



Hotel Remote Control RC 12110
type no. 2299-1059

Manual,
Code List, Brand List

Revision Status

Version	Creation Date	Author	Remarks
1	14.4.2014	M. Podolsky	Initial version
2	13.6.2014	M. Podolsky	new Hotel PC Software
3	20.4.2015	M. Podolsky	changed to RC12110 model

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1 Key description

Key. Nr	Printing/ Function	TV mode
1	TV Power	TV Power (DB)
2	1	T1 (DB)
3	2	T2 (DB)
4	3	T3 (DB)
5	4	T4 (DB)
6	5	T5 (DB)
7	6	T6 (DB)
8	7	T7 (DB)
9	8	T8 (DB)
10	9	T9 (DB)
11	i	TM (DB)
12	0	T0 (DB)
13	AV	AV (DB)
14	info	Info (DB)
15	list	FAV (DB)
16	epg	EPG (DB)
17	Cursor up	Cursor up (DB)
18	Cursor left	CursorLeft (DB)
19	OK	OK (DB)
20	Cursor right	CursorRight (DB)
21	Cursor down	Cursor down (DB)
22	tv/radio	tv/radio (DB)
23	exit	EXIT (DB)
24	clock	clock/sleep (DB)
25	red	Rot (DB)
26	green	Grün (DB)
27	yellow	Gelb (DB)
28	blue	Blau (DB)
29	Vol+	LautP (DB)
30	mute	Mute (DB)
31	Ch+	ProgP (DB)
32	Vol-	LautM (DB)
33	menu	Menu (DB)
34	Ch-	ProgM (DB)
35	TXT on	TextEin (DB)
36	TXT off	TextAus (DB)
37	16:09	16:9 (DB)
38	alarm	alarm (DB)
39	fast rewind	REW (DB)
40	play / pause	Play (DB) / Pause (DB)*
41	stop	Stop (DB)
42	fast forward	FFW (DB)



* Short/Long key press (short = < 1,5 sec)

new DB function

2 Programming of the TV database

The remote exits the programming mode after 10 sec. of inactivity.

2.1 Start Programming Mode

Long press (longer than 3 sec.) the Mute key and the OK key simultaneously till green LED blinks twice.

2.2 1001 – code search

- Start programming mode.
- Enter the code **1001**; the green LED blinks 2x for code OK or the red LED lights for 2 sec. in the case of wrong code.
- Press the **"Power"** key and keep it pressed till the TV set switches off.
- The key **"OK"** saves the current code.
- The key **"EXIT"** quits the code search without saving
- The end of database will be indicated by 5x blinks of the red LED.
- In the case the code search was interrupted, a following search will start with the next to stop code and not at the beginning of the database.

2.3 1003 – brand code search

- Start programming mode.
- Enter the code **1003**; the green LED blinks twice.
- Enter the 3-digit code of the brand/manufacturer; the green LED blinks 2x for code OK or the red LED lights for 2 sec. in the case of wrong code.
- Press the **"Power"** key and keep it pressed till the TV set switches off.
- The key **"OK"** saves the current code.
- The key **"EXIT"** quits the brand code search without saving
- The end of brand table will be indicated by 5x blinks of the red LED.

2.4 xxxx Direct Programming

- Start programming mode.
- Enter the 4-digit code for your TV set (from code list, one after the other); the green LED blinks twice for a correct code or lights two sec. in red for a not existent code.

2.5 0002 Query the stored 4-digit code

- Start programming mode.
- Enter the code **0002**; the green LED blinks twice.
- Press "1" for the first digit, "2" for the second, "3" for the third digit and "4" for the fourth and count the number of green LED flashes.
There are no flashes for digit "0".

2.6 0006 – Key lock / unlock

- Start programming mode.
- Enter the code 0006; the green LED blinks twice.
- Press the keys that should be locked (one after the other) or unlocked; the green LED blinks once for a locked key and twice for a unlocked key
- Press the key "**Power**" to confirm and quit the key lock mode
- All keys except the Power key and number keys can be locked

2.7 0007 – Code lock

- Start programming mode.
- Enter the code 0007; the green LED blinks twice.
- The RC is locked against unintentional programming (the red LED lights for 2 sec. in case the programming mode is started)
- Repeat the same procedure to unlock a locked RC

2.8 0000 – Reset

- Start programming mode.
- Enter the code **0000**; the green LED blinks twice.
- The RC is set back to the default (default TV code programmed)

3 Activation for special hotel channels

Additionally to the normal operation of the ruwido RC12110 maximal 10 special hotel channels can be programmed on the following keys:

- | | |
|----------|-----------|
| • red | • menu |
| • green | • exit |
| • yellow | • text on |
| • blue | • tv |
| • i | • info |

After programming this function, 3 digit channel numbers will be sent. This can be used for activating individual info channels of the hotel.

3.1 Start Programming Mode

Long press (longer than 3 sec.) the Mute key and the OK key simultaneously till green LED blinks twice.

3.2 Setup

- Start programming mode.
- Enter the code **0 0 0 9**; the green LED blinks twice.
- Press the desired key on which this individual function should be programmed, this can be one of the above listed keys.
- Press 3 digits for the desired channel and confirm with OK key; the green LED blinks twice

3.3 Adjust sending time

- Start programming mode.
- Enter the code **0 0 1 0**; the green LED blinks twice.
- Press the number key with the desired sending time:
 - number key 1 ... 100 milliseconds
 - number key 2 ... 200 milliseconds
 - number key 3 ... 300 milliseconds
 - number key 4 ... 400 milliseconds
 - number key 5 ... 500 milliseconds (this is the standard setting)
 - number key 6 ... 600 milliseconds
 - number key 7 ... 700 milliseconds
 - number key 8 ... 800 milliseconds
 - number key 9 ... 900 milliseconds

3.4 Adjusting break time

- Start programming mode.
- Enter the code **0 0 1 1**; the green LED blinks twice.
- Press the number key with the desired break time:
 - number key 1 ... 100 milliseconds (this is the standard setting)
 - number key 2 ... 200 milliseconds
 - number key 3 ... 300 milliseconds
 - number key 4 ... 400 milliseconds
 - number key 5 ... 500 milliseconds
 - number key 6 ... 600 milliseconds
 - number key 7 ... 700 milliseconds
 - number key 8 ... 800 milliseconds
 - number key 9 ... 900 milliseconds

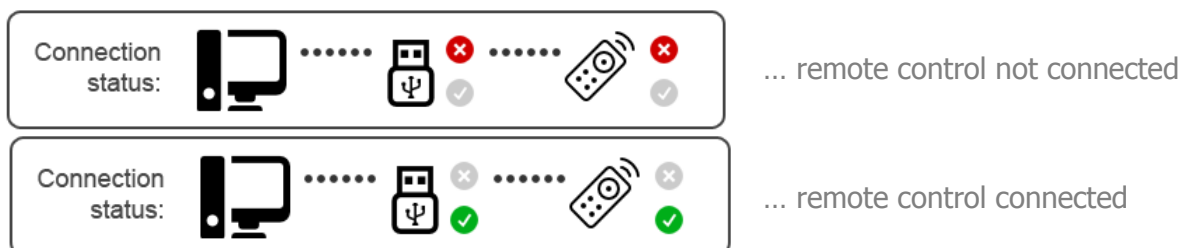
4 Copying function

It is possible to copy a "master" remote control that has been configured following the above described steps in section 1, 2 or 3 to several "slave" remote controls using the Hotel PC Software.



4.1 Connection status

Following symbols show the connection status:



No other functions can be used until the remote control is connected by the special red USB cable.

4.2 Copy configuration from master to slave



... this button is used to read the configuration from the master remote control



... this button is used to save the configuration in a file



... this button is used to open a saved configuration file



... this button is used to write the opened configuration into a slave remote control

4.3 Special master file created by ruwido

It is possible to manually create a special master file with a free configuration for every key of the ruwido hotel remote control. Ruwido just need to know which buttons of a certain original remote control should be assigned to which button of the ruwido hotel remote. An Excel sheet as a template for the configuration request can be provided.

After having received the configuration request, ruwido will create a special programming file. After programming the programming file into a master remote, it can be even modified according to sections 1, 2 and 3 and saved again as described in item 4.

5 Brand List

A

A.R.Systems	208
Admiral	140
Aeg	212
Airis	100
Aiwa	101
Akai	195
Akira	102
Akura	162
Alba	145
Altus	196
Anitech	148
Aoc	103
Arcelik	196
Arctic	141
Arena	165
Aristona	133
Astra	164
Audiosonic	161

B

Basic Line	188
Baur	183
Beko	196
Belson	157
Blaupunkt	146
Blue Sky	192
Blusens	147
Brandt	151
Bush	177

C

Changhong	119
Cinex	144
Clatronic	212
CMX/Commax	134
Continental Edison	121
Crosswood	201
Crown	164
Curtis	148

D

Daewoo	203
Dangaard	115
Dantax	153
Dce	153
Decca	158
Denver	149
Dmtech	188
Dual	209
Durabrand	209

E

Elbe	193
Elemis	154
Elta	164
Emerson	212
E-motion	118
Erres	137
Essentiel b	122
Euroline	153

F

Fenner	166
Ferguson	207
Finlux	206
First Line	166
Fisher	116
Formenti	133
Fujitsu	104
Funai	209

G

General	112
Goldstar	178
Goodmans	216
Graetz	200
Gran Prix	154
Granada	189
Grandin	200
Grundig	217
Grunkel	139

H

Haier	135
Hanseatic	167
Hb	200
Hitachi	224
Höher	200
Humax	127
Hypson	162
Hyundai	163

I

Imperial	125
Infratex	136
Ingelen	141
Interfunk	140
Intervision	148
Ipure	105
Irradio	166
Itt	173

J

Jvc	168
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K

Karcher	154
Kendo	179
Keymat	106
Kneissel	129

L

Lavis	120
Lenco	152
Lg	222
Lifetec	165
Loewe	155
Logik	117
Lumatron	208
Luxor	171

M

M Electronics	126
Magnadyne	125
Magnum	208
Marantz	133
Mark	212
Mascom	144
Matsui	184
Medion	201
Melectronic	141
Metz	159
Mitsubishi	150
Mx Onda	107

N

Nec	123
Neckermann	183
NEO	164
Nikkai	161
Nikkei	141
Nokia	197
Nordmende	185

O

Oceanic	126
ODYS	142
Oki	176
Orion	220
Otava	108
Others	118
Otto Versand	204

P

Palladium	208
Panasonic	198
Philco	140
Philips	225
Phocus	208
Phonola	148
Pioneer	190
Playsonic	205
Prima	148
Princess	161
Profilo	144
Proline	160
Prosonic	180
Provision	166
Pye	133

Q

Quadro	176
Quelle	215

R

Radiola	137
Radiotone	208
Rft	138
Roadstar	209

S

Saba	186
Saivod	212
Salora	210
Samsung	223
Sansui	140
Sanyo	194
Schaub Lorenz	205
Schneider	221
Scott	109
Seg	191
Seleco	130
Sencor	124
Sharp	214
Shivaki	113
Siemens	143
Silva Schneider	211
SilverCrest	139
Sinudyne	172
Sky	181
Sky Media	199
Sogo	212
Sony	218
Soundcolor	162
Star	161
Sunkai	153
Sunstech	131
Supratech	128
Swisstec	181

T

Tatung	158
Techline	191
Technica	188
Technical	188
Technics	114
Technika	169
Technisat	138
Technisson	141
Techwood	188
Tecnimagen	120
Teleavia	202
Telefunken	202
Telestar	154
Telesystem	119
Teletech	139
Televue	144
Tensai	208
Tesla	162
Tevion	174
Thomson	213
Thorn	175
Toshiba	219
Trilux	129

U

UMC	199
United	182
Universum	187

V

Vestel	170
Videoton	110
VIVAX	156
Voxson	166

W

Waltham	188
Watson	165
White Westinghouse	132
Windsor	139

Y

Yamaha	111
Yoko	161

6 Code List

A

A.R.Systems	1343	1349	1558	1572	1688	1690
	1715	2295				
AB IPBox	1617					
Acer	1642	2240	2241			
Action	1160	1344	1572	2088		
ad notam	2237	2315	2316			
Admiral	1160	1228	1349	1572	2271	
Advent	1442	2226				
Adyson	1358	1572				
Aeg	1517	1581	1664	1665	1671	1674
	1684	1686	1690	1699	1718	1724
	1726	1906	2158	2259		
Agath	1905					
AgfaPhoto	1863	2038				
Airis	1840	2050	2112	2129	2191	
Aiwa	1182	1572	1753	1770	2247	
Akai	1160	1482	1485	1498	1511	1539
	1556	1558	1559	1560	1572	1581
	1642	1648	1662	1664	1668	1670
	1671	1672	1678	1825	1983	2021
	2037	2087	2102	2147	2302	
Akira	1511	1585	2164	2166	2249	
Akura	1160	1349	1572	1643	1671	
Alba	1165	1349	1424	1426	1514	1539
	1559	1568	1572	2085	2102	2181
	2221	2263	2271			
Albiral	1572	2273				
Allstar	1572	1690				
Alphatronics	1829					
Alphatronik	1960					
Altek	2162					
Altus	1542	1544	1581	1662	1663	1664
	1670	1671	1704	2264		
Amoi	2207					
Amstrad	1160	1477	1858	2288		
Andersson	1648					
Anitech	1160	1349	1358	1558	1572	1690
Aoc	1572	2141	2143	2144	2145	
Apro	2128					
Aquavision	1439	1857				
Arc En Ciel	2300	2304				
Arcelik	1542	1544	1581	1664	1670	1671
	1684	1685	1687	1701	2264	
Arctic	1581	1662	1664	1670	1671	
Arena	1539	1581	1642	1664	1671	
Aristona	1511	1517	1558	1560	1572	1577
	1590					
Arthur-Martin	1684	1686	1718	1724		
Astra	1160	1572	1581	1664	1670	1671
Atec	1440					
Audiosonic	1160	1349	1542	1544	1572	1581
	1663	1664	1671			
Aver Media	2168					
AviSMART	1645					
Axxion	1160	1869				

B

Bang & Olufsen	1778	1779				
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Basic Line	1163	1539	1559	1571	1572	1642
	1643	1662	1664	1665	1670	1674
	1972	2259	2263			
Bauer	1228	1353	1560	2307		
Baur	1160	1477	1511	1558	1560	1572
	1583	1585	1623	1661	1751	1768
	1770	1979	2001	2012		
Baysonic	1349					
Beaulieu	1560					
Beko	1528	1529	1539	1542	1544	1581
	1597	1662	1663	1664	1667	1668
	1670	1671	1672	1684	1685	1687
	1694	1698	1701	1704	2028	2092
	2093	2261	2263	2264	2302	
Belson	1527	1569	1643	1783	1823	1824
	1832	1849	1888	1909	2037	2042
	2111	2121	2161	2204	2228	2258
	2317					
Benq	2097					
Bestar	1160	1572				
Blaupunkt	1165	1558	1560	1572	1599	1684
	1686	1718	1724	2102	2104	2106
	2300	2304	2307			
Blue Sky	1165	1466	1470	1471	1514	1539
	1559	1569	1572	1581	1610	1642
	1643	1648	1662	1664	1665	1670
	1671	1674	1690	1699	1726	2125
	2209	2259	2263	2264		
Blusens	1841	1843	1860	1866	1872	1877
	1881	1914	1932	1933	1945	1948
	1964	2125	2217			
Bosch	1560	1686	1718	1724		
Boxford	1676	1683	2196			
Brandt	1228	1466	1470	1471	1523	1583
	1619	1643	1670	1671	1704	2145
	2300	2302	2304	2309	2311	
Braun	1583	1673	2312			
Brignton	1837	1871				
Brionvega	1560	1572	1717	2276		
Brother	1349	1723				
Bush	1165	1340	1345	1349	1426	1428
	1517	1528	1529	1539	1542	1544
	1557	1559	1568	1572	1581	1664
	1670	1671	2102	2141	2181	2263
	2264					
C						
Campomatic	2016					
Canon	1560					
Caratec	2025					
Casio	1586	1688	1930			
cello	1867					
Centrum	1542					
Cge	1160	2271				
Changhong	1982	1989	2002	2115	2116	
Charisma	1796					
Charpy	2054					
Cie	1160	1163	1858			
Cinex	1665	1674	1690	1699	1726	
Clarivox	1572	2269	2284	2294		
Clatronic	1160	1340	1571	1581	1662	1663
	1664	1670	1671	1695	1721	1837
	2271					

Claud	1560					
CMX/Commax	1346	1830	1906	2025	2100	2107
	2119	2156	2159	2165	2183	2228
Combi	1840					
Computec	1695					
Condor	1160	1572	1690	2271		
Conia	1671					
Conic	1572	2088				
Conrac	2257	2264	2265			
Constructa	1558					
Contec	1160					
Continental	1165	1581	1664	1671		
Continental Edison	1165	1642	1647	2124	2158	2165
	2300	2304	2311			
Crosley	1572	2088				
Crosswood	1539	1559	1581	1664	1670	1671
	1704					
Crown	1160	1228	1542	1544	1572	1575
	1581	1664	1670	1671	1698	2054
	2125	2264	2272			
Curtis	1344	1572	1710	1972	2012	2271
Cybercom	1542					
Cyberpix	1643					
D						
Daewoo	1160	1163	1169	1170	1171	1173
	1174	1175	1176	1177	1178	1179
	1180	1181	1182	1517	1542	1560
	1568	1572	1593	1598	1605	1664
	1671	1687	1688	1831	1873	1874
	2128	2230	2319			
Dalco	2249	2250				
Dangaard	1868	1870	1874	1944	1948	2037
	2162	2173				
Dantax	1514	1542	1544	1581	1589	1662
	1664	1670	1671			
Davis	1560					
Daytek	2233					
Dce	1539	1559	1581	1608	1662	1664
	1671					
Decca	1572	1629	1690	1699	1726	2287
Dell	2253					
Denon	1189	1770	2057	2242		
Denver	1160	1711	1837	1870	1871	1874
	1939	1941	1944	1983	2027	2104
	2113	2125	2146	2147		
Diboss	1689	1695				
Digihome	1523	1642	1643	1647		
Digiline	1558	2263				
Digiloc	1844	2002				
Digital	1542	1544	1671			
Digital+	1542					
Digitech	1477	1539				
DIKOM	1906					
DLD	2052					
Dmtech	1523	1539	1559	1642	1643	1650
	1722	1853	2178			
DQT	1886	2255				
Dual	1160	1477	1511	1542	1544	1562
	1568	1571	1572	1581	1584	1585
	1588	1610	1624	1642	1643	1670
	1671	2181				
Dumont	2271	2281				

Durabrand	1539	1542	1544	1581	1643	1664
	1670	1671				
Dynatron	2193					
DYNEX	2198	2199				

E

easy touch	2118					
ECG	1983	2159				
Ecron	1539	1559	1610	1671		
Elbe	1514	1523	1528	1539	1542	1544
	1558	1559	1571	1581	1616	1624
	1642	1648	1665	1671	1674	1677
	1687	1690	1695	1836	1846	2125
	2195	2200	2233	2282		
Elbit	1560	1567	1586	1600		
Electric CO	2011					
Electric Mirror	2224					
Electrohome	1642	1972	2088			
Elekta	1160	1349	1542	1544		
Elektronika	1571	1572	1573	1586		
Elemis	1539	1642	1690	1699	1721	1726
Elfunk	1514	1523	1539			
Elin	1160	1572	1688	1690		
Elite	1344	1572	1972	2012		
Elmak	1532	1572	1576	2258		
Elman	2281	2302				
Elta	1160	1572	1581	1664	1671	
E-Max	2129	2233				
Emerson	1539	1559	1571	1572	1581	1662
	1664	1665	1670	1671	1674	2120
	2192	2193	2263	2294		
E-motion	2102	2104	2106	2109	2125	
enox	2037					
Erres	1511	1517	1558	1560	1572	1577
	1578	1750	2311			
Esc	1160	1572				
Essentiel b	1512	1523	1575	1643	1983	2037
	2148	2229	2258			
Eternity	2102	2106	2233			
Etron	1160	1572				
Euroline	1539	1542	1581	1586	1643	1662
	1664	1670	1671	2173		
Europa	1581	1664	1671			
Europhon	1572	2058	2281	2282		
Everton	2102					
Excelsior	1517					

F

Fenner	1160	1542	1544	1572	1581	1664
	1671	2263				
Ferguson	1196	1466	1470	1475	1507	1509
	1511	1558	1560	1572	1585	1616
	1630	1688	1751	1768	1770	1979
	2001	2012	2019	2084	2085	2088
	2092	2093	2102	2177	2286	2287
	2302	2304	2307	2309	2311	2314
Finlandia	1972	2309				
Finlux	1160	1482	1483	1484	1485	1487
	1490	1493	1498	1501	1511	1514
	1523	1539	1558	1572	1581	1585
	1629	1642	1643	1644	1648	1662
	1663	1664	1671	1677	1690	1699
	1726	2236	2268	2271	2277	

First Line	1160	1163	1539	1542	1544	1558
	1559	1571	1572	1581	1642	1643
	1662	1664	1670	1671	1690	1749
	1972	2156	2263	2264		
Fisher	1167	1770	1972	1975	1976	1979
	2279	2280				
Fluid	1395	1438	2206	2232		
Force	2233					
Formenti	1560	1571	1572	1592	1624	
Frontech	1160	1349	2309			
Fujitsu	1287	1288	1771	2264	2265	
Fujitsu Siemens	1771	1899	1924	2257		
Fulton	1688	1715				
Funai	1160	1349	1539	1542	1544	1555
	1556	1581	1642	1643	1664	1670
	1671	1771	1879	2192	2193	2256

G

Galaxis	1572	2271				
Galeria	1160					
Gbc	1160	1572				
Gec	1558	1572	1770	2088		
Geloso	1160					
General	1160	1684	1686	1718	1724	2249
Gericom	1439	2214	2264			
GoGEN	1642	1647				
Goldhand	1160					
Goldstar	1157	1160	1165	1344	1349	1374
	1375	1511	1560	1572	1593	1625
	1662	1664	1669	1670	1688	1690
	1693	1697	1856	1924	1963	2088
	2275					
Goldy	2249					
Goodmans	1160	1163	1180	1182	1187	1340
	1389	1419	1426	1428	1466	1514
	1539	1540	1542	1544	1558	1559
	1560	1571	1572	1579	1581	1605
	1608	1624	1642	1643	1664	1671
	1688	1690	1692	1845	1854	1911
	2021	2037	2102	2104	2127	2174
	2233	2263	2264			
Gpm	1160					
Graetz	1514	1523	1539	1542	1544	1559
	1569	1581	1642	1643	1663	1671
	1979					
Gran Prix	1690	1699	1726	2150	2151	2152
	2153	2154				
Granada	1194	1223	1226	1274	1275	1487
	1488	1498	1536	1558	1560	1567
	1572	1590	1628	1972	1976	2001
	2012	2073	2075	2078	2079	2083
	2087	2287	2309			
Grandin	1514	1523	1539	1542	1544	1559
	1581	1610	1642	1643	1662	1664
	1670	1671	1687	1856	2195	2263
	2264					

Grundig	1159	1165	1289	1290	1291	1292
	1293	1294	1295	1296	1424	1527
	1528	1542	1558	1560	1572	1573
	1590	1594	1610	1616	1649	1652
	1670	1684	1685	1686	1687	1698
	1701	1705	1718	1721	1724	1725
	1777	1911	1924	1926	2181	2233
	2258	2262	2307			
Grunkel	1539	1559	1643	1878	2116	
H						
H&B	1539	1542	1559	2264		
Haier	1203	1347	1351	1352	1356	1607
	1936	1972	1976	2110	2142	2158
Hannspree	1968	1969	2202			
Hanseatic	1160	1175	1178	1179	1181	1182
	1511	1560	1568	1572	1581	1585
	1588	1592	1633	1663	1671	1690
	1694	2141	2275	2276		
Hantarex	1160	1571	1572	2024		
Hb	1529	1539	1542	1556	1662	1663
	1670	1671	1672	1687	1698	1704
	1853	2056	2163	2258	2264	
Hb Ingelen	1539	1559	1664			
Hcm	1160	1349				
Hinari	1160	1572	1688	1690		
Hisawa	1671					
Hisense	2149	2155	2156	2157		
Hitachi	1180	1182	1228	1482	1487	1514
	1523	1539	1559	1568	1572	1590
	1593	1599	1604	1605	1608	1612
	1627	1629	1642	1643	1647	1648
	1979	2001	2012	2025	2057	2058
	2059	2060	2062	2063	2064	2065
	2066	2067	2068	2069	2070	2071
	2072	2073	2074	2075	2076	2077
	2078	2079	2080	2081	2082	2083
	2084	2085	2086	2087	2088	2089
	2090	2091	2092	2093	2094	2095
	2141	2239	2300	2311		
Höher	1539	1542	1559	1610	1642	1643
	1648	1662	1664	1670		
Home Electronics	2196	2258				
Horizont	1567	1581	1664	1671		
Humax	1168	2132	2133	2134	2135	2136
	2137	2138	2139	2212		
Hyper	1160	1586				
Hypson	1160	1349	1560	1569	1572	1581
	1611	1643	1670	1671		
Hyundai	1172	1202	1347	1350	1514	1523
	1542	1544	1581	1647	1664	1670
	1671	1705	2162	2225	2234	2235
	2249	2254	2259			
I						
Ice	1160	1349	1572			
Iekei	1908					
Ikusi	1679					
Imperial	1572	1705	1904	1988	1994	2271
Indesit	2307					
Infinity	1572					
Infratex	1348	1429	1568	1586	2243	2248
	2258	2263	2266	2289	2293	2295

Ingelen	1581	1662	1664	1670	1671	2195
	2261					
Ingersoll	1160					
Inno Hit	1160	1569	1572	1643		
Insignia	1781	2198				
InterACTV	1657					
Interbay	1160					
Interbuy	1349	1358				
Interfunk	1511	1558	1560	1572	1585	1979
	2271	2304				
Intertronic	1609					
Intervision	1160	1349	1358	1558	2238	2275
Ipure	1828	1983	2028	2039	2233	
Irradio	1160	1542	1544	1572	1664	1670
	1671	1690				
Iskra	1581	1664	1671			
Isp	1517					
Its	1160					
Itt	1160	1225	1227	1228	1471	1482
	1487	1498	1560	1581	1642	1644
	1662	1664	1670	1671	1686	1718
	1724	1972	1979	2181	2268	2300
Itv	1349	1690				
J						
Jdb	2196					
Jetpoint	1344	1511	1560			
Jmb	2102	2104				
John Lewis	1896					
Jvc	1200	1231	1232	1233	1234	1235
	1236	1237	1238	1239	1240	1241
	1242	1243	1244	1245	1246	1564
	1572	1951	1972	2274		
K						
Karcher	1160	1544	1572	1690	1699	1726
	2282					
Kendo	1160	1466	1469	1470	1471	1514
	1523	1539	1556	1559	1572	1636
	1642	1643	1648	1663	1664	1671
	1688	1690	2181	2195	2276	2277
	2297					
Kenmark	1540	2126				
Kenstar	1898	2044				
Kenwood	1920	1935	1943			
Keymat	1441	1902	2015	2055	2056	
Kishu	2164					
Kneissel	1163	1571	1572	1605	1846	2195
	2263	2269				
kogan	2110	2159	2165			
Konka	1185	1357	1780	2244		
KOPERNIKUS	1613	1999				
Kortek	2215					
Kotron	1844					
Kriminal Forsorgen	1675					
KTC	2228					
L						
Latona	2212					
Lavis	1163	1560	1572	1573	1610	1611
	2269					
Lcd	1855					

Lenco	1160	1161	1163	1184	1349	1572
	1634	1642	1644	1647	1671	1869
	1945	2101	2110	2229	2319	
Lenuss	1377	1381	1385			
Level	2171					
Lg	1610	1642	1643	1662	1664	1669
	1670	1671	1688	1693	1696	1697
	1702	1708	1709	1856	1912	1913
	1915	1916	1917	1918	1919	1920
	1921	1922	1923	1924	1925	1926
	1927	1930	1934	1935	1937	1938
	1942	1943	1946	1947	1949	1950
	1951	1952	1953	1955	1956	1957
	1958	1959	1961	1963	1965	1966
	2045	2216	2292			
Lifetec	1160	1163	1349	1539	1559	1568
	1572	1581	1591	1671	1688	1773
	2263					
Listo	1523	1539	1643			
Lodos	1539					
Loewe	1275	1510	1511	1526	1533	1534
	1535	1551	1560	1583	1585	1619
	1621	1622	1623	1660	1673	2263
Logik	1572	1887	1911	1940	2031	2128
	2177	2205				
Logix	2106					
Luma	1160	1572				
Lumatron	1539	1556	1559	1853	2164	2166
	2263					
Luxor	1160	1482	1485	1487	1490	1493
	1494	1501	1514	1523	1539	1559
	1560	1569	1611	1627	1629	1642
	1643	1648	1682	1712	2268	
M						
M Electronics	1160	1487	1490	1493	1498	1501
	1572	2302				
Magnadyne	1160	1572	1586	1690	2271	2281
Magnafon	1586	2281	2282			
Magnasonic	1228	1572	1690	1972		
Magnavox	1558	1572	1639	2088		
Magnum	1542	1544	1581	1610	1664	1665
	1671	1674	1720	1721		
Man City	2102					
Manhattan	1514	1539	1559	1643		
Marantz	1517	1554	1560	1572	2057	
Mark	1163	1539	1559	1571	1572	1581
	1623	1662	1664	1670	1671	2264
Marusys	1410					
Mascom	1483	1587	1665	1684	1687	1690
	1699	1723	1726	1983		
Matsui	1160	1165	1182	1340	1426	1428
	1430	1432	1433	1435	1436	1514
	1539	1559	1688	1690	1771	1858
	1911	1972	1976	2019	2177	2181
	2185	2188				
Maxwell	2264					
Mcperson	1711					
Media Station	2020					
Media Tv	1596					
Medialine	2317					

Medion	1482	1483	1523	1539	1542	1544
	1559	1560	1568	1581	1611	1642
	1643	1662	1664	1665	1670	1671
	1674	1688	1690	1704	1719	1827
	1849	1894	1895	1911	2021	2263
	2264	2265				
Melbox	2284					
Melectronic	1487	1490	1491	1498	1581	1664
	1671					
Memorex	1349	1716	1972			
Memory	1642	1643				
Metz	1446	1502	1503	1504	1505	1506
	1539	1559	1560	1561	1648	1690
	1816	1817	1818	1819	1820	2263
	2264	2307				
Micromaxx	1539	1559	1662	2259		
Microspot	1514	2010				
Minerva	1165	1294	2023			
Minsonic	1159					
Mirage	1664	1671				
Mirai	1764	1771	1851	2201		
Mitsai	1594	2109				
Mitsubishi	1160	1192	1193	1194	1195	1196
	1197	1511	1539	1559	1572	1585
	1590	1605	2210	2211		
Mivar	2170	2278				
Mtc	1344	1623				
Multichoice	1652	2194	2252	2313		
Multitech	1160	1572	1690			
Mustek	2050					
Mx Onda	1339	1675	1695	1840	2046	
N						
Naim	1653					
National	1269	1560	1572	2249		
Nec	1160	1186	1344	1439	1892	1893
	2210	2211	2212			
Neckermann	1160	1236	1511	1558	1560	1568
Neckermann	1572	1585	1586	1589	1664	1671
	1690	1750	1751	1768	1770	2181
	2182					
Nei	1572	2294				
NEO	1159	1164	1542	1544	1581	1644
	1664	1671	2245	2246	2249	2260
Neovia	1418	1688	2214			
Nevir	1906					
Nikkai	1349	1542	1544	1572	1581	1671
	2012					
Nikkei	1581	1664	1670	1671	1898	2162
	2164					
Nikko	1690	2296				
Nissan	1344					
Nobliko	2281					
Nokia	1160	1340	1344	1349	1482	1485
	1486	1487	1488	1489	1490	1491
	1492	1493	1494	1496	1497	1498
	1499	1500	1501	1560	1572	1586
	1972	1979	2181	2268	2271	
Nordmende	1225	1433	1466	1470	1471	1542
	1544	1560	1581	1586	1642	1664
	1670	1671	1897	1901	1909	1991
	2044	2219	2300	2302	2304	2306
	2309	2311				

Northern Star	2212	2213				
Notts Forest	2102					
Nova	1572					
Novox	1852	2032				
O						
Oceanic	1227	1487	1490	1493	1498	1501
	1972					
ODYS	1833	1834	1906	1954	2026	2038
	2039	2043	2047	2172	2197	2208
	2317	2318				
ok.	2102					
Okano	1160	2270				
Okii	1514	1523	1528	1539	1542	1544
	1571	1642	1643	1648	1687	1698
	1848	1862	1982	2110		
Olympic	1160					
Olympus	1560					
Onkyo	1415					
Onn	1542	2128				
Onwa	2182					
Opera	1572	1580	2164			
Orbit	1572					
Orbitech	1570					
Orian	2250					
Orion	1160	1189	1198	1201	1202	1349
	1355	1371	1420	1422	1426	1427
	1428	1429	1431	1432	1433	1434
	1435	1447	1539	1542	1544	1558
	1559	1560	1569	1572	1574	1582
	1586	1589	1611	1616	1642	1643
	1662	1664	1665	1670	1671	1674
	1768	1858	1911	2181	2182	2187
	2233	2264	2299			
Otake	1434	2181	2182			
Otava	1606	1688	1713	1714	1715	
Others	1539	1572	2102	2104	2106	2109
	2125	2129				
Otrum	1560					
Otto Versand	1160	1223	1225	1227	1228	1230
	1275	1477	1511	1558	1560	1568
	1572	1583	1585	1586	1589	1688
	1690	1750	1751	1768	1769	1770
	1979	2001	2012	2181	2182	2275
	2299	2302	2309			
Ovp	1680	1681				
Oxygen	2108					
P						
Pacific	1433	1664	1670	1671		
Palladium	1539	1542	1556	1559	1560	1572
	1581	1611	1619	1623	1671	1690
Panasonic	1263	1264	1265	1266	1267	1268
	1269	1270	1271	1272	1273	1274
	1275	1276	1277	1278	1279	1280
	1281	1282	1283	1284	1285	1286
	1514	1558	1560	1572	1770	2307
Panavision	1581	1664	1671	2251		
Pathe Marconi	2300	2304				
Peacock	1440	1853	2097			
PEAQ	1644	1789				
Philco	1160	1572	2088	2269	2271	
Philex	1511	1585				

Philips	1175	1225	1511	1515	1516	1517
	1518	1520	1521	1522	1524	1531
	1536	1537	1538	1541	1543	1545
	1546	1547	1548	1552	1554	1555
	1558	1560	1563	1564	1565	1566
	1570	1572	1573	1574	1577	1578
	1586	1590	1600	1607	1610	1611
	1616	1619	1626	1630	1631	1637
	1641	1642	1646	1688	1690	1706
	1707	1731	1732	1733	1734	1735
	1736	1737	1738	1739	1740	1741
	1742	1743	1750	1770	2001	2088
	2142	2300	2302	2307	2311	
Phocus	1292	1528	1542	1544	1581	1664
	1670	1671	1704	2264		
Phonola	1558	1572	1578	1664	1671	
Pioneer	1274	1443	1444	1445	1446	1448
	1449	1511	1558	1560	1571	1572
	1794	1795	1796	1797	1798	1799
	1800	1801	1802	1803	1804	1805
	1806	2012	2311			
PKS	1588					
Platinium	2175					
Playsonic	1539	1542	1544	1559	1581	1662
	1664	1670	1671	1698		
POLARIS	1705					
Polaroid	2040					
Powerpoint	1560	1671	2166			
Prandoni Prince	1690					
Prima	1160	1344	1349	1572	1972	2012
Princess	1160	1542	1544	1664	1670	1671
	1672					
Pro Basic	2186					
Profectis	1643					
Profex	1160					
Profilo	1654	1665	1667	1674	1677	1690
	1699	1723	1726	2002		
Profitronic	1572	1690				
Proline	1182	1514	1523	1539	1540	1559
	1569	1581	1605	1629	1643	1664
	1671	1675	1727	1845	1885	2126
	2128	2276				
Promethean	1970					
Prosonic	1514	1539	1542	1544	1581	1642
	1662	1664	1670	1671	1684	1687
	1715	1863	1870	1873	1874	1878
	1944	1948	2101	2102	2110	2113
	2162					
Protek	1643	2125				
Proview	2037					
Provision	1558	1662	1664	1670	1671	1690
Pye	1511	1554	1558	1560	1572	1590
Q						
Quadro	1199	1514	1523	1539	1556	1559
	1608	1609	1635	1642	1643	1648
	2129	2179	2267			

Quelle	1160	1236	1275	1477	1487	1490
	1493	1498	1501	1511	1539	1554
	1556	1558	1559	1560	1571	1572
	1573	1583	1585	1586	1589	1622
	1623	1688	1690	1750	1751	1768
	1770	1773	1858	1979	2001	2012
	2181	2182	2263	2270	2280	2309
	2314					

R

Radiola	1511	1517	1554	1558	1572	1577
	1590	1630	1736			
Radiomarelli	1586					
Radiotone	1160	1349	1539	1559	1572	1690
	1721	2263				
Radix	1979					
Rca	1344	1560	1787	1788		
Record	1156	1571	1575	1586		
Red Star	1690	1699	1726			
Reflexion	1869	2025				
Regal	1664	1671				
Relisys	2037					
Rft	1519	1530	1560	1570	1596	2279
Roadstar	1160	1349	1426	1539	1542	1544
	1556	1558	1559	1572	1581	1589
	1594	1610	1662	1664	1670	1671
	1714	2264				

S

Saba	1183	1466	1469	1470	1471	1475
	1509	1514	1523	1539	1642	1643
	1664	1670	1671	1704	2145	2281
	2298	2300	2302	2304	2308	2309
	2310	2311				
Sagem	2176	2189	2195			
Saisho	1511	1560	1858	2181		
Saivod	1539	1559	1642	1643	1662	1664
	1665	1670	1674	1690	1699	1726
	1859	1941	2263			
Sakio	1160	1349				
Salora	1482	1483	1487	1490	1492	1493
	1495	1498	1501	1523	1560	1575
	1583	1587	1642	1644	1647	1665
	1674	1677	1687	1690	1722	1828
	1853	1875	1945	1972	1983	1986
	1987	2025	2028	2033	2034	2123
	2125	2258	2262	2268		
Sambers	1690	2281	2282			
Samsung	1160	1161	1166	1167	1344	1349
	1354	1373	1374	1375	1376	1378
	1379	1380	1382	1383	1384	1386
	1387	1390	1391	1392	1393	1394
	1396	1397	1398	1399	1400	1401
	1402	1403	1404	1405	1406	1407
	1408	1409	1410	1411	1412	1413
	1414	1415	1416	1417	1511	1549
	1560	1572	1579	1590	1640	1661
	1666	1688	1690	1691	1707	1718
	1728	1729	1730	1758	2001	2116
	2270					
Sansui	1160	1344	1349	1511	1560	1572
	1585					

Sanyo	1160	1514	1539	1559	1642	1643
	1647	1648	1664	1670	1671	1690
	1699	1726	1967	1971	1972	1973
	1974	1975	1976	1977	1978	1979
	1980	2019	2279	2280		
Scansonic	1670	1784	1785			
Schaub Lorenz	1528	1529	1539	1542	1544	1559
	1581	1642	1643	1644	1648	1662
	1663	1664	1670	1671	1684	1687
	1698	1704	1853	1889	1983	2002
	2048	2056	2156	2161	2162	2164
	2166	2226	2258	2264		
Schneider	1160	1340	1349	1477	1511	1513
	1517	1523	1524	1539	1554	1558
	1559	1560	1568	1571	1572	1573
	1575	1577	1580	1581	1585	1586
	1590	1594	1603	1608	1610	1615
	1616	1630	1642	1643	1648	1656
	1662	1664	1665	1670	1671	1674
	1677	1688	1689	1690	1691	1695
	1699	1720	1721	1726	1736	1906
	2100	2263				
	1560	1677				
Scientific Labs	1642	1842	1907	1941	2229	
Scott	1642	1643				
Sea	1340					
Sec	1160	1349	1514	1523	1539	1556
Seg	1557	1559	1569	1571	1581	1586
	1642	1643	1655	1671	1687	1773
	1838	1863	1867	1982	2039	2125
	2169	2263	2279			
	1558	1572	1624	1657	2276	2277
Seleco	2290	2297	2300	2309	2313	
Sencor	1542	1684	1780	1983	1987	2025
	2159	2164	2228			
Sentra	2012					
Sharp	1204	1205	1206	1207	1208	1209
	1210	1211	1212	1213	1214	1215
	1216	1217	1218	1219	1220	1221
	1222	1223	1224	1225	1226	1227
	1228	1229	1421	1558	1560	1572
	1642	1644	1647	1803	1984	2012
	2080	2093	2141	2142	2302	2309
	1690					
	1690					
Shintom	1156	1511	1542	1544	1560	1690
Shintosh	2281					
Shivaki	1560	1567	1572	1590	1638	1690
Siarem	1699	1726	1750	1771	2084	2294
Siemens	2300	2304				
	1560	1610	1611			
Siera	1558	1560	1572	1610		
Sierra	1160	1539	1575	1587	1603	1608
	1642	1643	1654	1665	1674	1677
	1687	1689	1690	1695	1699	1700
	1721	1723	1726	1831	1839	1847
	1859	1865	1983	1987	1990	2002
	2039	2048	2110	2150	2152	2153
	2154	2258	2259	2262		
	1514	1523	1539	1569	1642	1894
	1160	1572	2281			
SilverCrest						
Singer						

Sinudyne	1433	1511	1542	1544	1560	1575
	1582	1586	1589	1611	1618	1632
	1664	1670	1671	1704	1770	1858
	2181	2259	2281	2282	2299	
Sky	1353	1442	1835	1884	1911	2203
	2233					
Sky Media	1353	1439	1442	1821	1822	1835
	1850	1864	1876	1883	1900	1911
	1998	2010	2031	2039	2051	2102
	2103	2104	2105	2106	2109	2120
	2122	2125	2131	2180	2202	2233
Skyworth	1227					
Smaragd	1165					
SMARTVISION	1705	2002				
Sogo	1581	1664	1665	1670	1671	1674
Sole	1162					
SONiX	2011	2233				
Sonolor	1972					
Sontec	1572					
Sony	1188	1189	1190	1191	1226	1227
	1228	1274	1444	1558	1560	1572
	1643	1744	1745	1746	1747	1748
	1749	1750	1751	1752	1753	1754
	1755	1756	1757	1758	1759	1760
	1761	1762	1763	1765	1766	1767
	1768	1769	1770	1772	1773	1774
	1775	1776	2311			
Soundcolor	1539	1542	1581	1664	1671	1690
	1699	1704	1726	2264		
Spectra	1163					
Splash Vision	2140					
Star	1347	1542	1544	1572	1688	2179
	2249					
Star General	2250					
Starlite	1160	1690				
Starlux	1160					
Strato	1349	1542	1544	2161		
Sungoo	2022					
Sunkai	1581	1664	1671	1858	2025	2181
Sunny	2125					
Sunrise	1166					
Sunstar	1160					
Sunstech	1642	1675	1853	1859	1863	1866
	1871	1878	1941	1948	2158	
Supertech	1160	1572	1586			
Supratech	1826	1838	2025	2029	2035	2049
	2052	2053	2184	2218		
SWEDX	1903					
Sweex	1825	1849	2025			
Swisstec	1353	1439	1442	1671	1835	1850
	1876	1882	1883	1884	1900	1911
	1998	2010	2051	2109	2120	2122
	2131	2180	2202	2203	2214	2227
	2233					
Sylvania	1572	2192	2193			
Symphonic	2193					
T						
Tadistar	1690					
Tandberg	1539	2041	2304			
Targa	1410	1894				

Tatung	1165	1388	1538	1560	1572	1574
	1589	1611	1627	1629	1677	1683
	1690	1699	1712	1715	1726	2093
	2287					
Tauras	1990					
TCL	1467	1642	1791	2158		
Tcm	1542	1544	1663			
Teac	1569	1822	1880			
Tec	1160	1163	2294			
Techline	1514	1523	1539	1556	1642	1643
	1687					
Technica	1344	1539	1559	1642	1643	1665
	1674	2259				
Technical	1514	1523	1539	1569	1642	1643
Technics	1267	1274	1278	1280	1572	1751
Technika	1514	1539	1642	1643	1647	1821
	1822	1864	1876	1928	1929	1940
	1983	2040	2102	2104	2105	2106
	2109	2117	2120	2319		
Technisat	1515	1518	1519	1530	1560	1570
	1590	1616	2231	2259	2291	
Technisson	1581	1662	1664	1670	1671	
Technosonic	1560					
Technotrend	1560	2227				
Techwood	1219	1344	1514	1523	1527	1539
	1559	1569	1642	1643	1647	1648
Tecnimagen	1554	1560	1610	1611	1662	
Tecnison	1160	1690				
Teco	2025					
Tekon	1160	1344				
Teleavia	2300	2302	2304	2307	2311	
Teleco	1658					
Telefunken	1466	1470	1471	1498	1508	1509
	1523	1539	1550	1555	1572	1642
	1643	1647	1654	1664	1670	1671
	1704	2145	2264	2298	2300	2302
	2303	2304	2305	2306	2307	2309
	2311	2314				
Teleopta	1160					
Telerent	1623					
Telestar	1160	1570	1677	1690	1699	1721
	1726	2304				
Telesystem	1542	1642	1687	1982	1989	2037
Teletech	1160	1514	1523	1539	1559	1642
	1727	2263				
Televue	1665	1674	1690	1699	1726	
Telra	1690	1699	1726			
Tensai	1160	1511	1560	1572	1611	1664
	1671	1672	1690	1704	2264	2275
TERRA	1525	1936	2030	2096		
Terris	1643	2160				
Tesco	2102					
Tesla	1542	1560	1572	1581	1659	1664
	1670	1671	1688	1704	2258	
Tevion	1514	1523	1539	1542	1559	1568
	1581	1662	1664	1670	1671	1690
	1699	1719	1726	1900	2021	2102
	2104	2106	2162	2209	2212	2263

Thomson	1175	1178	1179	1181	1183	1228
	1466	1467	1468	1469	1470	1471
	1472	1473	1474	1475	1476	1509
	1580	1615	1670	1688	1704	1789
	1790	1791	1901	1909	2044	2120
	2145	2286	2300	2302	2304	2305
	2307	2308	2309	2311	2314	
Thorn	1194	1196	1341	1511	1560	1572
	1585	1630	1688	1770	1978	1979
	2012	2018	2019	2084	2088	2286
	2302	2304	2307	2308	2309	2311
Time	1542	1853				
Tivo	1410					
Tokai	1523	1554	1572			
Tokyo	1166	1344				
Toshiba	1160	1182	1275	1294	1344	1374
	1423	1425	1426	1511	1539	1542
	1558	1559	1560	1572	1585	1642
	1647	1648	1662	1664	1670	1671
	1972	1979	1981	1984	1985	1992
	1993	1995	1996	1997	2001	2003
	2004	2005	2006	2007	2008	2009
	2012	2013	2017	2018	2019	2057
	2222	2223				
Trevi	1160	1849	1861	1986		
Triax	1473	1699				
Trilux	1553	1571	1586	1605	1983	2263
TWF	2161	2209				
U						
Uher	1560	1572	1623	1767		
Ultravox	1572					
UMC	1353	1439	1442	1821	1822	1835
	1850	1864	1876	1883	1900	1911
	1998	2010	2031	2039	2051	2102
	2103	2104	2105	2106	2109	2120
	2122	2125	2131	2180	2202	2233
United	1426	1427	1514	1539	1542	1544
	1575	1581	1642	1643	1662	1663
	1664	1670	1671	1849	1868	1870
	1874	1944	1945	1948	2037	2162
	2264					
UnityDigitalTV	1410					
Universum	1160	1349	1482	1483	1484	1498
	1511	1539	1556	1557	1558	1559
	1560	1571	1572	1573	1585	1586
	1643	1690	1767	1768	1770	2263
	2271	2304				
V						
Vanguard	1160	1643				
VD Tech	2036					
Vector	1941					
Veseg	1514	1523	1643			
Vestel	1514	1523	1536	1539	1556	1557
	1559	1569	1571	1572	1586	1591
	1608	1642	1643	1644	1647	1648
	1655	1891	2003	2263		
Videoseven	1771	1911	2233			
Videoton	1642	1643	2271	2301	2311	
Viewpia	2226					
ViewSonic	1437	1564	2190			
Vision	1160	1664	1671			

Vision Plus	2102	2109				
Visual Innovations	2109					
VIVAX	1542	1544	1613	1614	1703	1704
	1705	1782	1999	2002	2014	2048
	2054	2114	2125	2155	2167	2219
Vizio	1931	1962	2220			
Vogells	1910					
Vortec	1572					
VOX	1602	1647				
Voxson	1542	1544	1572	1581	1664	1670
	1671	1690				

W

Waltham	1514	1523	1539	1559	1642	1643
Watson	1160	1539	1556	1559	1572	1581
	1586	1642	1662	1664	1667	1670
	1671	1883	2021	2263		
Wattradio	1690	2271	2281	2282		
Welltech	1662	1664	1670			
Wharfedale	1514	1523	1542	1544		
White Westinghouse	1511	1539	1559	1560	1571	1585
	1595	1620	1624	1972	2271	
Wilson	2125					
Windsor	1514	1539	1559	1643	2263	2302
World Of Vision	1372	1439	1671			

X

Xoro	2228					
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Y

Yalos	2209					
Yamaha	2001	2005	2061	2064	2071	
Yoko	1160	1163	1349	1572	1586	1642
	1972	2304				

Z

Zanussi	1642	1912				
Zenith	1572	1786				

ruwido