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Tim Bridgland-Taylor G0JWJ, Geoff Wilkerson G8BPN, Adrian Hartland G8IVO, Richard Webb M0RPW, Tristan Quiney M0VXX

Editorial

At last I have been able to re-apply myself to the business of the Society *Journal*. I have been on holiday and I am trying to tackle a mysterious illness, so, all considered I have some catching up to do on this our 20th edition.

I have detected disquiet from a number of members that the Club's main topic nowadays seems to be Contesting. This is true. The HARS Contest Group now consists of many members eager to enjoy the warm team-spirit of co-operation involved in getting ahead and maintaining those top national scores and rankings. Supporting all of our members is what our Club does whatever their individual radio persuasion.

A new competition idea is developing. See inside "The G4ASR 40M QRP CW" Contest. G4ASR (Dave Butler) is the Club's Contest Captain and he can be contacted on g4asr@btinternet.com.

Mike G3LZM (Ed)

Sid & Charlie



Ham Radio Digital Modes: Joe Taylor talks FT8 and introduces FT4

Many thanks to SWLing Post contributor, Pete Eaton, who shares the following note and video:



Here is a You Tube Video of a presentation given by Joe Taylor last night (24 April 2019) at the Fair Lawn ARC Club (New Jersey, USA) Meeting on FT8 & Beyond an introduction to FT4.

View on YouTube at: <https://www.youtube.com/watch?v=2Pd7zB40xdY>

*Thank you for the tip, Pete!
FT4 looks like a fascinating iteration
of the popular FT8 mode. ...Ed.*

NEWS FLASH!

ETL SYSTEMS LTD have gifted £250 into the HARS funds.

Many thanks from all our members for this generous donation and we send them best wishes for their future in SATCOMS.

Hereford Morse Bootcamp May 4th 2019.

Rich G4FAD

We held our first **Hereford Morse Bootcamp** with the kind permission of Geoff G8BPN at his qth which used to be Geoff's electronic factory. It was an ideal building for our purposes and easily had room for the instructors and the 23 students.

In the past every town or village had a person who used Morse code in their job and could help an aspiring CW operator. Today this is no longer true and a Bootcamp helps to fill that void.

Andy G0IBN was in charge with Sandy G0VQW, Bob G3IXZ and me Rich G4FAD. We were ably assisted by Keith 2E0OKG who did all the administration for the day and made a nice cuppa as well.

After the introductions we got started with a practise session for about an hour or so, then the first break for tea and a very interesting talk by Andy G0IBN on Morse keys, the different types and how to set them up.

After the talk we had a session using the equipment to mimic a Morse contact. I had never really thought about it before but was

surprised to find that some of the students did not realise that before calling CQ you had to check the frequency was clear by calling "QRL?" and how to call CQ using the 3 by 3 times call and callsign.

Lunch time came very quickly and another talk from Andy on the use of computers for logging, and using them in contests.

Back to the key for the last session, this time we asked the student questions, for example 'what is the colour of your car'; 'Do you have a dog'? And hoped they had not run over their dog on the way to the session.

We threw the meeting open for last questions of the day and we all learned something we had not known about Morse before.

To finish up we had a raffle of Morse books kindly donated by Rupert G4XRV. Thank you to everyone including FOC/Essex CW Club whose equipment we used and the great students who were all very hard working. We look forward to the next Bootcamp and to meeting you all on the air. I can thoroughly recommend anyone to hold a Bootcamp as it is very rewarding experience indeed.



The G4ASR 40M QRP CW Challenge Shield

This imaginative proposal is the brainchild of David Butler G4ASR. The Club loans out on a month by month basis, a 40M CW rig to each of the participants listed. The objective is for the operator to score as many points as possible seeking best DX and number of contacts etc within the 1-month time limit between club meetings. A printed log table would be provided.

A running tally of developing results would appear in this Journal. Because of the HARS established contest-prestige associated with this idea, activity is expected to develop rapidly and maybe become "recognised" as a must-have award, perhaps nationally.

This You Tube clip explains about the TX kit and its parts. <https://YouTube.com/watch?v=aORGowhOJgl>

Entirely possible...Ed

Here are details of the rig:

Frog Sounds HAM Radio QRP Kit Telegraph CW Transceiver Receiver Radio Station V3

Description:

This is a very small volume of a simple 40 meter band micro-power amplitude telegraph transceiver, 9V square battery or external 9-12V DC power supply. Spread good time, and the nearby provinces hundreds of kilometers amateur radio communications. This machine was first introduced by domestic radio enthusiasts, but also it played a nice name "frogs". The frogs calling Kit V3 public version based combined with the actual usage Fixed several key issues, after several debugging before the formation of the current version.

Key Indicators

Power supply: 9V-12V (Recommended 12V linear regulated power supply)

Antenna: 50 ohm, unbalanced

Transmission power: 2W (9V Power), 3W (12V power)

Frequency: transmitter local oscillator frequency: 7023 KHz; receive local oscillator frequency: about 7023-7026 KHz

Operating mode: CW

Use

This machine is simple direct conversion transceiver interference, selectivity can be compared and the super heterodyne receiver, it is necessary to use not worse than the length of a half-wave dipole antenna, or communication is relatively poor. The selection disturbance is relatively small; spread the good opportunity for communication experiment, it is best to make an appointment with your friend's communication. Communication distance of about 150-300 km more secure, to greater distance depends on the propagation environment and the operator's operating skills. If the broadcast interference is relatively large, use 5K GAIN potentiometer signal attenuation, emergent signal from the radio interference. Attenuation potentiometer is critical, carefully adjusted; you will receive an unexpected effect. In the dissemination of good times with of this machine FT80C goods shortwave radio with a signal on a distant contrast reception, this local effect is no difference between basic commodity machine, which makes unexpected.

Recommendations for improvement

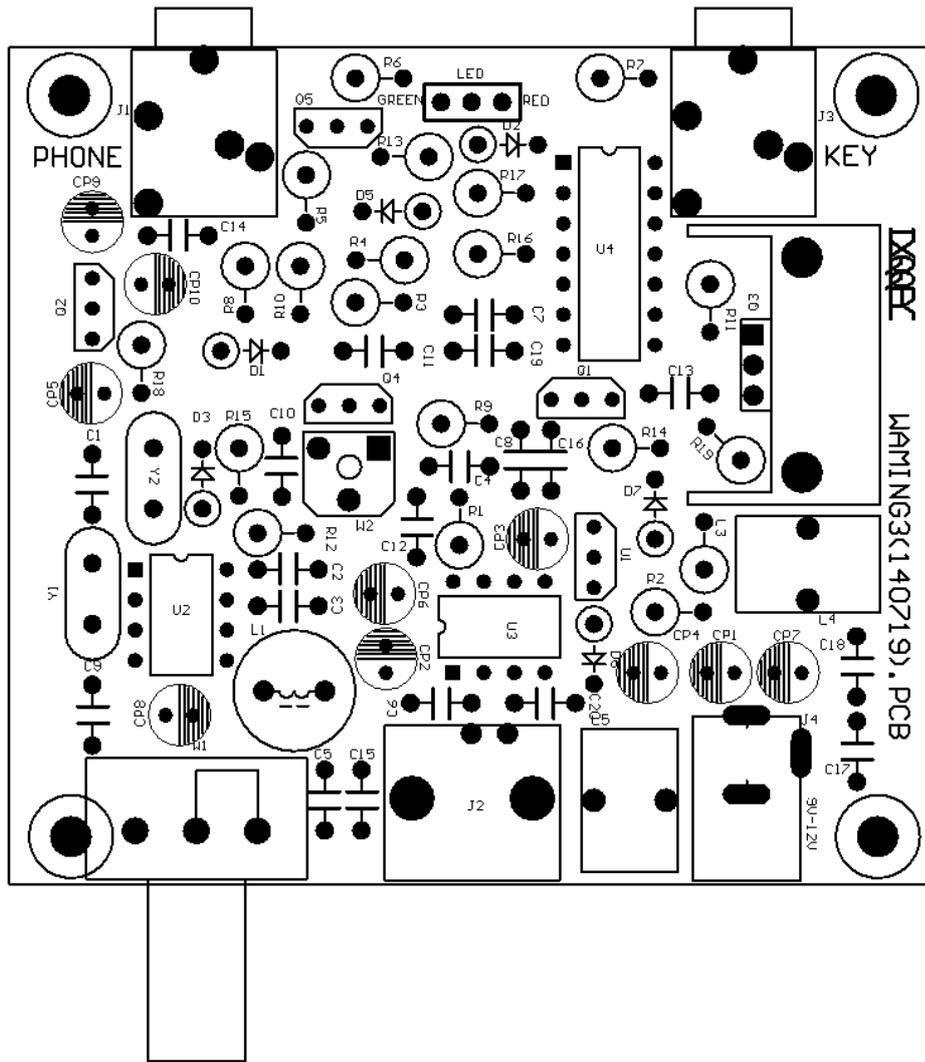
1N4001 replaced by appropriate varactor tube (recommended the 0P-100P), can increase the receive frequency range. Q1 9018 power between 0.8W ~ 1.2W 8050 power between 1.5W to 2W (select 8050 will make D882 In a critical state, need to be careful).

List of Components

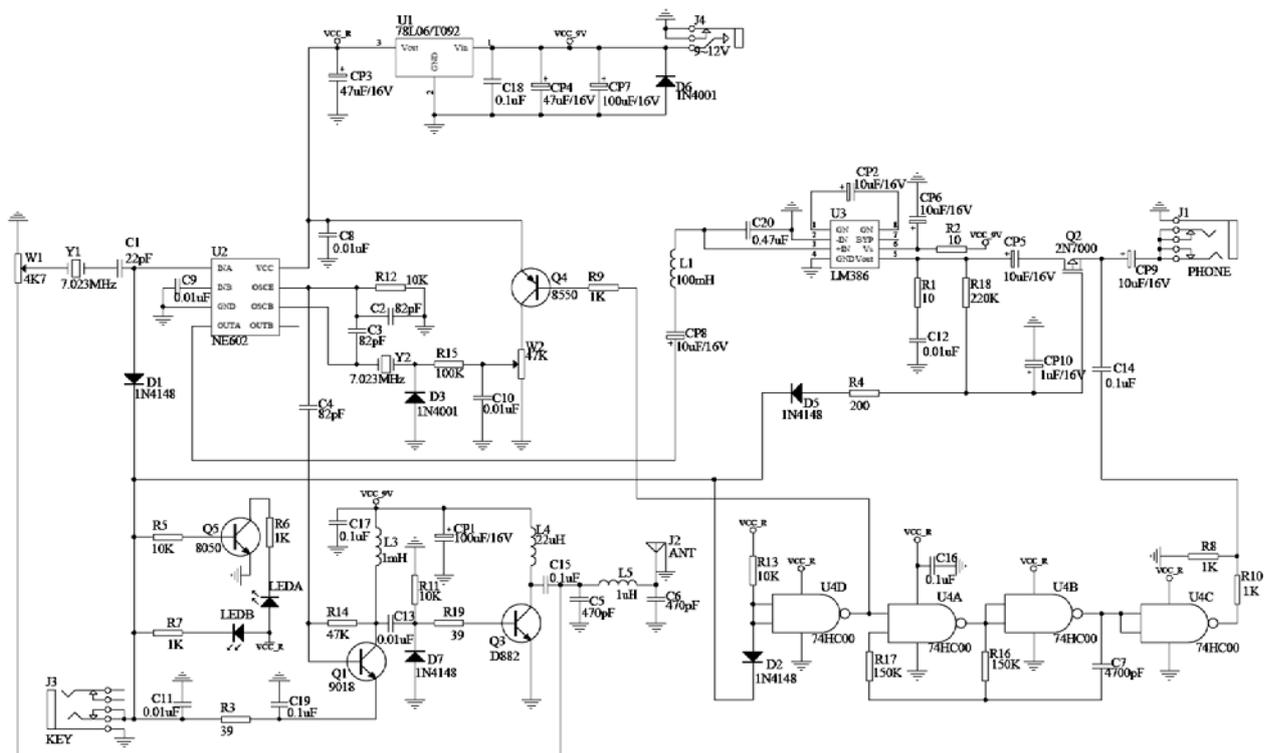
1/4W fixed resistor			Electrolytic capatitors		
R1, R2	10ohm	▲	CP1, CP7	100uF/16V	●
R3, R19	39ohm	▲	CP2, CP5, CP6, CP8, CP9	10uF/16V	●
R4	200 ohm	▲	CP3, CP4	47uF/16V	●
R6, R7, R8, R9, R10	1K	▲	CP10	1uF/16V	●
R5, R11, R12, R13	10K	▲	Transistor		
R14	47K	▲	D1, D2, D5, D7	1N4148	●
R15	100K	▲	D3, D6	1N4001	●
R16, R17	150K	▲	Q1	9018	●
R18	220K	▲	Q2	2N7000	●
Adjustable resistance			Q5	8050	●
W2	47K (473)	■	Q3	D882	●
W1	4K7	★	Q4	8550	●
Fixed inductors			LED	LED (2 colors)	■
L1	100mH (8*10 Shape)	●	IC		
L3	1mH (Color ring inductance)	●	U1	78L06 (T092)	●
L4	22uH (Magnetic)	●	U2	NE602 (DIP8)	■
L5	1uH (Magnetic)	●	U3	LM386 (DIP8)	■
Ceramic capacitors			U4	74HC00 (DIP14)	■
C14, C15, C16, C17, C18, C19	0.1uF (104)	▲	Crystal		
C8, C9, C10, C11, C12, C13	0.01uF (103)	▲	Y1, Y2	7.023MHz	■
C1	22pF	▲	other		
C2, C3, C4	82pF	▲	J2	Antenna pedestal	★
C20	0.47uF (474)	▲	J4	Black power outlet	★
C5, C6	470pF (471)	▲	J3	3.5mm Stereo Jack (KEY)	★
C7	4700pF (472)	▲	J1	3.5mm Stereo Jack (PHONE)	★
PCB * 1			★	heat sink for D882	★
Diametor of 0.51mm enameled wire					★
Inaddition, with the kit as well as a 51ohm refers 1W resistor used to act as a dummy load for testing.					●
Note: LM386 due to different manufacturesr, there will be such the GM386, KA386, JRC386 are LM386 compatible models!					



PCB Assembly



Circuit Diagram



Big Sunspot produces “Ocean Surf” sounds on shortwave

Though sunspots have been rare this year, Sunspot AR2738 has been producing bursts which have been heard as radio static – that sounds like “ocean surf” – on shortwave.

This was posted early this morning at spaceweather.com – along with a recording:

If you have a shortwave radio, you might have heard some unusual sounds this week. Big sunspot AR2738 is producing strong bursts of radio static. “They sound like ocean surf,” says Thomas Ashcraft, who recorded this specimen on April 13th using an amateur radio telescope in New Mexico:

Credit: Observation of Thomas Ashcraft via Spaceweather.com

Please refer to the Spaceweather.com Archive for more info.

Guest Post by Troy Riedel
SWLing Post April 15, 2019

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OFFERS?

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The HARS Technical Library

This is the new lending library thanks to Bob G3IXZ, who is the “owner”. The library is of course at Hill House - thanks to Geoff G8BPN. Great stuff here..., do take a look.



Subjects covered include: Antennas, Technical, Reference, Historical, Equipment and QRP.

Foundation Licence Course



Left to right: Nick Clare, Lawrence Woodward, Liam James-Fagg, Lewys Theo Wyn Evans.

Over the weekend of 25th and 26th May Foundation Licence Course No 16 was held at Hill House. There were five candidates; four adults Nick, Lawrence, Liam, Lewys and Alister (aged 9), the son of club member Josh Marvel N9JDM.

The members of the HARS Training Team this time were Rich G4FAD, Bob G3IXZ, Dave G4IDF, Phil G4HQB, Geoff G8BPN, Adrian G8IVO, Duncan M0OTG, Ben M0SWV, and Nigel G4XTF

As well as being on site for his son, Josh was also taking his Advanced exam.

Josh was successful and is now M0WYP but regrettably Alister missed out by just one point. The others on the FL all passed.

Since this course we are pleased to report that Alister has had a resit and has passed with 23 out of 26. he now awaits his M7 callsign.

For Sale

New Icom 9100 with 1.2Ghz band.
Also new Nevada PS30M (30A)



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HARS and GB2SZB - 24 June 2000

Bob Bowden G3IXZ

On the above date, a few of us in the original HARS club managed to put a Station on the air from a very special event in Herefordshire, to mark the opening of a museum to celebrate the memory of Violette Szabó, a young SOE agent, parachuted into occupied France in WW2, who made the ultimate sacrifice which, sadly, many similar agents suffered in those war years.

The museum is at Wormelow, in the grounds of a house originally owned by Violette's aunt and uncle who would entertain her for holidays prior to WW2. It can be visited on certain days to view the memorabilia which it contains – including some relevant vintage radio kit donated by various sources over the years (information later).

At the time we did not know how “special” the event was supposed to be but it was obvious on the day that it had really stirred the long retired SOE operatives into peaceful action to remember one of their “own”. Most of these men and women were in their 20s and 30s in the war years and it was likely that this celebration would be the last chance for many to renew friendships forged in the war. They were no longer young and I doubt if many had such an opportunity again.

Putting on a special event station like this is no mean task and our Chairman at the time, Derek Bradford G3LCK (SK), really put his back



Derek Bradford G3LCK (SK) and the excellent mobile QTH from Ray G0IMV

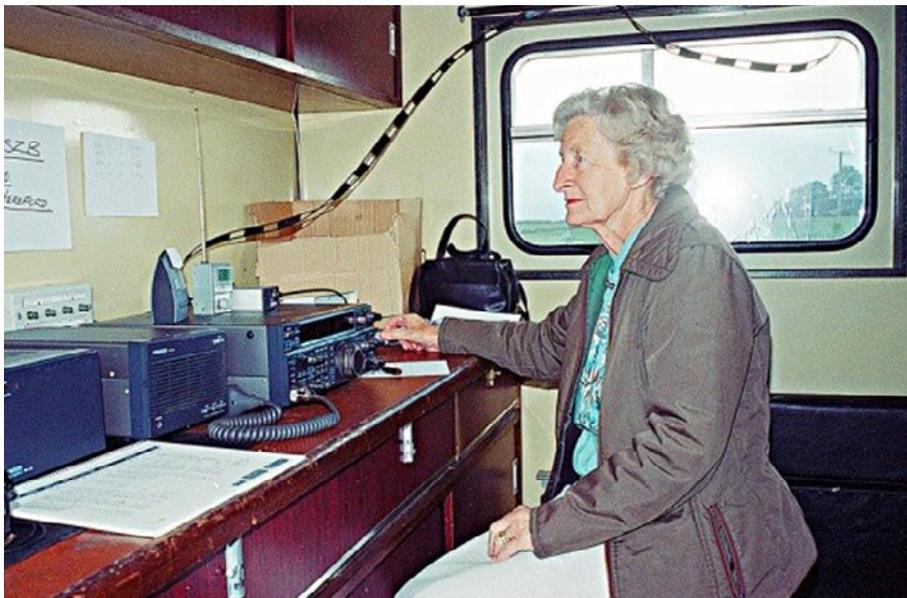


Violette Szabó GC
1921 – 1945
SOE Agent

into getting a station organised. Fortunately, HARS had a nice TS870 available for this kind of use and much extra hardware was provided by Ray Hill G0IMV, in the shape of a super outside broadcast vehicle he used for his part time Public Address work. This contained a nice operating desk and a dandy pump up mast, for hanging things on, as well as a mini kitchen which came in really handy. The special event callsign GB2SZB was obtained and a few of us headed for the site at Wormelow on the morning of the event. I cannot remember the antenna we used but it was essentially a long wire and was loadable on most HF bands. Early on in the day Derek had got on 20 metres near dawn and managed to work some VKs but the day unfolded with conditions taking a terminal dive. On 20M Derek, Tony G3ZRJ and I were struggling to get many QSOs on CW and



The general throng of visitors which had reached 1000+ by mid-day



*Derek G3LCK and Ursula Sadler VP2MT/G0IHM
key-bashing in poor RF conditions*

we were joined for a while by Ursula Sadler G0IHM (formerly VP2MT), who had been a radio operator during the war on the UK end of the radio links to the SOE agents abroad.

Her CW was impeccable using an electronic key and she made a few contacts despite the duff conditions. I do not know if Ursula is still alive but I hope she is. She had an interesting post war life and went to live on Monserrat as VP2MT but following the volcanic eruption, which nearly wrote off the island, she had to move to Florida.

On the day, David G4OGW, also did some operating and made an excellent record of the event using his camera. Much of his material was used in a subsequent article on the event for the *Radio User* magazine.

I do not want to go over the ground covered by *Radio User* but this article is basically to show that HARS was able to cope at relatively short notice to provide a useful and very appropriate element of support for the Event. What follows are a few notes and personal memories of the occasion together with some pictures – partly mine but mainly David’s.



The “agent” jumped from a single engine aircraft under low(ish) overcast. The crowdspace allocated for the DZ was nowhere big enough but a perfect arrival was made.



The Ubiquitous B2 Spy Set, used by agents throughout WW2.

One in good condition is very valuable now. I never used one for transmission but I briefly borrowed a B2 Rx from G3FKH (SK) many years ago when my main station Rx went faulty. I was impressed by its sensitivity and, for a valve rig, its compactness.

At about mid-morning I left our OB vehicle for a recce of the situation. I was amazed at the growth of the crowd and began “clocking” a few familiar faces. From TV programmes, I recognised Leo Marks, the SOE head of cyphers, leaving his taxi and looking slightly lost so I said hello and took him to the central display area, where a large number of other SOE people had gathered. Prominent also was Virginia McKenna, who had played the part of Violette in the film “Carve her Name with Pride”.

Co-incident with the commemoration service the SAS provided an “agent arrival” simulation. Apart from the rectangular canopy (and crowd) it could have been 1943!

My thanks to Ray Hill G0IMV and Dave Thomas G4OGW for assistance and images for the above piece.



The Violette Szabó GC Museum, Tump Lane, WORMELOW Hereford HR2 8HN

This Museum is open 11.30-1 pm and 2.30-4 pm every Wednesday from April to October.

For Group Visits contact Rosemary Rigby MBE, 01981 540477

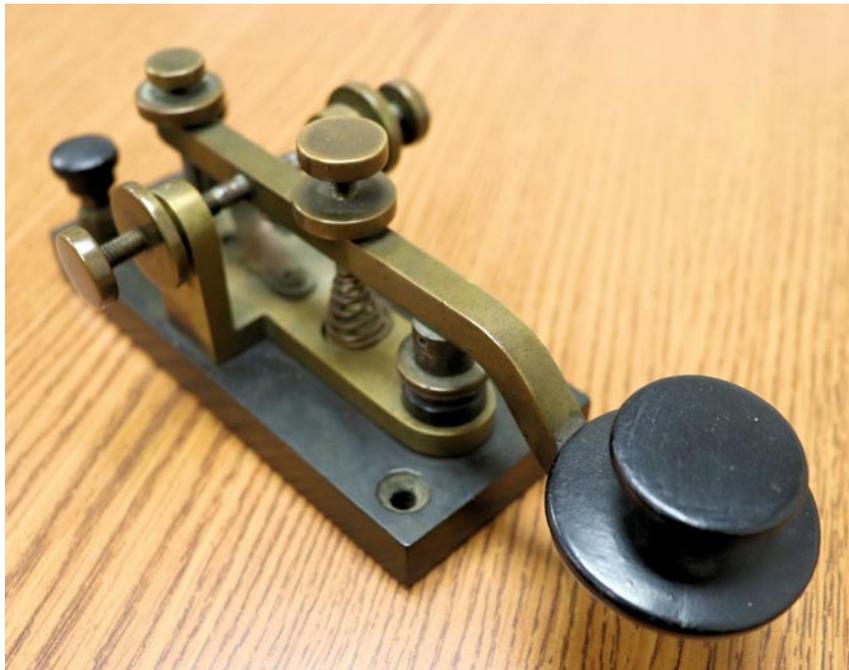


Why CW?

By Dan KB6NU

Here's my column from a recent issue of The KeyNote, the newsletter of the Americas chapter of FISTS.

If you're like me, you take a lot of ribbing about being a CW operator. I don't let that bother me, though. Instead, I encourage the no-code guys to at least think about learning the code, and am prepared with a list of reasons why they should do so:



1. It's FUN! When I list the reasons that I operate Morse Code, this is usually the last reason on the list. It's really the most important reason, though. If it wasn't fun, I wouldn't work CW, and I wouldn't expect any- one else to do it either.
2. You'll gain the adulation of your fellow hams. Many, if not most of the guys who give you a hard time about being a CW op are really jealous of your abilities. They're giving you a hard time because they really look up to you. Enjoy that and be gracious. Instead of giving them the business in return, offer to help them learn the code and enjoy working CW just like you do.
3. CW is more efficient than SSB. Without a doubt, CW is more efficient than phone. The bandwidth needed for a CW contact is on the order of a couple hundred Hz versus a couple of kHz for a SSB contact. Be careful when using this argument, though. Digital modes, such as PSK 31 actually require less bandwidth than CW.
4. CW is more effective than SSB. It's generally agreed that CW has about a 12 dB, or 2 S-unit, advantage over phone. That means that you can make CW contacts when it would be impossible to make SSB contacts.
5. You get more points in some contests. I don't understand contesters who don't operate CW. Many contests award more

ARRL has received from Lynn Burlingame, N7CFO, the donation of a Kilbourne & Clark Morse key that the late Howard Mason (IID, 7BU, and K7QB) used to let the world know that Rear Admiral Richard Byrd and his crew had overflowed the South Pole for the first time during Byrd's 1928 – 1930 Antarctic expedition.

points for a CW contact than they do for a phone contact. Doesn't it make sense, then, for contesters to know and operate Morse Code?

6. You'll work more DX. I think it's easier to work DX on CW than it is on phone. The pileups are generally smaller— although I'm not so sure that this was the case for the recent K1N DXpedition— and it's easier to get through.

These are my reasons for working CW. What are yours? E-mail me at cwgeek@kb6nu.com and let me know.

Thanks Dan ...Ed.

Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.com), the "No Nonsense" amateur radio license study guides (KB6NU.com/study-guides/), and one of the hosts of the No Nonsense Amateur Radio Podcast (NoNonsenseAmateurRadio.com). His wife sometimes thinks that amateur radio has become too much of a habit for him.

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Club Personalised Merchandise

All items have your callsign and club details. For availability and prices please contact Peter Lawley M6YPL or journaleditor@herefordradioclub.uk



T Shirt



Cap



Mug

An exotic China version is available.

Articles Wanted!

Please think about submissions/projects you might like to send in or see.

General topics and key words are listed below.

Members projects	Events	Training
Members station	Notices	QRP/QRO
Construction	Help	Illustrations
Items wanted	News	Photographs
Items for sale	DX	Early radio
Hints and kinks	Militaria	Restoration...

... or anything else that you think might be of interest to HARS members. If you have an idea for a submission, but don't know how to present it, I will do it for you.

Please submit anything and everything to journaleditor@herefordradioclub.uk or talk with Mike at the Club meetings.

*73s es GDX, G3LZM
Mike Bush (Editor)*