

B

	Frequency	Channel bandwidth
VHF I	MHz 47 - 68	7
VHF III	MHz 147 - 230	7

TV Colour bands subcarrier	Channel limits	Picture carrier	Sound carrier	
I	2	47... 54	48,25	53,75
52,68	3	54... 61	55,25	60,75
59,68	4	61... 68	62,25	67,75
66,68				

	MHz	MHz	MHz	MHz
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TV bands	Channel limits	Picture carrier	Sound carrier	Colour subcarrier		
VHF/ mid-band	S 3	118...125	119,25	124,75	123,68	
	S 4	125...132	126,25	131,75	130,68	
	S 5	132...139	133,25	138,75	137,68	
	S 6	139...146	140,25	145,75	144,68	
	S 7	146...153	147,25	152,75	151,68	
	S 8	153...160	154,25	159,75	158,68	
	S 9	160...167	161,25	166,75	165,68	
	S 10	167...174	168,25	173,75	172,68	
	III	5	174...181	175,25	180,75	179,68
		6	181...188	182,25	187,75	186,68
7		188...195	189,25	194,75	193,68	
8		195...202	196,25	201,75	200,68	
9		202...209	203,25	208,75	207,68	
10		209...216	210,25	215,75	214,68	
11		216...223	217,25	222,75	221,68	
12		223...230	224,25	229,75	228,68	

VHF/ super-band	S 11	230...237	231,25	236,75	235,68
	S 12	237...244	238,25	243,75	242,68
	S 13	244...251	245,25	250,75	249,68
	S 14	251...258	252,25	257,75	256,68
	S 15	258...265	259,25	264,75	263,68
	S 16	265...272	266,25	271,75	270,68
	S 17	272...279	273,25	278,75	277,68
	S 18	279...286	280,25	285,75	284,68
	S 19	286...293	287,25	292,75	291,68
	S 20	293...300	294,25	299,75	298,68
	S 21	302...310	303,25	308,75	307,68
	S 22	310...318	311,25	316,75	315,68
	S 23	318...326	319,25	324,75	323,68
	S 24	326...334	327,25	332,75	331,68
	S 25	334...342	335,25	340,75	339,68
	S 26	342...350	343,25	348,75	347,68
	S 27	350...358	351,25	356,75	355,68
	S 28	358...366	359,25	364,75	363,68
	S 29	366...374	367,25	372,75	371,68
	S 30	374...382	375,25	380,75	379,68
	S 31	382...390	383,25	388,75	387,68
	S 32	390...398	391,25	396,75	395,68
	S 33	398...406	399,25	404,75	403,68
	S 34	406...414	407,25	412,75	411,68
	S 35	414...422	415,25	420,75	419,68
	S 36	422...430	423,25	428,75	427,68
	S 37	430...438	431,25	436,75	435,68
	S 38	438...446	439,25	444,75	443,68

G

	Frequency	Channel bandwidth
UHF IV	MHz 470 - 606	8
UHF V	MHz 606 - 862	8

	MHz	MHz	MHz	MHz
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TV bands	Channel limits	Picture carrier	Sound carrier	Colour subcarrier
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IV	21	470...478	471,25	476,75	475,68
	22	478...486	479,25	484,75	483,68
	23	486...494	487,25	492,75	491,68
	24	494...502	495,25	500,75	499,68
	25	502...510	503,25	508,75	507,68
	26	510...518	511,25	516,75	515,68
	27	518...526	519,25	524,75	523,68
	28	526...534	527,25	532,75	531,68
	29	534...542	535,25	540,75	539,68
	30	542...550	543,25	548,75	547,68
	31	550...558	551,25	556,75	555,68
	32	558...566	559,25	564,75	563,68
	33	566...574	567,25	572,75	571,68
	34	574...582	575,25	580,75	579,68
	35	582...590	583,25	588,75	587,68
	36*	590...598	591,25	596,75	595,68
	37	598...606	599,25	604,75	603,68

V	38*	606...614	607,25	612,75	611,68
	39	614...622	615,25	620,75	619,68
	40	622...630	623,25	628,75	627,68
	41	630...638	631,25	636,75	635,68
	42	638...646	639,25	644,75	643,68
	43	646...654	647,25	652,75	651,68
	44	654...662	655,25	660,75	659,68
	45	662...670	663,25	668,75	667,68
	46	670...678	671,25	676,75	675,68
	47	678...686	679,25	684,75	683,68
	48	686...694	687,25	692,75	691,68
	49	694...702	695,25	700,75	699,68
	50	702...710	703,25	708,75	707,68
	51	710...718	711,25	716,75	715,68
	52	718...726	719,25	724,75	723,68
	53	726...734	727,25	732,75	731,68
	54	734...742	735,25	740,75	739,68
	55	742...750	743,25	748,75	747,68
	56	750...758	751,25	756,75	755,68
	57	758...766	759,25	764,75	763,68
	58	766...774	767,25	772,75	771,68
	59	774...782	775,25	780,75	779,68
	60	782...790	783,25	788,75	787,68
	61	790...798	791,25	796,75	795,68
	62	798...806	799,25	804,75	803,68
	63	806...814	807,25	812,75	811,68
	64	814...822	815,25	820,75	819,68
	65	822...830	823,25	828,75	827,68
	66	830...838	831,25	836,75	835,68
	67	838...846	839,25	844,75	843,68
	68	846...854	847,25	852,75	851,68
	69	854...862	855,25	860,75	859,68

I

For PAL I vision sound spacing 6MHz Vision nicam sound spacing 6.4MHz
Use above table and add .5MHz to sound carrier

*Navigational broadcast frequency cable networks must be rf tight and not radiate outside specified limits on this channel

**Used for astronomical telescopes cable networks must be rf tight and not radiate outside specified limits on this channel.

Channel	Picture carrier	Soundcarrier
	MHz	MHz
A 2	55,25	59,75
A 3	61,25	65,75
A 4	67,25	71,75
A 5	77,25	81,75
A 6	83,25	87,75
A 7	175,25	179,75
A 8	181,25	185,75
A 9	187,25	191,75
A 10	193,25	195,75
A 11	199,25	203,75
A 12	205,25	209,75
A 13	211,25	215,75
A 14	471,25	475,75
A 15	477,25	481,75
A 16	483,25	487,75
A 17	489,25	493,75
A 18	495,25	499,75
A 19	501,25	505,75
A 20	507,25	511,75
A 21	513,25	517,75
A 22	519,25	523,75
A 23	525,25	529,75
A 24	531,25	535,75
A 25	537,25	541,75
A 26	543,25	547,75
A 27	549,25	553,75
A 28	555,25	559,75
A 29	561,25	565,75
A 30	567,25	571,75
A 31	573,25	577,75
A 32	579,25	583,75
A 33	585,25	589,75
A 34	591,25	595,75
A 35	597,25	601,75
A 36	603,25	607,75
A 37	609,25	613,75
A 38	615,25	619,75
A 39	621,25	625,75
A 40	627,25	631,75
A 41	633,25	637,75
A 42	639,25	643,75

Channel	Picture carrier	Soundcarrier
	MHz	MHz
A 43	645,25	649,75
A 44	651,25	655,75
A 45	657,25	661,75
A 46	663,25	667,75
A 47	669,25	673,75
A 48	675,25	679,75
A 49	681,25	685,75
A 50	687,25	691,75
A 51	693,25	697,75
A 52	699,25	703,75
A 53	705,25	709,75
A 54	711,25	715,75
A 55	717,25	721,75
A 56	723,25	727,75
A 57	729,25	733,75
A 58	735,25	739,75
A 59	741,25	745,75
A 60	747,25	751,75
A 61	753,25	757,75
A 62	759,25	763,75
A 63	765,25	769,75
A 64	771,25	775,75
A 65	777,25	781,75
A 66	783,25	787,75
A 67	789,25	793,75
A 68	795,25	799,75
A 69	801,25	805,75
A 70	807,25	811,75
A 71	813,25	817,75
A 72	819,25	823,75
A 73	825,25	829,75
A 74	831,25	835,75
A 75	837,25	841,75
A 76	843,25	847,75
A 77	849,25	853,75
A 78	855,25	859,75
A 79	861,25	865,75
A 80	867,25	871,75
A 81	873,25	877,75
A 82	879,25	883,75
A 83	885,25	889,75

TV VHF Channels Secam L France

Channel	Picture carrier	Soundcarrier
	MHz	MHz
L 02	55,75	49,25
L 03	60,50	54,00
L 04	63,75	57,25
L 05	176,00	182,50
L 06	184,00	190,50
L 07	192,00	198,50
L 08	200,00	206,50
L 09	208,00	214,50
L 10	216,00	222,50

Video carriers of UHF channels identical to standard G, sound carrier + 6,5 MHz.

TV VHF Channels OIRT

Channel	Picture carrier	Soundcarrier
	MHz	MHz
I	49,75	56,25
II	59,25	65,75
III	77,25	83,75
IV	85,25	91,75
V	93,25	99,75
VI	175,25	181,75
VII	183,25	189,75
VIII	191,25	197,75
IX	199,25	205,75
X	207,25	213,75
XI	215,25	221,75
XII	223,25	229,75

Video carriers of UHF channels identical to standard G, sound carrier + 6,5 MHz.

CCIR-Standard	A	B	C	D	E	F	G	H	I	K	K1	L	M	N
Number of lines	405	625	625	625	819	819	625	625	625	625	625	625	525	625
Channel bandwidth (MHz)	5	7	7	8	14	7	8	8	8	8	8	8	6	6
Video-bandwidth (MHz)	3	5	5	6	10	5	5	5	5,5	6	6	6	4,2	4,2
Video-to-sound spacing(MHz)	-3,5	+5,5	+5,5	+6,5	+11,15	+5,5	+5,5	+5,5	+6	+6,5	+6,5	+6,5	+4,5	+4,5
Vestigial side band (MHz)	0,75	0,75	0,75	1,25	2	0,75	0,75	1,25	1,25	0,75	1,25	1,25	0,75	0,75
Picture modulation	Pos.	Neg.	Pos.	Neg.	Pos.	Pos.	Neg.	Neg.	Neg.	Neg.	Neg.	Pos.	Neg.	Neg.
Sound modulation	AM	FM	AM	FM	AM	AM	FM	FM	FM	FM	FM	AM	FM	FM

Country	VHF	UHF	Colour
Algeria	B	H	PAL
Argentina	N	N	PAL-N
Australia	B	H	PAL
Austria	B	G	PAL
Bahrain	B	G	PAL
Belgium	B	H	PAL
Bulgaria	D	K	SECAM
China	D	K	PAL
Cyprus	B	G	PAL/SECAM
Czechoslovakia	D	K	SECAM
Denmark	B	G	PAL
Egypt	B	G; H	SECAM
Finland	B	G	PAL
France	L	L	SECAM
Germany	B	G	PAL
Gibraltar	B	G	PAL
Great Britain	I	I	PAL
Greece	B	G	SECAM
Holland	B	G	PAL
HongKong	I	I	PAL
Hungary	D	K	SECAM
Iceland	B	G	PAL
India	B	-	PAL
Indonesia	B	-	PAL
Iran	B	G	SECAM
Iraq	B	-	SECAM
Ireland	I	I	PAL
Israel	B	G	PAL
Italy	B	G	PAL
Japan	M	M	NTSC
Jordan	B	G	PAL
Korea (Rep.)	M	-	NTSC
Kuwait	B	G	PAL
Lebanon	B	-	SECAM
Libya	B	H	SECAM

Country	VHF	UHF	Colour
Luxembourg	B/L	G/L	SECAM/PAL
Malta	B	H	PAL
Malaysia	B	G	PAL
Mexico	M	M	NTSC
Monaco	E	L/G	SECAM/PAL
Morocco	B	H	SECAM
Nigeria	B	G	PAL
Norway	B	G	PAL
Pakistan	B	G	PAL
Philippines	M	M	NTSC
Poland	D	K	SECAM
Portugal	B	G	PAL
Oman Sultanate	B	G	PAL
Qatar	B	G	PAL
Romania	D	K	PAL
Saudi Arabia	B	G	PAL/SECAM
Singapore	B	G	PAL
Spain	B	G	PAL
Sri Lanka	B	-	PAL
South Africa	I	I	PAL
Sweden	B	G	PAL
Switzerland	B	G	PAL
Syrian Arab. Rep.	B	-	SECAM
Thailand	B/M	-	PAL
Tunisia	B	G	SECAM
Turkey	B	G	PAL
U.A.E.	B	G	PAL
U.S.A.	M	M	NTSC
U.S.S.R.	D	K	SECAM
Yemen Arab. Rep.	B	-	PAL
Yugoslavia	B	G	PAL

CCIR = Comité Consultatif International des Radiocommunications
 PAL = Phase Alternation Line
 SECAM = Séquentielle à mémoire
 NTSC = National Television System Committee

dBuV to dBmV

dBuV	dBmV
0	-60
3	-57
6	-54
9	-51
12	-48
15	-45
18	-42
21	-39
24	-36
27	-33
30	-30
33	-27
36	-24
39	-21
42	-18
45	-15
48	-12
51	-9
54	-6
57	-3
60	0
63	3
66	6
69	9
72	12
75	15
78	18
81	21
84	24
87	27
90	30
93	33
96	36
99	39
102	42
105	45
108	48
111	51
114	54
117	57
120	60
123	63
126	66
129	69

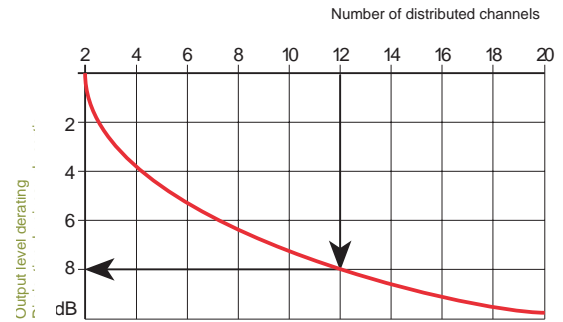
dBuV ,dBmV to uV and mV

dBuV	dBmV	uV	mV
0	-60	1	0.001
20	-40	10	0.010
40	-20	100	0.100
60	0	1,000	1
80	20	10,000	10
100	40	100,000	100
120	60	1,000,000	1,000
140	80	10,000,000	10,000
160	100	100,000,000	100,000
180	120	1,000,000,000	1,000,000

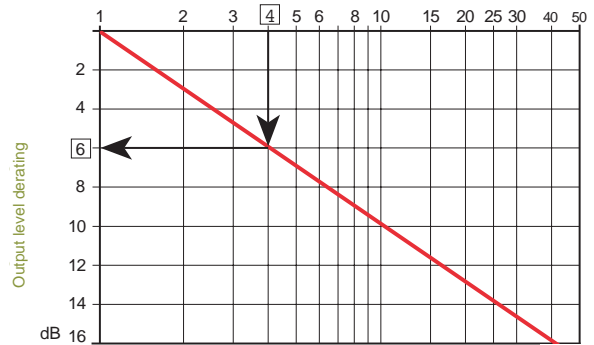
dBm to W

dBm	W
-10	10mW
0	1mW
10	10mW
20	100mW
30	1W
40	10W
50	100W
60	1kW
70	10kW

Derating for number of channels DIN4500B



Derating for cascading of amplifiers



FM radio channels

CH	Frequency	CH	Frequency
201	88.1	251	98.1
202	88.3	252	98.3
203	88.5	253	98.5
204	88.7	254	98.7
205	88.9	255	98.9
206	89.1	256	99.1
207	89.3	257	99.3
208	89.5	258	99.5
209	89.7	259	99.7
210	89.9	260	99.9
211	90.1	261	100.1
212	90.3	262	100.3
213	90.5	263	100.5
214	90.7	264	100.7
215	90.9	265	100.9
216	91.1	266	101.1
217	91.3	267	101.3
218	91.5	268	101.5
219	91.7	269	101.7
220	91.9	270	101.9
221	92.1	271	102.1
222	92.3	272	102.3
223	92.5	273	102.5
224	92.7	274	102.7
225	92.9	275	102.9
226	93.1	276	103.1
227	93.3	277	103.3
228	93.5	278	103.5
229	93.7	279	103.7
230	93.9	280	103.9
231	94.1	281	104.1
232	94.3	282	104.3
233	94.5	283	104.5
234	94.7	284	104.7
235	94.9	285	104.9
236	95.1	286	105.1
237	95.3	287	105.3
238	95.5	288	105.5
239	95.7	289	105.7
240	95.9	290	105.9
241	96.1	291	106.1
242	96.3	292	106.3
243	96.5	293	106.5
244	96.7	294	106.7
245	96.9	295	106.9
246	97.1	296	107.1
247	97.3	297	107.3
248	97.5	298	107.5
249	97.7	299	107.7
250	97.9	300	107.9