



CW Today

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In the March issue of *Amateur Radio*, containing the 5th edition of *CW Today*, we introduced the feedback of many CW operators to this author which have voiced concerns regarding a number of issues which at times cause friction in the sharing of spectrum between different aspects of the hobby. Further feedback was sought regarding conditions which generate friction, interference and/or inability to pursue the hobby as per our various expectations. An overall lament has been the declining standards and lack of consideration for others in our limited shared resource with several recurring themes of complaint, which we will address in this issue of *CW Today*.

Changing landscape

Sometimes the easiest way to notice changes is to be away for a long time and not experience the slow and gradual changes that may otherwise go largely unnoticed. An analogy is the frog when thrown into boiling water, will jump straight back out, perhaps unscathed. However if left in lukewarm water and the temperature slowly rises, the frog doesn't notice the gradual change and adapts to it, until it is so warm that he loses energy and falls asleep and is then finally boiled alive, unable to save itself if it realises something is wrong.

Having been out of Australia for over 30 years, the experience of returning here was like that of a frog thrown into boiling water. The over-regulation, dehumanising check boxes and the attempt to make a perfect system out of everything, when humans are far from perfect, and the general unawareness of the population of how much freedom has

been taken away from them, were only too obvious to me. That doesn't mean there aren't many others aware of these issues, just as in amateur radio, we all know something is wrong, and many can put their finger on it.

When I was last active on amateur radio some 20-30 years ago, the CW bands had very different activities and sounds compared to now. Local noise levels were much lower, many CW signals had interesting chirps, buzzes and clicks, and there was more consistent activity. The bands were not nearly as quiet as they are now out of contest times and DX activations, and on weekends and during DX activations and contests they were not nearly as busy. In other words, there was far less imbalance, and there still was pretty much room for everyone most of the time.

National society band plans were often more detailed and largely adhered to, with few pointing out their legal right to transmit SSB in the CW section or use USB on 40 m or LSB on 20 m. Contests generally avoided the lowest part of the bands, traditionally reserved for long distance intercontinental QSOs, as well as the higher ends of the CW bands reserved for low power QRP, non-contest and slow speed QRS activities. The rubber stamp QSO generally was the norm and included an honest RST report, QTH, name and details of rig, power, antenna and greetings.

WARC bands

When the WARC bands were introduced, it was fortuitous timing, because contests had become larger and more widespread resulting in increased friction with non-contesters who lamented the increasing spread and QRM. In those days many contest stations had key clicks

tens of kHz wide, and were running obviously way too much power, as they often still do, though now thankfully signals are much cleaner and narrow. It was at this time that WARC bands became available, hard won after a great many years of effort to convince other services and government of the need to give amateur radio, under pressure of frequency spectrum especially between 7 and 28 MHz, additional frequency bands at 10.1, 18.068 and 24.89 MHz (30, 17 and 12 m).

This eased off the pressure on 40 and 20 m in particular during contest times, as many could now use 10 or 18 MHz to conduct those normal rubber stamp or "rag chew" chat QSOs. Because of the narrow bandwidth of the WARC bands, national societies wisely passed resolutions via IARU that determined that some modes and types of operation were not to be allowed on the new bands. Contests, due to their large spread and growing popularity, were not allowed on the WARC bands. The 30 m band however, had and still has, additional restrictions, as a special case.

30 m Band - a special case

The difference between 30 m and the other WARC bands, is that amateur radio is still a *Secondary Service* on 30 m, whereas on 17 and 12 m we are in most countries the *Primary Service*. At 30 m we do not have a shared status with other non-amateur radio services: the *Primary users*, the *Fixed Service* have absolute right to cause us QRM while conversely we must completely avoid any QRM to non-amateur fixed service signals, no matter what mode they use, on the 30 m band. Because of this, the IARU had additional restrictions advised for amateur radio stations on 30 m: no automatically controlled unattended stations (unattended WSPR is not supposed to be on 30

m, for example, and Norway's NARL has raised this issue as a major concern), SSB was also restricted other than in Sub-Saharan Africa (WIA also gave Australia an SSB shared band), and broadcasts and beacons (with the exception of DK0WCY Aurora Beacon) are also discouraged from 30 m.

However, DX activations were not restricted and back in those days did not present the problem they do today. Many CW operators are now complaining about the narrow 15 kHz (in Australia) or around 30 kHz elsewhere, being completely taken up by even single DX activations with pile ups spread as wide as 35 kHz on several major recent DX expeditions. 20 years ago, and perhaps until more recently, it was usual for rare or popular stations to operate split as "UP 1". Now the common default is almost always simply "UP" or "DN" meaning stations are encouraged to call on any legal frequency above or below the DX station, resulting in these unrestricted pile ups.

An obvious requirement in abiding by the terms of our licenses when operating on 30 m in particular, is to listen on our transmit frequency at all times in order to be able to hear if any station which may not be an amateur radio station issues a "QRT" command or "QSY" to cease transmission or change frequency.

When operating split, this is no longer possible for most stations, if the split is greater than the audio pass band of the filter which is usually a maximum of around 2.3 kHz or so. Hence, it appears logical that split operation should not be occurring on 30 m, and if it does, not greater than 2 kHz to allow callers to remain within the terms of their licences.

30 m simplex experiment

In the light of feedback and complaints from many CW operators regarding the DX split operations especially on 30 m, I decided to update myself with the current situation and conduct some experiments and analysis.

The results were interesting. In one, it was observed that even if I called CQ off frequency from a DX activation, several stations immediately broke the terms of their licences by acting as cops and telling me to QSY, without identifying themselves. This even though in CW, a separation of 500 Hz is already considered more than adequate spacing especially on a narrow band. Even 2 kHz from the DX, I was being subjected to DQRM, and even when I tuned 5 kHz and more away, DQRM followed me to each frequency I'd first checked with "QRL?".

The second experiment was to call the DX station who announced they are listening down "DN" by calling 500 Hz down. This too, although it also complied with my licence condition in that I could listen to both the DX frequency as well as my own within the audio pass band of my filter, resulted in "pirates" (amateurs failing to identify) acting as frequency cops, and abusive words.

A third experiment on a different day, which lasted 20 minutes, was to use the old fashioned way of calling DX on their frequency, but using full QSK (full break-in) and only calling when the DX station's signal was clearly audible, not suffering from interference, noise or excessive fading, basically Readability 5. In this manner I called VK0EK without ever causing any interference as I only called when the DX was listening. As soon as the DX responded or made any transmission, I ceased without a further dit. Being able to send above 40 WPM, my reflexes are fast and this was very easy for me. The results: in this 20 minute period I did not cause any amount of QRM to VK0EK whatsoever, but a total of 30 incidents of DQRM occurred, not while I was transmitting, but generally when VK0EK was transmitting, as the self-styled cops decided to hurl insults, with only 2 of the cops identifying themselves.

No contact resulted here, as VK0EK on its web site made it clear it will not be accepting any simplex calls, and in calling was announcing

"DN" to indicate they were listening down. A fourth experiment, already conducted prior with the same success with K5P, was to call with a reasonable split (900 Hz) when signals were at least S7, and when calls were being answered at this split offset, with success on the first try.. In the next issue of CW Today we will look at time tested and proven ways of getting results fast in calling DX in pile ups: what is meant by the constant DX mantra of "listen, listen, listen" and how you can then give a single or at most two or three calls and be successful instead of sending your call sign over and over for hours on end.

Real actual DQRM

An interesting fact resulting from these experiments in revealing some of the problems of DX operations, is that although I did not cause a single incident of QRM to VK0EK, the 30 DQRM incidents during those 20 minutes, by unidentified stations bar two, the DQRM were not the subject and target of campaigns, I was. The same thing can be heard in most of the activations whereby deliberate QRM is being caused to DX operations by unidentified stations that cause QRM in telling others what to do. The results of these experiments can be shared with VK0EK CW operators after the operation is over, including a very detailed analysis of the simplex calling experiment and its outcomes. VK0EK have introduced many novel techniques perhaps never before used in major DX expeditions such as listening down instead of up, and almost live sharing of results and data online. They may possibly have already taken on board some of the criticism of the QRM caused by their pile-ups and 30 m split, though this remains to be seen.

Already many CW operators have been increasingly vocal in growing tired of what they perceive as inconsiderate operations of DX expeditions funded by big money and their lack of ability to control their pile ups in general, and resent their treatment of the hundreds

of disrupted DX QSO by others as “collateral damage”. However, although much of the blame is to be laid at the feet of the DX expedition organisers and operators for not operating with due responsibility and consideration on the only 50 kHz-wide 30 m band, and even with excessive unlimited split operations on other narrow or popular bands such as 17, 20 and 40 m, there is another problem which may explain the inability or unwillingness of DX expeditions to look at the root of the problem and demand some solutions to its negative impact or otherwise their inability to control it: computer technology.

Computer technology

Thanks to computer technology, it is now possible for CW to be decoded, albeit unreliably and probably without full QSK. Thus all of a sudden anyone with a computer and a decoder is assumed to be a “CW operator”, or, more accurately, a “DCW user” (Digital CW). Pressing of macro buttons, and inability to cease transmitting as soon as the DX transmits, is also all too obvious an occurrence when analysing the pile ups: callers don’t cease calling when DX transmits, they transmit thus on top of the station being called, the DX has to call again. Moreover, all too often DX has to send a callsign and report three or more times, because the DCW user doesn’t have reliable copy on the DX. It is very hard to get reliable copy with DCW in real HF conditions.

The other side of the big DX pile up problem is the Internet. Due to many amateurs using the Internet

to report “spotting” of DX as soon as they are heard, a pile up appears out of nowhere. Gone are the days of chasing DX by tuning around, and the wrong assumption made by many of the Internet hams is that as soon as a DX station has used a particular frequency, and was spotted in another part of the world while propagation doesn’t exist in this part of the world, that frequency is to be kept clear 24/7 and cannot be used by others. DX clusters thus deserve a special mention as to their effects and short-comings.

The DX Cluster problem

DX spotting on clusters has resulted in DX expeditions initially being hampered by almost instantaneous pile-ups as a result of Internet alerts notifying chasers of the DX often within seconds of them becoming active on a frequency. To make matters worse many callers are even operating remote stations via the Internet (with resulting time lag) from their work places, thus are generally also using the woefully inadequate DCW mentioned above. However, rather than attempting to mitigate the problem by, for example, demanding that reputable clusters have an option for any call sign to be removed just as one has the right to be on a “no call” telephone list, DX clusters have embraced clusters as a means of getting ever bigger piles ups with ever higher numbers of stations calling them. Perhaps the boast is now on as to which DX can create the largest pile up, and work the most stations within 24 hours. However, in spite of the problems mentioned regarding DCW and the

Internet, DX stations have resorted to a simple but unsatisfactory work-around: unrestricted pile up widths, so that they can tune and pick more easily out of the pile up.

Yet these DX clusters have additional problems as a screen shot of one supplied by a reader and published here, reveals. They do not require any verification of identity or authenticity for anyone to register and post spots, along with comments, using fake call signs, insulting and hurling abuse and foul language at others. Renowned DXer OT Jean, 5T0JL, aged 88, when calling CQ, refuses to violate the regulations by operating split and not listening on his frequency, so as to avoid causing QRM to others. He thus takes calls on his own frequency. He too is a frequent victim of aggressive language on clusters demanding that he operate split, and restrict his QSOs to “5NN” instead of – as he enjoys it – the exchange of an honest report and at very least, names in order to merit his QSL.

CW operators are now waking up to the reason why they are sometimes suddenly being called by a small pile-up: they were “spotted” on an Internet DX cluster. Moreover many of those callers simply come up with their call sign without even sending the callsign of the station they are calling, and expect only a “5NN”. Many too are again DCW users, and thus will make for a difficult QSO at the best of times. Many of us wish to call CQ and have people find us by tuning around, without the use of computers. There ought to be a way to opt out of clusters and spotting.

Photo 1: Some of the DX Cluster traffic during my experiments.

DX de	Freq	DX	Flags	Comments	UTC	Date
VK2HV	14 034,0	 VK5EEE		why DQRM ????	09:39	25/03/16
VK2HV	10 119,1	 VK5EEE		you are a sick FW	07:51	24/03/16
VK5EEE	101 190,0	 VK5EEE		Yes I DQRM VK0EK - I am idiot	07:50	24/03/16
VK2HV	10 119,0	 VK5EEE		cq on top WHY	07:44	24/03/16
VK3JEF	10 119,5	 VK5EEE		your a dickhead	07:43	24/03/16

VK0EK	10116.0	24 Mar 23:47	KC3X	sick sad operators on his freq
W2NO	10138.0	24 Mar 23:45	N6DBF	JT65, -17 in socal
VK0EK	10116.1	24 Mar 23:45	KN4KL	
VK0EK	10116.0	24 Mar 23:44	FG4NO	No sig on 30 and 40m
ZALE	10120.0	24 Mar 23:43	W3LPL	Heard in NC and NH
N4EMP	10138.0	24 Mar 23:41	N6DBF	JT65, -08 in socal
VK0EK	10116.0	24 Mar 23:40	LU6OI	wkd 2 dwn Tnx
VK0EK	10116.0	24 Mar 23:39	VK0EK	oos should be here soon!careful
VK0EK	10116.2	24 Mar 23:38	KIIG	QSX 10113.6
W3ML	10116.0	24 Mar 23:36	VK2HV	also vk0 limit is 400 watts :-)
VK0EK	10116.0	24 Mar 23:34	W3ML	It is a 200 watt limit on 30
VE3FGU	10138.0	24 Mar 23:32	N6DBF	JT65, -18 in socal
VK0EK	10115.0	24 Mar 23:28	WB2REM	My amp going
KB6NU	10112.0	24 Mar 23:26	DL4HG	nr.Detroit nw cqng
VK0EK	10100.0	24 Mar 23:25	W2MYA	No Amps on 30 M Lets Follow The Rules!!
VK0EK	10100.0	24 Mar 23:25	VK0EK	scumbags qro on 30m&60m
VK0EK	10116.0	24 Mar 23:24	K1EA	More amps going
G3URN	10138.0	24 Mar 23:23	N6DBF	JT65, -20 in socal
VK0EK	10100.0	24 Mar 23:18	VK0EK	a\$sholes tune amps on 30m?
N6ZN	10114.5	24 Mar 23:18	KB3OZC	thank you!
VK0EK	10116.0	24 Mar 23:16	N6ZN	y tune on tx freq go +1 & tun
VK0EK	10116.1	24 Mar 23:13	K4BBH	
KC3GDS	10138.0	24 Mar 23:08	N6DBF	JT65, -19 in socal
VK0EK	10116.0	24 Mar 23:06	K3MA	IF you got it use it
VK0EK	10116.0	24 Mar 23:04	NA1DX	TU TU use http://www.dxa3.org/
VK0EK	10116.0	24 Mar 23:04	NQ7R	Sounds like a few Kws on
VK0EK	10116.0	24 Mar 22:54	MM0SAJ	TZ4AM is 10115.0 listing up on his freq
VK0EK	10116.0	24 Mar 22:54	NA1DX	QSS DOWN it is a DEXPEDITION

Photo 2: Another sample of Cluster traffic, this time sledging IOTA operations.

Problem resolution

Clearly these issues and the friction they cause, as well as the extensive interference caused by unrestricted pile-up spreads and multiple contests occurring concurrently, need addressing. It appears that most of us myself included have no objection to DX activations and contests per se, and see them as useful activations of amateur radio frequencies. However, unfortunately these activities are now clearly impacting upon large numbers of traditional radio amateurs who, even though they may have professions in the ICT fields, choose to have QSO in relaxed longer-form style and without the aid of computers or Internet, and are seeing their own enjoyment of the hobby being pushed away by special interests such as DX activations and contests.

So that all aspects of the hobby can return to the days when they managed to share the spectrum with less friction, some guidance is required, and options and solutions

should be sought. Clearly risking the loss of 30 m at a future WARC because primary users may point to the QRM they have experienced, or as a reason not to grant additional allocations at 8.5 and 12.5 MHz for example, should also be minimised. The IARU should step in to restrict split frequency operations on 30 m at the very least, and issue guidelines on other bands, perhaps designating certain sub bands for remote DX stations and others for their split QSX. The WIA could start this process via consultation with various parties, and put forward their suggestions at regional conferences.

Otherwise it appears that traditional CW operators may have to cede the traditional CW bands, and migrate to quieter pastures, as a work-around. The matter is being made worse by the ARRL recent band plan giving away the formerly exclusive CW bands to be shared with RTTY and data modes and the WIA recent submission to ACMA. This of course is bad news for the

future, if not corrected, because digital modes cause immense QRM to CW, but CW only minimal QRM to Digital modes. Likewise, SSB is more of a QRM to CW due to its wide band width. CW is allowed throughout the bands, and when the CW band is too crowded or QRM too severe, the only current option is to find clear frequencies within the SSB top portions.

Future of amateur radio

In the April edition of *Amateur Radio* I counted no less than six Silent Keys. Aside from the fact that the majority of radio amateurs have never had a key and thus always were silent keys to begin with, the loss of life of one of our number whether CW operator or not, signals a further decline to the hobby and a loss of knowledge, experience and on-air activity, for us all. Thus the replenishing of our ranks into the future is essential for safe guarding our rights and privileges, since although amateur radio is at the root of most technological benefits of modern society today, we have not even managed to have the ITU put our traditional HF bands at our disposal in perpetuity and should be lobbying to do so, as advised by OT George VK2FF.

Feedback

Further solutions and ideas on how to solve the problems that have been raised by readers, some of which have been presented above, are welcome, and can be addressed to the author. In the next issue of *CW Today*, we may also have a look at some at some methods to be successful in working pile ups, from the chaser side of things, as used by experienced and skilled CW DXers.

Editor's note: The views presented are those of the author and those with whom he corresponds. This journal and the WIA do not necessarily endorse his views or actions on air.

