

14.6.8 Hop sequences

The hopping sequence of an individual PMD entity is used to create a pseudorandom hopping pattern utilizing uniformly the designated frequency band. Sets of hopping sequences are used to co-locate multiple PMD entities in similar networks in the same geographic area and to enhance the overall efficiency and throughput capacity of each individual network.

An FH pattern, F_x , consists of a permutation of all frequency channels defined in Table 38 and Table 39. For a given pattern number, x , the hopping sequence can be written as follows:

$$F_x = \{f_x(1), f_x(2), \dots, f_x(p)\}$$

where

- $f_x(i)$ is the channel number (as defined in 14.6.4) for i^{th} frequency in x^{th} hopping pattern;
- p is the number of frequency channels in hopping pattern (79 for North America and most of Europe, 23 for Japan, 27 for France, 35 for Spain)

Given the hopping pattern number, x , and the index for the next frequency, i (in the range 1 to p), the channel number shall be defined to be as follows:

$$f_x(i) = \begin{cases} [\delta(i) + x] \bmod (79) + 2 & \text{in North America and most of Europe, with } \delta(i) \text{ defined in Table 42.} \\ [(i-1) \times x] \bmod (23) + 73 & \text{in Japan.} \\ [\delta(i) + x] \bmod (27) + 47 & \text{in Spain with } \delta(i) \text{ defined in Table 43.} \\ [\delta(i) + x] \bmod (35) + 48 & \text{in France with } \delta(i) \text{ defined in Table 44.} \end{cases}$$

Table 42—Base-Hopping sequence $b(i)$ for North America and most of Europe

i	$b(i)$	i	$b(i)$	i	$b(i)$	i	$b(i)$	i	$b(i)$	i	$b(i)$	i	$b(i)$	i	$b(i)$
1	0	11	76	21	18	31	34	41	14	51	20	61	48	71	55
2	23	12	29	22	11	32	66	42	57	52	73	62	15	72	35
3	62	13	59	23	36	33	7	43	41	53	64	63	5	73	53
4	8	14	22	24	72	34	68	44	74	54	39	64	17	74	24
5	43	15	52	25	54	35	75	45	32	55	13	65	6	75	44
6	16	16	63	26	69	36	4	46	70	56	33	66	67	76	51
7	71	17	26	27	21	37	60	47	9	57	65	67	49	77	38
8	47	18	77	28	3	38	27	48	58	58	50	68	40	78	30
9	19	19	31	29	37	39	12	49	78	59	56	69	1	79	46
10	61	20	2	30	10	40	25	50	45	60	42	70	28	—	—