

CEPT/ERC/RECOMMENDATION 12-03 E (Bonn 1994)**HARMONISED RADIO FREQUENCY CHANNEL ARRANGEMENTS FOR
DIGITAL TERRESTRIAL FIXED SYSTEMS OPERATING IN THE BAND 17.7 GHz TO 19.7 GHz**

Recommendation proposed by the Working Group "Spectrum Engineering" (WGSE)

Text of the recommendation adopted by the "European Radiocommunications Committee" (ERC):

"The European Conference of Postal and Telecommunications Administrations,

considering

1. that CEPT should develop radio frequency channel arrangements in consultation with organisations developing standards for radio systems, in order to make the most effective use of the spectrum available,
2. that compatibility between systems of different capacities should be assured,
3. that for low capacity digital systems there exist many links among CEPT countries using various arrangements according to Recommends 6 of ITU-R Rec. F. 595,
4. the main deployment is foreseen by the majority of CEPT Administrations for medium and high capacity digital systems,

noting

- a) that Article 8 of the Radio Regulations allocates in Region 1 the band 17.7 GHz - 19.7 GHz on equal primary basis to the Fixed, Fixed-Satellite and Mobile services. Sharing criteria between Fixed and Mobile, and Fixed and Fixed-Satellite services may be required,
- b) that radio frequency channel arrangements have been recommended by ITU-R for medium and high capacity digital systems in the 17.7 GHz - 19.7 GHz band,

recommends

1. that for medium and high capacity digital systems, CEPT Administrations should follow the recommended radio frequency channel arrangements for the band 17.7 GHz - 19.7 GHz (Annex A),
2. that for low capacity digital systems channel frequency arrangements may be accommodated, on a national basis, within any of the high capacity channels or guard bands."

Left blank

Annex A

Let

f_0 be the centre frequency (MHz) of the 17.70 - 19.70 GHz band ($F_0 = 18700$ MHz),

f_n be the centre frequency (MHz) of a radio frequency channel in the lower half of the band,

f_n' be the centre frequency of a radio frequency channel in the upper half of the band,

then the frequencies (MHz) of individual channels are expressed by the following relationships:

1. CO-CHANNEL ARRANGEMENT (see Fig. 1)

a) for systems with a carrier spacing of 110 MHz:

$$\begin{array}{ll} \text{lower half of the band:} & f_n = f_0 - 1000 + 110 n \\ \text{upper half of the band:} & f_n' = f_0 + 10 + 110 n \end{array} \quad \text{where } n = 1, \dots, 8$$

b) for systems with a carrier spacing of 55 MHz:

$$\begin{array}{ll} \text{lower half of the band:} & f_n = f_0 - 1000 + 55 n \\ \text{upper half of the band:} & f_n' = f_0 + 10 + 55 n \end{array} \quad \text{where } n = 1, \dots, 17$$

c) for systems with a carrier spacing of 27.5 MHz:

$$\begin{array}{ll} \text{lower half of the band:} & f_n = f_0 - 1000 + 27.5 n \\ \text{upper half of the band:} & f_n' = f_0 + 10 + 27.5 n \end{array} \quad \text{where } n = 1, \dots, 35$$

d) for systems with a carrier spacing of 13.75 MHz:

$$\begin{array}{ll} \text{lower half of the band:} & f_n = f_0 - 1000 + 13.75 n \\ \text{upper half of the band:} & f_n' = f_0 + 10 + 13.75 n \end{array} \quad \text{where } n = 1, \dots, 70$$

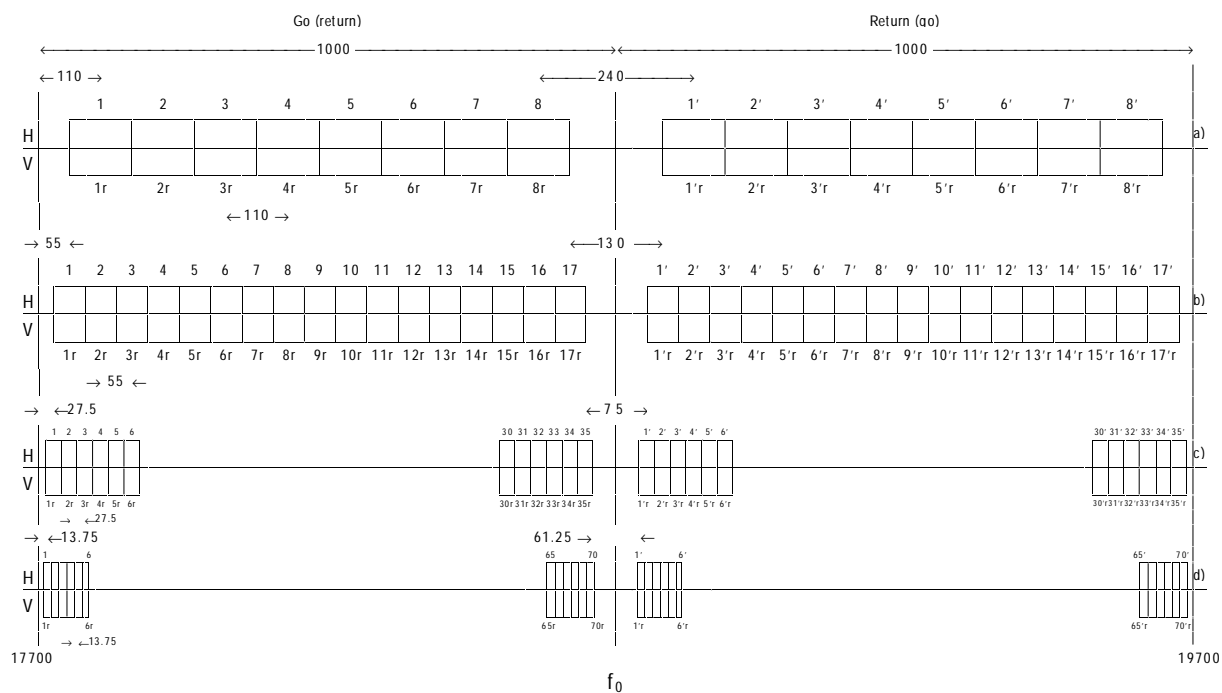


FIGURE 1

Radio frequency channel arrangement for digital radio-relay systems operating in the 17.7 GHz - 19.7 GHz band

(Co-channel arrangement)

(All frequencies are in MHz)