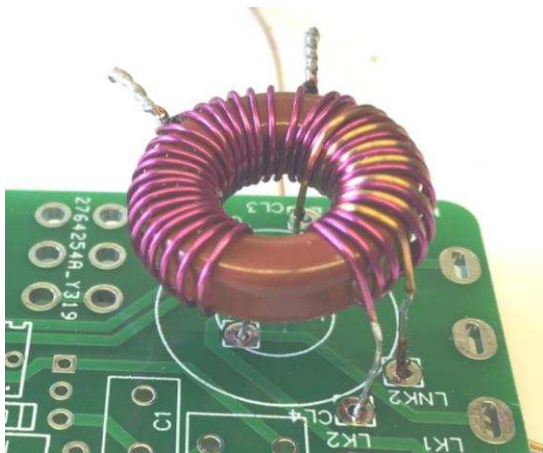
Next I suggest fitting the three 2 watt resistors, you need to keep the off cuts from these resistors.

Now we can fit the toroidal, you first can tin the leads, this is the hardest part of the kit to fit and probably the most important part to get right.

The enamel on the wires is a special enamel that will burn off if treated correctly. You need a good soldering iron that keeps its heat for this, you can help it by scraping the wire or lightly sanding the wires from the toroidal first to break the enamel insulation. When tinning these wires you will need to apply the soldering iron and solder for about 10 secs or so, normally a puff of smoke will come off the wire when the enamel burns off and the solder will then flow over the wires. Don't breath in these fumes, I am sure that they are not good for you. In fact all solder fumes are to be avoided. Make sure you have plenty of ventilation in the work area.

The first two wires I tin are the two loops, makes sure the two wires of the loop are well twisted together first and then trim the loop so it's about 10mm long from the coil. Now apply your soldering iron to this pig tail and I find applying solder to the tip while rubbing the irons tip over these wires helps to burn off the enamel, make sure that the solder flows nicely over the pig tail just about up to the core.

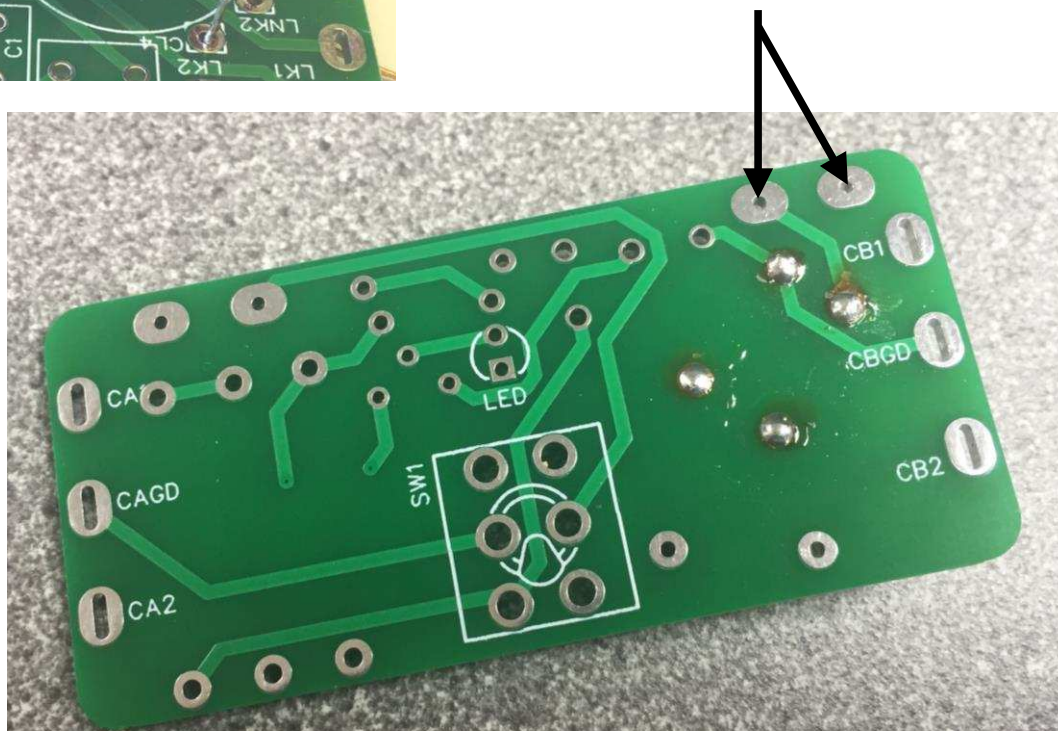
Now leave the 4 other wires one to two inches (25-50mm) in length. Again apply the soldering iron and solder to the wire near to the core, we need about 10-15mm of wire from the core to be tinned. You will need to apply the iron for around 10secs or so to burn off the enamel with a puff of smoke.



Now fold the 4 wires downwards as per this picture, I find trimming each lead to a different height makes it easier to fit the toroidal to the board, just feed the wires one by one into the correct hole.

When the Coil is fitted flush to the board solder each of the 4 leads. Now its worthwhile checking for continuity for both windings.

With a test meter check that there is a short circuit between CB1 and CBGD. Then check for a short circuit between the two large solder pads just above CB1



Kanga QRP Mini Transmatch A.T.U.

Now we kept those cut off leads from the resistors, find two nice long ones and make them into little walking sticks like the picture here. (save the others for later too!)

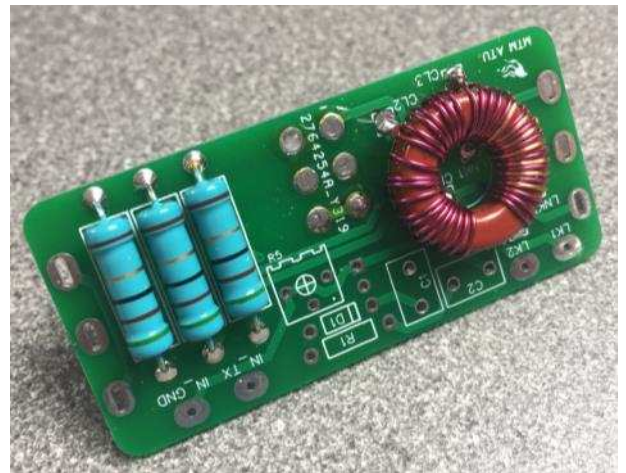


These hooks are fed through the board to connect the coil taps to the PCB.

Do this for both taps of the coil and solder in place, trim the wires when done.

The board should now look like this.

Now we can carry on installing the remaining parts.



Now turn the board over so we can fit the switch, remove the top nut and washers from the switch and put them on one side for later. The switch should be fitted so its pins JUST fit flush with the other side of the PCB, this is so when the ATU is assembled into the case and onto the front plate there is enough of the screws thread protruding to attach the nut to. The nut is only cosmetic really so fitting it really is optional.

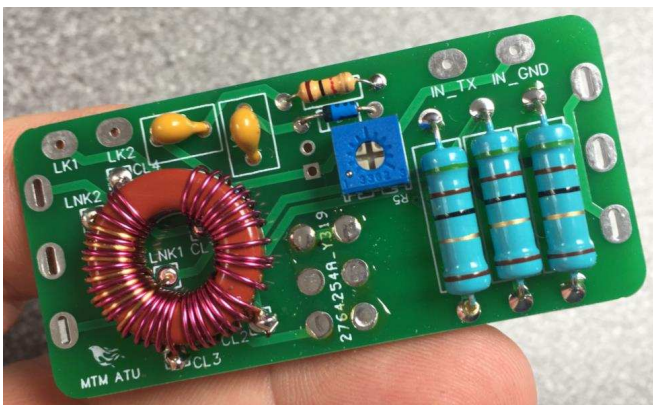
Now we can make a start fitting the smaller parts.

These next parts are simple to fit, start with the two yellow 10nf capacitors C1 and C2, they must be fitted on the same side as the large resistors. Next fit the 1K resistor and the 10 K trimer all on the same side. Final fit the diode. Fit this so that the black band is nearest to the two yellow capacitors

This is what the board should look like now.

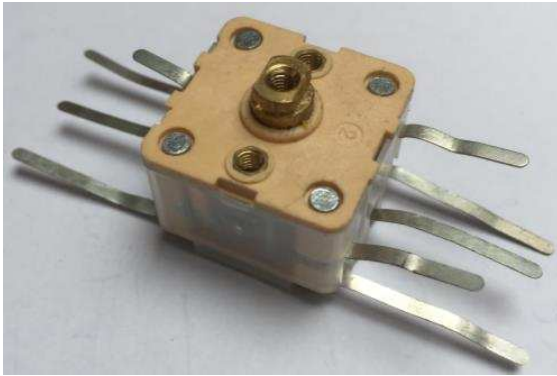
The board shown here is an earlier board than the one in your kit so you may notice one or two little differences.

Now turn our attention to the front panel, and the two variable capacitors. We need to fit these to the front panel but first we need to prepare them.

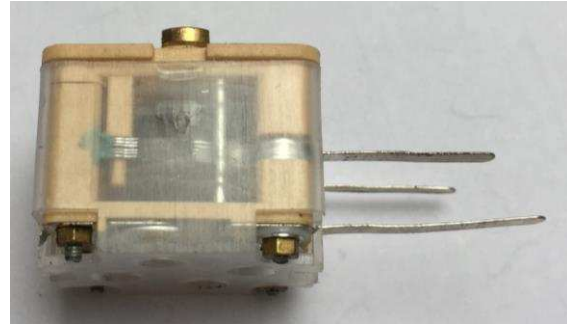


Kanga QRP Mini Transmatch A.T.U.

IMPORTANT read all the following twice and look at the pictures BEFORE you cut the leads. Be 100% sure what you're doing at this stage. Check twice, cut once!



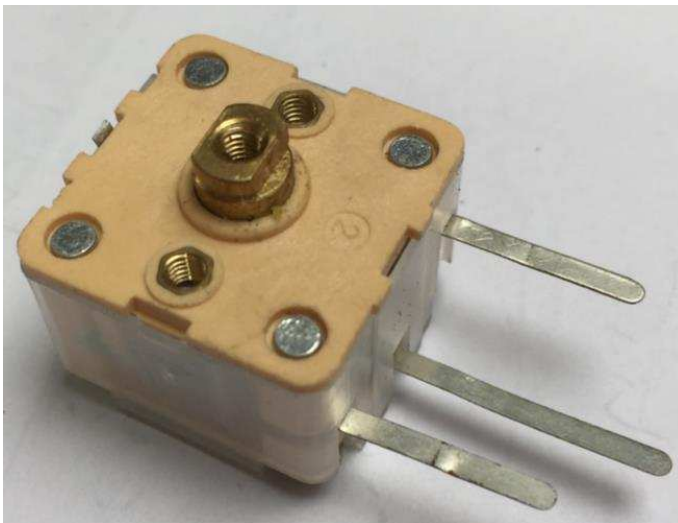
On one side of the capacitor there are 4 pins, the other side has 5. Make sure you identify each side correctly, once sure snip off all the legs on the side with 4 pins.



Now on the 5 pin side half way down the body of the capacitor you will see one lead on the left and on the right, we NEED these so do not cut them! Under these leads we have 3 leads in a row, we only want the centre lead, the other two need to be snipped off, snip them off right up against the body. Check twice before cutting them that you have the right ones, look at the other pictures below in the next stages to be sure you know which ones to cut.

IMPORTANT Note

Keep the off cuts, remember the QRP motto 'Do more with less' (God bless you George) . We may have a good use for them a little later on...



If you have a suitable capacitance meter check between the centre pin and the two outer pins, you should find that you have about 270pf when you adjust the capacitor between each pin and centre.

Now we can fit the shaft extenders to the capacitors, you will find 10mm black extender tube and 2.5mm x 12mm screw, when tightening the extender be careful not to damage the internals of the capacitor by applying too much force to the body of the capacitor. Use a pair of cutters or needle nose pliers to hold the small brass shaft on its two flats when tightening the 12mm screw.

On the back of the capacitor there are 4 trimmers, we are not using any of them but I still like to set them fully open. If you don't do this it's not going to cause a problem but I still recommend doing this.



Kanga QRP Mini Transmatch A.T.U.



When the capacitors are ready we can move on. Attach the two capacitor to the front plate with the 2.5mm short screws provided.

Fold back the three remaining terminals from each capacitor as shown in this picture.

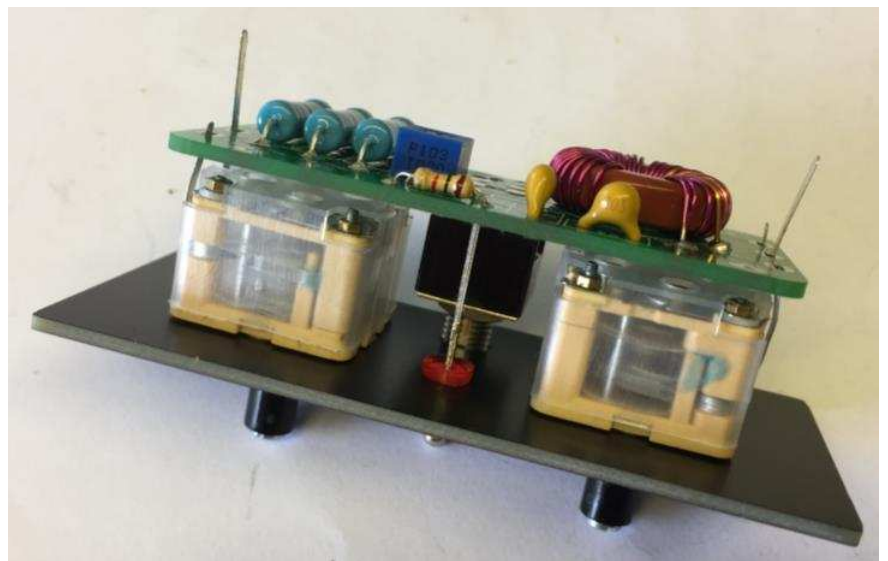
Now another important step. You will find a short length of very thin foam tape, cut this to fit the back of these capacitors. One side of the foam has a paper backing, the other side has a plastic peelable backing, remove the plastic backing and stick the foam to the back of the two capacitors. This foam makes sure that we get no short

circuits from back of the PCB solder points when we bolt it all together. Make sure the tape is a little larger than the base of the capacitors.

Now let's mount the main PCB and the front panel.

Very carefully lower the PCB onto the front panel assembly **BUT FIRST**

Drop the LED into place on the PCB, do not solder it just yet. The long leg of the led must go into the round hole. The led must be fitted from the back of the main PCB as shown here. (The same side as the switch)



Carefully make sure that the three legs of each capacitor go into their correct mounting holes and that the LED isn't trapped or falls out while doing this. A bit fiddly I know.

When all in place just have a good inspection to makes sure all the capacitor legs are correct and the LED is in place. Make sure you did not miss the foam tape! Push the board down and solder the capacitor legs in place. Trim these flush when done.

Make sure the LED is push through the front panel and solder the legs on the PCB, they will only just be visible.

Now we can work on the rear panel.

There are two different end panels depending if you're using SO239 sockets or BNC's.

The idea is the same which every panel you are using, the instructions here show the use of SO239's.

Kanga QRP Mini Transmatch A.T.U.



Use the screws/nuts provided to mount the sockets to the back panel. Place the two earth tags on the back of the socket on the holes nearest the switch as per the picture here. If using BNC's tighten the sockets and make sure the earth tag is on the side near the switch.

Remember I told you to keep the off cuts from the capacitor leads. Find the two longest ones. We are going to use them to connect between the earth tags and the switch. It is important to use a sizable conductor for these links or you will not get a good SWR. I find these off cuts are nice and wide and do a good job since they are just going to be thrown out it makes good sense to use them, connect one tag to the top of the switch and the other tag to the middle terminal of the switch.



If you have thrown these away then you can also use any sizeable conductor around 1mm^2 or so would be ideal. (I have also use the offcuts from those 2 watt resistors we fitted earlier, see below)

Now fit the links to the back panel, I have provided some silicone coated wire for this, it's very flexible.

Solder 4 short lengths of this wire as shown, about 2 inches long. (I now supply red and black wire)

The picture here shows the tags connected to the switch using the thick resistor leg off cuts.

The tags on the sockets go to the top terminal of the switch and the centre terminal.

Now drop the front and rear panels into the case, the groove pattern on the case should be nearest to the back panel. The bottom part of the case has a hole drilled in it for the fixing screw.

Kanga QRP Mini Transmatch A.T.U.

Trim the length to suit and solder the 4 wires to the large input and output pads on the main PCB,

Note the cross over on the Antenna side.



The Mini Transmatch is complete! Just pop the top on attach with the long case screw and fix the four stick on feet.

Using the Mini Transmatch

The Transmatch is easy to use, much easier than many manual ATU's. While tuning I recommend reducing powder if you can (be nice to other Hams) with the ATU fitted between the radio and the antenna first set the controls to the 12 o'clock position. Set the radio to the required operating frequency, adjust the two ATU controls for max noise in the receive, this will normally put you in the right ball park anyway, with the ATU switched to 'Tune' give a steady RF carrier. The LED will light (unless already at the best spot!) Adjust the two controls to find the point where the LED goes out (or becomes very dim). This is the sweet spot and you will find that you have a good usable match to the antenna. Flick the switch back to operate and you're done. If you have a SWR indicator on the radio you may be able to tease the SWR down further now by making very small adjustments to the controls. The LED indicator will normally go out around a SWR of 1.5:1, this is a perfectly usable match and further improvement will have little advantage. Many of us over worry about wringing the last fraction of match from a ATU, When the light goes out you're good to go. After a short while you will begin to trust the LED indicator and stop looking at the Radios SWR meter.

Trouble shooting.

As long as you have built the ATU correctly you should not have problems in use but a couple points of note. If the LED is very dim at all settings of the controls you may have the sensitivity trimmer set too low, the LED gets its power via a voltage produced when there is a mismatch, All LEDs need a minimum voltage to operate, there is a little trimer on the main PCB that allows you to adjust the sensitivity (and brightness) of the LED, I like it very bright so tend to turn the sensitivity to max (well just under it really), with a low power carrier applied adjust the trimer to give a bright LED .

You just can't tune an antenna on a certain band?

ATU's have their limits, sometimes they just can't give you a match. Try the antenna on a different band to start with, if you can match it then you most likely have a difficult length antenna, sometimes if the antenna can present a very high impedance (or very low) at a certain frequency, try adding a few feet to the length (or shorten if you don't have the room) and test again, just a few feet can make a massive difference. Also the feed cable (Coax) length can cause problems, if you can try a shorter or longer length just a few feet can make all the difference.

If you have a balanced feeder you will need to provide an adapter to allow this to be connected to the ATU, make sure that you flick the switch on the rear to BAL in this case (Normally should be set to Un-Bal for coax feeds).

I hope you enjoyed building the MTM-ATU and that it gives you good service.

73 Paul M0BMN

2022 PW 144MHz QRP Contest

I subscribe to Practical Wireless and on reading this months edition I was surprised to see Dave (G8FMC) mentioned in one of the contesting pages, this is what he had to say.

2022 Practical Wireless 144MHz QRP Contest

Well, it appears that I have acquired another bit of 'Wallpaper' as my good friend Stewart G3RXQ terms it. More specifically I managed to achieve 'Leading Fixed Station' in the above contest, which took place back on Sunday 12th June.

The PW 2m low power contest is pitched to (almost!) coincide with the RSGB '2nd 144MHz Backpackers'. Not exactly the same times, but close! At least the start times were the same, with the PW contest going on 3 hours longer than the Backpackers. Since the power limit is 5W, the same as the Backpackers 5B category, it means that if you are 'up a hill' then you can enter both using the same log. (Although scoring is completely different!)

The PW contest is also open to QRP fixed stations, although most will be /P. (I entered a check-log to the RSGB Backpackers contest, which helps in the cross-checking during adjudication).

This is where the tactics come into play. If you want to achieve a good placing in a contest, first look at the categories & results of previous years. If there is a category with relatively few entries &/or modest scores, then that immediately cuts-down on the 'opposition', if you are happy to enter that category? (Another tip from G3RXQ, who has acquired quite a bit of 'Wallpaper'!)

Anyhow the PW results are finally out & Bryan tipped me off that I seem to have achieved:

1. Leading Fixed Station (out of 13 stations)
2. Leading Station in IO91 square (out of 6 stations, the most populous square, along with IO92, as usual)

My overall rating was a rather more modest 15 out of 45. That demonstrates the benefits of going /P up a hill & also the effectiveness of my tactical approach (if you are too old or too lazy to go climbing hills!)

PW do produce some quite nice very colourful Certificates (I have 1 or 2 others) which they send through the post, rather than a download. (Like the Worked All Britain group, PW are a bit quaint & 'old-school')

73 Dave, G8FMC

Ed: Well done Dave, I didn't realise you did QRP! Maybe a talk on working QRP might go well with the members, and a few tips along the way.

2022 PW 144MHz QRP Contest

Description	Name/Team	Callsign
Overall Winner	Hereford VHF Contest Group	GW1YBB/P
Runner Up	SDAGITS	G4RLF/P
Leading Fixed Station	Dave Keston	G8FMC
Leading Single Operator	Hereford VHF Contest Group	GW1YBB/P
Leading Multi-Operator	SDAGITS	G4RLF/P
Leading English Station	SDAGITS	G4RLF/P
Leading Welsh Station	Hereford VHF Contest Group	GW1YBB/P
Leading Scottish Station	Galashiels And District ARS	GM4YEQ/P
Leading GI/EI Station	Paul Norris	EI3ENB/P
Leading GJ/GU Station	Chris Rees	GU3TUX
Leading Isle of Man Station	John Dowling	GDOTFG/P

Lead Stations

Square	Name	Call	No. entries
IN89	Chris Rees	GU3TUX	1
IO62	Paul Norris	EI3ENB/P	1
IO71	Simon Gosby	GW8OVZ/P	1
IO74	John Dowling	GDOTFG/P	1
IO75	Bill Ward	GMOICF/P	1
IO80	SADGITS	G4RLF/P	2
IO81	Hereford ARS	GW1YBB/P	5
IO82	Steve Marsh	G4TCU/P	5
IO83	Gwil Jones	GW6PVIUP	4
IO84	Otley Amateur Radio Society	G3XNO/P	2
IO85	Galashiels And District Amateur Radio Society	GM4YEQ/P	1
IO90	Andrew Vare	G4XZL/P	3
IO91	Dave Keston	G8FMC	6
IO92	Burton On Trent Amateur Radio Club	G3NFC/P	6
IO93	Bern Rhead	G8KVM/P	5
JO00	Southdown Amateur Radio Society	G1KAR/P	1
JO01	Invicta Contest Group	M5IC/P	3
JO02	Cambridge & District Amateur Radio Club	G2XV	1
JO11	Frank L. Laanen	PE1EWR	1

Lead Stations

2022 PW 144MHz QRP Contest

Pos	Call	Name	Single	QSO's	Squares	Score	Locator	Transceiver	Antenna	Ht. m asl
1	GW1YBB/P	Hereford ARS	S	140	23	3,220	IO81KW	Yaesu FT-817	homebrew 9 ele	800
2	G4RLF/P	SADGITS		96	24	2,304	IO80WX	TS770 + processor and LNA	13-ele Yagi	277
3	G3NFC/P	Burton On Trent ARC		84	22	1,848	IO92EQ	Flex 5000A SDR/DEMI MR/ MHP 200 masthead	2 X 15-ele LFA Yagis	100
4	G4TCU/P	Steve Marsh	S	91	17	1,547	IO82WJ	Yaesu FT-817ND	Homebrew 4-ele Yagi	4
5	GW4IDF/P	Malvern Hills Radio Amateurs Club		74	15	1,110	IO81NV	Yaesu FT-817	11-ele Yagi at 6m	425
6	G4XZUP	Andrew Vare	S	68	14	952	IO90MX	loom IC-705	Homebrew 9-ele DK7ZB Yagi	270
7	G3XNO/P	Otley ARS		54	17	918	IO84VB	Yaesu FT-991	9-ele Yagi	487
8	GW8OVZ/P	Simon Gosby	S	47	19	893	IO710W	Yaesu FT-817	7-ele Yagi DK7ZB design	536
9	MOKPW/P	Chris Leviston	S	46	18	828	IO84KF	Icom IC-705	10-ele Yagi	330
10	G4CZB/P	Northampton RC	S	47	15	705	IO92KG	Icom IC-705	9-ele Tonna	195
11	G7UHN/P	Andy Webster	S	46	15	690	IO900W	Yaesu FT-817, DG8 preamp	6-ele Yagi	225
12	GW6PVK/P	Gwil Jones	S	43	14	602	IO83LC	Yaesu FT-817ND	12-ele Tonna	920
13	G8HXE/P	Keith Haywood	S	41	14	574	IO83RO	Yaesu FT-817	SOTA SB5	380
14	GOSRC/P	South Derbyshire & Ashby Wouds ARG		38	14	532	IO92FT	Yaesu FT-817	6-ele Yagi	101
15	G8FMC	Dave Keston	S	35	15	525	IO91NW	Elecraft K3 + ME2T TVTR	8-ele Powabeam	115
16	G8KVM/P	Bern Rhead		40	13	520	IO93AD	Yaesu FT-817ND	3-e1e Quad	488
17	GW8ZRE/P	Dave Hewitt	S	47	11	517	IO83JF	Yaesu FT-817	7-ele ZL Special	261
18	GOKYS/P	Bob Edgar	S	36	14	504	IO80AQ	Yaesu FT-818	3-ele SOTAbeam	550
19	GOBNC/P	Ron Flemming	S	40	10	400	IO91EU	Yaesu FT-897D	DL7KM	198
20	G3UGF/P	Richard J Constantine	S	33	11	363	IO93AS	Icom IC-9700	Diamond 10-ele	433
21	G2XV	Cambridge & District ARC		26	12	312	JO02AH	Kenwood 790A	2 x phased 9-ele Tonna	15
22	G3LVP	Ken Easty	S	25	11	275	IO81WV	Kenwood TS-850 + TVTR	8-ele Yagi	30
23	GX4WBC/P	Central Radio Amateur Circle		27	10	270	IO92BN	Yaesu FT-817ND	3-ele beam	228
24	G4PGJ	David Ward	S	22	11	242	IO92ET	loom IC-7100	7-ele LFA	12
25	G4HZG/P	Burton ARC	S	26	9	234	IO93BA	loom IC-9700	11-ele Tonna	372
26	MONYY/P	Nick Woodruffe	S	24	9	216	IO81XS	Icom IC-705	Dual 7-ele Yagi - PA144-432-19-3-2CB	253
27	G4BZI/P	Roger Bracey	S	19	10	190	IO93AC	Icom IC-202E	3-ele Sotabeam Yagi	395
27	G6AHX	Simon Evans	S	19	10	190	IO82WA	loom IC-9700	8 el ZL	10
29	G8TRS/P	Tamworth ARS		17	10	170	IO92EP	Yaesu FT-817/ Icom IC-705	5-ele Yagi	114
30	GDOTFG/P	John Dowling	S	14	11	154	IO74PC	Yaesu FT-857	9-ele Yagi	150
31	M1AEA	Mark Waldron	S	24	6	144	IO82WM	Yaesu FT-817	Diamond X30	219
32	G6EPN/P	Peter Knight	S	18	7	126	IO91DL	Icom IC-705	5-ele Jaybeam Yagi	253
33	M5IC/P	Invicta Contest Group		17	7	119	JO01GH	Icom IC-7400/Q5 TVTR	4 x 3-ele LFA	180
34	GU3TUX	Chris Rees	S	13	8	104	IN89VR	Yaesu FT-817	3-ele Yagi	73
35	G8IBL	Huw G Hallybone	S	10	8	80	IO91QE	Elecraft K3S	2x 9-ele M2	100
36	G0E1Y	Simon Pryce	S	15	5	75	IO82OR	Kenwood TS-2000	10-ele Yagi	77
37	EI3ENB/P	Paul Norris	S	9	8	72	IO62JI	Yaesu FT-847	Diamond A144S10R2 10-ele Yagi	170
37	MX5KR/P	Keighley ARC		12	6	72	IO93AT	Yaesu FT-817	ZL 7-ele Yagi	275
37	G1KAR/P	Southdown ARS		12	6	72	JO00DR	Icom1C-706mk11 / Icom IC-705	9-ele Yagi	146
40	G6DXV/P	Timothy Dix	S	11	6	66	IO91TX	Yaesu FT-817	WIMO Portable HB9CV	170
41	GM4YEQ/P	Galashiels And District ARS		9	7	63	IO85MM	Yaesu FT-991A Transceiver (until 1220UTC)	7-ele ZL Special Yagi	360
42	G0FCA/P	Iain Groom	S	12	5	60	IO83VS	Icom IC-7000	5-ele LFA	375
43	MOIMA	Phil Bourke	S	6	7	42	JO01DH	Yaesu FT-817	5-ele ZL Yagi	237
44	GMOICF/P	Bill Ward	S	6	5	30	IO750R	Kenwood TS-790E & GaAsFET preamp	HB 5-ele Yagi	160
45	G5H	Invicta Contest Group		6	3	18	JO01GH	Icom IC-706	X50 Vertical	180
46	GW8HEB	Tom Brady	S	5	3	15	IO82KP	Yaesu FT-817ND	SQBM200P MkII Dual Band Vertical	149
47	G1RRR	Keith Bareham	S	3	3	9	IO90CU	Yaesu FT-736R	5-ele Yagi	28
48	PE1EWR	Frank L. Laanen	S	2	3	6	JO11SL	Icom IC-9700	PA-144-9-5A	9

Full Results

This month I am going to carry on with getting you to send to yourself combinations which you will hear in a standard QSO.

As I said at the conclusion of last month's corner, sending your own callsign and getting it right, will give you confidence.

After the callsign's, at the beginning of a QSO, the first thing that you will normally hear, depending on the time of day, is GM for good morning, GA for good afternoon or GE for good evening. Try sending all of these so that you can both send them, and recognise them when they are sent to you.

Another series of letters you will hear is FB, which stands for fine business. This is quite often sent at the beginning of the second transmission, to ACK that all the information you sent has been received. Again try sending that combination. It has a nice rhythm to it.

If you have responded to a CQ, and the other station has not contacted you before, the GM, GA or GE will usually be followed by OM, standing for old man. Again, try sending that as well.

Another combination of letters you will hear at the start and indeed right throughout a QSO is the letters ES, which in CW is used for the word 'and'. So, GM OM ES TNX FER the call, is good morning old man and thanks for the call. If you know the first three, you can almost take the "thanks for the call" as read, without having to think about it.

The last set of letters I would like you to try this month is RST, sent before the report. This is usually preceded by UR, which is used for your, but if you can recognise RST, then you are set up to read the report, which is normally sent 2 or 3 times.

Again, any feedback would be gratefully accepted.

Next month we will continue with the QSO.

Jeremy G3XZG

Spotlight - Sasayama

QSO with JA3MIX, Masa

Band: 21MHz
Mode: CW
Date: 2nd September 2022
Time: 12:30 GMT
QTH: Sasayama
Coordinates: 37.075°N 135.219°E
Time Zone: UTC +9
Population: 40,050 (March 2022)



Flag



Chapter

It is ideally situated in Hyogo region on the island of Honshu, in an area of mountains between an inland sea and the sea of Japan. This means that it has a climate in which the hottest month, August, averages temperatures of just over 25°C, and the coldest month, January, at 1.8°C. The wettest month is September. It is fair to say, it sounds quite wet generally, with an average rainfall per annum of 1500 mm.

The area mainly known for agriculture, producing black soybeans, mountain yams, as well as producing beef, wild boar and venison. I'm not sure that the wild boar can be described as a product, as it must be a fairly random process. Obviously though, a place to go and eat.

Tourism plays a major part in the city's economy, mainly because of its situation in the mountains, but it also boasts a ruined castle, built originally in the 12th century, and has an area of preserved traditional houses.

One of its main attractions though is the Dekansho festival that takes place each year on August 15 and 16th. This is a folk dance of song festival, held in the castle square, and is based, so far as I can tell, around an ancient Japanese folk-song, the Dekansho-bushi.



Sasayama Castle



Bon dancing

Tourists are invited to try "Bon" dancing, which is also a major part of the event. This is a form of traditional Japanese dancing which is performed by men, women and children, dancing in a circle round musicians, (or if done on the cheap, recorded music), all on a central platform. Fans, sticks and other accompaniments are used, and to be honest, it sounds like a form of Japanese morris dancing.

I have a great respect for the stamina and showmanship of Morris dancers, but a Japanese version is hard to imagine, and I don't think I'll be joining in any time soon.

Even keeping that idea in mind, and the need to keep your head down over those two days, it is certainly somewhere I would like to visit.

Jeremy, G3XZG

October

HF

Day	Date (2021)	Time UTC	Contest Name
Sun	02 Oct	500-2300	DX Contest
Mon	03 Oct	1900-2030	Autumn Series CW
Wed	12 Oct	1900-2030	Autumn Series DATA
Sun	16 Oct	1900-2030	RoLo CW
Mon	17 Oct	1900-2030	RSGB FT4 Contest
Thu	27 Oct	1900-2030	Autumn Series SSB

VHF

Day	Date (2021)	Time UTC	Contest Name
Sat	01 Oct	1400-2200	1.2GHz Trophy
Sat	01 Oct	1400-2200	2.3GHz Trophy
Sat-Sun	01-02 Oct	1400-1400	Oct 432MHz-245GHz Contest
Tue	04 Oct	1800-1855	144MHz FMAC
Tue	04 Oct	1900-2130	144MHz UKAC
Wed	05 Oct	1900-2100	144MHz FT8 AC
Tue	11 Oct	1800-1855	432MHz FMAC
Tue	11 Oct	1900-2130	432MHz UKAC
Wed	12 Oct	1900-2100	432MHz FT8 AC
Thu	13 Oct	1900-2130	50MHz UKAC
Sun	16 Oct	0900-1300	50MHz AFS Contest
Tue	18 Oct	1900-2130	1.3GHz UKAC
Thu	20 Oct	1900-2130	70MHz UKAC
Tue	25 Oct	1830-2130	SHF UKAC

November

HF

Day	Date (2021)	Time UTC	Contest Name
Sun	02 Oct	500-2300	DX Contest
Mon	03 Oct	1900-2030	Autumn Series CW
Wed	12 Oct	1900-2030	Autumn Series DATA
Sun	16 Oct	1900-2030	RoLo CW
Mon	17 Oct	1900-2030	RSGB FT4 Contest
Thu	27 Oct	1900-2030	Autumn Series SSB

VHF

Day	Date (2021)	Time UTC	Contest Name
Sat-Sun	01-02 Oct	1400-1400	Oct 432MHz-245GHz Contest
Tue	04 Oct	1800-1855	144MHz FMAC
Tue	04 Oct	1900-2130	144MHz UKAC
Wed	05 Oct	1900-2100	144MHz FT8 AC
Tue	11 Oct	1800-1855	432MHz FMAC
Tue	11 Oct	1900-2130	432MHz UKAC
Wed	12 Oct	1900-2100	432MHz FT8 AC
Thu	13 Oct	1900-2130	50MHz UKAC
Sun	16 Oct	0900-1300	50MHz AFS Contest
Tue	18 Oct	1900-2130	1.3GHz UKAC
Thu	20 Oct	1900-2130	70MHz UKAC
Tue	25 Oct	1830-2130	SHF UKAC

'Air Miles', how far have we gone? / results

So, how have we done?

Again, quality this month, not quantity.




Malcolm (G3ZNU) tops the leader board.

RTTY is the favoured mode this month.





(Running totals in red)

General





Most Miles

G3ZNU		585,694	1,315,753	
G3XZG		75,762	551,143	





Most QSO's

G3ZNU		78	370	
G3XZG		26	294	





Longest QSO

G3ZNU		OG66X(11167)	OG66X(11167)	
G3XZG		PM75PB(7764)	PM75PB(7764)	





Shortest QSO (miles)

G3XZG		GB0NDR(22)	G0SWU(22)	
G3ZNU		4U1A(811)	G0LUH(19)	

Average per QSO (miles)

G3ZNU		3,556	7,508	
G3XZG		1,874	2,913	

Maidenhead Squares


















G3ZNU		53	247	
G3XZG		25	212	

QSO Economy Drive








High miles per Watt

G3ZNU		111.67(100)	111.67(100)		G3XZG		2.20(100)	0.22(100)	
G3XZG		77.64(100)	77.64(100)		G3ZNU		8.11(400)	0.05(400)	

By Band

160m	30m	12m	2m
	G3XZG 19 	G3XZG 5 23 	G3ZNU 29 
80m	20m	10m	70cm
G3ZNU 4 	G3ZNU 39 101  G3XZG 8 68 	G3ZNU 9 103  G3XZG 4 	G3ZNU 9 
60m	17m	6m	23cm
	G3ZNU 30 39  G3XZG 2 31 	G3ZNU 19 74  G3XZG 80 	
40m	15m	4m	
G3XZG 2 21  G3ZNU 1 	G3ZNU 2 9  G3XZG 29 		

By Mode

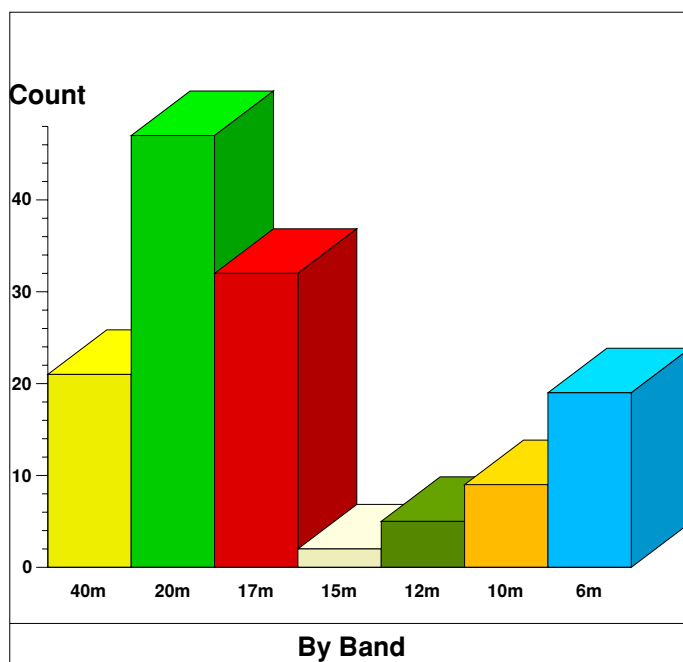
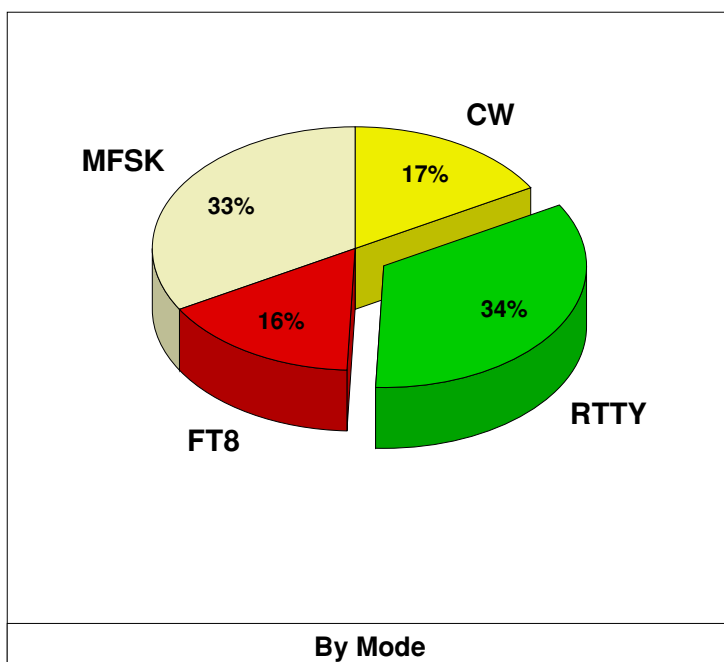
CW	FT8	RTTY
G3XZG 26 290  G3ZNU 6 	G3ZNU 25 243 	G3ZNU 53 53 
MFSK	SSB	
G3ZNU 52 52 	G3ZNU 16  G3XZG 4 	

'Air Miles', how far have we gone? / results

By Country

G3ZNU	30	60
G3XZG	13	56

Countries visited	-	37
Most visited Country	-	United States - 37 times
Total Mileage	-	661,456
Total QSO's	-	104
Average miles per QSO	-	6,360.15
Total locators visited	-	77
Most visited locator	-	FN42 7 times



United States	37	Bahrain	1
Brazil	10	Barbados	1
Spain	7	Belarus	1
Finland	3	Belize	1
Portugal	3	Canada	1
Slovenia	3	Cyprus	1
Bulgaria	2	Czech Republic	1
Croatia	2	Denmark	1
Germany	2	England	1
Greece	2	Italy	1
Indonesia	2	Latvia	1
Japan	2	Netherlands	1
Norway	2	Romania	1
Poland	2	Serbia	1
Russia	2	South Korea	1
Sweden	2	Thailand	1
Angola	1	Turkey	1
Argentina	1	United Nations	1
Australia	1		

Any other business

For sale

4m Vertical (about 4 months old)



Cost £49.95, will accept £25

6m Halo (about 6 months old)



Cost £49.95, will accept £25

Both antenna's are good, I don't do 4m (bought it on a whim) and I already have the V2000 on the roof for 6m, so both are surplus to requirements, this has now freed up the mast for 'other' antenna's I'm working on.

Any interest, please contact me either at a club meeting, or on bryanpage1@btinternet.com