

Product Information 2

TV Frequency Table <Digital TV>

■ Channel Map (for Japan)

Ch.	Freq.	Ch.	Freq.	Ch.	Freq.	Ch.	Freq.	Ch.	Freq.
1	93.143	C25	237.143	C49	381.143	22	527.143	46	671.143
2	99.143	C26	243.143	C50	387.143	23	533.143	47	677.143
3	105.143	C27	249.143	C51	393.143	24	539.143	48	683.143
C13	111.143	C28	255.143	C52	399.143	25	545.143	49	689.143
C14	117.143	C29	261.143	C53	405.143	26	551.143	50	695.143
C15	123.143	C30	267.143	C54	411.143	27	557.143	51	701.143
C16	129.143	C31	273.143	C55	417.143	28	563.143	52	707.143
C17	135.143	C32	279.143	C56	423.143	29	569.143	53	713.143
C18	141.143	C33	285.143	C57	429.143	30	575.143	54	719.143
C19	147.143	C34	291.143	C58	435.143	31	581.143	55	725.143
C20	153.143	C35	297.143	C59	441.143	32	587.143	56	731.143
C21	159.143	C36	303.143	C60	447.143	33	593.143	57	737.143
C22	167.143	C37	309.143	C61	453.143	34	599.143	58	743.143
4	173.143	C38	315.143	C62	459.143	35	605.143	59	749.143
5	179.143	C39	321.143	C63	465.143	36	611.143	60	755.143
6	185.143	C40	327.143	13	473.143	37	617.143	61	761.143
7	191.143	C41	333.143	14	479.143	38	623.143	62	767.143
8	195.143	C42	339.143	15	485.143	39	629.143		
9	201.143	C43	345.143	16	491.143	40	635.143		
10	207.143	C44	351.143	17	497.143	41	641.143		
11	213.143	C45	357.143	18	503.143	42	647.143		
12	219.143	C46	363.143	19	509.143	43	653.143		
C23	225.143	C47	369.143	20	515.143	44	659.143		
C24	231.143	C48	375.143	21	521.143	45	665.143		

Note: Some CATV stations transmit C24~C27ch in the following frequencies.

C24: 233.143MHz

C25: 239.143MHz

C26: 245.143MHz

C27: 251.143MHz

TV Frequency Table <Analog TV>

■ JAPAN Channel Frequency Assignments

Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.	Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.
1	93	90~96	91.25	95.75	150	208.75	32	587	584~590	585.25	589.75	644	702.75
2	99	96~102	97.25	101.75	156	214.75	33	593	590~596	591.25	595.75	650	708.75
3	105	102~108	103.25	107.75	162	220.75	34	599	596~602	597.25	601.75	656	714.75
4	173	170~176	171.25	175.75	230	288.75	35	605	602~608	603.25	607.75	662	720.75
5	179	176~182	177.25	181.75	236	294.75	36	611	608~614	609.25	613.75	668	726.75
6	185	182~188	183.25	187.75	242	300.75	37	627	614~620	615.25	619.75	674	732.75
7	191	188~194	189.25	193.75	248	306.75	38	623	620~626	621.25	625.75	680	738.75
8	195	192~198	193.25	197.75	252	310.75	39	629	626~632	627.25	631.75	686	744.75
9	201	198~204	199.25	203.75	258	316.75	40	635	632~638	633.25	637.75	692	750.75
10	207	204~210	205.25	209.75	264	322.75	41	641	638~644	639.25	643.75	698	756.75
11	213	210~216	211.25	215.75	270	328.75	42	647	644~650	645.25	649.75	704	762.75
12	219	216~222	217.25	221.75	276	334.75	43	653	650~656	651.25	655.75	710	768.75
13	473	470~476	471.25	475.75	530	588.75	44	659	656~662	657.25	661.75	716	774.75
14	479	476~482	477.25	481.75	536	594.75	45	665	662~668	663.25	667.75	722	780.75
15	485	482~488	483.25	487.75	542	600.75	46	671	668~674	669.25	673.75	728	786.75
16	491	488~494	489.25	493.75	548	606.75	47	677	674~680	675.25	679.75	734	792.75
17	497	494~500	495.25	499.75	554	612.75	48	683	680~686	681.25	685.75	740	798.75
18	503	500~506	501.25	505.75	560	618.75	49	689	686~692	687.25	691.75	746	804.75
19	509	506~512	507.25	511.75	566	624.75	50	695	692~698	693.25	697.75	752	810.75
20	515	512~518	513.25	517.75	572	630.75	51	701	698~704	699.25	703.75	758	816.75
21	521	518~524	519.25	523.75	578	636.75	52	707	704~710	705.25	709.75	764	822.75
22	527	524~530	525.25	529.75	584	642.75	53	713	710~716	711.25	715.75	770	828.75
23	533	530~536	531.25	535.75	590	648.75	54	719	716~722	717.25	721.75	776	834.75
24	539	536~542	537.25	541.75	596	654.75	55	725	722~728	723.25	727.75	782	840.75
25	545	542~548	543.25	547.75	602	660.75	56	731	728~734	729.25	733.75	788	846.75
26	551	548~554	549.25	553.75	608	666.75	57	737	734~740	735.25	739.75	794	852.75
27	557	554~560	555.25	559.75	614	672.75	58	743	740~746	741.25	745.75	880	858.75
28	563	560~566	561.25	565.75	620	678.75	59	749	746~752	747.25	751.75	806	864.75
29	569	566~572	567.25	571.75	626	684.75	60	755	752~758	753.25	757.75	812	870.75
30	575	572~578	573.25	577.75	632	690.75	61	761	758~764	759.25	763.75	818	876.75
31	581	578~584	579.25	583.75	638	696.75	62	767	764~770	765.25	769.75	824	882.75

Sound IF 54.25MHz
Picture IF 58.75MHz (Unit : MHz)

■ U.S.A. Channel Frequency Assignments

Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.	Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.
2	57	54-60	55.25	59.75	101	146.75	43	647	644-650	645.25	649.75	691	736.75
3	63	60-66	61.25	65.75	107	152.75	44	653	650-656	651.25	655.75	697	742.75
4	69	66-72	67.25	71.75	113	158.75	45	659	656-662	657.25	661.75	703	748.75
5	79	76-82	77.25	81.75	123	168.75	46	665	662-668	663.25	667.75	709	754.75
6	85	82-88	83.25	87.75	129	174.75	47	671	668-674	669.25	673.75	715	760.75
7	177	174-180	175.25	179.75	221	266.75	48	677	674-680	675.25	679.75	721	766.75
8	183	180-186	181.25	185.75	227	272.75	49	683	680-686	681.25	685.75	727	772.75
9	189	186-192	187.25	191.75	233	278.75	50	689	686-692	687.25	691.75	733	778.75
10	195	192-198	193.25	197.75	239	284.75	51	695	692-698	693.25	697.75	739	784.75
11	201	198-204	199.25	203.75	245	290.75	52	701	698-704	699.25	703.75	745	790.75
12	207	204-210	205.25	209.75	251	296.75	53	707	704-710	705.25	709.75	751	796.75
13	213	210-216	211.25	215.75	257	302.75	54	713	710-716	711.25	715.75	757	802.75
14	473	470-476	471.25	475.75	517	562.75	55	719	716-722	717.25	721.75	763	808.75
15	479	476-482	477.25	481.75	523	568.75	56	725	722-728	723.25	727.75	769	814.75
16	485	482-488	483.25	487.75	529	574.75	57	731	728-734	729.25	733.75	775	820.75
17	491	488-494	489.25	493.75	535	580.75	58	737	734-740	735.25	739.75	781	826.75
18	497	494-500	495.25	499.75	541	586.75	59	743	740-746	741.25	745.75	787	832.75
19	503	500-506	501.25	505.75	547	592.75	60	749	746-752	747.25	751.75	793	838.75
20	509	506-512	507.25	511.75	553	598.75	61	755	752-758	753.25	757.75	799	844.75
21	515	512-518	513.25	517.75	559	604.75	62	761	758-764	759.25	763.75	805	850.75
22	521	518-524	519.25	523.75	565	610.75	63	767	764-770	765.25	769.75	811	856.75
23	527	524-530	525.25	529.75	571	616.75	64	773	770-776	771.25	775.75	817	862.75
24	533	530-536	531.25	535.75	577	622.75	65	779	776-782	777.25	781.75	823	868.75
25	539	536-542	537.25	541.75	583	628.75	66	785	782-788	783.25	787.75	829	874.75
26	545	542-548	543.25	547.75	589	634.75	67	791	788-794	789.25	793.75	835	880.75
27	551	548-554	549.25	553.75	595	640.75	68	797	794-800	795.25	799.75	841	886.75
28	557	554-560	555.25	559.75	601	646.75	69	803	800-806	801.25	805.75	847	892.75
29	563	560-566	561.25	565.75	607	652.75	70	809	806-812	807.25	811.75	853	898.75
30	569	566-572	567.25	571.75	613	658.75	71	815	812-818	813.25	817.75	859	904.75
31	575	572-578	573.25	577.75	619	664.75	72	821	818-824	819.25	823.75	865	910.75
32	581	578-584	579.25	583.75	625	670.75	73	827	824-830	825.25	829.75	871	916.75
33	587	584-590	585.25	589.75	631	676.75	74	833	830-836	831.25	835.75	877	922.75
34	593	590-596	591.25	595.75	637	682.75	75	839	836-842	837.25	841.75	883	928.75
35	599	596-602	597.25	601.75	643	688.75	76	845	842-848	843.25	847.75	889	934.75
36	605	602-608	603.25	607.75	649	694.75	77	851	848-854	849.25	853.75	895	940.75
37	611	608-614	609.25	613.75	655	700.75	78	857	854-860	855.25	859.75	901	946.75
38	617	614-620	615.25	619.75	661	706.75	79	863	860-866	861.25	865.75	907	952.75
39	623	620-626	621.25	625.75	667	712.75	80	869	866-872	867.25	871.75	913	958.75
40	629	626-632	627.25	631.75	673	718.75	81	875	872-878	873.25	877.75	919	964.75
41	635	632-638	633.25	637.75	679	724.75	82	881	878-884	879.25	883.75	925	970.75
42	641	638-644	639.25	643.75	685	730.75	83	887	884-890	885.25	889.75	931	976.75

Sound IF 41.25MHz
Picture IF 45.75MHz (Unit : MHz)

■ U.S.A. Channel CATV Frequency Assignments

Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.	Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.
2	57	54~60	55.25	59.75	101	146.75	R	267	264~270	265.25	269.75	311	356.75
3	63	60~66	61.25	65.75	107	152.75	S	273	270~276	271.25	275.75	317	362.75
4	69	66~72	67.25	71.75	113	158.75	T	279	276~282	277.25	281.75	323	368.75
5	79	76~82	77.25	81.75	123	168.75	U	285	282~288	283.25	287.75	329	374.75
6	85	82~88	83.25	87.75	129	174.75	V	291	288~294	289.25	293.75	335	380.75
A-6	87	84~90	85.25	89.75	131	176.75	W	297	294~300	295.25	299.75	341	386.75
A-5	93	90~96	91.25	95.75	137	182.75	W+1	303	300~306	301.25	305.75	347	392.75
A-4	99	96~102	97.25	101.75	143	188.75	W+2	309	306~312	307.25	311.75	353	398.75
A-3	105	102~108	103.25	107.75	149	194.75	W+3	315	312~318	313.25	317.75	359	404.75
A-2	111	108~114	109.25	113.75	155	200.75	W+4	321	318~324	319.25	323.75	365	410.75
A-1	117	114~120	115.25	119.75	161	206.75	W+5	327	324~330	325.25	329.75	371	416.75
A	123	120~126	121.25	125.75	167	212.75	W+6	333	330~336	331.25	335.75	377	422.75
B	129	126~132	127.25	131.75	173	218.75	W+7	339	336~342	337.25	341.75	383	428.75
C	135	132~138	133.25	137.75	179	224.75	W+8	345	342~348	343.25	347.75	389	434.75
D	141	138~144	139.25	143.75	185	230.75	W+9	351	348~354	349.25	353.75	395	440.75
E	147	144~150	145.25	149.75	191	236.75	W+10	357	354~360	355.25	359.75	401	446.75
F	153	150~156	151.25	155.75	197	242.75	W+11	363	360~366	361.25	365.75	407	452.75
G	159	156~162	157.25	161.75	203	248.75	W+12	369	366~372	367.25	371.75	413	458.75
H	165	162~168	163.25	167.75	209	254.75	W+13	375	372~378	373.25	377.75	419	464.75
I	171	168~174	169.25	173.75	215	260.75	W+14	381	378~384	379.25	383.75	425	470.75
7	177	174~180	175.25	179.75	221	266.75	W+15	387	384~390	385.25	389.75	431	476.75
8	183	180~186	181.25	185.75	227	272.75	W+16	393	390~396	391.25	395.75	437	482.75
9	189	186~192	187.25	191.75	233	278.75	W+17	399	396~402	397.25	401.75	443	488.75
10	195	192~198	193.25	197.75	239	284.75	W+18	405	402~408	403.25	407.75	449	494.75
11	201	198~204	199.25	203.75	245	290.75	W+19	411	408~414	409.25	413.75	455	500.75
12	207	204~210	205.25	209.75	251	296.75	W+20	417	414~420	415.25	419.75	461	506.75
13	213	210~216	211.25	215.75	257	302.75	W+21	423	420~426	421.25	425.75	467	512.75
J	219	216~222	217.25	221.75	263	308.75	W+22	429	426~432	427.25	431.75	473	518.75
K	225	222~228	223.25	227.75	269	314.75	W+23	435	432~438	433.25	437.75	479	524.75
L	231	228~234	229.25	233.75	275	320.75	W+24	441	438~444	439.25	443.75	485	530.75
M	237	234~240	235.25	239.75	281	326.75	W+25	447	444~450	445.25	449.75	491	536.75
N	243	240~246	241.25	245.75	287	332.75	W+26	453	450~456	451.25	455.75	497	542.75
O	249	246~252	247.25	251.75	293	338.75	W+27	459	456~462	457.25	461.75	503	548.75
P	255	252~258	253.25	257.75	299	344.75	W+28	465	462~468	463.25	467.75	509	554.75
Q	261	258~264	259.25	263.75	305	350.75	W+29	471	468~474	469.25	473.75	515	560.75

Sound IF 41.25MHz
Picture IF 45.75MHz (Unit : MHz)

■ C.C.I.R. Channel Frequency Assignments

Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.	Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.
2	50.5	47~54	48.25	53.75	87.15	126.05	40	626	622~630	623.25	628.75	662.15	701.05
3	57.5	54~61	55.25	60.75	94.15	133.05	41	634	630~638	631.25	636.75	670.15	709.05
4	64.5	61~68	62.25	67.75	101.15	140.05	42	642	638~646	639.25	644.75	678.15	717.05
5	177.5	174~181	175.25	180.75	214.15	253.05	43	650	646~654	647.25	652.75	686.15	725.05
6	184.5	181~188	182.25	187.75	221.15	260.05	44	658	654~662	655.25	660.75	694.15	733.05
7	191.5	188~195	189.25	194.75	228.15	267.05	45	666	662~670	663.25	668.75	702.15	741.05
8	198.5	195~202	196.25	201.75	235.15	274.05	46	674	670~678	671.25	676.75	710.15	749.05
9	205.5	202~209	203.25	208.75	242.15	281.05	47	682	678~686	679.25	684.75	718.15	757.05
10	212.5	209~216	210.25	215.75	249.15	288.05	48	690	686~694	687.25	692.75	726.15	765.05
11	219.5	216~223	217.25	222.75	256.15	295.05	49	698	694~702	695.25	700.75	734.15	773.05
12	226.5	223~230	224.25	229.75	263.15	302.05	50	706	702~710	703.25	708.75	742.15	781.05
21	474	470~478	471.25	476.75	510.15	549.05	51	714	710~718	711.25	716.75	750.15	789.05
22	482	478~486	479.25	484.75	518.15	557.05	52	722	718~726	719.25	724.75	758.15	797.05
23	490	486~494	487.25	492.75	526.15	565.05	53	730	726~734	727.25	732.75	766.15	805.05
24	498	494~502	495.25	500.75	534.15	573.05	54	738	734~742	735.25	740.75	774.15	813.05
25	506	502~510	503.25	508.75	542.15	581.05	55	764	742~750	743.25	748.75	782.15	821.05
26	514	510~518	511.25	516.75	550.15	589.05	56	754	750~758	751.25	756.75	790.15	829.05
27	522	518~526	519.25	524.75	558.15	597.05	57	762	758~766	759.25	764.75	798.15	837.05
28	530	526~534	527.25	532.75	566.15	605.05	58	770	766~774	767.25	772.75	806.15	845.05
29	538	534~542	535.25	540.75	574.15	613.05	59	778	774~782	775.25	780.75	814.15	853.05
30	546	542~550	543.25	548.75	582.15	621.05	60	786	782~790	783.25	788.75	822.15	861.05
31	554	550~558	551.25	556.75	590.15	629.05	61	794	790~798	791.25	796.75	830.15	869.05
32	562	558~566	559.25	564.75	598.15	637.05	62	802	798~806	799.25	804.75	838.15	877.05
33	570	566~574	567.25	572.75	606.15	645.05	63	810	806~814	807.25	812.75	846.15	885.05
34	578	574~582	575.25	580.75	614.15	653.05	64	818	814~822	815.25	820.75	854.15	893.05
35	586	582~590	583.25	588.75	622.15	661.05	65	826	822~830	823.25	828.75	862.15	901.05
36	594	590~598	591.25	596.75	630.15	669.05	66	834	830~838	831.25	836.75	870.15	909.05
37	602	598~606	599.25	604.75	638.15	677.05	67	842	838~846	839.25	844.75	878.15	917.05
38	610	606~614	607.25	612.75	646.15	685.05	68	850	846~854	847.25	852.75	886.15	925.05
39	618	614~622	615.25	620.75	654.15	693.05	69	858	854~862	855.25	860.75	894.15	933.05

Sound IF 33.4MHz
Picture IF 38.9MHz (Unit : MHz)

■ C.C.I.R. Channel CATV Frequency Assignments

Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.	Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.
E2	50.5	47~54	48.25	53.75	87.15	126.05	S15	261.5	258~265	259.25	264.75	298.15	337.05
E3	57.5	54~61	55.25	60.75	94.15	133.05	S16	268.5	265~272	266.25	271.75	305.15	344.05
E4	64.5	61~68	62.25	67.75	101.15	140.05	S17	275.5	272~279	273.25	278.75	312.15	351.05
X	71.5	68~75	69.25	74.75	108.15	147.05	S18	282.5	279~286	280.25	285.75	319.15	358.05
Y	78.5	75~82	76.25	81.75	115.15	154.05	S19	289.5	286~293	287.25	292.75	326.15	365.05
Z	85.8	82~89	83.25	88.75	122.15	161.05	S20	296.5	293~300	294.25	299.75	333.15	372.05
S1	107.5	104~111	105.25	110.75	144.15	183.05	S21	306	302~310	303.25	308.75	342.15	381.05
S2	114.5	111~118	112.25	117.75	151.15	190.05	S22	314	310~318	311.25	316.75	350.15	389.05
S3	121.5	118~125	119.25	124.75	158.15	197.05	S23	322	318~326	319.25	324.75	358.15	397.05
S4	128.5	125~132	126.25	131.75	165.15	204.05	S24	330	326~334	327.25	332.75	366.15	405.05
S5	135.5	132~139	133.25	138.75	172.15	211.05	S25	338	334~342	335.25	340.75	374.15	413.05
S6	142.5	139~146	140.25	145.75	179.15	218.05	S26	346	342~350	343.25	348.75	382.15	421.05
S7	149.5	146~153	147.25	152.75	186.15	225.05	S27	354	350~358	351.25	356.75	390.15	429.05
S8	156.5	153~160	154.25	159.75	193.15	232.05	S28	362	358~366	359.25	364.75	398.15	437.05
S9	163.5	160~167	161.25	166.75	200.15	239.05	S29	370	366~374	367.25	372.75	406.15	445.05
S10	170.5	167~174	168.25	173.75	207.15	246.05	S30	378	374~382	375.25	380.75	414.15	453.05
E5	177.5	174~181	175.25	180.75	214.15	253.05	S31	386	382~390	383.25	388.75	422.15	461.05
E6	184.5	181~188	182.25	187.75	221.15	260.05	S32	394	390~398	391.25	396.75	430.15	469.05
E7	191.5	188~195	189.25	194.75	228.15	267.05	S33	402	398~406	399.25	404.75	438.15	477.05
E8	198.5	195~202	196.25	201.75	235.15	274.05	S34	410	406~414	407.25	412.75	446.15	485.05
E9	205.5	202~209	203.25	208.75	242.15	281.05	S35	418	414~422	415.25	420.75	454.15	493.05
E10	212.5	209~216	210.25	215.75	249.15	288.05	S36	426	422~430	423.25	428.75	462.15	501.05
E11	219.5	216~223	217.25	222.75	256.15	295.05	S37	434	430~438	431.25	436.75	470.15	509.05
E12	226.5	223~230	224.25	229.75	263.15	302.05	S38	442	438~446	439.25	444.75	478.15	517.05
S11	233.5	230~237	231.25	236.75	270.15	309.05	S39	450	446~454	447.25	452.75	486.15	525.05
S12	240.5	237~244	238.25	243.75	277.15	316.05	S40	458	454~462	455.25	460.75	494.15	533.05
S13	247.5	244~251	245.25	250.75	284.15	323.05	S41	466	462~470	463.25	468.75	502.15	541.05
S14	254.5	251~258	252.25	257.75	291.15	330.05							

Sound IF 33.4MHz
Picture IF 38.9MHz (Unit : MHz)

■ CHINA Channel Frequency Assignments

Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.	Ch. No.	Center Freq.	Freq. Range	fp	fs	fosc.	Image Freq.
1	52.5	48.5~56.5	49.75	56.25	87.75	125.75	30	650	646~654	647.25	653.75	685.25	723.25
2	60.5	56.5~64.5	57.75	64.25	95.75	133.75	31	658	654~662	655.25	661.75	693.25	731.25
3	68.5	64.5~72.5	65.75	72.25	103.75	141.75	32	666	662~670	663.25	669.75	701.25	739.25
4	80	76~84	77.25	83.75	115.25	153.25	33	674	670~678	671.25	677.75	709.25	747.25
5	88	84~92	85.25	91.75	123.25	161.25	34	682	678~686	679.25	685.75	717.25	755.25
6	171	167~175	168.75	174.75	206.25	244.25	35	690	686~694	687.25	693.75	725.25	763.25
7	179	175~183	176.25	182.75	214.25	252.25	36	698	694~702	695.25	701.75	733.25	771.25
8	187	183~191	184.25	190.75	222.25	260.25	37	706	702~710	703.25	709.75	741.25	779.25
9	195	191~199	192.25	198.75	230.25	268.25	38	714	710~718	711.25	717.75	749.25	787.25
10	203	199~207	200.25	206.75	238.25	276.25	39	722	718~726	719.25	725.75	757.25	795.25
11	211	207~215	208.25	214.75	246.25	284.25	40	730	726~734	727.25	733.75	765.25	803.25
12	219	215~223	216.25	222.75	254.25	292.25	41	738	734~742	735.25	741.75	773.25	811.25
13	474	470~478	471.25	477.75	509.25	545.25	42	746	742~750	743.25	749.75	781.25	819.25
14	482	478~486	479.25	485.75	517.25	555.25	43	754	750~758	751.25	757.75	789.25	827.25
15	490	486~494	487.25	493.75	525.25	563.25	44	762	758~766	759.25	765.75	797.25	835.25
16	498	494~502	493.25	501.75	533.25	571.25	45	770	766~774	767.25	773.75	805.25	843.25
17	506	502~510	503.25	509.75	541.25	579.25	46	778	774~782	775.25	781.75	813.25	851.25
18	514	510~518	511.25	517.75	549.25	587.25	47	786	782~790	783.25	789.75	821.25	859.25
19	522	518~526	519.25	525.75	557.25	595.25	48	794	790~798	791.25	797.75	829.25	867.25
20	530	526~534	527.25	533.75	565.25	603.25	49	802	798~806	799.25	805.75	837.25	875.25
21	538	534~542	535.25	541.75	573.25	611.25	50	810	806~814	807.25	813.75	845.25	883.25
22	546	542~550	543.25	549.75	581.25	619.25	51	818	814~822	815.25	821.75	853.25	891.25
23	554	550~558	551.25	557.75	589.25	627.25	52	826	822~830	823.25	829.75	861.25	899.25
24	562	558~566	559.25	565.75	597.25	635.25	53	834	830~838	831.25	837.75	869.25	907.25
25	610	606~614	607.25	613.75	645.25	683.25	54	842	838~846	839.25	845.75	877.25	915.25
26	618	614~622	615.25	621.75	653.25	671.25	55	850	846~854	847.25	853.75	885.25	923.25
27	626	622~630	623.25	629.75	661.25	699.25	56	858	854~862	855.25	861.75	893.25	931.25
28	634	630~638	631.25	637.75	669.25	707.25	57	866	862~870	863.25	869.75	901.25	939.25
29	642	638~646	639.25	645.75	677.25	715.25							

Sound IF 31.5MHz
Picture IF 38.0MHz (Unit : MHz)

■ OIRT Ch.

Ch.No.	fp	fs	fosc
IF	38.0	31.5	—
R1	49.75	56.25	87.75
R2	59.25	65.75	97.25
R3	77.25	83.75	115.25
R4	85.25	91.75	123.25
R5	93.25	99.75	131.25
R6	175.25	181.75	213.25
R7	183.25	189.75	221.25
R8	191.25	197.75	229.25
R9	199.25	205.75	237.25
R10	207.25	213.75	245.25
R11	215.25	221.75	253.25
R12	223.25	229.75	261.25

■ AUSTRALIA Ch.

Ch.No.	fp	fs	fosc
IF	36.875	31.375	—
0	46.25	51.75	83.125
1	57.25	62.75	94.125
2	64.25	69.75	101.125
3	86.25	91.75	123.125
4	95.25	100.75	132.125
5	102.25	107.75	139.125
5A	138.25	143.75	175.125
6	175.25	180.75	212.125
7	182.25	187.75	219.125
8	189.25	194.75	226.125
9	196.25	201.75	233.125
10	209.25	214.75	246.125
11	216.25	221.75	253.125
12	223.25	228.75	260.125

■ New FRANCE Ch.

Ch.No.	fp	fs	fosc
IF	32.7	39.2	—
FA	47.75	41.25	80.45
FB	55.75	49.25	88.45
FC ₁	60.50	54.00	93.20
FC	63.75	57.25	96.45
F1	176.00	182.50	143.30
F2	184.00	190.50	151.30
F3	192.00	198.50	159.30
F4	200.00	206.50	167.30
F5	208.00	214.50	175.30
F6	216.00	222.50	183.30

■ SOUTH AFRICA Ch.

Ch.No.	fp	fs	fosc
IF	38.9	32.9	—
4	175.25	181.25	214.15
5	183.25	189.25	222.15
6	191.25	197.25	230.15
7	199.25	205.25	238.15
8	207.25	213.25	246.15
9	215.25	221.25	254.15
10	223.25	229.25	262.15
11	231.25	237.25	270.15
12	—	—	—
13	247.43	253.43	286.33

Notes : fpPicture frequency
 fsSound frequency
 foscLocal oscillator frequency

Unit : MHz

■ NEW ZEALAND Ch.

Ch.No.	fp	fs	fosc
IF	38.9	33.4	—
1	45.25	50.75	84.15
2	55.25	60.75	94.15
3	62.25	67.75	101.15
4	175.25	180.75	214.15
5	182.25	187.75	221.15
6	189.25	194.75	228.15
7	196.25	201.75	235.15
8	203.25	208.75	242.15
9	210.25	215.75	249.15

■ IRELAND Ch.

Ch.No.	fp	fs	fosc
IF	39.5	33.5	—
A	45.75	51.75	85.25
B	53.75	59.75	93.25
C	61.75	67.75	101.25
D	175.25	181.25	214.75
E	183.25	189.25	222.75
F	191.25	197.25	230.75
G	199.25	205.25	238.75
H	207.25	213.25	246.75
J	215.25	221.25	254.75

■ Ivory Coast Ch.

Ch.No.	fp	fs	fosc
IF	38.0	31.5	—
1	43.25	49.75	81.25
2	52.25	58.75	90.25
3	60.25	66.75	98.25
4	175.25	181.75	213.25
5	183.25	189.75	221.25
6	191.25	197.75	229.25
7	199.25	205.75	237.25
8	207.25	213.75	245.25
9	215.25	221.75	253.25

■ TAIWAN Ch.

Ch.No.	fp	fs	fosc
IF	45.75	41.25	—
7	175.25	179.75	221
8	181.25	185.75	227
9	187.25	191.75	233
10	193.25	197.75	239
11	199.25	203.75	245
12	205.25	209.75	251
13	211.25	215.75	257

Notes : fpPicture frequency
 fsSound frequency
 foscLocal oscillator frequency

Unit : MHz

■ INDONESIA Ch.

Ch.No.	fp	fs	fosc
IF	38.9	33.4	—
1A	44.25	49.75	83.15
2	55.25	60.75	94.15
3	62.25	67.75	101.15
4	175.25	180.75	214.15
5	182.25	187.75	221.15
6	189.25	194.75	228.15
7	196.25	201.75	235.15
8	203.25	208.75	242.15
9	210.25	215.75	249.15
10	217.25	222.75	236.15
11	224.25	229.75	263.15

■ ITALY Ch.

Ch.No.	fp	fs	fosc
IF	38.9	33.4	—
A	53.75	59.25	92.65
B	62.25	67.75	101.15
C	82.25	87.75	121.15
D	175.25	180.75	214.15
E	183.75	189.25	222.65
F	192.25	192.75	231.15
G	201.25	206.75	240.15
H	210.25	215.75	249.15
H1	217.25	222.75	256.15
H2	224.25	229.75	263.15

■ CHILE Ch.

Ch.No.	fp	fs	fosc
IF	45.75	41.25	—
2	55.25	59.75	101
3	61.25	65.75	107
4	67.25	71.75	113
5	77.25	81.75	123
6	83.25	87.75	129
7	175.25	179.75	221
8	181.25	185.75	227
9	187.75	191.75	233
10	193.25	197.75	239
11	199.25	203.75	245
12	205.25	209.75	251
13	211.25	215.75	257

■ MOROCCO Ch.

Ch.No.	fp	fs	fosc
IF	38.9	33.4	—
M4	163.25	168.75	202.15
M5	171.25	176.75	210.15
M6	179.25	184.75	218.15
M7	187.25	192.75	226.15
M8	195.25	200.75	234.15
M9	203.25	208.75	242.15
M10	211.25	216.73	250.15
(E2)	48.25	53.75	87.15
(E4)	62.25	67.75	101.15
(E5)	175.25	180.75	214.15
(E8)	196.25	201.75	235.15
(E12)	224.25	229.75	263.15

Notes : fpPicture frequency
 fsSound frequency
 fosc.....Local oscillator frequency

Unit : MHz

■ **ANGOLA Ch.**

Ch.No.	fp	fs	fosc
IF	39.5	33.5	—
1	43.25	49.25	82.75
2	52.25	58.25	91.75
3	60.25	66.25	99.75
4	175.25	181.25	214.75
5	183.25	189.25	222.75
6	191.26	197.25	230.75
7	199.25	205.25	238.75
8	207.25	213.25	246.75
9	215.25	221.25	254.75
10	223.25	229.25	262.75

■ **FRENCH Overseas Territories Ch.**

Ch.No.	fp	fs	fosc
IF	40.2	33.7	—
K4	175.25	181.75	215.45
K5	183.25	189.75	223.45
K6	191.25	197.75	231.45
K7	199.25	205.75	239.45
K8	207.25	213.75	247.45
K9	215.25	221.75	255.45

■ **Old FRANCE Ch.**

Ch.No.	fp	fs	fosc
IF	28.05	39.2	—
2	52.40	41.25	80.45
4	65.55	54.40	93.60
5	164.00	175.15	135.95
6	173.40	162.25	201.45
7	177.15	188.30	149.10
8A	185.25	174.10	213.30
8	186.55	175.40	214.60
9	190.30	201.45	162.25
10	199.70	188.55	227.75
11	203.45	214.60	175.40
12	212.85	201.70	240.90

■ **UK Ch. (for B/W broadcast)**

Ch.No.	fp	fs	fosc
IF	39.5	43.0	—
B1	45.00	41.50	84.50
B2	51.75	48.25	91.25
B3	56.75	53.25	96.25
B4	61.75	58.25	101.25
B5	66.75	63.25	106.25
B6	179.75	176.25	219.25
B7	184.75	181.25	224.25
B8	189.75	186.25	229.25
B9	194.75	191.25	234.25
B10	199.75	196.25	239.25
B11	204.75	201.25	244.25
B12	209.75	206.25	249.25
B13	214.75	211.25	254.25
B14	219.75	216.25	259.25

Notes : fpPicture frequency
 fsSound frequency
 foscLocal oscillator frequency

Unit : MHz

Color TV Systems

Country	Systems			
	V H F	U H F	Color	Channel
Asia				
Afghanistan	B		PAL	C.C.I.R.
United Arab Emirates	B		PAL	C.C.I.R.
Yemen Arab Republic	B		PAL	C.C.I.R.
Israel	B G		PAL	C.C.I.R.
Iraq	B		SECAM	C.C.I.R.
Islamic Republic of Iran	B		SECAM	C.C.I.R.
India	B		PAL	C.C.I.R.
Indonesia	B G		PAL	IN
Oman	B G		PAL	C.C.I.R.
Qatar	B		PAL	C.C.I.R.
Republic of Korea	M M		NTSC	US
Democratic Cambodia	M		NTSC	US
Democratic People's Republic of Korea	D		SECAM	OIRT
Cyprus	B H B G		PAL	C.C.I.R.
Kuwait	B		PAL	C.C.I.R.
Saudi Arabia	B G		SECAM	C.C.I.R.
Syrian Arab Republic	B		SECAM	C.C.I.R.
Singapore	B		PAL	C.C.I.R.
Sri Lanka	B		PAL	C.C.I.R.
Thailand	B		PAL	C.C.I.R.
China	D D		PAL	CHINA
Turkey	B		(PAL)	C.C.I.R.
Nepal	—	—	—	—
Pakistan	B		PAL	C.C.I.R.
Bahrain	B		PAL	C.C.I.R.
Bangladesh	B		PAL	C.C.I.R.
Myanmar	M		NTSC	US*
Philippines	M M		NTSC	US
Bhutan	—	—	—	—
Viet-Nam	D M			
Malaysia	B		PAL	C.C.I.R.
People's Democratic Republic of Yemen	B		PAL	C.C.I.R.
Moldives	B		PAL	C.C.I.R.*
Mongolia	D		SECAM	OIRT*
Jordan	B		PAL	C.C.I.R.
Laos People's Democratic Republic	—	—	—	—
Lebanon	B		SECAM	C.C.I.R.
Brunei	B		PAL	C.C.I.R.
Hong Kong		I	PAL	UK
Macau	—	—	—	—
Taiwan	M		NTSC	US
Japan	M M		NTSC	JAPAN

Country	Systems			
	V H F	U H F	Color	Channel
Oceania				
Australia	B G		PAL	Australia
Kiribati	—	—	—	—
Solomon Islands	—	—	—	—
Tuvalu	—	—	—	—
Tonga	—	—	—	—
Nauru	—	—	—	—
Western Samoa	(M)		(NTSC)	(US)
New Zealand	B		PAL	NZ
Vanuatu	—	—	—	—
Papua New Guinea	—	—	—	—
Fiji	—	—	—	—
Guam	M		NTSC	US
New Caledonia	K ₁		SECAM	F.O.T.
Hawaii	M		NTSC	US
French Polynesia	K ₁			F.O.T.
American Samoa	M		NTSC	US
Micronesia	M		NTSC	US
Africa				
Algeria	B (G)		PAL	C.C.I.R.
Angola	Ⓛ		PAL	ANGOLA
Uganda	B		PAL	C.C.I.R.
Egypt	B		SECAM	C.C.I.R.
Ethiopia	B		PAL	C.C.I.R.
Upper Volta	K ₁			O.I.R.T.
Ghana	B		PAL	C.C.I.R.
Cape Verde	—	—	—	—
Gabon	K ₁		SECAM	F.O.T.
United Republic of Cameroon	—	—	—	—
Gambia	(K)			(F.O.T.)
Guinea	—	—	—	—
Guine-Bissau	—	—	—	—
Kenya	B		PAL	C.C.I.R.
Ivory Coast	K ₁		SECAM	I.C
Comoros	—	—	—	—
Congo	D		SECAM	F.O.T.*
Zaire	K ₁		SECAM	F.O.T.
Sao Tome and Principe	—	—	—	—
Zambia	B		PAL	C.C.I.R.
Sierra Leone	B		PAL	C.C.I.R.
Djibouti	K ₁		SECAM	F.O.T.
Zimbabwe	B		PAL	C.C.I.R.
Sudan	B		PAL	C.C.I.R.
Swaziland	G		PAL	?
Equatorial Guinea	B		PAL	?
Seychelles	—	—	—	—

Country	Systems			
	VHF	UHF	Color	Channel
Senegal	K1	—	—	F.O.T.
Somalia	—	—	—	—
United Republic of Tanzania	B I	I	PAL	C.C.I.R.
Chad	—	—	—	—
Central African Republic	B			?
Tunisia	B		SECAM	C.C.I.R.*
Togo	K1		SECAM	F.O.T.*
Nigeria	B		PAL	C.C.I.R.*
Niger	K1		SECAM	F.O.T.*
Burundi	—	—	—	—
Benin	K1		SECAM	F.O.T.*
Botswana	—	—	—	—
Madagascar	K1		SECAM	F.O.T.*
Marawi	—	—	—	—
Mari	—	—	—	—
Republic of South Africa	I	I	PAL	SA
Mozambique	B		PAL	?
Mauritius	B		SECAM	C.C.I.R.
Mauritania	B		SECAM	?
Morocco	B		SECAM	MO
Libyan Arab Jamahiriya	B		SECAM	C.C.I.R.
Liberia	B		PAL	C.C.I.R.
Rwanda		—	—	—
Lesotho	—	—	—	—
Europe				
Iceland	B		PAL	C.C.I.R.
Ireland	A I	I	PAL	IR
Albania	B		PAL	IT*
Andorra				
United Kingdom	A	I	PAL	UK
Italy	B	G	PAL	IT
Austria	B	G	PAL	C.C.I.R.
Netherlands	B	G	PAL	C.C.I.R.
Greece	B	G	SECAM	C.C.I.R.
San Marino	B	G	PAL	IT
Switzerland	B	G	PAL	C.C.I.R.
Sweden	B	G	PAL	C.C.I.R.
Spain	B	G	PAL	C.C.I.R.
C.I.S.	D	K	SECAM	OIRT
Czecho	D	K	SECAM	OIRT
Slovakia	D	K	SECAM	OIRT
Denmark	B	G	PAL	C.C.I.R.

Country	Systems			
	VHF	UHF	Color	Channel
Federal Republic of Germany	B	G	PAL	C.C.I.R.
Norway	B	G	PAL	C.C.I.R.
Vatican City State	—	—	—	—
Hungary	D	K	SECAM	OIRT
Finland	B	G	PAL	C.C.I.R.
France	E L	L	SECAM	F
Bulgaria	D	K	SECAM	OIRT
Belgium	B	H	PAL	C.C.I.R.
Poland	D	K	SECAM	OIRT
Portugal	B	G	PAL	C.C.I.R.*
Malta	B		PAL	C.C.I.R.
Principality of Monaco	G	L G	SECAM PAL	C.C.I.R.
Yugoslavia	B	G	PAL	C.C.I.R.
Liechtenstein	—	—	—	—
Grand Duchy of Luxemburg	C	L G	SECAM PAL	C.C.I.R.*
Romania	D	D		OIRT
South, North Americas				
United States of America	M	M	NTSC	US
Argentina	N		PAL	US
Uruguay	N		PAL	US*
Ecuador	M		NTSC	US
El Salvador	M		NTSC	US*
Guyana	K1		SECAM	F.O.T.
Canada	M	M	NTSC	US
Cuba	M		NTSC	US*
Guatemala	M		NTSC	US
Grenada	—	—	—	—
Costa Rica	M		NTSC	US
Colombia	M		NTSC	US*
Jamaica	M		NTSC	US
Surinam	M		NTSC	US
St. Vincent	—	—	—	—
Saint Lucia	M		NTSC	US*
Chile	M		NTSC	US
Dominican Republic	M		NTSC	US
Commonwealth of Dominica	—	—	—	—
Trinidad and Tobago	M		NTSC	US
Nicaragua	M		NTSC	US
Haiti	M		NTSC	US*
Panama	M		NTSC	US
Bahamas	M		NTSC	US*

Country	Systems			
	VHF	UHF	Color	Channel
Paraguay	N		?	US*
Barbados	M		NTSC	US
Brazil	M	M	PAL	US
Venezuela	M		NTSC	US
Peru	M		NTSC	US
Bolivia	N		PAL	US
Honduras	M		NTSC	US
Mexico	M	M	NTSC	US
Others				
Greenland	M		NTSC	US
Bermuda	M		NTSC	US
Puerto Rico	M	M	NTSC	US
St. Pierre et Miquelon	K ₁		SECAM	F.O.T.
Antigua	M		NTSC	US
Guadalupe	K ₁		SECAM	F.O.T.
Martinique	K ₁		SECAM	F.O.T.
Nether Lands Antilles	M		NTSC	US
St. Kits	M			US
Turks & Caicos Is.	M		NTSC	US
Virgin Is.(American)	M		NTSC	US
Virgin Is.(British)	M		NTSC	US
Guiana(French)	K ₁			F.O.T.
Azores Is.				C.C.I.R.
			US	
Gibraltar	B		PAL	C.C.I.R.
Canarias Is.	B			C.C.I.R.
Madeira Is.	B			C.C.I.R.
Reunion	K ₁		SECAM	F.O.T.
Diego Garcia	M		NTSC	US
Johnstone Is.(American)	M		NTSC	US
Midway Is.(American)	M		NTSC	US
Tahiti Is.	K ₁			F.O.T.

Note : Abbreviations used in the Channel section as shown in the following table.

F.O.T.	French Overseas territories channel
I.C.	Ivory Coast channel
IR	Ireland channel
IT	Italy channel
MO	Morroco channel
NZ	New Zealand channel
SA	South Africa channel
UK	Britain channel

*Estimated.

() There is no broadcast station, but one can listen to a broadcast in the neighboring country.

- There is no broadcast.

?Unknown.

Broadcasting System

■ Analog

Popular Name of Broadcasting System	UK ch(at VHF)	CCIR ch(1)	CCIR ch(2)	Luxembourg (at VHF)	OIRT ch(1)	OIRT ch(2)
Standard Broadcasting System	A	B	G.H	C	D	K, K ₁
Audio Modulation System	A ₃	F ₃ (±50kHz)	F ₃ (±50kHz)	A ₃	F ₃ (±50kHz)	F ₃ (±50kHz)
fs-fp Band Width	-3.5MHz	+5.5MHz	+5.5MHz	+5.5MHz	+6.5MHz	+6.5MHz
Channel Band Width	5.0MHz	7.0MHz	8.0MHz	7.0MHz	8.0MHz	8.0MHz
Number of Scanning Lines	405 Poles	625 Poles	625 Poles	625 Poles	625 Poles	625 Poles

Popular Name of Broadcasting System	Old France ch (at VHF)	France ch	US or JAP ch	Argentina ch	Ireland ch	Old Luxembourg (at VHF)ch
Standard Broadcasting System	E	L	M	N	I	F
Audio Modulation System	A ₃	A ₃	F ₃ (±25kHz)	F ₃ (±25kHz)	F ₂ (±50kHz)	A ₃
fs-fp Band Width	±11.15MHz	±6.5MHz	±4.5MHz	±4.5MHz	±6MHz	+5.5MHz
Channel Band Width	14.0MHz	8.0MHz	6.0MHz	6.0MHz	8.0MHz	7.0MHz
Number of Scanning Lines	819 Poles	625 Poles	525 Poles	625 Poles	625 Poles	819 Poles

Note : UK UHF channel included Ireland channel.

■ Digital

	Japan				U.S.A.			Europe			
	BS satellite	CS satellite	Terrestrial	Cable	Satellite	Terrestrial	Cable	Satellite	Terrestrial	Cable	
Broadcasting System	ISDB-S	DVB-S	ISDB-T	ISDB-C	DVB-S	DTV	DVB-C	DVB-S	DTB-T	DVB-C	
Modulation method	8PSK QPSK BPSK	QPSK	OFDM	QAM	QPSK	8VSB	256QAM	QPSK	OFDM	QAM	
Bandwidth	34.5MHz	27MHz	6MHz	6MHz	24MHz	6MHz	6MHz	27MHz	7, 8MHz	8MHz	
Bit rate	51Mbps	34Mbps	23Mbps	-	30Mbps	19Mbps	-	34Mbps	24Mbps	-	
Multiplexing Method	MPEG-2 SYSTEM				DSS	MPEG-2 SYSTEM					
Video coding	MPEG-2 VIDEO										
Audio coding	ACC	MPEG-2 AUDIO				AC-3		MPEG-2 VIDEO			