

BAND III IN EUROPE

Band III is the *only* spectrum available for DAB services. This factsheet explains how Band III was planned by the GE06 (Geneva 06) Agreement and Plan and how it is currently used in different European countries.

WHAT IS THE GE06 AGREEMENT AND PLAN?

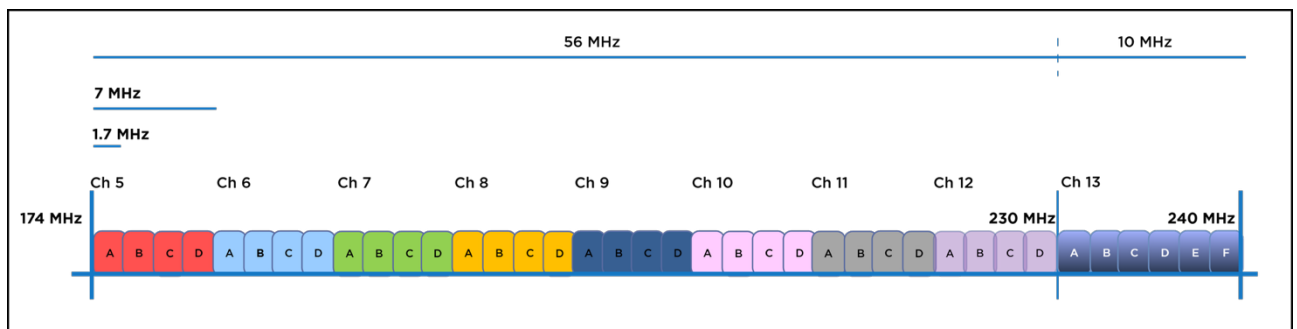
The GE06 Agreement and Plan is an international treaty that establishes the frequency plans for digital terrestrial broadcasting in the VHF Band III and UHF Bands IV/V. It was adopted by the ITU Regional Radiocommunication Conference in 2006 (RRC-06) to facilitate the transition from analogue to digital television and radio. [1]

BAND III CHARACTERISTICS

Band III covers the frequencies from 174 MHz to 230 MHz and is part of the VHF Band which ranges from 30 MHz to 300 MHz.

56 MHz of Band III is divided into eight 7 MHz channels (from channel 5 to channel 12); each 7 MHz channel can also be sub-divided into four 1.7 MHz blocks (from A to D) as shown in Figure 1.

Figure 1: Band III frequency channels



Some countries (e.g., Norway and Denmark) also use channel 13 for DAB, this is the 10 MHz from 230 MHz to 240 MHz, which is divided into six 1.7 MHz blocks, 13A to 13F.

HOW BAND III HAS BEEN PLANNED IN EUROPE

The use of Band III in Europe is defined by the GE06 Agreement where Band III is planned for DAB and DVB-T services. DVB-T signals use the full 7 MHz of a Band III channel whereas DAB signals occupy 1.7 MHz channels. On average, the Plan enabled each country to have three DAB multiplexes with national coverage and one DVB-T multiplex with national coverage. Additional frequencies were planned for local DAB or DVB-T services.

Some countries such as Finland and Italy, planned to use most of Band III for DVB-T services.

The GE06 Agreement allows for the DVB-T entries to be converted into DAB and DVB-T frequencies can be used for DVB-T2.

HOW BAND III IS USED IN DIFFERENT COUNTRIES

The use of Band III in Europe varies from country to country depending on national circumstances (national needs, economy, topography, geographic situation, etc.).

The following general facts can be identified:

- Most European countries have deployed DAB¹ in Band III.
- Many European countries have revised their GE06 Band III DVB-T allotments / assignments and converted them into DAB to provide better nationwide DAB coverage in line with international coordination.
- Only one country operates DVB-T/T2 in Band III alongside DAB services. Most European countries do not transmit TV signals in Band III anymore. Television roof top antennas have been optimized accordingly to work on the UHF band only.
- One country has switched off all FM radio broadcasting services. In this case, distribution of radio broadcasting services fully relies on DAB in Band III.
- In many countries digital broadcasting services share the spectrum with additional services: defence, PMSE (e.g. radio microphones), short range devices, private mobile radio, and aeronautical communication.

Further and more detailed information can be found in Technical Report EBU TR 102 [2].

REFERENCES

- [1] EBU Technical overview of the ITU-R document GE06
https://tech.ebu.ch/docs/techreview/trev_308-rrc-06.pdf
- [2] EBU Technical Report TR102: <https://tech.ebu.ch/publications/tr102>

¹ For updated information please see <http://www.worlddab.org/>