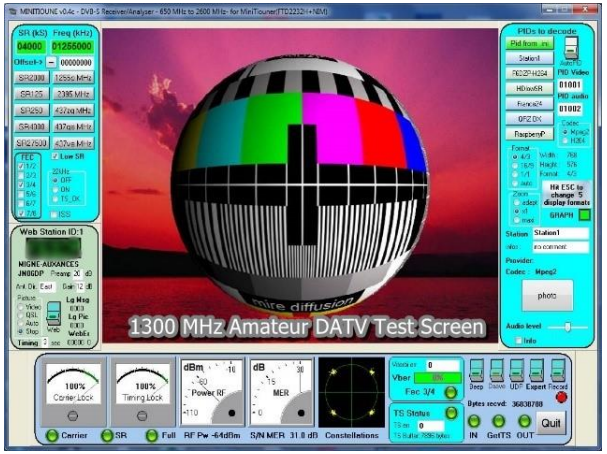

Developing Skills

The band 1240 – 1300 MHz interestingly provides a bridge between established VHF/UHF amateur radio operation and experimental higher frequency microwave band operation. It provides a rich resource to facilitate a range of amateur radio learning activities from narrowband propagation experiments to wideband digital amateur TV experimentation with coding, compression, and efficient data transmission. High performance low noise receivers are the norm and techniques learnt at these frequencies provide a catalyst to explore ever higher frequencies.

Skills and know-how in this frequency band encourages interest and experimentation in the higher frequencies that are fundamental to today's radio communication systems. Many radio communication engineers start their careers in this way.

Overstated Problem

1) The issue laid out in Resolution 774 is **overstated** with no reported evidence of large scale or persistent interference harming RNSS services.
2) **Poor RNSS receiver performance** could result in increased susceptibility to all sources of interference.
3) Two **national** interference cases in Europe have been dealt with through regular national enforcement action.
4) **Two interference cases** cited in the ITU-R Report M.2513 involved **fixed RNSS installations** and fixed amateur repeater installations and not individual amateur radio stations.
5) The **density of amateur radio stations** and a realistic consideration of transmitting activity in this band lead to a **low probability** of potential interference.
6) The band is **not exclusively allocated to RNSS** and other higher power services are active, including other fixed and mobile services.
7) Some constraints demanded by the RNSS community studies would **suppress all amateur radio activity**. Compromise is needed.

WRC-19 Resolution 774

Agenda Item 9.1 topic b

The IARU

The International Amateur Radio Union (IARU) is the worldwide federation of national amateur radio organizations and represents the interests of the Amateur Radio services worldwide with national member-societies in more than 140 ITU Member States.

WRC-23 AI 9.1 topic (b) position

Radio amateurs have successfully co-existed and innovated in the 1240-1300 MHz frequency range for many years and IARU believes that the regulatory status of the amateur and amateur satellite services in this range is already clear. **Therefore any developments to add new regulatory, operational or technical measures to be incorporated as new mandatory elements into the Radio Regulations are considered by the IARU as disproportionate** to the minimal risk of interference and therefore opposed.

IARU encourages the completion of this topic. We support the development of technical and operational measures to protect RNSS in an ITU-R Recommendation but several measures being considered are disproportionate and so stringent that amateur applications would not be able to operate. Any measures need to be considered as **guidance** to administrations on a national basis, taking account of amateur and amateur satellite service spectrum occupancy and usage. This would result in measures that are proportionate in scope and carefully justified, thereby not unnecessarily inhibiting amateur applications and their future development.

https://www.iaru.org/

The 1240-1300 MHz frequency band

This band is the lowest amateur frequency band offering high capacity enabling **experimentation** and **disaster relief communications** networks using higher bandwidth, data and image transmission modes.

Amateur Radio at 1240 – 1300 MHz

Amateur radio stations are operated in the amateur or amateur satellite service by qualified operators. These services operate in frequency bands allocated by the ITU-R Radio Regulations. The frequency range 1240 – 1300 MHz is allocated to the amateur service on a secondary basis with an allocation to the amateur satellite service over the range 1260 – 1270 MHz. The band is the subject of WRC23 AI 9.1 topic b and Resolution 774 (WRC-19).

At W(A)RC's 1979 and 2000 the ITU-R extended the global allocation to RNSS from 1240 - 1260 MHz and then up to 1300 MHz without considering that in this range the amateur service had been in operation for many years (since 1947) with an established base of users and installed stations.

The Spectrum Engineering Problem

With a secondary allocation the amateur service recognises its duty to not cause interference to the RNSS or any other primary service in the band. With some services this can be achieved through national inter-service co-ordination, but for the mass market RNSS terrestrial receivers in this band this will not be possible. Therefore, guidance is being developed that can facilitate coexistence and further minimise the potential for interference.

Low impact on RNSS users

IARU has submitted studies agreed in ITU-R Study Groups which show that the potential number of RNSS receivers experiencing persistent interference over a wide area is negligible. Highly directive antennas are used by amateur radio operators and the studies show that l**ess than 0.5% of RNSS users** might be affected and for **less than 2% of time** aggregated over a one year period.

Extract from the studies agreed in ITU-R:

Area	% Impacted RNSS Rx	Amateur Station Density
Rural	**0.15%**	**Minimum**
Urban	**0.27%**	**Average**
Dense urban	**0.21%**	**Average**

The study can be found here:

https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-23-studies.aspx

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