

From: "John Rogers" <g3pqa>  
To: <topband-at-contesting.com>  
Sent: Sunday, November 02, 2008 2:48 PM  
Subject: Topband: New 160m QRN Problem in EU

During the last month I have been hearing a new source of qrn which seems different from the usual local switch mode rubbish. Only audible at night, and strongest on 90 deg. East beverage. Up to s7 at 2130z, s9 at 0130z, on east beverage and audible on all others. Not listened later in last couple of weeks, so dont know yet what time it disappears, but DF-ed it at 70 degrees - difficult to get accurate bearing as it is skywave.

Sounds like power line qrn with phase distortion, a bit like the old Loran at a much higher frequency. Spreads from about 1810kHz to 1860kHz, strongest around 1839kHz.

I suspect it is coming from east UK or west EU, but difficult to locate without other reports. Later on I will make recordings and try to DF from other locations.

Does anyone else hear it, (or have an idea of what it might be)?

Thanks 73  
John G3PQA

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From: ON4WW Mark Demeuleneere  
To: "John Rogers" <g3pqa>  
Cc: "Hugo De becker" <on7gb>  
Sent: Monday, November 03, 2008 4:22 PM  
Subject: Re: Topband: New 160m QRN Problem in EU

John,  
This morning the qrm was gone. Checked around 500 kHz, gone too.  
Is it gone at your end?

Hugo, is it gone at your end?  
73 - Mark - on4ww.

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From: "Paul Dane" <g4pwa>  
To: <g3pqa>  
Sent: Monday, November 03, 2008 5:38 PM  
Subject: RE: New 160m QRN Problem in EU

Hi John,  
I've also been suffering from a new noise source recently. Mine is intermittent, loud (S9 ish), same direction as yours (loudest on my 90 degree beverage), but wider than you reported (spreading up beyond 2000kHz, getting weaker as freq increases). It was a real nuisance during CQWW, but luckily I've only heard it a couple of times since then.  
It was strongest on my 90 degree bev, also strong on the 60 and 120 degree bevs (roughly the same on both), much weaker on the others, so I think it must be pretty much due East from here (in West Gloucestershire).

I also looked at it in AM mode using Spectran. Pronounced spikes every 50Hz or so, all roughly the same amplitude except for larger spikes at 100Hz and 200Hz. Definitely not the sort of pattern you get with line noise, but not the same pattern I've seen with switched mode PSUs either. Don't know why, but it just didn't feel like a local noise source.

If you hear it on again, please feel free to give me a call and I'll see if we're talking about the same thing.

Cheers,  
Paul G4PWA

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From: "John Rogers" <g3pqa>  
To: "Paul Dane" <g4pwa>  
Cc: "ON4WW Mark Demeuleneere"  
Sent: Tuesday, November 04, 2008 2:37 AM  
Subject: Re: New 160m QRN Problem in EU

Hi Paul,  
Many thanks.

It sounds the same. Bad news. I havent looked in Spectran yet but will connect it later.

The qrn was off (or weaker) on Sunday but is on again today (Monday evening/Tuesday early am) getting worse as the evening progresses.

Whilst I am typing this email at 0130z it is s8/9 on 1840kHz. (fading and phasing up and down) and extends from 1800 -2200kHz. Also weak s5 on 500kHz.

Mark ON4WW and Hugo ON7GB are also hearing something, maybe the same. Lets hope we get

reports from someone closer to its source and it is fixable!

73

John G3PQA

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From: "ON4WW Mark Demeuleneere"

To: "John Rogers" <p3pqa>

Cc: "Hugo De becker" <on7gb>

Sent: Monday, November 03, 2008 11:20 PM

Subject: Re: Topband: New 160m QRN Problem in EU

Contrary to my prior e-mail, the qrn is back! Seems like it was off most of the day (around 1830z it was still not there), but when I listened at 2230z, it was back in full force on both 500 kHz and 160m.

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From: "John Rogers" <g3pqa>

To: "ON4WW Mark Demeuleneere"

Sent: Tuesday, November 04, 2008 12:12 PM

Subject: Re: Topband: New 160m QRN Problem in EU

Mark,

Same here. It came up here around 2200z yesterday (Sunday) evening and was strong (s9) centred on 1840kHz (from about 1800 to 2100kHz) until 0245z. It then disappeared for half an hour, and then came back and was s9 again by 0330 this (Monday) morning (when I went to bed tired!).

You have probably received my other emails.

I have now looked on Spectran on AM mode and it is lines every 50Hz, starting at 100Hz.

John OZ1LXJ says he cannot hear it up there, but he had some other qrn and static which may have been masking it, but at least it indicates it is not in OZ area.

Am wondering if it is some new kind of PLT being tested somewhere.

Very bad news.

73

John G3PQA

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From: "John Rogers" <g3pqa>

To: "ON4WW Mark Demeuleneere"

Cc: "Paul Dane" <g4pwa>; on7gb

Sent: Tuesday, November 04, 2008 2:53 AM

Subject: Re: Topband: New 160m QRN Problem in EU

Mark,

Many thanks for email.

Monday morning I did not hear it, but Monday evening there again. Now early Tuesday morning 0130z and stronger.

Centre 1840kHz, audible from 1800-2200kHz, worst 1830-1840kHz, up to s9 with qsb and a sound like slow phase change.

100 deg bev - s9+10dB (at 0145z, getting stronger as night is later!)

40 deg bev - s7/8

150 deg bev - s6

275 deg - s6

330 deg - s4

K3 in SSB 2.7kHz b/w . Sounds worse in am mode as you say. Unfortunately it is there weakly on all my other beverages (I guess they respond to skywave to certain degree and limited f/b), so a serious problem for weak DX later in evening and in mornings.

If I am getting it skywave, then it must be a worse problem for others closer!?

I have just monitored 500kHz and it is also there , s5.

My first bearing was 70 degrees, but the loop had to be nearly horizontal, and sky-wave bearings are inaccurate, maybe 20degrees out. I will take some recordings and try to df again, during the week.

I had an email also from Paul G4PWA (near Bristol), it sounds as if he is getting the same problem unfortunately. (I will forward email to you)

73

John G3PQA

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From: "John Rogers" <g3pqa>

To: "ON4WW Mark Demeuleneere"

Cc: "Paul Dane G4PWA"; "Hugo De becker" <on7gb>

Sent: Tuesday, November 04, 2008 1:42 PM

Subject: Re: Topband: New 160m QRN Problem in EU

Mark,

It is also bad near Ipswich (Suffolk) - email from Keith G3RPB fyi  
Looks like serious problem. If Keith can df it in daytime then perhaps we  
can find area.

73

John

----- Original Message -----

From: Spicer, Keith <g3rpb>

To: John Rogers

Sent: Tuesday, November 04, 2008 11:29 AM

Subject: RE: G3KTZ and big QRN

Hi John,

Thanks for the FW from ON4WW. Yes, something like Loran but at a higher  
frequency. I switched to broadband filter 1 and it was S9 on the Marconi. I  
wondered about PLT too. I haven't checked during the day-time but I will  
tomorrow.

73,

Keith

From: John Rogers <g3pqa>

Sent: 04 November 2008 11:23

To: Spicer, Keith <g3rpb>

Subject: Re: G3KTZ and big QRN

HI Keith,

Is the qrn a sort of cycling noise centred on 1840kHz that sounds like a power-line loran?

It was s9 again around midnight and later on.

Broad spikes every 50Hz on Spectran from 100Hz up to 1Khz., maybe some kind of new PLT.  
Very bad news.

I will forward you email from mark ON4WW.

Also problem for G4PWA in Gloucestershire.

Can you hear it in the day time?

73

John

----- Original Message -----

From: Spicer, Keith <g3rpb>

To: John Rogers <g3pqa>

The QRN is very strange. I heard the HS last night but the QRN was so bad  
that even though he was a reasonable signal, he was unreadable for most of  
the time. The QRN was audible all over the band and on every antenna. I am  
wondering if it is solar noise.

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From: "ON4WW Mark Demeuleneere"

To: "John Rogers" <g3pqa>

Cc: "Paul Dane G4PWA"; "Hugo De becker" <on7gb>

Sent: Tuesday, November 04, 2008 10:08 PM

Subject: Re: Topband: New 160m QRN Problem in EU

John,

Tnx your mail and follow-up. Just got home with a Digital Direction Finder (NewMar NAV 121, RDF-501D), courtesy on4ma.

This I hope will be more useful to pick up the signal than my 160m foxhunting device.

I told Hugo: I'll nail this bastard, even if it means I'll have to drive to Bukarest. Those who know me  
can attest to the fact that I am serious when it comes down to hunting interferences that  
bother/obstruct my 160m reception ;-)

I tracked and solved many interferences over the years, but this kind is new to me. The furthest away  
interference in the past, was just under two kilometer. This one may be hundreds of kilometers. A real  
challenge! I hope it doesn't go away before I track it down, I would be disappointed, hi.

In case we need help from the authorities (hey, I am not perfect and may not be able to solve this  
one), I am gathering data in a spreadsheet. Would you care sending me yours: when is it on, off, can  
you also hear it around 500kHz when you hear it on 160m, etc. Real cool would be if we could get a

start/stop time, but I think we won't be that lucky. I could hear it in waves (come/go, every so many seconds, but not in a fixed pattern/frequency) all day long on Sunday. On Monday it seemed off during daytime. What the heck is it?

Pse send me data, if you wish, also Keith (I don't have his e-mail) and possibly others, tnx. If need be, I will be able to involve our NCS/BIPT (like Ofcom, but not that commercial yet) to help us pinpoint the culprit (in a European context, if it extends beyond our borders). For that I will need as much preliminary data as possible (times, headings).

It seems I get longwinded, enough. Have a nice evening all - 73 - Mark - on4ww.

ps: 2104z and 30 seconds: no interference I thought, but I could just hear it kicking off! Also around 500 kHz.

pps: could you all pse keep a close listen the following days around 21z to see if you can hear start it up?

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From: John Rogers <g3pqa>  
Sent: 05 November 2008 08:34  
To: ON4WW Mark Demeuleneere  
Cc: Paul Dane <g4pwa>; Hugo De becker <on7gb>  
Subject: Re: Topband: New 160m QRN Problem in EU

Hi Mark, (Hugo, Paul)

The QRM/N was not there at 0600 (fortunately as condx were good again to west coast). I will have to DF it again at another time.

I wonder what kind of system operates from 2000 to 0400 ?? and then goes qrt. The spikes are 50Hz interval as Paul says, so it appears to be power related, perhaps some kind of nasty new PLT system ??.

Am surprised so few people have reported a problem. Perhaps only a few of us have sensitive rx systems, but the area spread is huge - from Belgium to Bristol! Very serious problem. Lets hope others can hear it and df closer.

73  
John

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From: "Paul Dane" <g4pwa>  
To: "'John Rogers'" <g3pqa>; "'ON4WW Mark Demeuleneere'"; "'Hugo De becker'" <on7gb>  
Sent: Wednesday, November 05, 2008 10:59 AM  
Subject: RE: Topband: New 160m QRN Problem in EU

Hi guys,

I don't think it's PLT/BPL. The amplitude changes too much, and the frequencies involved are too low. If we can hear it above and below the MW band, then it is probably radiating considerable power inside the band as well, and a PLT/commercial operation would not be permitted to do that.

My best guess is that it is a faulty MW tx (maybe some sort of power supply problem?). The noise we are suffering from could be tens of dBs down from the main signal, so the broadcaster may not know there is a problem. This would also explain why the signal is so loud (good tx ant), why it only comes on at night (different power level / different tx after dark), and why the 50Hz bands are broad and not spiked (modulation?).

I am sure that lots of people can hear it, but they probably think it is something that only affects them - a very local problem like line noise or a switch mode PSU etc. Also, because it is only active some of the time, most people are probably hoping that the problem will go away by itself!

Mark/Hugo - what direction do you think it is coming from? Is it from the UK, or further east - maybe PA/DL? Once we know what country is involved, then we can put out a more targeted request for help.

73,  
Paul G4PWA

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From: ON4WW Mark Demeuleneere  
Sent: 05 November 2008 15:55  
To: Paul Dane <g4pwa>; 'John Rogers' <g3pqa>; 'Hugo De becker' <on7gb>  
Subject: Re: Topband: New 160m QRN Problem in EU

Good evening all,

Paul may be bang on. PLT/PLC/BPL, don't think so.

Tonight I may not be at home around 21z, could you all pse check if you can hear it kick off, both on topband and 500 kHz, if possible?

I am positive that on Sunday it was on all day long. During weekdays so far we seem to notice that it

is not on during daytime. This morning at 0630z (can we always refer in utc?) and when I got home at 1530z, no interference.

Paul, both my K9AY and Beverages seem to indicate it comes from east direction.

My 'feeling' tells me it is about 80 degrees. The Beverages are not very clear (as John said before, I believe), the signal is also strong in west and northwest directions (high angle arrival?).

But the K9AY comes in handy and tells me it is for sure eastern direction. I am in the city of Ghent, Hugo is in Keerbergen which is roughly east of me, 60km.

What bothers me is that on4un (who is 10km away from me) has not been hearing the interference. That confused me in the beginning, but I will clarify one of the following days and go listen at his station myself. I am pretty sure I will hear it at his station as well.

Pse try and listen tonight, I will probably still be at a meeting around 21z. I heard it kick off at 21h04'30" sharp, yesterday.

Tnx es 73 - Mark.

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From: "Paul Dane" <g4pwa>

To: "'ON4WW Mark Demeuleneere"; "'John Rogers'" <g3pqa>; "'Hugo De becker'" <on7gb>

Sent: Wednesday, November 05, 2008 7:24 PM

Subject: RE: Topband: New 160m QRN Problem in EU

Thanks Mark.

I think we should be able to capture it tonight.

[www.qsl.net/on4ww/emi-rfi/QRM00025.jpg](http://www.qsl.net/on4ww/emi-rfi/QRM00025.jpg) shows 30 seconds of audio spectrum (band noise) displayed by the Argo software. I have set up the software to create and save a jpg file every 30 seconds, and I will leave it running all night.

Our noise has a very distinctive pattern - a narrow vertical white line at 100Hz and wider bands at higher multiples of 50Hz. If it is active tonight, we should be able to see exactly when it starts and stops, and maybe get some other clues.

73, Paul

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From: ON4WW Mark Demeuleneere

Sent: 05 November 2008 21:36

To: Paul Dane <g4pwa>; 'John Rogers' <p3pqa>; 'Hugo De becker' <on7gb>

Subject: Re: Topband: New 160m QRN Problem in EU

Hugo heard it already at 2015z when he entered the shack.

A good thing to know: it is vy strong on Hugo's inv-V and vertical. It is weak on my inv-L (almost inaudible sometimes), but good copy on my Bevs and K9AY. So I'll start DF-ing towards Hugo (60km from here). Tomorrow I have a holiday, if it is on during daytime, I may go on a hunt.

73 - Mark - on4ww.

ps: Friday til Monday away from home, pse keep taking notes, tnx.

pps: tnx for the pix Paul. I think you may see over the next days that it comes and goes at different times.

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From: "John Rogers" <g3pqa>

To: "ON4WW Mark Demeuleneere"

Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "Paul Dane G4PWA"

Sent: Thursday, November 06, 2008 1:36 AM

Subject: Re: Topband: New 160m QRN Problem in EU

Mark,

Thank you for your email and work on this problem!

This evening 5th November the same qrn started at about 2000z s8 on 1839kHz but disappeared around 2100z. At 2330z when I listened again it s7 on 1839kHz with qsb, and audible on 500kHz., but at 0030z 6Nov it is up to s7 with deep qsb - possibly intermittent - not sure - maybe it is there all the time but just conditions and qsb. Strange.

Looking at the qrn on Softrock 160 Pan display, the qrn spikes appear to move slowly in frequency - this explains the "phasing" noise, and on Spectran the spikes are 50Hz apart.

Possibly the qrn is power related in some way, but whether it is a new PLT system or fault somewhere in transmission is only guessing .

As you say, some work is needed to find the source, where ever it is!

Good luck with the Marine df set. As you can hear the noise in the day time you stand a good chance of getting an accurate bearing.

I have been using a 500mm tuned loop with low noise 20dB preamp and a K2 - this is quite sensitive but still pretty useless for skywave. I was ready to take bearings again this morning but the qrn was not there of course.

I am surprised there has been so little response from the amateur community, I would have thought that many other people must be hearing the qrn. Perhaps with all the sources of noise we all have to put up with these days another nuisance is just mixed in with the rest. But this is bad. As you say, we need as much info. as possible before going to the authorities.

Unfortunately, in UK Amateur Radio is not supported by the DTI or OFCOM unless there is a very serious problem - I would have thought this comes into that category and will report to RSGB RFI people when we have some more information and hopefully response from other hams badly affected by the qrn who can support the complaint.

73

John G3PQA

PS

I only received your above email 4th November 2108z via my ISP today (at 2300z on 5th November at 2100z - 24hours late!). Please use my other (talktalk) email address above as this delay has been happening a lot recently (maybe the ISP Onetel is suffering from qrn as well - hi)

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From: "Paul Dane" <g4pwa>

To: "'ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>; "Hugo De becker" <on7gb>

Sent: Thursday, November 06, 2008 12:42 AM

Subject: RE: Topband: New 160m QRN Problem in EU

It started up at 1927z this evening ([www.qsl.net/on4ww/emi-rfi/QRM00218.jpg](http://www.qsl.net/on4ww/emi-rfi/QRM00218.jpg)) and it has the same familiar pattern ([www.qsl.net/on4ww/emi-rfi/QRM00697.jpg](http://www.qsl.net/on4ww/emi-rfi/QRM00697.jpg)). Signal strength varies a lot - sometimes really strong, other times buried in noise/static and almost invisible on Argo.

Now the interesting bit. I've attached a copy of a transmission I found on 1611kHz ([www.qsl.net/on4ww/emi-rfi/DRM.jpg](http://www.qsl.net/on4ww/emi-rfi/DRM.jpg)). As you'll see, the spectrum is quite similar to our QRM's spectrum. This particular signal is a DRM transmission from Vatican Radio, so it's obviously the wrong direction, but I think it's likely that our QRM is being produced by a DRM transmitter. I don't know much about DRM, but according to [www.drm.org](http://www.drm.org) there are now a few MW DRM transmitters in Germany, and this fits with your observations regarding direction and signal strength. Some of these transmissions also seem to be experimental, which could explain the unpredictable transmission times.

I have five main DRM suspects - 729kHz, 855kHz, 1485kHz, 1575kHz and 1593kHz. If any of you can stay up late tonight, please check these frequencies and see if our QRM stops when these transmissions stop.

Unfortunately I have to go to bed now, but I'm going to lay a proper trap for these guys tomorrow ;-)

Cheers,

Paul

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From: "ON4WW Mark Demeuleneere"

To: "John Rogers" <g3pqa>; "Paul Dane G4PWA"

Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "ON4UN John Devoldere"

Sent: Thursday, November 06, 2008 9:04 AM

Subject: Re: Topband: New 160m QRN Problem in EU

Paul, tnx for your other e-mail with the pictures, vy interesting. I am answering through this e-mail; John wants me to use his other e-mail address, and Keith has been included in the thread. If we can use this e-mail and use 'reply to all', we can keep the history of tracking this event, contained in this 'master' e-mail.

I included John ON4UN in Cc. He has a too good receiver, that's why he didn't pick up the interference a couple of days ago. The NB of his K3 works, let's say, excellent :)

John hears the qrm from down in the spectrum all the way up to 2 MHz. He finds it to be strongest on a 30 degree bearing. With it being so strong on Hugo's inv-V and vertical, it's a matter of hitting the road direction Antwerp. Problem: the interference is not on when I listened at 0715z. I am on a holiday today, but cannot go DF-ing when it's not on ;)

The 30 degree bearing from John puzzles me a bit, compared to my gut feeling of 80 degrees (k9ay and Bevs combined).

Paul, sure interested to hear about your DRM findings next!

John (pqa), indeed, the crud nowadays is so high and mixed, that people may not recognize this interference problem at first. Don't worry about Ofcom, John (un) has good relations with our bipt/ncs, it should not be a problem to have them help us out if need be. For that, we need as much data as possible.

73 - Mark - on4ww.

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From: "Paul Dane" <g4pwa>

To: "ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>  
Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 10:47 AM  
Subject: RE: Topband: New 160m QRN Problem in EU

Mark, I think you need to hit the road after dark, direction Burg (near Berlin!). I can't be completely sure, but I think the QRM is coming from the OldieStar DRM transmitter on 1575kHz.

The attached jpg files show the audio spectrum for my test frequencies (1930kHz and 1675kHz) and for each of the suspect DRM frequencies. I wrote a small program to switch my FT1000 between each frequency every few seconds, so Argo could capture all of the audio spectrums on a single screen.

[www.qsl.net/on4ww/emi-rfi/QRM200200.jpg](http://www.qsl.net/on4ww/emi-rfi/QRM200200.jpg) was taken just before 0500z. The dark horizontal band in the centre of the screen show that the QRM was still active on 1930kHz (top) and 1675kHz (below). You can clearly see the narrow spike at 100Hz and the broad peaks at 150Hz, 200Hz, etc. There are also some narrow spikes higher in frequency - this is just local electrical interference. Below the dark bands, there are some lighter bands showing the audio spectrum (in USB mode) of the DRM stations on 1593, 1575, 1485 and 855 kHz (and the 855kHz and 729kHz stations are also shown at the top of the screen). The DRM stations can be identified by the characteristic spike at 750Hz.

[www.qsl.net/on4ww/emi-rfi/QRM200215.jpg](http://www.qsl.net/on4ww/emi-rfi/QRM200215.jpg) was taken a few minutes after 0500z. The broad peaks at 150Hz, 200Hz etc have gone, just leaving some narrow spikes from my local electrical interference. You will notice that the 1575kHz DRM transmission has also gone - there is no 750Hz spike for that frequency.

There was a lot of fading and local electrical noise at the time, so it is impossible to see exactly when our QRM and the DRM transmission finished, but it seems very likely that these two events are linked. In addition, according to [www.drm.org](http://www.drm.org), the 1575kHz Oldiestar tx operates until 0500z, which also ties in with these observations.

Unfortunately I am just too far away from the source of the QRM and have too much local interference to be 100% certain, but I hope this info will steer you in the right direction. Best of luck Mark, and please let us know how you get on.

73,  
Paul G4PWA

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From: "ON4WW Mark Demeuleneere"  
To: "Paul Dane" <g4pwa>; "John Rogers" <g3pqa>  
Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 12:02 PM  
Subject: Re: Topband: New 160m QRN Problem in EU  
Tnx Paul. My xyl prefers Berlin over Bukarest, we're lucky :-)  
Am away on holidays as of tmw until Monday.  
Am sure John on4un will continue and elaborate on your findings.  
Hugo will visit a nearby ham this weekend (who has Beverages), to hopefully find an additional bearing.  
73 - Mark.

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From: "Paul Dane" <g4pwa>  
To: "ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>  
Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 12:21 PM  
Subject: RE: Topband: New 160m QRN Problem in EU  
OK, thanks Mark. Have a great weekend, and let's hope we can clear this up before too long.  
73, Paul

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From: "ON4WW Mark Demeuleneere"  
To: "Paul Dane" <g4pwa>; "John Rogers" <g3pqa>  
Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 3:27 PM  
Subject: Re: Topband: New 160m QRN Problem in EU  
Paul,  
I get this for Oldiestar:  
0900-1500utc daily 1575 ND NE Germany 20 OldieStar Radio German

2300-0500utc daily 1575 ND Europe 100 OldieStar Radio German

Where column 5 is the target area and column 6 the power used.

Last Sunday I could hear the interference all day long. In the evening it kicks off way before 2300utc. Is it possible we are looking for another radio station? Preferably closer to my qth than Berlin, hi.

Tnx es 73 - Mark.

ps: 1425z now, band very quiet, also 500 kHz, no interference

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From: "Paul Dane" <g4pwa>

To: "'ON4WW Mark Demeuleneere'; 'John Rogers'" <g3pqa>

Cc: "'Spicer, Keith <g3rpb>"; "'Hugo De becker'" <on7gb>; "'ON4UN John Devoldere'"

Sent: Thursday, November 06, 2008 5:08 PM

Subject: RE: Topband: New 160m QRN Problem in EU

Yes, it's very possible that we are looking for another station (hopefully a much much closer one!).

At the moment, all we know is that the QRM looks similar to a DRM signal, and it stopped at the same time as the OldieStar DRM transmission. We don't know if the QRM started at the same time as the OldieStar transmission, but hopefully we can find that out tonight. If the two signals start at the same time, then I think we have probably found our QRM source. If they don't, then we will have to keep on looking.

I would be delighted if it turned out to be closer to you, but this morning's evidence suggests that the QRM is somehow linked to OldieStar. I know the start time doesn't fit the published schedule, but the finish time (for the DRM and the QRM) fits perfectly. And as it says on the DRM website, 'schedule subject to change'.

It seems like DRM on MW is still an experimental technology, both for the broadcasters and for the listeners. I googled 'oldiestar' and '1575kHz' and the first result was [www.drmtx.org/forum/archive/index.php/t-1466.html](http://www.drmtx.org/forum/archive/index.php/t-1466.html) This makes interesting reading, because it is full of complaints from listeners about the technical quality of the OldieStar signal. As one of them says 'Looks like many broadcasters don't care about their actually transmitted signal'. That sounds like just the sort of organisation that could produce out-of-band interference and either not know about it or not care about it.

In any case, we should know for sure in a few hours time...

Cheers,

Paul

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From: "Spicer, Keith <g3rpb>"

To: "Paul Dane" <g4pwa>; "ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>

Cc: "Hugo De becker" <on7gb>; "ON4UN John Devoldere"

Sent: Thursday, November 06, 2008 5:26 PM

Subject: RE: Topband: New 160m QRN Problem in EU

Hi Paul & Mark,

We are all very grateful for your detailed analysis of the transmission pattern and its similarity with the DRM transmissions and your research into the DRM stations. It really looks quite a hopeful comparison. I will also check OldiStar tonight. I am sure that many stations have the same problem but attribute it to local sources. Before discussing it with John, I naturally assumed it was from my 415kV powerlines 1.5 km away.

I don't have any sophisticated test equipment, but the noise is only slightly stronger on my N/E beverage than my S/E beverage, giving me a very rough idea that it is from the central Europe direction, which supports your DRM conclusions.

Thanks again for your good work.

73, Keith, G3RPB

-----  
From: "Paul Dane" <g4pwa>

To: "'Spicer, Keith <g3rpb>"; "'ON4WW Mark Demeuleneere'; 'John Rogers'" <g3pqa>

Cc: "'Hugo De becker'" <on7gb>; "'ON4UN John Devoldere'"

Sent: Thursday, November 06, 2008 6:01 PM

Subject: RE: Topband: New 160m QRN Problem in EU



Thanks very much Keith. I also thought it was just local QRM until I saw John's note on the reflector, but it's surprising how far these things can travel. Maybe we are all listening to the same noises and just assume we are the only ones who can hear them!

Not sure if we are on the right track with the DRM idea, but we should find out soon enough.

By the way, the low power OldieStar tx was on 1575kHz earlier on. This is not the one we are interested in. Our high power tx has a 750Hz spike when viewed in USB mode - the low power tx has a 750Hz spike when viewed in LSB (and no spike when viewed in USB).

Still waiting for the QRM to start...

73,  
Paul

-----  
From: "ON4WW Mark Demeuleneere"  
To: "Paul Dane" <g4pwa>; "Spicer, Keith <g3rpb>"; "John Rogers" <g3pqa>  
Cc: "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 9:33 PM  
Subject: Re: Topband: New 160m QRM Problem in EU

Good evening all,

I had my RX and ears all tuned to 478 kHz, with 1834 kHz on my second vfo. John on4un called in on 70cm to ask if all was quiet at my end, this was around 20utc.

Exactly at 20h07'40" UTC, the interference kicked off full blown on 478. Checked 1834 and 1925, also there.

Okay, we got a starting point, which corresponds with what John noticed yesterday (around 20utc). Can we verify the next days, if it is 'around' 2007utc, or always dead on at 2007utc?

Can't wait until Monday to hit the road and find this little dude. Leaving on holidays tomorrow, won't be on e-mail.

73 - Mark - on4ww.

ps: tnx Keith for your observations

pps: confirmed with John on4un tonight, on our verticals the signal is not dominant (it is audible, but gets lost in all the other static noise). We are 10km apart. At Hugo's place, on his inv-V and vertical, the interference is dominant. Hugo, we're coming your way mate...

-----  
From: "Paul Dane" <g4pwa>  
To: "ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>  
Cc: "Spicer, Keith <g3rpb>"; "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 9:50 PM  
Subject: RE: Topband: New 160m QRM Problem in EU  
Mark, the good news is you don't have to go to Berlin! The bad news is we still don't know what is causing the QRM, but unfortunately it probably isn't the OldieStar tx. The noise came back on at about 2008z, but there is still no sign of the high power 1575kHz tx on Argo.

Sorry for getting everyone's hopes up, and I guess it's back to the original plan of DFing it.

Alternatively, do any of you know anyone who owns one of these:

<http://www.microtelecom.it/perseus/software.html> ? Apparently it can record and store up to 1600kHz (for example, 300 - 1900kHz), and it will allow you to 'play back' the moment when the QRM appears or disappears, so you can see which other signals appear or disappear at the same time.

73,  
Paul

-----  
From: "Paul Dane" <g4pwa>  
To: "ON4WW Mark Demeuleneere"; "Spicer, Keith <g3rpb>"; "John Rogers" <g3pqa>  
Cc: "Hugo De becker" <on7gb>; "ON4UN John Devoldere"  
Sent: Thursday, November 06, 2008 9:59 PM  
Subject: RE: Topband: New 160m QRM Problem in EU  
Best of luck Mark! The start time varies quite a bit - yesterday was 1947z, and I think you caught it at 2104z on Tuesday - but hopefully it will be on all night.  
73, Paul

To: g3nrw  
From: John Rogers <g3pqa>  
Date: Fri, 7 Nov 2008 Time: 02:33:38

Hello again Ian,

Apologies for delay coming back to you but my ISP has been playing up and just caught your email as I was going out.

I am forwarding you one of the latest emails from Paul G4PWA who has taken pictures of the qrn on Spectran and Argo. He has analysed that the QRN could very well be from a new DRM broadcast transmission, perhaps faulty. Suggest you listen to some of the drms in AM mode (see frequencies below in Paul's email) and compare.

If you hear exactly when the qrn comes on or goes off, please send an email with date and time info to ON4WW and the group. It would also be useful if you could check the drm frequencies at the same time and see if their presence, absence or activity correlates.

Here the qrn is up to s9+10dB in am mode on a 600ft 90deg beverage, and less strong but still a big nuisance on all other aerials. It appears to be approx 70-90deg bearing from here (Cookham near Maidenhead, Berkshire). Present theories are that the DRM is possibly located in Germany. Mark ON4WW is going to df it when he has the time and it is active.

At this location it is centred approximately on 1840kHz, and weaker on 1950kHz but still there - it spreads from 1800-2100kHz when strong. The times it is active are approx 2000z to 0500z, varying slightly from day to day but generally around this time. One or two days it has been there all day.

Lets hope it is fixable, or 160m will be very difficult for weak stations (and impossible to east!). Thanks to Mark and Paul for their work on this.

73

John G3PQA

From: "Ian Wade" <g3nrw>  
To: <topband-at-contesting.com>  
Sent: Monday, November 03, 2008 2:20 PM  
Subject: Re: Topband: New 160m QRN Problem in EU  
From: John Rogers <g3pqa>  
Date: Sun, 2 Nov 2008 Time: 13:48:22

John,

I regularly hear something like this in mid Beds, all over the band, but particularly around 1949kHz. It is usually S9+40 or more, making the band unusable for hours at a time.

At first I thought it was a local plasma TV, but I can't get a local fix on it. I've heard stations a few miles away complaining about it as well.

I'd be interested to hear your recording of it.

73

Ian, G3NRW

-----  
From: "Ian Wade" <g3nrw>  
To: "John Rogers" <g3pqa>  
Cc: "Paul Dane" <g4pwa>; "ON4WW Mark Demeuleneere"; "George" <g3nmz>  
Sent: Friday, November 07, 2008 7:31 AM  
Subject: Re: Fw: Topband: New 160m QRN Problem in EU

Hello John,

Thanks for all the information. I will keep a log of when I hear the noise in future.

I usually listen to a local SSB net on 1949 kHz from 2130 UTC every evening, until around 2230. The main participants are G3NNY, G3NMZ and M1RMB, whom I'm sure you have come across before.

Last night (6 November), the noise was a vicious 30-40dB over S9 for most of that time, then it dropped to about S9 for a few minutes around 2210, then back up to S9+20 for another few minutes, then it disappeared altogether at about 2225.

Needless to say, this made it impossible to hear most of the stations on the net.

Antenna is a G5RV running north-south, with feeders strapped.

You mentioned below that you had received some pictures, but they seemed to have got lost in email forwarding. Could you forward them to me please.

73

Ian, G3NRW

-----  
From: "John Rogers" <g3pqa>

To: "Ian Wade" <g3nrw>

Cc: "Paul Dane" <g4pwa>; "ON4WW Mark Demeuleneere"; "George" <g3nmz>

Sent: Friday, November 07, 2008 9:45 AM

Subject: Re: Fw: Topband: New 160m QRN Problem in EU

Hello Ian, (and George!)

It sounds as if your qrn may not be the same - it could be more local to you. You will be able to DF it if ground wave. The recent DRM has been coming in skywave and fading up and down. I could not take an accurate bearing with a loop because it was so high angle.

I will send Paul's pictures again by separate email in case the same. Also if you listen to the DRM transmission this evening on 1575kHz it will give you an idea of what we are hearing (and suffering!). However the 160m qrn sounds more "crackly" than the DRM and has 50Hz pulse intervals. It went off at 0510z this morning, but no doubt will reappear this evening.

73

John

-----  
From: "John Rogers" <g3pqa>

To: "'Spicer, Keith <g3rpb>"; "'Paul Dane'" <g4pwa>; "'ON4WW Mark Demeuleneere'"

Cc: "Ian Wade" <g3nrw>; "'ON4UN John Devoldere"; "'Hugo De becker'" <on7gb>

Sent: Friday, November 07, 2008 6:39 AM

Subject: Re: Topband: New 160m QRN Problem in EU

QRN disappeared at approx 0510z today 7/11.

DRM station on 1575kHz also disappeared (but may have been co-incidence of course.)

DRM on 478kHz had qrt earlier.

73

John

-----  
From: "ON4WW Mark Demeuleneere"

To: "John Rogers"; "'Spicer, Keith <g3rpb>"; "'Paul Dane'"

Cc: "Ian Wade" <g3nrw>; "'ON4UN John Devoldere"; "'Hugo De becker'" <on7gb>

Sent: Friday, November 07, 2008 7:23 AM

Subject: 160m interference

John, tnx for bringing Ian aboard, had seen his e-mail on topband reflector.

Your report of this morning gives us a time frame from abt 21z to 05z (when the interference is on).

While I disappear in the Ardennes this weekend, could two things be done pse.

1. Carefully check this weekend if interference is on during daytime (ref. my observation last Sunday); ON4UN-ON7GB, important you do this, as I think recalling it was not heard during daytime by John-pqa (signal not propagating that far during daytime?)

2. Send a new request to topband reflector trying to involve people in primarily, but not limiting to, Germany/Luxembourg (preferably with directional rx antennas). Request should indicate what we have so far:

21 to 5z timeframe

also audible between 440-540kHz (I know it is going from roughly 400 kHz to 2 MHz, but let's give them the frequencies with strongest interference signals)

1830-1840 kHz window strongest on 160m

also strong around 1925 kHz

general east direction as observed from G and ON land

best way to listen is in AM mode

ON7GB made a recording (using several filter settings, in AM mode), here is the link:

[www.qsl.net/on4ww/emi-rfi/500kHz.mp3](http://www.qsl.net/on4ww/emi-rfi/500kHz.mp3)

If it is felt point 2 should be done after the weekend (if we can confirm if interference is on during daytime), that would be fine with me. I am willing to post after the weekend, but now have to run quickly...to the Ardennes.

Pse make sure only one person posts to topband reflector, if you decide to go ahead today ;)

Cu sn es 73 - Mark - on4ww.

ps: no, I won't be taking any DF equipment with me :)

-----  
From: John Rogers <g3pqa>  
Sent: 10 November 2008 09:53  
To: ON4WW Mark Demeuleneere; 'Spicer, Keith <g3rpb>'; 'Paul Dane' <g4pwa>  
Cc: Ian Wade <g3nrw>; 'ON4UN John Devoldere'; 'Hugo De becker' <on7gb>  
Subject: Re: 160m interference

Mark,

Firstly I hope you had an enjoyable break in the Ardennes and the wx was better than UK!  
I have been busy in evenings over the weekend therefore could not monitor all the time, but the QRN was still bad around 0000z as usual and maybe later.

Nothing in the day time on both Saturday and Sunday, but then I have never heard it at this time, perhaps as Mark says because I am too far away for ground wave.

Others can perhaps report more info. on the times the qrn was active during the last few days. What I cannot understand is why ALL my beverages appear to be worse affected than other G stations, and if such strong skywave here it is not being heard by John OZ1LXJ or Kees PA0CLN. Perhaps I am just at a bad skywave skip distance.

Let us hope Paul can find a pattern with other transmissions to help identify the source, and you are able to trace the groundwave.

73

John G3PQA

-----  
From: "Paul Dane" <g4pwa>  
To: "'John Rogers'" <g3pqa>; "'ON4WW Mark Demeuleneere'"; "'Spicer, Keith <g3rpb>'"  
Cc: "'Ian Wade'" <g3nrw>; "'ON4UN John Devoldere'"; "'Hugo De becker'" <on7gb>  
Sent: Monday, November 10, 2008 12:00 PM  
Subject: RE: 160m interference

QRM started later than usual on Friday evening - about 2227z. Also seemed weaker than on previous days. We had visitors over the weekend, so unfortunately I couldn't monitor on Saturday/Sunday - hopefully someone else has info about those days.

I also heard our QRM around 500kHz and also some sort of digital transmission on 243kHz (loud buzzing noise - not same waveform as ours, but possibly linked - second harmonic??). If any of you hear the QRM around 500, please could you check 243 as well. Unfortunately I have a lot of local noise around 500kHz and my FT1000 produces a lot of spurious responses below that frequency, so it is difficult for me to investigate any possible link between the two.

73,

Paul

-----  
From: "ON4WW Mark Demeuleneere"  
To: "Paul Dane" <g4pwa>; "'John Rogers'" <g3pqa>; "'Spicer, Keith <g3rpb>'"  
Cc: "'Ian Wade'" <g3nrw>; "'ON4UN John Devoldere'"; "'Hugo De becker'" <on7gb>  
Sent: Monday, November 10, 2008 5:52 PM  
Subject: Re: 160m interference

Back in town. Tnx for all your reports.

When I came home at 14z today, the interference was on, full force. I had to lie down due to a painful (hernia/ischias) back pain. Just got back in the shack (1620z), qrm totally gone.

Hugo and John (on4un) told me it has been on, all day long, on Sunday. And today, until...?

Anyhow, it was very strong on 160m/500 kHz. And, it was very intermittent.

It would be on for some seconds, fall out for a second, sometimes a tenth of a second, come back on, go away for several seconds, etc.

It sounded to me like the qrm was 'dieing'..., getting to the end of its life...whatever was arcing, seemed to me like it was arcing towards a final point (if it is something arcing).

I expect a further report tonight from Hugo, who went to visit on5cd (with Beverages). Also on4atw starts observing the qrm.

Stay tuned es 73 - Mark - on4ww.

ps: won't be going out DF-ing tonight due to back pain (and hey, the qrm is gone, I hear on4un calling cq agn on 160m)

pps: on4un told me we got a second problem: the fishing buoys in the Baltic Sea. They are annoying indeed, and seem to multiply by every new topband season

ppps: indeed I believe too, Ian has another local qrm than ours.

-----  
From: "John Rogers" <g3pqa>  
To: "ON4WW Mark Demeuleneere"; "Paul Dane" <g4pwa>; "'Spicer, Keith <g3rpb>'"

Cc: "Ian Wade" <g3nrw>; "ON4UN John Devoldere"; "Hugo De becker" <on7gb>

Sent: Tuesday, November 11, 2008 11:46 AM

Subject: Re: 160m interference

Mark,

11th November

I was out for most of yesterday evening 10th but listened 11th November today earlier at 0000 and 0300z. Noise s9 and intermittent with small gaps for maybe a second or less as Mark describes below, possibly slightly weaker but this may have been condx.

Same freq coverage.

Sorry to hear about your back, hope you are feeling better today.

73

John

-----  
From: "ON4WW Mark Demeuleneere"

To: "John Rogers" <g3pqa>; "Paul Dane" <g4pwa>; "Spicer, Keith <g3rpb>"

Cc: "Ian Wade" <g3nrw>; "ON4UN John Devoldere"; "Hugo De becker" <on7gb>

Sent: Tuesday, November 11, 2008 10:26 PM

Subject: Re: 160m interference

Ge all,

Just came back from on4un's, where I heard Paul make a qso with tn5sn, congrats. After this mail, I hope to work him for my #277 on topband.

John and I visited Hugo this afternoon/evening, in search for our common interference. Today we were not successful, as en route to Hugo, the qrm disappeared completely.

In all, John and I had a pleasant afternoon, confirming at his place that the direction indeed is 70/80 degrees (and not 30 as first thought), finding a local interference on 80m at 500m distance (a switching power supply of a lighter with many spotlights) and finally visiting Hugo.

I just noticed John pqa saying on on4kst.com, that 'luckily the bad qrn has not started yet tonight', let's hope it stays off forever...

Today was a day off, tomorrow salt mine. Earliest I can go back on the road is either at night during the week, or Sunday. We'll find it. Hopefully before cqww end of the month.

Now onto tn5sn...ever so strong, working Asia for the moment.

73 - Mark - on4ww.

ps: in all, John and I worked almost 9 hours today on the interference, no need to say my xyl was not happy during our holiday today :))

-----  
From: ON4WW Mark Demeuleneere

Sent: 11 November 2008 22:22

To: Paul Dane <g4pwa>; 'John Rogers' <g3pqa>; 'Spicer, Keith <g3rpb>'

Cc: 'Ian Wade' <g3nrw>; 'ON4UN John Devoldere'; 'Hugo De becker' <on7gb>

Subject: Re: 160m interference

Paul, I checked 243 and found no correlation. The qrm goes from 400 to over 500 kHz, but is easiest to listen at in the 480 to 499 kHz frame (for me, as not much other BC traffic in that window).

In follow-up to my previous e-mail: I did not work the TN tonight...heard him sign QRT once, and that was it. Congrats agn Paul!

73 - Mark - on4ww.

ps: as I write this, I checked around 500 kHz, sure enough the qrm is on at 2218utc! Darn... not too audible around 1830-1840 due to the many strong EU signals tonight, but can hear it distinctively on 1920-1925 AM with QSB on it.

-----  
From: "Paul Dane" <g4pwa>

To: "ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>; "Spicer, Keith <g3rpb>"

Cc: "Ian Wade" <g3nrw>; "ON4UN John Devoldere"; "Hugo De becker" <on7gb>

Sent: Wednesday, November 12, 2008 1:29 AM

Subject: RE: 160m interference

OK, thanks for trying Mark - I know you mentioned 478kHz before, so I thought there might be some link, but apparently not.

TN5SN was really strong tonight. I know John PQA got him as well, so I guess the propagation spotlight was on Southern England for a short time.

According to his website, Nicolas will be in Congo for 3-4 years, so I'm sure you will get him before too long. He also has a real-time chat facility - very useful for letting us know that it is really him and not a pirate, but let us hope people won't use it to make 'chat-assisted' QSOs.

Thanks to you, John and Hugo for all your efforts today. It would be great if you could fix this problem

for us before CQWW - otherwise I will have to invest in a K3!

73,  
Paul

-----  
From: "ON4WW Mark Demeuleneere"  
To: "Paul Dane" <g4pwa>; "John Rogers" <g3pqa>; "Spicer, Keith <g3rpb>"  
Cc: "Ian Wade" <g3nrw>; "ON4UN John Devoldere"; "Hugo De becker" <on7gb>  
Sent: Sunday, November 16, 2008 10:31 AM  
Subject: Re: 160m interference

Hi all,

Tnx Paul for the TN5SN chat url, I worked Nicolas a couple of days ago. Next hopefully FK8CP. I missed fk8cp the other day, due to the interference we all experienced the last weeks. I was eager to find the interference prior to CQWW, otherwise no contest was possible. The last time I heard the interference very briefly and intermittent, was at 0643z, 13 November. Since then, I never heard it and did not get any reports in from you guys.

Is it gone?

Paul, the noise blanker on the K3 is indeed very very effective, compared to the double NB on my 1000mp!!

So, with this, I really hope the interference is gone. Did anyone hear it on 14-15-16 November? Have a nice Sunday - 73 - Mark - on4ww.

-----  
From: "Paul Dane" <g4pwa>  
To: "ON4WW Mark Demeuleneere"; "John Rogers" <g3pqa>; "Spicer, Keith <g3rpb>"  
Cc: "Ian Wade" <g3nrw>; "ON4UN John Devoldere"; "Hugo De becker" <on7gb>  
Sent: Sunday, November 16, 2008 12:14 PM  
Subject: RE: 160m interference  
Congrats Mark, and best of luck with the FK8 - a really difficult path from here, with or without QRM! I have not been active for the last few days, so I don't know if the interference is still there. It would be really great if someone has fixed it for us, but I will keep listening and will let you know if I hear it again.

73, Paul G4PWA

-----  
From: "John Rogers" <g3pqa>  
To: "ON4WW Mark Demeuleneere"; "Paul Dane" <g4pwa>; "Spicer, Keith <g3rpb>"  
Cc: "Ian Wade" <g3nrw>; "ON4UN John Devoldere"; "Hugo De becker" <on7gb>  
Sent: Sunday, November 16, 2008 1:17 PM  
Subject: Re: 160m interference etc.

Mark, and all,

I have been away or qrl in the evening the last few days but did listen yesterday 15th November. Unfortunately the QRN was there again from about 2100z to at least 2330z when I closed. Weaker and intermittent, but still up to s8 on east 95 deg beverage.

I was up at 0400z this morning 16 November and nothing heard (and no DX either, poor condx) .

Very pleased to qso TN5SN, considering the state of almost permanent civil war in Congo we are lucky he has been active. Does anyone know what his job is?

I also have a K3 but have not found the NB or NR so effective on this qrn. However the NB is excellent for removing s9+ electric fence pulses.

Mark, working Remi FK8CP is really tough, especially from G! He has been trying to find a new qth. Some of the time (weekends) he was operating from his old location which is quieter and closer to the sea. Condx have been poor to that area the last few weeks, in previous years they were better in February and March.

73

John G3PQA

-----  
From: on4ww  
To: john <g3pqa>; Paul Dane <g4pwa>; Keith Spicer  
CC: g3nrw; john devoldere on4un; on7gb  
Subject: Re: 160m interference etc.  
Date: Sun, 16 Nov 2008 20:06:41 +0100

John,

Tnx for this report! I thought the interference was gone, not so.

Heard FK8CP for half an hour today, but he had heavy QRN. This is the longest time ever I heard Remi.

Today nothing of the interference so far. 73 all - de Mark.

-----  
From: "Ian Wade" <g3nrw>  
To: "ON4WW Mark Demeuleneere"  
Cc: "Paul Dane" <g4pwa>; "John Rogers" <g3pqa>; "Spicer, Keith <g3rpb>"; "'ON4UN John Devoldere"; "Hugo De becker" <on7gb>  
Sent: Sunday, November 16, 2008 1:23 PM  
Subject: Re: 160m interference  
>> From: ON4WW Mark Demeuleneere  
>> Date: Sun, 16 Nov 2008 Time: 11:31:24  
>> So, with this, I really hope the interference is gone. Did anyone hear  
>> it on 14-15-16 November?

No, not a sign of the interference during this period. (However, I'm not sure if my interference is related to your interference :-). The noise floor has been generally low for this QTH, around S2-S3, for all of this period.

73  
Ian, G3NRW

-----  
From: Hugo De Becker <on7gb>  
To: on4ww; g3pqa; paul dane g4pwa; keith spicer  
Cc: g3nrw; john.devoldere on4un  
Sent: Sunday, November 16, 2008 9:08 PM  
Subject: RE: 160m interference etc.

Hi Mark & others,  
It is kind of striking that the QRM has hardly been heard since you guys went out to hunt it down. Personally I haven't noticed it anymore whatsoever, partly because I spent less time listening but surely because it hasn't been on as much as before.  
Still wondering what the cause of the QRM eventually was though...(it was really strong at my QTH!)  
Mark & John, sorry for having just one chair in my poor shack. As you could see I have only a minimum of equipment and thus only one chair ;-)  
Hope you enjoyed the visit anyway.  
73, Hugo-ON7GB

-----  
From: "John Rogers" <g3pqa>  
To: "ON4WW Mark Demeuleneere"  
Cc: "Paul Dane G4PWA"; "Hugo De becker" <on7gb>; "Spicer, Keith <g3rpb>"; "'ON4UN John Devoldere"  
Sent: Tuesday, November 18, 2008 1:28 AM  
Subject: 160m interference W8JI informed

To all,  
As Mark knows I worked Tom W8JI yesterday who said he was getting similar interference 10dB about noise level at his dusk. Presumably not the same source qrn as nil here yesterday but thought it a good idea to share the information as he was interested and send your email with details of Hugo's soundfile in case he ever comes across the same problem. Unfortunately the email to Tom W8JI bounced at his old contesting.com address so I resent it via Bill W4ZV asking him to forward as you see, but no response so far.  
FYI-Tom also said he was in process of putting up another 300ft+ tower - wow! (if only . . . . . ).  
No qrn heard here today 18/11 2330z-0015z. Lets hope it is gone for good  
(even though unsatisfactory not to find source)

73  
John

-----  
From: Spicer, Keith <g3rpb>  
To: John Rogers <g3pqa>  
Sent: Friday, November 21, 2008 6:27 PM  
Subject: QRM

Hi John,  
I have a lot of noise tonight. Not sure if it is local or the dreaded QRM. But heard a JH7 through it!  
73,  
Keith

-----  
From: John Rogers <g3pqa>  
To: Spicer, Keith <g3rpb>

Cc: ON4WW Mark Demeuleneere  
Sent: Friday, November 21, 2008 8:29 PM  
Subject: Re: QRM  
Hi Keith,

Here also, indeterminate crackling and hash from east raising noise level. Cant hear very weak ones, but not as bad as original qrm a couple of weeks ago. Maybe same source. All this is bad news. Mark, can you hear any qrn tonight?

73  
John

-----  
From: ON4WW Mark Demeuleneere  
To: John Rogers <g3pqa>; Spicer, Keith <g3rpb>  
Sent: Saturday, November 22, 2008 8:09 AM  
Subject: Re: QRM  
Hi John and Keith,

Since 13 November I never heard the interference again. You heard it on the 15th in the evening, and that was it, no more reports since.

Sorry I wasn't checking last night (still suffering hernia and was enjoying the sofa, hi), if you want me to do a quick check, pse give me a telephone call.

Keith, I think yours may be a local problem. Often local qrm can be pinpointed with a yagi antenna, if the interference is audible on the higher frequencies (and it often is!). When listening in AM mode, try to listen if you can find the same pattern on higher frequencies, and then (in case you have a yagi) swing the yagi from left to right, find the minimum and from there the maximum. When you got your yagi pointing in the exact direction, go outside and follow that line with a portable receiver and try to trace the qrm that way.

Maybe the above is not applicable in this case, but maybe it can be in the future.

GL es 73 - Mark - on4ww.  
ps: had a super opening 3 mornings ago...WA/OR/WY/AK and 3 VE7's, waw!

-----  
From: John Rogers <g3pqa>  
To: Spicer, Keith <g3rpb> ; ON4WW Mark Demeuleneere  
Cc: Hugo De becker on7gb ; Paul Dane G4PWA  
Sent: Saturday, November 22, 2008 10:11 PM  
Subject: Re: QRM  
Hi Mark,  
Thanks for email. Am sorry to hear you are still suffering with the Hernia - I hope you can get it fixed soon.

I have just turned on the rig again (2100z) and unfortunately the qrn is going again. s9 on my east 95deg beverage, s7 on 240 deg bev, and weak on 40 deg. It seems to have changed character - appears more "crackly" now, as if something is arcing/faulty. Am sending this email quickly, but am next going to look at it on Spectran and my Softrock bandscope to see if the same pulses.

Paul, do you hear it again?

If it is the same qrn, I suggest we take your idea and publicise on the 160m reflector, giving the link to Hugo's soundfile and asking if anyone has seen similar pulses.

73  
John G3PQA

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From: ON4WW Mark Demeuleneere  
To: John Rogers <g3pqa>; Spicer, Keith <g3rpb>  
Cc: Hugo De becker on7gb; Paul Dane G4PWA ; ON4UN John Devoldere  
Sent: Saturday, November 22, 2008 9:51 PM  
Subject: Re: QRM  
Hi John,

2145z when I read your e-mail, and the interference is not on at this end.



What has been on is what I call static noise from either snow (or cold wind/rain?) conditions. I have heard this in the past, and it was always related during cold weather and with snow/ice (dis)charges. It sounds like building up of qrn for 1 second, and then discharge back to nil noise, then again up for perhaps 2 seconds, back down to nil, and so forth (sounds a bit like a chainsaw, when you rev it up). Right now I can hear it on 479 kHz. This is not the same interference we were discussing before.  
73 - Mark.

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From: Spicer, Keith <g3rpb>  
To: ON4WW Mark Demeuleneere ; John Rogers <g3pqa>  
Cc: Hugo De becker ON7GB ; Paul Dane G4PWA ; ON4UN John Devoldere  
Sent: Saturday, November 22, 2008 11:12 PM  
Subject: RE: QRM

Hi all,  
I have just come in and checked 160 and it is 22.10. I don't have any interference tonight; residual noise level is S3 on N/E beverage. Last night it was very bad; about S6 and very crackly. Temperature is minus 1.5C with about 25 mm of snow.  
73, Keith G3RPB

-----  
From: John Rogers <g3pqa>  
To: ON4WW Mark Demeuleneere ; Spicer, Keith <g3rpb>  
Cc: Hugo De becker on7gb; Paul Dane G4PWA ; ON4UN John Devoldere  
Sent: Sunday, November 23, 2008 12:21 AM  
Subject: Re: QRM

Mark, (and Keith), thanks,  
It had gone by 2145z, but I was also hearing the "chain-saw" from the east, which after your report of this may be coming from longer distance. Yes - we do have snow in England on the east coast. 160m is more like 40m today - condx to JA were excellent and have just heard NOXA 579 2310z.  
73  
John

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### **The Belgian e-mail correspondence (in Dutch language)**

From: "Hugo De Becker" <on7gb>  
To: "Mark Demeuleneere" <on4ww>  
Sent: Sunday, November 02, 2008 8:29 PM  
Subject: 500 kHz. storing

Mark,  
In bijlage [www.qsl.net/on4ww/emi-rfi/500kHz.mp3](http://www.qsl.net/on4ww/emi-rfi/500kHz.mp3) in AM met inschakeling van de verschillende filters...  
Een ramp de laatste dagen.  
73, Hugo-ON7GB

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From: on4ww  
To: on4ma  
Sent: Sunday, November 02, 2008 11:02 AM  
Subject: Storing 160m

Marc,  
Heb je je direction finding unit nog, en werkt die nog?  
Ik zit hier met een moeilijk storing-geval op 160m en weet me geen raad. Reeds 5km met de fiets gebold, zonder resultaat.  
Misschien dat het met jouw unit wel vindbaar is.  
73 - Mark

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From: on4ma  
To: on4ww  
Sent: Sunday, November 02, 2008 12:49 PM  
Subject: Re: Storing 160m  
die heb ik nog steeds maar de batterijen zijn plat ...4x grote A  
73  
on4ma

-----  
From: on4ww

To: on4ma

Sent: Sunday, November 02, 2008 1:12 PM

Subject: Re: Storing 160m

Marc, zijn dat de grootste cilindervormige batterijen? Of de soort daaronder? Van de grootste heb ik er 4.

Hoe ver zou je toestel een storing kunnen oppikken, denk je?

Kan ik er vanmiddag omkomen, of wil je zelf ook uitpeilen? Altijd welkom!

73 - Mark.

-----  
From: on4ma

To: on4ww

Sent: Sunday, November 02, 2008 5:13 PM

Subject: Re: Storing 160m

Mark

er zaten nog 4 batterijen in maar die zijn blijkbaar uitgelopen... ik moet hem opendoen en de kontakten kuisen.

stak er 4 andere in maar geen muziek voorlopig

ergens van de week zal dat wel lukken.

je mag hem natuurlijk komen halen maar hij moet eerst open..

on4ma

73

-----  
From: on4ww

To: on4ma

Sent: Sunday, November 02, 2008 5:42 PM

Subject: Re: Storing 160m

Ok Marc, geef je een seintje als je hem terug aan de klap gekregen hebt?

De storing is ook hoorbaar tussen 440 en 550 kHz, het is een interessant geval, maar moeilijk!

73 - Mark.

-----  
From: on4ma

To: on4ww

Sent: Sunday, November 02, 2008 10:51 PM

Subject: Re: Storing 160m

Ja doe ik beslist , zag dat je gebeld had deze vooravond, gsm had ik vergeten in de tuin, ganse dag buiten bezig geweest.

en wat voor storing is dat ?

73

on4ma

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From: on4ww

To: on4ma

Sent: Monday, November 03, 2008 7:36 PM

Subject: Re: Storing 160m

Storing was hoorbaar in Engeland, bij on7gb, on4ww en niet bij on4un. Raadselachtig, niet?

Sinds deze morgen is de storing verdwenen.

Ik voeg de audio file toe, die Hugo opnam v.d. storing (op 500 kHz). Storing was hoorbaar tussen 440-550 kHz en 1800-1850 en rond de 1920 kHz.

Voorlopig je DF-unit niet nodig, maar smijt hem niet weg!! hi...

Jammer dat de storing reeds weg is, was eigenlijk benieuwd of we die met jouw toestel konden uitpeilen. Met de vossegeweertjes lukte het in ieder geval niet, de storing was zeker niet lokaal!

73 - Mark.

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From: on4ma

To: on4ww

Sent: Monday, November 03, 2008 8:16 PM

Subject: Re: Storing 160m

wegsmijten, zijt gij nie goe zeker...zo'n excellent duur apparaat...de boten geraakten er vroeger mee thuis.Dus storingen zal hij ook wel vinden.

Heb er hier 2uur aan zitten knoeien. Was aan de batterijen, totaal geoxideerd.. vuil boelke zo'n batterijen die uitgelopen zijn.

Nu met zo'n apparaat moet je in de open lucht gaan staan.. het pikt veel op ..ook je lichte qrm bronnen van je eigen huis .

Dat geluid van je storing doet mij denken aan een spaarlamp ..probeer dat eens uit.  
73

marc on4ma

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From: on4ww

To: on4ma

Subject: Re: Storing 160m

Date: Mon, 3 Nov 2008 23:54:35 +0100

De storing was vanmorgen en vanavond weg. Toen ik daarnet rond 2330u luisterde, was de storing terug! Zowel rond 500 kHz als op 160m band.

Het kan een lange tocht worden met je DF-unit, maar ik heb deze week haast geen tijd. Misschien donderdag. Ik probeer er eerder om te komen. Je kan zelf ook eens luisteren...als je een sterke storing rond 500 kHz hoort, en 't zelfde op 160m, awel, dat moeten we zien te vinden. 't Zal niet gemakkelijk zijn!

73 - Mark.

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From: on7gb

To: on4ww

Sent: Tuesday, November 04, 2008 6:40 PM

Subject: RE: Storing 160m

Hi Mark,

Op dit moment geen storing. Hoop dat het snel opgelost geraakt.

Blijkbaar zijn we niet alleen. Storing is hier het ergst op de inverted Vee (apex op 30m en tips op 10m) en minder erg op kwartgolfsloper naar het zuiden en de vertical.

73, Hugo-ON7GB

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From: Hugo De Becker <on7gb>

To: on4ww

Sent: Friday, November 07, 2008 9:48 PM

Subject: QRM

Mark,

6/11/2008 QRV 0630-0700 UTC: no QRM

07/11/2008 QRV 0630-0700 UTC: no QRM

1800-2045 UTC: no QRM

Ik probeer morgen op tijd in shack te zijn want J88DR zal QRV zijn op ON sunrise. Zal proberen zo veel mogelijk te checken tijdens weekend en maandag waarschijnlijk op visite bij ON5CD.

73, Hugo-ON7GB

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From: Hugo De Becker <on7gb>

To: Mark Demeuleneere <on4ww>

Sent: Saturday, November 08, 2008 8:21 AM

Subject: QRM 9 November

Hi Mark,

Kwam vanmorgen in de shack rond 05:45 UTC. QRM hitting me in full force!

Heb ook ON4ATW gevraagd te luisteren. In de 160M band had hij niks maar op 500 kHz. wel maar bij hem komt het precies uit het noorden.

Rond 06:24 heb ik me op 1833 LSB gezet en ben beginnen 'taperen'

'[www.youtube.com/watch?v=Q7S3y68rFfA](http://www.youtube.com/watch?v=Q7S3y68rFfA)'.

Om 06:27 'live on tape' verdwijnt de QRM.

Die 27ste minuut is al eerder ter sprake gekomen door jou en kan een belangrijke indicatie zijn.

Op de 25ste, 37ste, 49ste, 80ste en 102de seconde van de opname is er een fractie verandering waar te nemen in de QRMbron. Klinkt een beetje als een MS burst op VHF maar is uiteraard iets anders. Op 2:48 begin ik de band te tunen naar beneden (van 1833 naar 1800 ongeveer) en dan terug naar boven.

Op 03:32 kan je de QRM horen wegvallen.

Theo stelde voor eens een 160M bandpass filter te gebruiken om te zien of ik de storing dan nog heb op topband.

Mijn simpel station heeft dat natuurlijk niet maar ik hoor eens rond in de buurt hier.

Ik probeer morgen opnieuw maar ga vannacht op stap dus weet niet of ik het haal morgenvroeg voor sunrise.

73, Hugo-ON7GB

From: Hugo De Becker <on7gb>  
To: Mark Demeuleneere <on4ww>  
Sent: Monday, November 10, 2008 8:14 AM  
Subject: QRM

Dag Mark,

Gisteren zondag 9/11 is de QRM de ganse dag daar geweest. Elke keer ik in shack kwam geluisterd. Enkel 's avonds rond 17:00z was hij weg. Geen idee wanneer het terug begonnen is want ik ben na 18:00z niet meer QRV geweest.

Vandaag maandag 10/11 om 06:07z radio opgezet en de QRM was er weer. Van 06:25z-06:45z opname gemaakt in de hoop het uitvallen opnieuw te kunnen registreren maar het is nu 07:15z en de QRM is nog steeds daar. 1 verschil met de vorige dagen: soms valt het enkele seconden weg en dan is het daar opnieuw (opname kan ik je mailen indien gewenst).

ON5CD, kan het ook horen maar veel minder sterk dan hier bij mij en het is het sterkst op z'n noord-west beverage (= richting Antwerpen). Hij draait het wel grotendeels weg met z'n NB (IC756PROIII) wat met mijn TS850S amper resultaat geeft.

Ik ga deze namiddag bij Ivo langs trouwens.

Ben niet zeker dat je er tijdens de contest al iets van had waargenomen maar indien het toen al was moet men daar in Lier toch ook last van gehad hebben?

Voila, dat is de update.

73, Hugo-ON7GB

BTW: Op 500 kHz. zit baken SK6RUD - hoorde ik doorkomen onder de QRM.

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From: Hugo De Becker <on7gb>  
To: Mark Demeuleneere <on4ww>  
Sent: Tuesday, November 11, 2008 9:42 AM  
Subject: QRM

Dag Mark,

Ik ga er van uit dat je een tof weekend achter de rug hebt en dat die rug snel herstelt ;-)

Maandag 10 november was de QRM er van 's morgens vroeg en toen ik naar Ivo vertrok rond de middag was hij er nog steeds.

Ook in de namiddag toen we op zijn QRA luisterden was de QRM er. Bij hem best hoorbaar op de NW beverage.

Bon, ik ben gisteren na 17:00z niet meer in de shack geweest en nu vandaag pas rond 08:00z en de QRM was er weer maar het patroon is helemaal veranderd. Er zijn heel veel onderbrekingen en het is zoals je in je laatste mail beschrijft precies alsof de QRM stervende is. Hopelijk krijgt hij snel de doodsteek.

Als ik alle gegevens wat bij mekaar leg, lijkt het sterk op dat de bron ergens in het Antwerpse zit.

Ik ken echter geen 160M DX'er in die buurt (van ON7NQ heb ik al lang niks meer gehoord) die de storing eventueel nog erger zou kunnen hebben dan ikzelf.

Het is nu 08:45z en ik luister op 500 en 1833 kHz. en het is toch nog altijd een erg storende zaak hier.

Voila, als de QRm er volgend weekend nog is en je rug is OK, misschien toch eens in die richting zoeken?

73, Hugo-ON7GB

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From: Hugo De Becker <on7gb>  
To: on4ww  
Sent: Thursday, November 13, 2008 8:08 AM  
Subject: RE: QRM

Hi Mark,

Sri van TN5SN, maar die zal zeer binnenkort wel eens opnieuw te werken zijn zeker?

Laatste 2 dagen weinig QRV geweest. Enkel 's morgens effe en een uurtje 's avonds maar geen storing meer gehoord maar ik zag een 'talk' van je met 'it's on!' dus ik vrees dat we'r nog ni vanaf zijn.

73, Hugo-ON7GB