

Frequency diversity entails that you have many radars working on different frequencies. This compound an attacker jamming challenge, sine many different jammers are required in order to cover all frequencies. As it can be seen bellow this was a principle used by the Germans at least in the last years of the war.

Frequency agility entail that it is possible to change the frequency of an individual radar. This was reflected in the Vollwismar. As far as I can tell, this required the manual change of the tubes/valves in the radar. An operation, which could be performed in about five minutes.

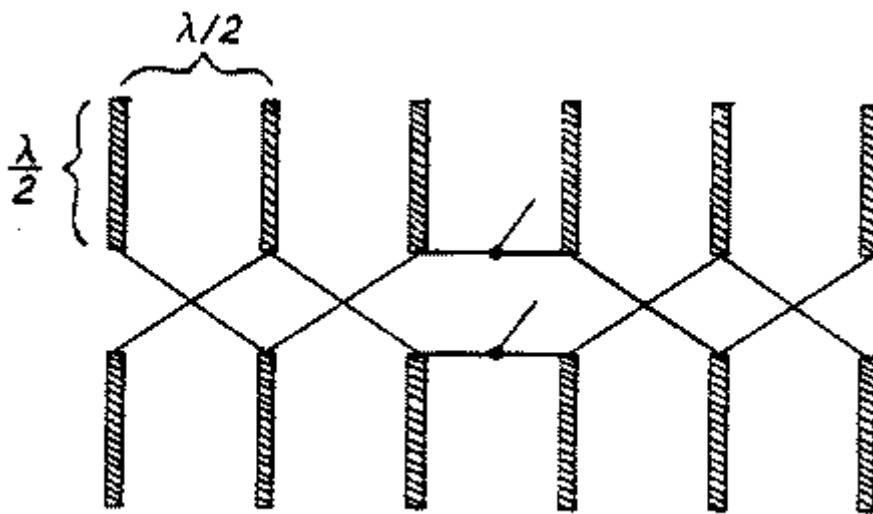
Luftwaffe radar frequencies.

Insel	Köthenband	Wavelength (m.)/ Frequency (Mhz)	Type of radar.
A		2.32 – 2.45/129 – 122.	Wassermann S
B		2.08 - 2.24/144 – 133.	Freya LZ B, Wassermann M I
C		3.00 – 3.30/100 – 91.	Freya LZ C
D (Z)		1.50 – 1.55/200 – 193.	Freiburg I/II
D (Y)		1.55 – 1.60/194 – 188.	
D (X)		1.60 – 1.65/188. – 182.	Freiburg I/II
D (W)		1.65 – 1.70/182 – 176.	Freiburg I/II
D (V)		1.70 – 1.75/176 – 171.	Freiburg I/II
D (U)		1.75 – 1.80/171 – 166.	Freiburg I/II
D (T)		1.80 – 1.85/166 – 162	Freiburg I/II
	Gelb/Braun	1.70/176.	
	Gelb/Rot	1.80/171.	
	Ludwig	1.95/153.	
	Gelb	2.00/150.	Freiburg I/II
	Gelb/Grün	2.56/192.	
	Grün	3.15/95.	Köthen A
	Rot	3.40/88.	Köthen B, Yagi-Freya
	Braun	3.65/82.	Köthen, Fahrstuhl-Yagi.
	Weiss	4.05/74.	Köthen C
	Schwartz	4.60/65.	
	Blau	4.80/62.	
	Violet	5.20/57.	
	Grau	5.75/52.	
	Grau Neu	8.80/34.	Elefant, See-Elefant and Russel
Vollwismar	Bereich I	1.90 – 2.50/157 - 120.	Freiburg II/III/W II, Freya LZ/W I, Wassermann M II/IV, Dreh-Freya, Jagdschloss I.
	Bereich II	1.20 – 1.90/250 - 157.	Freya LZ, Freiburg III/W II, Wassermann MIII, Jagdschloss II
	Bereich III	2.50 – 4.00/120 – 75.	Freya LZ, Freiburg III/W III, Wassermann M V

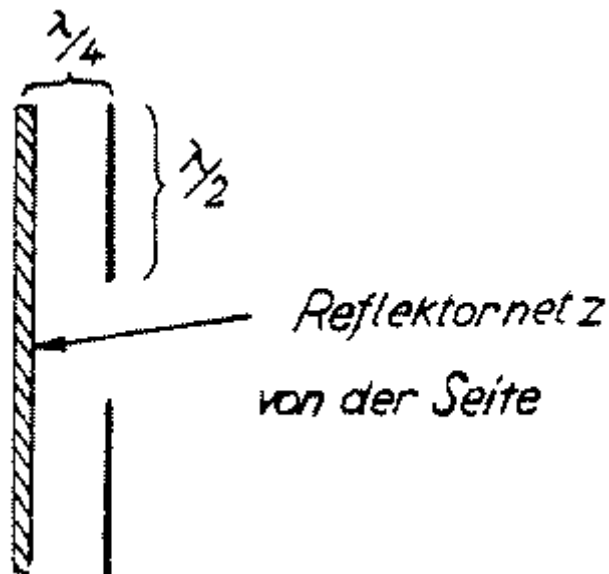
Before the above system was introduced, the following frequencies were also used:

Wavelength (m.)/ Frequency (Mhz)	Type of radar.
2.40/125	Freya
2.50 – 2.20/121 – 138	Freya LZ A
2.50 – 2.20/120 - 138	Mammut II
2.40/125	Wassermann L
0.54/560	Würzburg Riese

Until the advent of the Vollwimar German radar antennas were designed in accordance with the bellow illustrated principles. So if you know the wavelength used by the radar you can easily calculate the size of the antenna elements and the size of the dipoles. And vice-versa.



von vorn



*Reflektornetz
von der Seite*

Allied electronic counter measures.

Mandrel I	Wavelength(m.)/ Frequency (Mhz)
A	3.4 – 3.1/88 – 98.
B	3.1 – 2.8/98 – 108.
C	2.8 – 2.5/108 – 118.
D	2.5 – 2.3/118 – 128.
E	2.3 – 2.2/128 – 138.
F	2.2 – 2.0/138 – 148.
Mandrel III	
A	10.3 – 7.6/29 – 39.
G	2.0 – 1.5/148 – 196.
American Mandrel	
P	4.8 – 2.9/63 – 103.
Q	3.3 – 2.3/92 – 133.
R	2.1 – 1.5/143 – 203.
Carpet II	1.00 – 0.5/300 – 600.
Carpet III	1.00 – 0.3/300 - 1000
Dina II	3.2 – 1.4/93 - 210