



International Amateur Radio Union Region 1

Working for the future of amateur radio

VHF – UHF - μ Wave Newsletter

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Editorial

From the old chairman

After 2 periods as chairman of the VHF+ committee I decided to step down. Looking back from this 6 years as chairman it's time to make a short evaluation. I'm very happy that we now have a very good plan to improve the contest robot, with a project manager and a clear budget. This was one of my main goals from 2017 until now and I'm glad that the General Conference approved this.

We had also a lot of progress in simplifying and harmonising the bandplans. The only thing we could not promote until now is actualising the technical parts of the VHF handbook, especially the new digital modes.

Like I said all several years, our bands above 440 MHz are under severe pressure. Therefore I'm very glad that Dick, PA2DW, is taking over. His experience in the μ Wave bands will be a great asset and I wish him all the best as the new Chairman of VHF+.

I will do some work in the background, for the committee and other tasks for IARU-R1.

Jacques ON4AVJ

Short introduction of your new chairman

Dick PA2DW

I started my carrier by graduating from the University of Applied Science of Amsterdam, after completing a technical bachelor (ing) in marine radio-techniques. In the period 1981-1984, I sailed on a small number of oceangoing merchant vessels, as Radio-Officer. Hence my morse-skills are of course excellent, however the HF-bands have always been of secondary interest to me. Ever since I obtained my license in 1976 (at age of 19), I have always been a DX-er and sometimes contester on VHF and up and been active on 144 MHz EME since 1982. Always with homebrew equipment and QRO 😊

Due to the increasing noise levels on 144, I decided to move my EME-activities in 2008 upwards to 1296 MHz.

In 2000 I joined the VERON executive board as VHF-manager and from 2005-2008 I was president of VERON. In these years I joined two IARU-conferences, the one in San Marino and the one in Davos. In these years, my elmer Arie/PA0EZ was chairman of C5 and all I can say is that I hope to be able to reach the high standard Arie has set forward. Being an avid contester himself, Arie was very driven in this particular field which had its advantages and disadvantages.

My personal contest experience is limited to being operator at PI4GN, on 70cm till 1,5 cm and the Marconi Memorial Contest in november.

Another milestone in my radio-career was the saving of the 25m dish of the radio-astronomy Centre at Dwingeloo. I helped negotiating with the Ministry to safeguard this historical instrument and now



it is at the disposal for amateur radio. Of course EME is on main dish the menu, but also amateur radio-astronomy, which enlightens our hobby!

Further information regarding PA2DW:

- Mostly active on VHF (2m DX) and SHF (23cm EME), occasionally 40m CW
- Avid CW QRQ-operator 😊
- Building, repairing and restoring radio-equipment is what I like very much
- Repairing mechanical watches is something I have ever done since my young years. It's a great training in patience!
- I am fond of going into nature and spot birds
- I sing I a shanty choir, named "de Marconisten". No explanation needed...

My main motivation for applying to the chair of Committee C5 of the IARU is the increasing amount of pressure on the VHF-UHF-SHF frequency allocations for amateur radio and the inevitable innovations in our own circles (WSJT/FT8 etc.) which profoundly change the way we make use of radio. Hence there will be some difficult decisions and negotiations ahead of us and I think my experience will help us in finding our way and my diplomatic skills will be useful when we have to negotiate with authorities.

My mission is to help strengthen the IARU with my experience and to help making the right choices for the future together with you all. I believe in band sharing, rather than giving up allocations and I am not afraid to negotiate swapping allocations in case it has benefits for all involved.

I also think that we should reconsider our organization concerning contesting. Let's see to it, that we can agree upon our policies as much as possible in a democratic way. So the C5CWG has to be strengthened and discussion should take place only there and then in C5 we can thereupon simply hammer decisions we agree on. And believe me, 100% satisfaction cannot be guaranteed, because contesting is all about finding ways to stretch the rules 😊

As Arie PA0EZ used to say "contest is war" But let's make sure we will be able to resolve the rules in a peaceful and diplomatic way.

Looking forward to work with you all, it is good to see so many of my old friends again!

73, Dick PA2DW

IARU-R1 25th Virtual General Conference 2020

From 11th until 16th October our conference was held for the first time virtually. This new experience was rather successful. C5 (VHF+ committee) had 3 sessions from 2.5 hours each and we discussed 35 papers. There were more the 30 Member Societies who attended the meetings, this is a success. We made 17 recommendations; find hereby those who are important for the VHF+ community:

[*NS20_C5_Rec_01*](#)

This important paper was introduced by Barry Lewis G4SJH who coordinates the IARU effort for WRC23 Agenda Item 9.1(b) concerning the 23cm band:

The following actions should be taken to fully underpin the IARU volunteer team effort addressing the potential WRC-23 related threats to the amateur services in the 1240-1300MHz band. Coexistence between the amateur and amateur satellite services and the radio navigation satellite service has become a global ITU-R topic relevant across the entire IARU:

- **Member Societies actively take action to engage with their national administration to promote the IARU position on the development of the regional CEPT and global ITU-R regulatory deliverables.**
- **Member Societies promote the views of their national amateur community with their national administration.**
- **Member Societies actively engage in setting the national and regional brief for the regulatory and ITU-R preparatory work that will take place in all RTO's across all Regions.**
- **Member Societies proactively engage with their national administration and RTO's regarding progress of the work regionally and globally.**
- **Member Societies remain vigilant and ready to react to any early proposals to downgrade (or remove) the national amateur services allocations in their respective countries ahead of the conclusion of the regulatory work.**
- **Member Societies widely publicise the amateur community views (both the IARU position and their national amateur community) – e.g. national newsletters etc.**
- **Member Societies take these actions urgently.**
- **Member Societies should report back to IARU R1 SRLC on a regular basis or as appropriate.**

[*NS20_C5_Rec_02*](#)

To suspend the AROS activity, as it is of relevance only for local authorities and not for IARU.
No actions needed

[*NS20_C5_Rec_03*](#)

The General conference approves and ratify those recommendations made during the interim meeting in Vienna 2019 and approved by the EC.
No actions needed

[*NS20_C5_Rec_04*](#)

No attempt should be made during the QSO or after the contest to obtain any part of the required exchange information via other communication methods such as the Internet chat channel, WEBDSR and remote receiver outside 500 metres diameter from the station

location, DX Cluster, talk-back on another amateur band, telephone etc.. Such a secondary method invalidates the contest QSO.

Correction of logged exchanges after the contest, by use of any database, recordings, email or other method, is not allowed. The log should contain what happened (sent and received) in the band during the contest.

[**NS20_C5_Rec_05**](#)

In every category of all the IARU Region 1 Contests (50/70 MHz ; VHF ; UHF & μ W) the stations willing to win their categories must submit their logs individually to the IARU R1 Contest Robot within the 23:59 UTC of the Monday after the contest (34 hours); only these stations will be eligible to the victory and prizes.

If the first station in the classification did not send his log before the deadline to be eligible for the victory (34 hours), then the first station which sent his log within the 34 hours deadline will be the winner.

[**NS20_C5_Rec_06**](#)

The 50 MHz and 70 MHz contests are held on separate weekends

[**NS20_C5_Rec_07**](#)

The contests shall comprise the following sections for:

- 50 MHz band:
 - o SINGLE (SO): single operator entries without MGM (only CW/SSB)
 - o MULTI (MO): multi operator entries without MGM (only CW/SSB)
 - o SINGLE (SO-MGM): single operator entries MGM on another date
 - o MULTI (MO-MGM): multi operator entries MGM on another date
 - o 6HOURS (6H): 6 hours entries (CW/SSB)
- 70 MHz band:
 - o SINGLE (SO): single operator entries without MGM (only CW/SSB)
 - o MULTI (MO): multi operator entries without MGM (only CW/SSB)
 - o SINGLE (SO-MGM): single operator entries MGM
 - o MULTI (MO-MGM): multi operator entries MGM

The contest working group is asked to find appropriate dates.

[**NS20_C5_Rec_08**](#)

Was withdrawn during the plenary meeting.

[**NS20_C5_Rec_09**](#)

Each MS organizes monthly digital weak signal mode activity contests as described above according to this schedule:

- the 1st Wednesday of the month from 17:00 to 20:00 UTC on the 144 MHz band.
- the 2nd Wednesday of the month from 17:00 to 20:00 UTC on the 432 MHz band.

The contest managers share the QSO records in the logs for cross checking.

If it is not possible for an MS to organize this activity contests herself, she will at least advertise this activity in her publications.

NS20_C5_Rec_10

C5CWG propose to use 2021 year to start to collect all the information needed, prepare the contest robot, and finalize Trophy rules with bands/sections, then start with the official IARU Reg. 1 VHF & Up Trophy in 2022.

NS20_C5_Rec_11

To encourage multinational amateur radio interest groups to promote and document their innovations for the sake of radio amateur activities through IARU (R1). Their experience and know-how can be an added value for the amateur community and IARU Member Societies.

This would not impact the way in which proposals are presented to the Region for General Conferences.

This initiative should also be taken into account in framing the Terms of Reference for the proposed TWG

Rec NS20_C5_Rec_12

- The contest robot is operated by the ÖVSV for the IARU under Austrian law
- The programming will be continued by Indiware (Barbara Langwieser)
- We appoint PE1ITR from the C5CWG to the project leader and single contact person to Indiware for the necessary adoptions and improvements, within the approved budget.
- PE1ITR will provide a transparent system with a backlog and work list of all improvements and bugs.
- PE1ITR gets access to the technical specifications and structure of the current IARU Contest robot.
- *PE1ITR bring in a request from CHF 2150,-- + CHF 2200,-- = CHF 4350,-- into the C2 meeting.*
- *The expectation is that is that an annual amount of CHF 2150,-- is needed that must be supported by the actual backlog and work list.*

NS20_C5_Rec_13

A framework for wideband experimentation the amateur bands be developed by opening up new designated segments of existing and new bands for free experimentation with unheard of modulation modes and techniques

NS20_C5_Rec_14

VHF Bandplan updates:

- **50MHz:** Remove under-used entries for 50.510 SSTV and 50.550 Image frequency; which are unnecessary and a duplication in the all-modes segment –enabling more flexible use
- **70 MHz:**70.200 SSB and 70.250 Meteor Scatter -change ‘calling’ to ‘centre’
- **144 MHz:** Update the long designation for ‘144.110–144.160 EME MGM (i)’, to ‘CW and MGM EME’ so it aligns to the current 144.100-144.150 band plan edges and usage
- **144MHz:**Remove the designation for ‘144.195-144.205 Random MS SSB (m)’ as the activity varies with mode across other parts of the segment
- **144MHz:**rename 144.492 ‘EMGM’ to ‘Personal weak signal MGM Beacons’ -but no other frequency changes (NB: NS_C5_-10 proposes a different solution)
- **430 MHz:** Rename 432.370 ‘FSK441 random calling’ to ‘Meteor Scatter centre’
- **430 MHz:** Delete the latter section of Footnote a) re ‘Telegraphy exclusive..., PSK31 etc’ which is no longer applicable.

- **430 MHz: Modify the VIE19_C5_Rec_06 for 'note(p)' which is for LoRA-only, to a more flexible description of: '125kHz Max BW Data (such as LoRa etc)' to enable experiments of other modes more easily.**
- *430 MHz (information only): The specific use of LoRa may be problematic due to insufficient frequency separation which is normally 200kHz between frequencies (not 125kHz), so C5 and the original proposers are also invited to review this and consider a slightly different frequency pair.*

NS20_C5_Rec_15

70cm bandplan updates:

Recommendations for Main Frequency Table:

- **Remove legacy ATV & FM notes from the frequency column for 434.594-434.981MHz and 438-440MHz**
- **Split 435-438 MHz row, into two rows for:-**
 - **435-436 MHz: Satellite Service**
 - **436-438 MHz: Satellite Service and DATV/Data - 437MHz DATV/Data centre of activity**

Recommendations for Footnotes

- **Update Para 1.5.1 Footnote (c) to:**
As of 1-Jan-2021 Analogue ATV and SATV is no longer permitted in the 430-440 MHz band. ATV operators are encouraged to use the microwave allocations where available, but may use narrower bandwidth DATV modes in the 436-438 MHz band. See 1.5.4 for further guidance for DATV and experimental Data usage. In case of interference between DATV/Data and the Amateur Satellite Service, the Satellite Service shall have priority.
- **Update Para 1.5.4 to:-**
1.5.4 DATV and Experimental Data usage in the 436-438 MHz Band
If the 436-438MHz amateur satellite section is used for DATV or other experimental Data developments, it shall be on the following basis:
 - DATV (like Voice) Repeater outputs are not permitted
 - DATV Internet gateways are not permitted
 - DATV Repeater inputs are permitted (eg for cross band usage)
 - DATV Simplex usage is permitted
 - Transmission times by DATV/Data users should be as short as possible
 Any DATV and adhoc simplex Data usage of similar bandwidths to DATV, should be compliant with the Region 1 Technical Recommendations for DATV in Section-9.4 and in particular the maximum bandwidth.
No other fixed infrastructure for nodes, gateways, DV hot-spots or repeaters are permitted in 436-438MHz.

Recommendations for Technical Recommendations:

- **Rename Section-9 title to Amateur Television (remove 'wide band')**
- **Remove Sec 9.1 for AM TV in 435 MHz**
- **Remove Sec 9.2 for 435 MHz medium BW ATV**
- **Remove 9.4.1 re 435 MHz Fast scan ATV standard**
- **Remove 9.4.2 re 435 MHz SATV standard**
- **Remove 9.4.3 Fax Standard (also redundant)**

NS20_C5_Rec_16

µWave band plan updates:

- **2320MHz:** Remove 500Hz BW restriction in 2320.000-2320.150 MHz, so that 2320.0-2320.8 MHz is all 2700Hz max BW (and simplify the table).
- **3400 MHz:** Amend 500Hz BW to 2700Hz in 3400.0-3400.8 MHz to remove unintended restrictions on SSB & MGM
- **5650 MHz:** Remove 2700 Hz BW limits in 5650-5670 MHz (and simplify the table)
- **5720 MHz:** Change ATV to ALL MODES in 5700-5720 MHz and merge with 5720-5760 MHz
- **10.369 GHz:** Remove 2700 Hz BW limit in 10.369 – 10.370 GHz and merge with 10.37-10.45 GHz ALL MODES

NS20_C5_Rec_17

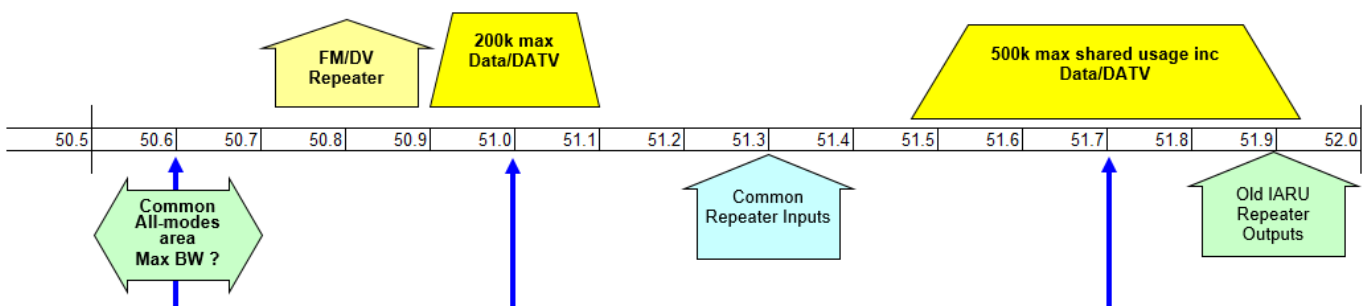
50MHz band plan update to accommodate newer applications within the 50.5-52 MHz range

- Add the lower voice repeater output frequencies at 50.7- 50.9 MHz directly in the main table for clarity to encourage that option for newer deployments if there is demand
- Voice repeaters and gateways to be designated as FM/DV in the band plan
- Discuss and re-align the 50.5-50.7 MHz range to be common (without any repeater overlap) and enable at least part of it to accommodate 50kHz BW Digital Comms (currently it has a 12kHz maximum bandwidth)
- Designate 51.0 MHz as a centre for narrower bandwidth data, up to 200 kHz BW
- Designate 51.7 MHz as a centre for 500kHz shared usage
- Note: Update the original 12kHz bandwidth limit and footnotes appropriately

Those recommendations will be published in the VHF Handbook(version 9) in the coming weeks.

50 MHz – What has changed ?

Of the various recommendations above, the 50MHz changes are particularly unusual and innovative. During the C5 meeting the following diagram was used to provide a high level view of the proposals for 50.5-52 MHz that lead to NS20_C5_Rec_17 (and also assisted by part of NS20_C5_Rec_14).



Notes:-

Blue Arrows are existing experimental centres at 50.6, 51.0, 51.7
Very few old IARU Voice Repeater Outputs in use at 51.9

Where national licence conditions permit, a key aim is to accommodate novel Data and Reduced-Bandwidth DATV developments. This is most easily achieved with the use of the lower option for

voice repeater outputs in future, as this reduces the overlap near 51.9 MHz. The lower output frequencies may also be easier for obtaining regulatory permissions.

As discussed in the C5 meeting session, the final preference for 50.5-50.7 MHz was to avoid any specific bandwidth limit, but 50.5-50.6 will be retaining the existing Gateway frequencies. Appropriate explanations will be included when the VHF Handbook is updated

It is recognised that the regulators in many countries often put specific modes or bandwidth limits in licence conditions. However these novel wider bandwidth applications were considered in the WRC19 studies and there have also been some successful 50 MHz DATV tests already. Therefore it is important to maximise flexibility in licence conditions and it is hoped that over time we can demonstrate some excellent innovation and non-interference operation. If we can, this will assist with the conference closing message by President Don Beattie G3BJ regarding 'tomorrows technologies for tomorrows people'.

Note: Assisting innovation was also a motivation in the C4-HF meeting. There, NS20_C4_Rec_04 was approved for removing the maximum bandwidth restriction in 29000 - 29510 kHz to also enable experimental wideband operation on a non-interference basis.

Useful Information

C5 Chairman: Dick Harms, PA2DW

C5 Vice chairman: Jann Traszewski, DG8NGN

Contest co-ordinator: Alex Carletti , IV3KKW

Beacons co-ordinator: Mathias Klug, DH4FAJ

Satellite co-ordinator: Graham Shirville, G3VZV

Spectrum specialist: Murray Niman, G6JYB

Secretary: Jacques Verleijen, ON4AVJ

Website: <https://www.iaru-r1.org/about-us/committees-and-working-groups/vhf-uhf-shf-committee-c5/>

Handbook: Current Edition: v8.50: https://www.iaru-r1.org/wp-content/uploads/2019/08/Latest-VHF_Handbook.pdf

Newsletters: <https://www.iaru-r1.org/about-us/committees-and-working-groups/vhf-uhf-shf-committee-c5/vhf-newsletters/>

Wiki <http://iaruwiki.oevsv.at>

Contest robot http://iaru.oevsv.at/v_upld/prg_list.php

Mailing list VHF managers and liaison officers

If you are not on this mailing list and you are a VHF manager of your country please send a mail to ON4AVJ@uba.be

Use of the IARU R1 C5 Wiki

If you are an official Member Society representative, but have no login and you want to participate to the discussions on the Wiki, please write a mail to ON4AVJ@uba.be.