

OPERATING PRACTICE

Who of us (the old guard who had to take an exam disregarded) has obtained his driving license by merely taking a theoretical exam? Nobody.

The basic license, there has never been any kind of training in Belgium on how they had to make a QSO. A theoretical test and presto, the brand new amateur radio is released on the bands. With not always nice result. By analogy with the driving test: imagine you only take a theoretical exam, get your driver's license, and then the track stays in a vehicle which you have never driven. Well, this is exactly what is happening with hams.

The author has in his first years as a ham like everyone made mistakes (he still does, but a lot less) and intends to use this letter to give an impetus for newcomers to quickly sound as a 'pro' on the bands. The mistakes he made were often taken in the past by listening to the old-timers. They are not to blame. Clear guidelines on how to communicate on ham bands have never existed.

The importance of good 'Operating Practice' should not be underestimated. Ultimately listen to our broadcasts by everyone, be it hams, listeners, official bodies etc. The technical aspect of our hobby is one thing. If we use our equipment to make connections we enter the second matter, ie we represent our nation on the airwaves ... we are like a signboard.

To successfully transmit on any frequency and in any mode some simple unwritten rules to be observed. Follow me in the quest for good 'Operating Practice'?

1. HAMTAAL

Know the 'hamtaal'. Make your own, the language of the amateur therefore not say 'Radio four', but 'Readability 4'. Make else you familiar with all the usual things such as the phonetic alphabet, CW abbreviations, the Q code, the number code (73/88) and make sure that this is a second language that you fully mastered before entering a QSO.

Use the phonetic alphabet is correct: A is Alfa, and not Alabama. Why? See further under paragraph 8 (PILEUPS).



2. LISTEN

As a new ham you want to start transmitting as soon as possible, logical. Take it easy, take your time, stay away from the microphone, Morse key or keyboard off. First get comfortable with ALL the functions of your transmit / receive unit (s) before you start broadcasting. Especially the connector is important because here you can make your first mistakes.

Teaching in the first place LISTENING. Who listens will be much more successful in making good connections. The chapter PILEUPS we focus here on in.



3. CORRECT USE OF YOUR CALL SIGN / CALL SIGN

Use your callsign correctly. You have to take an exam to be able to practice a hobby. Be proud of your callsign, it is unique in the world. Only if you use it correctly, you making legal transmissions. Why is this mentioned? Ever heard on VHF call sign 4ZZZZ? Insofar as is known to me talking about a transmission from a station from Israel and not from Belgium. ON4ZZZZ is the correct callsign. A callsign comprises of a prefix AND a suffix. Even on the HF bands this reprehensible practice and listen to. If your car stolen, will you report to the police that your license plate 123 or ABC123?



4. BE POLITE



This is the shortest but undoubtedly most important chapter in this document: always stay polite under any circumstance. Your transmitted signal is heard by many people and agencies. We'll elaborate below the point 'Conflict'. With politeness goes a long way further, even in our world.

5. SOME TIPS FOR MAKING VHF / UHF REPEATER

Many of the following points in this document are dedicated to specific situations while chasing for DX contacts (long distance) on the HF bands. Many of these points also apply when working on the VHF / UHF bands.



Very specifically to the VHF and UHF bands is the ability to use the repeaters (do not forget the leaders of the repeaters once stabbing a shot in the arm?). Repeaters (relay stations) are there in the first place to

increase the operational range of mobile and portable stations. Fixed stations should be aware of this. If two fixed stations can make a connection without using a relay station, it is advisable that they use a repeater for a long winded QSO?

Whoever makes use of repeaters should realize that he has not the 'monopoly' on its use. Actually, this is true for making connections at all frequencies. On non-repeater frequencies the 'first come, first served' principle a bit apply. On repeaters should not prevail this. Everyone should get a chance to use this very useful medium, especially the mobile and portable stations.

If, during a QSO on a micro repeater is transmitted to the other station, the good (almost obligatory) habit that a pause is inserted. So can someone else make a call quickly, or intervene in the ongoing QSO. Who lightning PTT (Push to Talk) button prevents this possibility. Remember.

6. HOW TO MAKE A QSO? WHICH MAY BE SAID?

Many newcomers will be their first introduction of the amateur bands baffled by the many QSOs in which only exchange callsigns and reports. This does not have to be. Personally, I found it unpleasant in the beginning and I loved 'long and elaborated QSOs. I was a true 'ragchewer. There's nothing wrong with that, on the contrary! Over the years, however, I switched from long to very short QSOs. Each his own.



Although we exercise a mainly technical hobby need to keep our QSOs not limited to technical matters. A healthy balance is necessary. Radio amateurism is not intended to chit chat about groceries. Let your common sense be.

What we certainly can not go on: religion, politics, advertising and music programs.

The Belgian basic license manual implements for the first time an 'Operating Practice & Procedures'. In it you also learn how to make an ordinary QSO (or connection). What follows is a concise repetition and some additions:

- before starting a transmission, always check thoroughly if the frequency you want to use is not occupied by other stations;
- then you put CQ (general call - CQ comes possibly from the English "I seek you" - I wish you Pat W5THT passes. [explanation for CQ](#) , used during the pre-wireless days). Point 7 'How to call CQ?' provides more information to the finer points of this again;
- if you do not know how to place callsigns in what order in a conversation, remember that you simply must be experienced first name the callsign of your counterpart, then your nickname. Example (you are ON4ZZZZ): 'Thanks OM, microphone back to you. ON4XXXX (from) ON4ZZZZ '(end of your transmission).
- at the end of a transmission you should always mention your callsign. If making many short transmissions during a QSO, you should definitely at least once mention your callsign every five minutes;
- at the microphone change (or key exchange), you always read a short pause: so get stations that want to sign up the opportunity to do this if necessary;
- do not cubits long argument over one hundred and one different things, but do broadcast short and concise so that your counterpart may respond in due time before he forgets what you've had it all;
- if you are in phone terminate your broadcast and pass the microphone to the other station, say 'over'. This is strictly for amateur connections are not really necessary, but it is sometimes useful. Experience will teach you when this or not do;
- CW you finish your transmission for a QSO exchange with the letter K (from 'Key'). Also 'KN' is used; this is more specific and means you only station whose callsign you just sent to come back;
- CW you finish a QSO with the letters 'SK' ('Stop Keying'). After this signaled the connection is completely done;
- in phone you end a QSO NEVER with 'over and out' or 'over and out'. Or 'about' you say during a substitution during the QSO, or say 'in / out' at the end and then the QSO is completely done.

Someone also brought following me. As amateurs progress in their 'career' they seem to forget they were once newcomers. You actually hear often amateurs in the HF bands 'CQ DX' after which they are called by a 'local' station (which is no long distance for them at that time). Often this local operator gets a 'slap', after which he orphaned and angry behind. This is a knife that cuts along two sides. The newcomer should understand that if a station 'CQ DX' calls, he the one who actually looking for DX should not call at that time (as he no DX course). The experienced amateur who is keen on making exotic compounds would for

its part should remember that he has just done the same in its early days because it 'new' wanted to work.

In such a situation I usually give a short report, log the station and tell him that I'm actually looking for DX. The newcomer usually understands the hint and will pay better attention next time, but he's also pleased that he has logged a new one ... and that's what counts! So ... give everybody a QSO and do later in life your early days!

7. HOW TO CALL CQ?

Go first looks into whether the frequency you want to use is free. This is done not only by listening but also by **effectively asking** whether the frequency is in use.

SSB will ask for example, after having listened for a while, 'Is this frequency in use?', Followed by your callsign. If no response, repeat this question again, followed by your callsign. Then you can call CQ yourself.

CW and RTTY ask 'QRL?' Some feel that a 'question mark' is sufficient. This can cause confusion. If at that frequency effectively a connection is in progress (that you do not hear), someone may interpret your question mark as if you check the call sign of the station. Chances are there is a 'cop' scenario (see paragraph 12). "QRL?" leaves no doubt, and is unequivocal about what your purpose, namely to ask if the frequency is free. A question mark is meaningless and may mean several things.



In CW you get possibly one of the following answers if the frequency is in use:

- R (received-roger)
- Y (yes)
- YES
- QSY

If you have arrived by chance on a 'hot frequency' for example, a DXpedition or a rare drive, then chances are that you are quite short response served. Do not worry, do not react, just move to another frequency. Or figure out what the DX station is (by listening - not to ask for it) and work him.

Many problems can be avoided by applying the first rule of DXing: LISTEN. This golden rule used in combination with the magic word 'QRL?' Will keep you out of trouble if you want to launch a CQ.

- When calling CQ, do not do this: call CQ ten times, then your callsign twice and then switch to receive. Better: call CQ twice and give your callsign ten times (do not do, it is only by way of example ... four times your call is sufficient!).
- The key during a call is not the word CQ, but your callsign. If conditions are bad, it is important that the station on the other side of the world (ideally right?) To hear your callsign.

Practice makes perfect. If you are not experienced, listen for a while first but to others before turning the big step. You will quickly separate the wheat from the chaff and develop your own style to create successful and enjoyable connections.

8. PILEUPS

Once you have got the bug of the DX hunting will frequently come into contact with PILEUPS. When a rare DX station is on the tape, it will receive very soon a large group of amateurs wanting to work him. At the end of a QSO the crowd starts simultaneously on top of each other and calling the DX station. This is called a 'pileup'.



Not just a rare DX stations generate pileups. Occasionally DXpeditions are appointed to countries where almost no ham radio activity, sometimes even to uninhabited islands. The purpose of these expeditions is to contact as many amateur stations during limited stay in the rare entity. Contacts with these expeditions should be AS SHORT AS POSSIBLE to be. The expedition operator is not interested in your QTH, equipment or name of your dog.

How to trade your best to get a rare DX station or DXpedition station as quickly as possible in the log?

LISTEN



LISTEN

And, why should I listen? Because who does not want to listen, to feel? Indeed. Who does not listen, will not succeed to break the pileup and log the rare DX station relatively quickly.

Listening serves to 'behavior' and the rhythm in which the DX station works, to know. Also to see if it works SPLIT. During the listening period you have ample time to check and doublecheck the send and receive parts of your station:

- correct choice of antenna?
- SPLIT function activated?
- Transmitter and amplifier correctly tuned on a CLEAR frequency?

How often one hears this last part is done ON the frequency of the DX station! For shame! This only provokes reactions of the so called 'COPS' (which will be discussed later) and spoils the pleasure of many because the DX station is no longer audible.

- Before making a single transmission: ensure you that you are indeed correct heard the callsign of the DX station.

Often we find ourselves in a pileup because we rely on a display on a DX Cluster. It happens more than once that the message is not correct! So be sure you have recorded the call sign of the station you are working correctly. You will also feared return QSL card with the message 'NOT IN LOG', 'NON EXISTING CALL' or 'NOT ACTIVE THAT DAY' save.

An experienced DX station experiencing the pileup becomes too large because too many stations call simultaneously will switch to SPLIT operation. Thus transmission frequency remains free and callers can remain clearly understand him.

A not-so experienced DX station will continue working SIMPLEX and often after a short time in the towel because he was no longer in charge, the pileup.

Here you can play an important role, with the DX station during your QSO him subtly to bring it might be appropriate to operate SPLIT (if there are too many callers!). The other DXers will be grateful if you manage to persuade the DX station to change to SPLIT mode!

Following are the different pileup situations.

A. SSB SIMPLEX PILEUP **Simplex**

How do you TO GET best through a SIMPLEX pileup (a real pileup with dozens of stations that are eager to work the DX station)?



- Wait until the previous QSO is COMPLETELY finished;
- timing is VERY important. If you give immediately after the previous QSO is your callsign will have little or no success.
- waiting for approximately seven seconds and only then give your complete callsign
- **LISTEN ...**

Variants of this approach are many. This is experience you will only acquire by listening very often to simplex pileups. A lot depends on the rhythm in which the DX station works, and how well or not so well he can decipher the callsigns out of the cacophony.

If you call immediately after a previous QSO finishes, your callsign will disappear in the dozens of others who are simultaneously calling. Often give the pileup stations twice, sometimes even three or four times (phew!) Their call sign after each other. Meanwhile the DX station has more than likely been called a station in the pileup, but nobody hears this as some "endless" continue to give their callsign, without listening.

If you wait about seven seconds the majority of the pileup takes a breather and this is the time when your best strikes and calls himself once. Then LISTEN.

- Give your callsign relatively fast. 'Stretching' of the phonetic alphabet has NO MEANING 'Oscar November Four Zulu Zulu Zulu Zulu' is the correct way and this should be pronounced rather quickly.
'Ooooscaaaaar Noooveeeeember Fooouuurrr Zuuuluuuu' so more time is wasteful and contributes nothing to the intelligibility of your callsign at the DX station. On the contrary!
- ALWAYS use the CORRECT phonetic alphabet when calling in a pileup.
The phonetic alphabet (Alpha through Zulu) in radio traffic serves to avoid mistakes during

exchanges of letters and / or words. There are only 26 letters, each with their own unique word, in order to achieve this objective.

A DX station listens in the pileup cacophony these specific words. His ears are harassed by the fusion of all these words (and figures), the fatigue increases. If we then also deviate from the standard words of the phonetic alphabet, it gets even more difficult for him.

Far too often in pileups set the DX station just THAT letter that deviated from the standard alphabet does not understand and to ask for a repeat.

Example:

'Lima' cuts like a razor sharp. Many use 'London' as an alternative. If your signal is very weak, the DX station will probably understand 'Lima' but not 'London'!

More examples:

Bravo - Baltimore. Echo - Easy (very bad). Hotel - Honolulu (bad). Juliett - Japan. Kilo - Kentucky. Lima - London (very bad). November - Norway (very bad). Oscar - Ontario / Ocean (very bad). Papa - Portugal (very bad). Quebec - Quitto (very bad). Romeo - Radio. Sierra - Santiago. Tango - Toronto (bad). Uniform - United / University (bad). Victor - Venezuela (bad). Whiskey - Washington (very bad). X-ray - Xylophone (very bad). Yankee - Yokohama (very bad). Zulu - Zanzibar (bad).

Not only is the DX station to the exact words, he expects certain words, certain sounds and a defined number of syllables. If by static / QRN is a syllable lost, he can often itself a complete right because he correctly threads together the sounds and the number of syllables in the word.

The puns were used mostly used on VHF / UHF might be nice, but not effective (we are thinking to Old Man Neuze four Zotte Zatte Sultry Seers).

- and returns the DX station with your full and correct callsign, then there is no reason to waste time by repeating your callsign at the beginning of your transmission. Enter the DX station just his report. You can end with your callsign, but this is time consuming and certainly to be avoided when working DXpeditions.

The shorter your transmission the better and the more the rest of the pileup will appreciate it. Often give you best only a report without attaching anything to add. One second and the QSO is made, the DX station can attend station.

- when calling in a pileup, never transmit the callsign of the DX station; he knows his only too well ... pure waste of time
- Give your callsign once. Twice the maximum, but not advisable. In some cases (usually hear the DX station properly or inexperienced) to do this anyway. Three times is out of the question!
- If the DX station returns with a part of your callsign, put an emphasis on that part of your call the DX station does not hear

Examples:

QRZ, XU7ACV.

(cacophony-7 seconds waiting time)

ON4zzzz.

ON4zzzz, you are 59, QSL?

QSL, 59.

Thanks, QRZ, XU7ACV

QRZ, XU7ACV.

(cacophony-7 seconds waiting time)

ON4zzzz.

4zzzz, you are 59, QSL?

ON4 - ON4zzzz, 59, QSL?

ON4zzzz, QSL tnX, QRZ, XU7ACV

- if the DX station returns with a partial callsign which does not correspond to letters of your callsign, then SHUT UP! Again: BE QUIET, BE SILENT! Do not like the previous loud words? Well, the DX station does not like your nickname, that he does not want to hear at that moment.

If everyone in a pileup this logical principle, followed then there is a lot more stations could be logged by the DX station!

Unfortunately, the primacy of the "I" feeling many DXers and they find excuses left to do but begin to call back even if they know the DX station did not come back to them.

Pure waste of time this is!

- and returns the DX station with 'ONLY' and a partial callsign, this usually means that he already tried several times to take full callsign on unsportsmanlike behavior of the pileup DXers (keep calling on top of the station he is trying to work) each must try to record the nickname again.
- if the DX station instructs 'JA ONLY, Europe Standby' he expects to hear ONLY Japanese stations. Silence is the message. Do not call in the pileup 'Europe PLEASE', this is really out of the question.
- If you use a QRP (5 W or less on CW, 10 W or less in phone), the DX station call not with your callsign followed by / QRP ('stroke QRP'). Never. This is not permitted suffix under Belgian law. Only / P, / M, / MM and / A are accepted. How often one hears not someone in a pileup with just 'stroke QRP' without calling nickname? Then the DX station should it eventually ask for his callsign, again a waste of time. During a 'ragchew QSO' you can clarify that you are working QRP.

B. CW SIMPLEX PILEUP

- The same points as mentioned above are valid for a CW simplex pileup.
- Never send 'the ON4ZZZZ.
Why not send the "ON4ZZZZ 'but just' ON4ZZZZ? Because the word 'de' (in morse code means 'from' in Dutch) only adds to confusion in unraveling the nicknames by the DX station.
- Never end with a 'k' (invitation to transmit) when calling a DX station.
The more irrelevant information you pass, the greater the chance of mistakes. An extreme example of how the transmission of 'k' when calling a DX station can lead to confusion, can be found at the end of paragraph 13 (two-letter callsigns), see below.
If the calling station (you) does not transmit during a timespan which is significantly longer than a space between two letters will understand the DX station that broadcast is stopped.
- Adapt your speed.
You will hear soon (after listening to first carefully to the pileup and the rhythm in which the DX station works) which stations are picked up by the DX station. Adapt your transmit speed to the speed of the working stations.
Just because the DX station at 40 wpm does that only stations that are elected to 40 wpm signals. Often the DX station picks out stations using a much slower signals. Then sign your best too slowly.
- When returning the DX station with 'ONLY' and / or closing at the end with 'KN' (instead of K = Over, invitation to transmit) it means he ONLY the specific station that he invokes (or the partial callsign) wants to hear back. Usually this indicates that the DX station starts to get on his hips because of the many undisciplined callers who are transmitting on top of the station he is trying to work!



C. RTTY (AND OTHER DIGIMODES) SIMPLEX PILEUP

here is once you give callsign usually do not work. Twice is advisable and depending on the DX station can pick out callsigns, it is sometimes necessary to give your callsign three times. The latter is to be avoided as much as possible.

Better is very good timing and call at the right time. Hopefully the DX station is quick to SPLIT mode!



D. SSB SPLIT PILEUP

Phew, the DX station works in SPLIT mode, what a relief! Indeed a relief because in SPLIT mode the pace of making QSOs increases considerably compared to working in SIMPLEX mode.



How to get fast now in the log of the DX station is working SPLIT?

- LISTEN, LISTEN, LISTEN ...
- Go through the above simplex techniques work, a lot of items are applicable.
- Your transceiver is still in SPLIT mode?
- Who LISTENING a few minutes before making ANY transmission, you increase your chances considerably to get in the log with a few well placed calls!

Some hams make a sport to break the pileup immediately with one well placed call to get into the log of DX station.

A few minutes you the time to listen will:

1. the rhythm in which the DX station works;
2. know the width of the SPLIT (eg. 5 to 10 kHz up / down), either indicated by the DX station (this is the preferred method, but unfortunately not all DX stations do this often!) or by fishing it out yourself;
3. understand whether he is a real opportunity at that time to get through the pileup (the only Japan DX station works because he has better propagation to there to then to Belgium?);
4. out how the DX station moves through the SPLIT window;
In other words, he goes from the bottom of the SPLIT window upwards and starts over again from the bottom? Whether he turns over once arrived gradually back down?
5. notice in which frequency hops the DX station moves through the pileup. In other words, if the SSB SPLIT window comprises 10 kHz, does he work stations every 2 kHz, or is it 3 or 5 kHz? Or does he work some stations at the bottom, then the middle, and then the top?

Only after:

1. Give one (1) times your callsign;
2. and LISTEN.

If you have gone through the above points, it is usually a piece of cake to pass your call at the right time and at the right frequency. Bet you're more successful than before (when you do not follow these tips) to the pileup going to 'break'? And no, you do not kilowatts of power to do.

Again, when the DX station returns with a partial callsign and it does not correspond to yours, BE SILENT - BE QUIET! This point can not be stressed enough. If you do get calls, you can, even when SPLIT operation, another QSO help the lightning and the speed at which the DX station works get down! DO NOT DO THIS! Even if you hear others doing it! Be a lady / gentleman in radio traffic!

If you do not do this - hence you are listening - you have a good chance to hear which station the DX station, and on which frequency!

Depending on the capacity of the DX station to pick callsigns out of the pileup, it is advisable to give your callsign only once. You should feel yourself. Twice is an absolute maximum, three times is out of the question. I repeat myself, but this is an important point.

Different DX stations have different operating styles. The One will be better than the other. Some work by numbers to thin out the pileup. If the requested number in your callsign: BE QUIET - BE SILENT!

E. CW SPLIT PILEUP

- Most of the points concerning SSB SPLIT pileup techniques are also applicable here. Take them once more.
- Adjust your speed to initially that of the DX station, and if you figure out the average speed of the stations through a pileup hit, then use that speed. This is the speed the DX station feels most comfortable.
- Command your callsign one (1 time), and LISTEN. Giving your callsign twice on CW makes no sense.
- If you do give your callsign twice, work in QSK mode (CW full break-in). So you can hear when the DX station starts transmitting. You can then interrupt your transmission and seek with the 2nd VFO to whom he is working.



F. RTTY (AND OTHER DIGIMODES) SPLIT PILEUP

- Most of the points concerning SSB SPLIT pileup techniques are also applicable here. Take them once more.
- Send your callsign twice (2x) and listen. If you three times your callsign will give you quickly notice that the DX station to give is already a report. If you're lucky, the DX station gives the call sign of the station called again at the end of his transmission. Then you can search on your 2nd VFO where it is transmitting. Very often you have that lucky and then it is important to hear the beginning of the transmission of the DX station. Usually this works out fine if you just give your callsign twice.



9. TAIL ENDING

twenty years ago: 'tail ending' a new thing came about some controversy existed. Pro's and con's so.



What is tail ending? Loosely translated, you might say "step on his tail." With the introduction of the 2nd VFO (at first external, and later incorporated in the rig) working SPLIT mode became a popular way of operating for DX stations and DXpeditions. Attentive DXers listen on their 2nd VFO to the DXer that was called by the DX station. As the attentive listener hears the QSO was okay (callsigns and reports correctly exchanged) he kicked as it were on the tail of the DXer who was still working close with the DX station. Thus, the DX station could already hear - if its signal is strong enough - and jot down his callsign. If the DX station then ended, in turn, he called immediately after the DXer who had done 'tail ending'. In this way, it was thought to save time and to log more QSOs. But time has learned that very few 'correct' tail ending 'do and early on the call in progress QSO being, hence the QSO has to be repeated (part of callsign missing, report not understood etc.) .

Because placed today anyway much less disciplined is then used to show that many operators think they ever need to call on top of an existing QSO. If they additionally hear the DX station is calling the next station without asking 'QRZ' or something like that being said, the gate is completely out of the dam.

'Tail ending', yes or no? General consensus of the day today is: no.

10. DX WINDOWS

The frequency bands broadcast prescribed by our government custody. What kind of broadcasts where exactly should happen it does not prescribe. To make things better coordinated to keep the IARU band plan exists for ensuring that order reigns on our tires. The IARU band plan speaks only 80m from two frequency bands (3500-3510 kHz and 3775-3800 kHz) where priority should be given to intercontinental contacts, "which means as much as" DX "and a DXpedition window on the 20m band (14195 +/- 5 kHz). Besides this, there are 'de facto' DX frequencies where are found DXpeditions and stations from rare countries.



Know these DX frequencies, also known as DX windows "called, and respect them.

When I with a low power station was operating from the heart of Africa, I wanted to make as much as possible with a new and rare country in their log. That's why I always sought a place in one of the DX windows to call CQ. I knew many DXers are keeping an eye on these windows in the hope of something 'rare'.

My disappointment was big when I noticed these windows filled with 'normal' European or American who conducted a 'local' QSOs, or CQ DX were calling and did not hear me when I cried to them!

Many think the DX windows are there to call CQ DX as ordinary station itself. I disagree and consider these windows as a haven for weak DX stations that want to be 'noticed'. Best self not to call CQ in these windows and use them solely in search for rare DX.

Next to avoid de facto DX windows and DX frequencies are current and worth keeping an eye, by regular stations to call ourselves there CQ:

- SSB: 28490-28500, 24945, 21290-21300, 18145, 7045, 3790-3800, 1845 kHz;
- CW: usually the first 5 kHz of the band, and even following frequencies: 28020-28025, 24895, 21020-21025, 18 075, 14020-14025, 10103-10105, 3500-3510. 1830-1835 kHz;
- RTTY: ± 28080-21080-14080 kHz

Of course DX stations and DXpeditions can appear on other frequencies outside the DX windows.

11. CONFLICT SITUATIONS

Let's not forget that with many hundreds of thousands of them, all at the same terrain, namely the ether same hobby. Conflicts are therefore excluded. It seems unrealistic not to discuss this fact; a bit of good advice never hurt anyone.



As stated in paragraph 4: BE POLITE. This is the only way that your long-term will achieve results in conflict.

Let's start with an example of a very extreme case, namely IZ9xxxx from Sicily.

OM Pipo has / had the annoying habit to call CQ on 14195 kHz, to conduct a DX frequency used by rare DX stations and DXpeditions, and QSOs with regular stations from Europe and America. This prompted worldwide a lot of anger among DXers. 14195 kHz was also a mess again recreated Pipo showed up, because the DX community did not appreciate him that frequency 'monopolized'.

If we analyze this case, we notice the following objective observations:

- Pipo asks 'Is this frequency in use?' before he starts a CQ and makes QSY when the frequency is found to be in use.
- Pipo uses a frequency which he, as decreed by law, can use at anytime (see further).
- 14195 kHz is situated in the de facto DX window 14190-14200 kHz. This frequency segment in IARU Region 1 since January 1, 2006 primarily reserved for DXpeditions (so Pipo had to emigrate to other frequencies).
- Whenever Pipo made legal transmissions on 14195 kHz (before January 1, 2006) he was being jammed by dozens of stations without identifying who actually pirateerden.

Mid 2003. This situation came to my attention and I have found many occasions how dozens of DXers were deliberately Pipo disturbing. Let there be no doubt: did any of these stations outside the norms imposed by its license. If the trolley of NCS (National Audit of Spectrum, BIPT) happened to have been at THEIR door and the officers on duty have found this deliberate faults, these DXers would have their license is lost, and not Pipo IZ9xxxx who always within the legal limits worked his license!

As a quasi-objective observation we can say Pipo is an anti-social ham who on purpose spoils the pleasure of others. But, his actions are always conducted within the boundaries of his license.

How do you now best to deal with such a case?

- certainly not by jamming him (and making illegal transmissions). That gives him taste a sense of power, and power for more ... so he will certainly do his best to further get the blood under the nails of the people!
- Leave him be, and turn your VFO to another frequency;
- in a normal manner with him and try to find out the cause of his behavior

Indeed, on August 12, 2003 the boy was too much. I called Pipo in a normal way, and we had a QSO of about 20 minutes on 14195 kHz. During this QSO I learned Pipo did not appreciate that he was deliberately jammed by dozens of 'unknown' hams that he did not take that phones with death threats (!) Washroom (phone was picked up by his daughter!), Etc. During this 'calm' QSO we exchanged argumentation as to why both sides 14195 kHz or would not be used more by Pipo. We ended the QSO without reaching an agreement, but the next few weeks 14195 kHz was clear of IZ9xxxx broadcasts.

Obviously Pipo use after a month or so commence with 14195 kHz, perhaps because someone caused him grief on another frequency? On another occasion, in 2005, when the expedition K7C on 14195 kHz was active, I overheard Pipo asking 'Is this frequency in use?'. I answered him immediately 'Yes Pipo, by K7C, tnx QSY, 73 from ON4WW. Pipo immediately went down 5 kHz to to call CQ. Case closed.

An incident that I was experiencing at first hand at the beginning of my amateur career took place on 21300 kHz. An agitated and infamous ON6 was a local QSO on top of a DXpedition to perform. I signed up, explained the situation, asked them politely to QSY and signed with my call sign. What I got thrown when my head is not subject to publication. I later learned that ON6 with his ON4 companion constantly being jammed on a VHF repeater. Perhaps their unmannerly mentality was the fact that they were disturbed, or perhaps they gained this mentality because they were unjustly jammed (by again 'illegal' jammers)?

A very different example of an inappropriate intervention. Two ON3-stations were on a VHF relay in connection with each other. One said to the other he could hear him very well on the repeater input frequency. Which "ordered" a ON4 in a very arrogant manner to leave the repeater because he wanted to make a call. This is not possible. As stated times BE POLITE. The ON4 operator could break in and say that he wanted to make a call. I suppose it as a user of a relay knows that these stations are specially designed for mobile users to give a greater operational range. If these two unlucky ON3 stations together on a highway at 120 km / h crossed their QSO would on a simplex frequency over quickly in the opposite direction. The fact that the 'newcomers' bawled at by an old-timer is flatly embarrassing. we should not put them on track to be experienced amateurs?

Is this true? Does it matter? 'Bottom line': be polite. You will not always what you want, but more often than not.

And this brings me to the next point, which could actually reside under 'Conflict' ...

12. 'COPS' (POLICE)

The ham community is expected is largely self policing ', the hams must personally maintain order in their

ranks. As long as nothing illegal happens, the 'Authorities' will not intervene. But that does not mean the Radio Amateur Service needs to have its own police! Self-discipline, yes.



Let us go on and on with our friend Pipo from Sicily. I was 2 seconds slower to respond to his question 'Is this frequency in use?', then surely one of the self-appointed DX'cops "have spoken and have him criticize a lot in the least friendly terms to the head hurled. The words used are almost always such that only the situation from bad to worse can evolve.

As can be expected after all these accusations is that Pipo's character, just stays on 14195 kHz. Not only will he be constantly disturbed the next two hours, also K7C expedition will disappear off stage ... Precious time and lots of QSOs will be lost thanks to our 'helpful' cops.

- Most 'cops' have good intentions and are not so extreme in their language. They remain polite and are often successful in their attempt to keep / get a free frequency.
- Some 'cops' also have good intentions but are not too subtle in their language and reap the opposite of what they intended. These 'cops' create chaos instead of calm.
- A third category of 'cops' is those using foul language with the objective of creating chaos. Their bad language and manners attract comments from colleague 'cops', with a resulting total chaos!

These three categories of 'cops' have one thing in common: when playing 'cop', they are effectively being PIRATES. Because they make transmissions without identifying.

In which case, you 'Cops' mostly come from?

- 'Cops' mostly appear on a rare DX station or DXpedition is active, usually when this station is working in SPLIT mode;
- a station that forgets to press the SPLIT button on his transceiver and starts the DX station to call on his frequency. Usually this operator also prefers to three or four times its nickname so nobody in the pileup hears whom the DX station calls. Exactly ... the time for 'cops' to start shooting.

A civilized 'cop' can report on a strictly neutral way to the 'offender' that he must transmit 'UP' or 'DOWN'. He wants to help him, it does not make the intention blame him.

How the operator who made a 'mistake', 'help' in a neutral way?

Before giving in to your vocation 'cop':

- set especially at first consider what the added value can be of YOUR intervention;
- silent when there is already another 'cop' (or 'cops') are at the scene;

And if you do the 'good cop':

- give the last 2 or 3 letters of his callsign followed by UP or DOWN. That's all;

All other messages mean that she / he made the mistake might not understand the criticism or the instruction, the error does not rectify, and there will be chaos.

Sample CW

ON4WW calls by mistake on the frequency of the DX station. Transmit the following: 'WW UP'. If one only transmits UP, then ON4WW probably not by the 'UP' was meant to him. With the result that he repeats the same mistake and continues to call on the frequency of the DX station. A second consequence is that there are probably several other 'cops' will start to transmit UP UP, with chaos as a result.

So always some letters of the call sign of the station signals, followed by UP. So he will understand that he is wrong, and not another. If one is in 'full' callsign followed by 'UP', you will very probably cover a part of the transmission of the DX station.

Even better would be that no one feels called to 'being a cop-dom', but this is a utopia. A targeted call to the wrong calling station so can order rapidly. A call with foul language achieves nothing and gives the pileup and DX station little joy, to put it mildly. One good 'cop' can be a blessing, two good 'cops' are already too many.

In SSB and RTTY modes the same principle applies. Give a part of the call (or even the complete callsign in these modes) followed by the correct instruction (listening UP / DOWN), and the frequency of the DX station will be clear again.

If DXer you will quickly realize that you get more benefit by not reacting to 'cops'. Try something negative to something positive. Keep on LISTENING through the tumult (here's the magic word again) to the DX station and in many cases you will be able to log the DX station while the 'cops' are 'fun' in their own way.

Remember, strictly taken, a 'cop' ALWAYS makes illegal transmissions, unless he identifies!

13. TWO LETTER CALLSIGNS (PARTIAL CALLSIGNS) AND DX NETS

As mentioned in point 3 (CORRECT USE OF YOUR CALL SIGN), use in ALL modes ALWAYS your complete callsign.

In many DX nets (mostly to be heard on the 15, 20 and 40m bands) it is customary that the MOC (Master of Ceremony) takes a list of stations that a DX station, which is in the DX .NET has logged in, want to work.

For the creation of this list the MOC often asks to pass the last two letters of your callsign. This is not only illegal, but in addition, many have adopted this method when they call a DX station. This is completely wrong.

It slows down the rate at which a DX station / DXpedition can operate the stations. Many times heard, even when I 'on the other side': a station gives three times the last two letters of his callsign. He is very strong with the DX station and had once given his complete callsign than the QSO was made in five seconds. Recommend this QSO will take three to four times longer!

On CW you hear much less and in RTTY it is seldom seen. Anyway, it's pointless. The most unlikely that I have ever encountered in the blooper category: someone called me on CW with 'XYK XYK. He was so strong that I had to sign him finally to hear the weaker stations were calling under him. So I signaled "XYK 599. The callsign that follows is fictitious, but you understand what it is about. "Z88ZXY Z88ZXY 599 K '. This nice OM signaled his nickname the last two letters followed by the letter K (invitation to transmit in morse = Key). The letter K was glued to the last two letters so that it looked as if it were the last three letters of his callsign. In English this is called 'a waste of space and time'!

Finally, this still on DX nets. The accompanying figure says a lot about. The QSOs are being dictated from the very beginning. The MOC often lends a hand and this can not really intended for those who want to create a two-way QSO. Try to make your own connections. The pleasure you experience it will be much bigger.

14. THE USE OF QRZ AND QUESTION MARK

Some DX stations and DXpedition operators have a bad habit of making only very rarely submit their nickname. This creates problems.



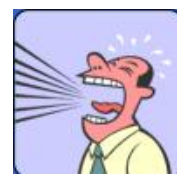
DXers going over the tape (not logged in to a DX Cluster) hear a station, but not his callsign. Over time they start 'QRZ' or '?' or "CALL?" to signal CW, and "QRZ 'or' What's your / his call? ' to call in SSB. This is highly annoying because if the DX station works SPLIT he can not hear this. The pileup stations are transmitting on a different frequency and are disturbed by the one transmitting 'QRZ' or '?' or "CALL?" transmits. Result: the feared 'cops' are emerging. Chaos follows.

If you want to avoid chaos, follow rule number one of DXing: LISTEN. Do not ask 'QRZ', '?', 'What's your / his call?', It will not help you to find out the callsign of the station.

'QRZ' is indeed misused here! QRZ means: Who is calling me?

15. A CONTEST STATION CALL

If you want to call a contest station or want to participate in a contest, please read very carefully the regulations. In some contests you can not call all stations and therefore it is somewhat embarrassing if you call someone that can actually and you do not want to work at that time. In such a case, the logging software to the contest operator even impossible to sign you. Here are some tips:



- a contest station wants to work as rapidly as possible as many stations. The message is: keep it short!
- Never give your callsign twice when calling a contest station. Once is sufficient;
- if the contest station you callsign has absorbed completely, do not repeat your callsign and just give him the required contest report;
- if the contest station returns to someone else: BE QUIET, BE SILENT!

16. DX CLUSTERS

A controversial theme. Some people do not like, most however.



It is striking how many incorrect 'DX spots' are being posted. Before pressing the ENTER button: check all data after and see if there are no mistakes when you make a report.

A DX Cluster also has an 'ANNOUNCE' function. This is used by many stations 'a bit wrong'. Usually to complain or to be cut, and to ask for QSL information. Complain and saw? Yes, recently observed during 3Y0X DXpedition, but on other occasions:

- "I am calling for 3 hours and have no QSO can make"
- "I am listening for 5 hours and have not heard him . Bad expedition! "
- 'Bad operators, they know the propagation'
- "why not SPLIT? "
- 'Please RTTY'
- 'BINGOOOOO! "
- 'New One !!! " '
- 'My # 276 !!! "
- Etc. etc..

This makes no sense. DX added value is nil. On a DX Cluster do DX spots, period. Any text can be used in the comment field to provide information about the SPLIT frequency, QSL manager etc. DX Cluster = DX spots, with possible relevant information which has added value for all DXers.

QSL info can be requested via the command 'SH / QSL callsign'. Or if this feature does not exist on your DX Cluster: 'SH / DX 25 callsign'. You will obtain the last 25 spots of this station and usually somewhere in a comment field or referred QSL VIA. Even better is the command: 'SH / DX callsign QSL info'. This will show the last 10 reports of this station with QSL info in the commentary field. If the DX Cluster you information sought does not, you may contact one of the many internet QSL websites.

Your frustrations do not have to transfer to others. You can invest might be better some more time in improving your station or improve your skills as an operator?

The notifications 'Worked 1st call' and 'Worked with 5 W' say nothing about the signal of the DX station, but everything about the ego of the DXer who makes the notification.

Often we see 'DX spots' of stations spotting themselves or their chat partner, then put a private message in the text field. This is out of the question!

Then there are the reports of PIRATE stations. A PIRATE does not deserve our attention, do not spot him.

If your drives as our friend Pipo, what do you suppose happens then? Right, do not do so.

Summary: make correct DX spots. Annoy your fellow man not with your frustrations. To swank nobody has a message, or to useful information such as SPLIT frequency and QSL info. Use the features of DX Cluster correctly. If they do not know you, they search. The manual usually can be found on the DX Cluster. Read the manual.

Please note that the whole world is reading your report! So you can very quickly and easily build a bad reputation.

For hardleersen, but also for our pure entertainment, this link from the [Cluster Monkeys](http://www.kh2d.net/dxmonkey.cfm) (http://www.kh2d.net/dxmonkey.cfm) recommended. The message is clear.

17. TIPS FOR DX STATIONS AND DXPEDITIONS

Love going with family and radio holiday? Or are you working for your work abroad and can be "radioactive"? Or are you nuts (according to your XYL) and prefer spending your money on a DXpedition? Then you have a chance that you will make transmissions from an entity that is sought after by your

fellow amateurs. The more sought after is the place from which you send, the more chance you will have to deal with situations as above mentioned: 'cops', nobody listening to your instructions, etc. It is very important that YOU the strings well. hands takes and continues to hold.



- If going on holidays to Spain or France you will not create big pileups.
- Going on holiday to the Balearic Islands, Crete or Cyprus, the pileup fever will surface and you will already get some callers.
- you go to work to Iran and you get the chance to come out over there, put your sweating!
- And if you leave for Scarborough Reef DXpedition, the pileups fence all the way from the dam ... 'fasten your seatbelts'!

How to take the reins and hold? Surely not an easy task, but feasible. Here are some tips:

- mention your callsign after every QSO. Do you have a real long callsign such as SV9 / ON4ZZZZ / P, enter the callsign at least once every three QSOs;
- If you work simplex and you become aware that you can not fully record the nicknames are calling too many drives (which may be for example as little as 5 stations.), immediately switch to SPLIT mode;
- when switching to SPLIT mode make sure the frequencies where you will hear yourself not in use! Take care not to ruin an ongoing QSO;
- you work in SPLIT mode, report it after each QSO. Indicate which split you are using. For example, in CW: UP 1, UP 1-2, UP 5. SSB: listening 5 up listening 5 to 10 (kHz) up;
- listen at least 1 kHz CW SPLIT higher (or lower). Better is 3 kHz, to avoid possible that someone with keyclicks interference on your TX frequency => no 'cops' to intervene;
- SSB SPLIT listen at least 5 kHz up or down your TX frequency. You would not think it possible, how wide are some signals and if you have only 3 kHz SPLIT which may splatter on your TX frequency;
- do not worry too SPLIT window, do not claim unnecessary spectrum just for yourself;
- if you can absorb only a partial callsign in SSB (which often happens in a huge pileup), give a report to the partial callsign eg 'Yankee Oscar 59.,
- on CW do not question mark 'when returning to a partial callsign. Questioned signals are unacceptable because once you do this, the great majority of (undisciplined) pileup to start calling you back. Example: 3TA, 599. Not: ?? 3TA, 599. Dan begins to recall the pileup;
- on SSB and CW (and digimodes): If you have purchased only a portion of the nickname and have given a report, repeat the full call sign of the station so that they are sure that you know him and have not logged another. Some inexperienced DX stations give an example report: TA, 59. OH3TA coming back, repeating his callsign several times and gives a report. The DX station comes back and says: QSL, tnx, QRZ? Well, if OH3TA unless of course it correctly in the log state. Here to say the DX station: OH3TA, tnx, QRZ?
- once you have given a report to a partial callsign, stick with that station until you have his complete callsign. The pileup can be very undisciplined. When they hear that keep calling does not work, you still insists to this one work station to which you have included only a partial callsign, the pileup will put itself more disciplined. Drop the partial callsign at any given time and work another station, you have lost the battle and chaos will rule;
- if a pileup becomes too undisciplined, go QRT, change your TX frequency or frequency band;
- always stay 'cool' and do not start shouting at the pileup;
- no work 'two-letter callsigns'; Also tell them that you want to hear full callsigns;
- you are in SPLIT mode, the stations you return to are not responding, listen on your TX frequency, much chance of disturbing others (eg 'cops');
- CW 40 wpm speed limit where you should not go on the higher bands. On the lower bands (40-160 m) is the maximum speed - depending on conditions - is between 20 and 30 wpm;
- let the pileup know what you're doing. you go QRT, tell them. You need to make a pit stop, tell them: QRX 5 (QRX 5 minutes, standby). Make you QSY to another mode or frequency, tell them. There is nothing more annoying for a pileup not to know where you are or what you do there. They want to work you and like to be informed of your activities. 'You are hot'!

If a pileup is too big for you, you might decide to work by continent / region or number.

Work means you have a specific continent (eg. Europe) or region (Northern Europe, West Coast USA)

calls, where the DXers in the other continents / regions have to standby by continent / region. Per number work means you call the stations by the number in their callsign (0-9).

This way of working is generally not recommended. Large groups of operators are sitting idle, nervously waiting until it is their turn. While they wait, they have no guarantee you will call their continent / region or number; After all, you can go QRT at any time. Thus they are nervous. And nervous operators can quickly turn into nasty 'cops'. If you work by numbers, 90% of the pileup is sitting idle!

That said, I would like to mention that these methods can provide assistance to novice operators. An advantage when working by continent / region is to give areas that normally have poor propagation towards you, still have the opportunity to work you.

Some things to keep in mind as per continent / region works:

- Use this technique to reach areas with poor propagation towards you far;
- when using this technique because the pileup is too big for you to handle, rotate quickly between continents;
- the other continents of your plans: are you going to work JA only for 10 minutes, then you work EU next, then NA? Tell them.
- When the size of the pileup decreases, switch back on at the same time work all continents / regions.

Some things to keep in mind when working by number:

- once you started a number sequence, finish it. Sometimes operators stop in the middle of a sequence and go QRT or start working again without numbers: be assured, you win the sympathy of the pileup not!
- Start the sequence with number 0 (zero), continue with 1-2 -...- 9 and start with 0 again;
- the numbers not throw each other: 0-5-2-3-8-4 -... the pileup will hate you.
- Work up to 10 stations per number, always work an equal amount of stations per number.
- The pileup on how many stations you will work per number and repeat this information each time you switch to another track.
- Remember, 90% of the pileup is sitting idle, 'cops' will transmit on your frequency. So try if possible to avoid working by numbers.

Outside the techniques to work by continent / region or number, trying to work some operators in each country. This must be avoided at all times. I repeat, do not do this, you will activate attract 'cops' of the 'standby' countries. You will anyway fail to call each of the 335 different DX entities, so why even think about using this silly technique?

To close. One of the most important points when running a pileup is to maintain the same RHYTHM. If you can, you will yourself be much more relaxed, and the pileup. Most importantly, enjoy it!

18. MISCELLANEOUS

CW keyclicks care for a lot of annoyance. Are you the owner of a device that produces 'garbage', leave modified (or do this as amateur radio itself!). Your fellow man will thank you. Same applies to SSB: about modulated signals make few friends. Make sure your transmissions are 'clean'!



The Q code and number code (73/88) are established to make it easier and less certain questions and words on CW. Actually they should not belong in phone (SSB / AM / FM) QSOs! You do not have to say no 73 if you just 'hello' can transfer in phone? Try herein to find a happy medium. A phone QSO must not matter as much as possible 'Q words and numbers.

And 73 (best regards) in telephony in the plural saying that leave you quite necessary if you do it correctly. Ever tried to transmit 73's on CW?

If the speed of a DX station on CW is too fast for you to take and you want to work anyway, use a tool (software decoding) so you understand what he transmits. Otherwise there may be a lot of time lost to complete just one QSO, yours. This is because you do not respond in due time because you will not understand what is transmitted. Remember that there are still many people waiting. Only by practicing a lot you'll speed so can increase your capability to copy almost all CW stations without difficulty and without software.

'QSO NOT IN LOG': if your QSL cards regularly return with this feared message, it means that you urgently need to change your 'operating practice'. LISTEN is a first requirement: if you can not hear the station, why call? Re-read this document several times, act accordingly, and be a successful operator. Bet the QSO NOT IN LOG 'message will not only sporadically?

Now we're on the QSL cards. The saying goes like this: 'The final courtesy of a QSO is the QSL card'. Most of us keep in mind to get your QSL card in their collection. Some do not. I personally take it to answer all QSL cards that reach me via the bureau system or direct. QSL of radio amateurs as well as of SWL (shortwave listeners). We are lucky in Belgium, the costs for the use of the bureau system is included in our annual dues to the UBA, our National Radio Society. Therefore it is extremely cheap for us to exchange QSL cards worldwide. Not all amateurs are so cheap on the use of the bureau system in other countries is sometimes quite expensive. Keep this in mind when you QSL send and inform you (possibly through the IARU website) if there is indeed functioning bureau system in the country where you want to send your card to. If not, you can consider sending direct with an SAE (Self Addressed Envelope-self-addressed envelope) and sufficient funds for return postage (eg IRC -. International Reply Coupon) to cover the costs.

You can also confirm contacts electronically eg. Via LoTW (Logbook of the World) from the ARRL (American Radio Relay League). So you do not really paper QSL, but hey, I like having that old QSL cards to keep in shoeboxes!

Some DX stations use a QSL manager to confirm your QSL card, so they have more time to make QSOs, rather than engage in the time consuming answering QSL cards. There are many websites which provide all the necessary information regarding those executives. One is QRZ.com, which is often mentioned in conversations on the tapes.

Something about the national amateur radio societies. During World War II were all amateur radio licenses suspended and was requisitioned all radio equipment. Do you know who after the war ensured that the amateurs were back up and running? Indeed, it were the National Radio Societies (IARU member) who were responsible. This non-profit organizations are the only legal entities that have the ability to negotiate with the government that gives us the privilege to practice our hobby. It is important that these national associations are strong in their shoes, and that can only be if you're a member of. Together we are strong, l'Union fait la Force. Are you a member? Consider to join. And why would not participate as a volunteer in your association? Remember, these Societies are the only option when it comes to finding hearing on the government! They are important.

On the Internet there are many sources of information related to amateur radio and DX. The list is very long, a search on the web will help you further. To name a few: UBA, 425 DX News Letter, ARRL Propagation Bulletins, etc ...

Know the IARU Region 1 band plan and the frequencies authorized by BIPT, print them out and hang them prominently on.

IZ9xxxx and Pipo are the modified callsign and name of a Sicilian ham for understandable reasons.

We must also encourage a good laugh, check out once the [sharp observations](http://www.qsl.net/dl4tt/DawgX-rayClub.html) have read (<http://www.qsl.net/dl4tt/DawgX-rayClub.html>) of DL4TT associated with 'Dog X-ray' after Chapter 19.

19. IN CONCLUSION

This boy started out as a small pistol ham. In the beginning he could make very happy when he one QSO with a major DXpedition. Low power (even though bigots claimed otherwise) he worked his first 300+ countries. There was no secret, there was no amplification, there was just the very strong desire to work a new country.

This meant that all 'DXboekskes' leafed were, he tuned in on the 2 meter DX channel to listen to the old-timer DXers and they with their superior antennas DX heard the news could be for him. Sleepless nights. Hours are called to make a QSO. Without success. And then still sit calling hours until he finally broke the pileup. Or perhaps not, and tried again the next day. Sometimes taking holidays to be able to work 'a new one'.

This boy still is a small pistol ham. If other DXers from the east of the country come to visit, it's always: 'Boy, that's what did you stand? Ge does all that DX with that? "

Indeed, the desire to work DX is high, and then you go looking to build your station as well and efficiently as possible. Giant Large does not have to be in order to be successful. Above all, good operating practice is the key to success.

It often tickles me to drive and make them show how difficult QSO instead of wasting their time by complaining sit on a DX Cluster bitterly to those 'DX Cluster moaners'.

'Get a life, and work DX'. As a grand personality once said, "DX IS"!

Good luck in working 'new' on the tires in the hope that the above suggestions level of operating practice that can push up. If you are unable to get through the pileups, you may always call upon me. A tasty trappist beer per new country worked from your station is all that is needed ...

And, remember, nobody will ever be without mistakes. Bet you the author ever will catch on making a mistake? Smile and try to do better than him instead of him to shoot. "

Good luck and have fun on the bands! Thanks to the good friends who were involved in this project.

73 - Mark - ON4WW.
(April 2006)

ps: I would like to know your opinion after you read the full article. Have you had something, missing cases, etc.

You can lose your mind in my or you can send me an email:

on4ww@on4ww.be

Tnx!

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S.O.S.



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