

Operating instructions

ruwido remote control
for hospitals and care homes



healthcare RC12120

ruwido remote control
for hotels and private homes



tantum RC12130

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Thank you for buying a ruwido remote control. Your new remote control replaces the most important functions of your TV set. Read the following instructions carefully and retain the instructions for reference at a later date.

Further information and additional instructions can be obtained at www.ruwido-consumer.com.

If you have any questions you can call us on our information line under



Your remote control can be programmed using the operating instructions and the associated code list via the following methods:

- manual programming
- automatic programming by brand

Inserting and replacing the batteries

Your remote control is powered by two 1.5 Volt batteries (AAA / LR03). Insert the batteries in accordance with the markings on the battery compartment. Please take extra care to ensure correct polarity. Dispose of the old batteries in accordance with local regulations.

Note:

Your remote control has an internal memory to make sure the programming will be retained after changing the batteries. We recommend to always use new batteries. Never combine old and new batteries because the performance of your remote control and the service life of the batteries will be negatively affected.

General Information:

Your remote control is fitted with a 10 second protection mechanism. When programming, you have to press a button within 10 seconds otherwise the remote control is set back to its regular operating mode.

Note:

A short double flash of the signal LED confirms the input, a long flash indicates an incorrect input. In case a code number is entered incorrectly, press any key and wait for a long flash of the signal LED. You can then continue entering the correct programming codes according to the instructions.

Function descriptions

	RC 12120 healthcare		RC 12130 tantum
	Radio		AV, source, input
	On/Off, Standby		On/Off, Standby
	Number key 1		Number key 1
	Number key 2		Number key 2
	Number key 3		Number key 3
	Number key 4		Number key 4
	Number key 5		Number key 5
	Number key 6		Number key 6
	Number key 7		Number key 7
	Number key 8		Number key 8
	Number key 9		Number key 9
	Number key 0		Number key 0
	Video text on		Video text on
	Electronic TV programme, Guide		Electronic TV programme, Guide
	Cursor up		Cursor up
	Cursor down		Cursor down
	Cursor left		Cursor left
	Cursor right		Cursor right
	OK		OK
	Volume up		Volume up
	Volume down		Volume down
	Channel up		Channel up
	Channel down		Channel down
	Mute		Mute
	Exit		Exit

Manual programming

1. Switch on your TV set (either manually or using the original remote).
2. Select the brand of your TV set in the code list. One or more four digit codes are shown for each brand.
3. Press and hold  and  simultaneously until the signal LED (O) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input is made within 10 seconds or if any other key except number keys 0 to 9 is pressed.

4. Use the number keys to enter the first code from the code list for the brand you have selected. The signal LED (O) flashes twice, to indicate that the code has been accepted.
5. Test the functionality of your remote control according to the above shown table of functions.
6. If the TV set does not respond or only responds partially to the button commands, please repeat steps 3 to 5 using the next code from the code list.
7. If the TV-set responds properly to all functions, your remote control is correctly programmed and is ready for use. Please file the used programming code for reference.

Used programming code:

Note:

On our website www.ruwido-consumer.com you can use the code search function at the support area where you are able to enter the brand name as well as the model number of your TV-set and/or your original remote directly. This will help you to find the matching programming code faster and makes testing several codes redundant. In case that none of the listed codes on the code list leads to success and neither the brand name and model number of your TV-set or original TV-remote can be found at the online support portal of our website, we recommend to follow the instructions for 'automatic programming according to brand' as described below.

Automatic programming according to brand

As an alternative, or if the correct code for your TV set cannot be found by 'manual programming', you can use the automatic search function by brand for programming your remote:

1. Switch on your TV-set (either manually or using the original remote).
2. Press and hold  and  simultaneously until the signal LED (○) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input is made within 10 seconds or if any other key except number keys 0 to 9 is pressed.

3. Enter the following four digit-code according to the brand of your TV set:

0020	Grundig
0021	Hitachi
0022	JVC
0023	LG
0024	Panasonic
0025	Philips
0026	Samsung
0027	Sanyo
0028	Sharp
0029	Sony
0030	Toshiba
0049	all other brands (complete code search)

The signal LED (○) flashes twice, to indicate that the code has been accepted.

Note:

If the brand of your TV-set is not listed in the list above, please use code **0 0 4 9** for starting the complete code search.

4. Hold  pressed until the TV-set switches off. Please be patient as this process can take several minutes.
5. As soon as the TV set has switched off, press  to save the code.
6. Test the functionality of your remote control according to the table of functions above.
7. If the TV-set responds properly to all functions, your remote control is programmed correctly and ready for use.

Note:

During the search process, your remote control might find a code which your TV-device responds to and switches off automatically although all functions may not work correctly. In this case the search process should be re-started (steps 1 to 5) until the best matching code has been found. Re-starting the search process starts at the last saved programming.

Note:

Reaching the end of the database is indicated by 5 flashes of the signal LED (○).

Code reader

The code reader can be used to display the programming code that was found in the search process so that it can be filed for later use.

1. Press and hold  and  simultaneously until the signal LED (○) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input is made within 10 seconds or if any other key except number keys 0 to 9 is pressed.

2. Use the number keys and enter the code **1 0 0 2**. The signal LED (○) flashes twice again.
3. Press **1** and count the number of times the signal LED flashes; this is the first digit of the code.
4. Press **2** and count the number of times the signal LED flashes; this is the second digit of the code.
5. Press **3** and count the number of times the signal LED flashes; this is the third digit of the code.
6. Press **4** and count the number of times the signal LED flashes; this is the fourth digit of the code.

Note:

The signal LED (○) does not flash if the number is 0.

The steps 3 to 6 can be carried out in any order and as many times as required.

Button lock

All functions except the number keys and  can be inactivated and also activated again.

1. Press and hold  and  simultaneously until the signal LED (○) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input will be made within 10 seconds or if any other key except number keys 0 to 9 will be pressed.

2. Use the number keys and enter the code **1 0 0 6**. The signal LED (○) flashes twice again.
3. Press all the buttons which functions you wish to become inactive one after another.
The signal LED (○) flashes once for indicating that the selected button has been inactivated and twice for indicating that the selected button has been activated.
4. Press the number key **0** to leave the programming mode and to save the individual selected key configuration.

Note:

If you want to withdraw the button lock configuration, just reset your remote control completely according to the function 'factory settings (reset)'.

Code lock

In order to prevent an accidentally reprogramming of your remote control, the programmed code can be blocked.

1. Press and hold  and  simultaneously until the signal LED (○) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input is made within 10 seconds or if any other key except the keys 0 to 9 is pressed.

2. Use the number keys and enter the code **1 0 0 7**. The signal LED (○) flashes twice again.
3. Your remote control is now blocked against any reprogramming.

Note:

The code lock is active if the signal LED (○) flashes long once (2 seconds) and not twice briefly as usual when trying to programme it.

4. In case you want to deactivate the code lock repeat steps 1 to 3.

Multi code remote control

For some LG, Philips or Samsung hospitality series TV models up to 9 different TV sets of the same model can be operated in a room without interferences. Please consult the TV manual for further information how to setup this feature in the TV menu. If the TV supports this function the remote control needs to be programmed with following codes.

1. Press and hold  and  simultaneously until the signal LED (○) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input is made within 10 seconds or if any other key except number keys 0 to 9 is pressed.

2. Use the number keys and enter one of the following code numbers.

2 9 7 X	LG	X ... 0 no pairing
2 9 8 X	Philips	X ... 1 to 9 for pairing 1 to 9
2 9 9 X	Samsung	

For example: **2 9 7 7** for LG pairing 7.

The signal LED (○) flashes twice, to indicate that the code has been accepted.

Factory settings (reset)

1. Press and hold  and  simultaneously until the signal LED (○) flashes twice.

Note:

Your remote control exits the programming mode automatically if no further input is made within 10 seconds or if any other key except number keys 0 to 9 is pressed.

2. Use the number keys and enter the code number **9 9 9 9**. The signal LED (○) flashes twice again in order to confirm that the remote control has been reset.

Note:

When using the 'reset' function your remote control loses all its programming and is reset to its original factory setting.

Note on environmental protection

No need for translation, because this text can be used from existing manuals.

Guarantee

Your remote control is under guarantee for a period of two years from the date of purchase. Please consult the dealer in the event of any warranty claim.

Codelist

A

A.R.Systems	1538	2036	1548	1459	1453	1294
	1287					
AB IPBox	1463					
Accent	1434	1147				
Acer	1985	1986				
Action	1845	1459	1288	1147		
ad notam	2057	2056	1982			
Admiral	2011	1459	1294	1193	1147	
Advent	1971	1357				
Adyson	1459	1302				
AEG	1909	1535	1538	1527	1523	2004
	1724	1563	1555	1536	1525	1518
	1494	1418				
Agashi	1459					
Agath	1722					
AgfaPhoto	1806	1692				
Aiko	1147					
AIM	1434	1459				
Airis	1938	1883	1860	1823	1668	
Aiwa	1992	1597	1581	1459	1458	1162
Akai	1502	1451	1527	1459	1453	1802
	1458	1396	1394	2045	1899	1857
	1849	1805	1780	1647	1529	1528
	1523	1518	1494	1443	1434	1406
	1147					
Akira	1434	1994	1913	1909	1689	1671
Akura	1502	1527	1459	1294	1147	
Alba	1423	1451	2015	1929	1151	2011
	1968	1857	1844	1728	1469	1459
	1346	1344	1294			
Albiral	1459	2014				
Alfa	1459					
Allstar	1538	1459				
Alphatronics	1650					
Alphatronik	1760					
Altek	1914					
Altus	1527	2020	1550	1524	1518	1494
	1441	1431				
American High	1288					
Americana	1288					
Amoi	1954					
Amstrad	1389	2030	1683	1147		
Andersson	1502					
Anglo	1294					
Anitech	1453	1538	1459	1302	1294	1147
Ansonic	1451	1538	1523	2015	1563	1525
	1502	1294	1147			
AOC	1898	1897	1895	1894	1459	
Apro	1878					
Aquavision	1682	1355				
Arc En Ciel	2044	2042				
Arcelik	1527	1536	1535	2020	1541	1518
	1494	1441	1431			
Arctic	1527	1518	1494			
Arena	1502	1527	1518	1494	1451	
Aristona	1453	1485	1459	1418	1434	1454
Art Tech	1459	1458				
Arthur-Martin	1535	1555				
Asberg	1459	2011	1458			
Asora	1147					

Astra	1527	1518	1494	1459	1147
Asuka	1294				
Atec	1355				
Atlantic	1459				
Atlas	1453				
Atoro	1147				
Audio Technica	1202				
Audiosonic	1459	1527	1524	1518	1494 1458
	1441	1431	1294	1147	
Audioton	1147				
Audiovox	1459				
Aver Media	1916				
AviSMART	1505				
AWA	1459	1147			
Axxion	1685	1147			

B

Bang & Olufsen	1603	1604	1602			
Basic Line	1451	1527	1502	1459	1523	2015
	2004	1770	1525	1518	1149	
Bauer	1193	2048	1459	1434	1297	
Baur	1453	1434	1791	1597	1581	1459
	1389	1794	1772	1595	1520	1458
	1457	1147				
Baysonic	1294					
Beaulieu	1459	1434				
BEC	1845	1459				
Becrese	1852	1849	1845	1794	1772	1459
Beko	1541	1527	1535	2003	1550	1536
	1524	1523	1518	1441	1431	2045
	2020	2015	1852	1851	1806	1528
	1494	1459	1451	1429		
Bell & Howell	1770	1459	1193			
Belson	1910	2059	2004	1973	1951	1869
	1861	1812	1805	1727	1705	1672
	1657	1646	1645	1609	1502	1468
	1427					
Benchmark-Beaumark	1459	1288				
BenQ	1855					
Beon	2011	1459				
Bestar	1459	1147				
Bigston	1147					
Blackstripe	1794	1772	1770	1288		
Blaupunkt	1857	1858	1535	1459	1151	2048
	2044	2042	1555	1492	1453	1434
Blautech	1551					
Blue Sky	1423	1527	1451	1502	1538	1523
	1494	1459	1383	1151	2020	2015
	2004	1956	1869	1563	1525	1518
	1468	1384				
Blusens	1740	1754	1735	1734	1697	1695
	1964	1869	1762	1750	1745	1741
	1738	1737	1736	1696	1690	1687
	1659	1654				
Bosch	1555	1535	1459	1434		
Boxford	1526	1943	1534			
Brandt	1383	1527	1193	2050	2049	1458
	2045	2044	2042	1898	1550	1502
	1457	1423	1384			
Braun	2052	1519	1457			
Brendstar	1147					
Brigmtton	1693	1660				
Brinkmann	2011					

Brionvega	1459	2023	2022	1554	1458	
Brother	1560	1294				
Bruns	2007					
Bush	1418	1451	1346	1527	2015	1431
	1151	2020	1929	1895	1857	1728
	1518	1494	1469	1459	1452	1441
	1429	1294	1284			

C

Campomatic	1776					
Canon	1459	1434				
Capehart	1459					
Capsonic	1459	1294				
Caratec	1809					
Carrefour	1459					
Carver	1459					
Casio	1731	1538	1459			
Cathay	1459					
CCI	1707					
cello	1691					
Centrum	1441					
Centurion	1459					
CGE	2011	1147				
CGM	1147					
Changhong 长虹	1792	1870	1856	1777	1776	
Charisma	1619					
Charpy	1827					
CIE	1683	1149	1147			
Cihan	1459					
Cimline	1929					
Cinex	1538	1523	1563	1525		
Citizen	1794	1459	1288			
Clarivox	2037	2026	2005	1459		
Claton	1451					
Clatronic	1527	2011	1660	1558	1538	1524
	1518	1494	1459	1284	1147	
Claud	1458					
CMX/Commax	1931	1973	1911	1868	1907	1867
	1859	1809	1724	1658	1290	
Colortyme	1459	1288				
Combi	1668					
Computec	1538					
Computron	1459	1147				
Concorde	1147					
Condor	1459	2011	1538	1147		
Conia	1527					
Conic	1845	1459				
Conrac	2020	2019				
Constructa	1453					
Contec	1147					
Continental	1151	1527	1518	1494		
Continental Edison	1502	1909	1151	2049	2044	2042
	1911	1877				
Corfung	1294					
Cosmel	1147					
Craig	1459					
Crosley	1845	1459				
Crosswood	1451	1527	1550	1518	1494	
Crown	1541	1527	1459	1518	2020	2013
	1869	1827	1494	1458	1441	1431
	1193	1147				
Crystal	1459	1434				
Curtis	1459	2011	1794	1770	1546	1288

Cybercom	1441					
Cyberpix	1502					
D						
Daewoo	1159	1460	1157	1162	2060	1459
	1161	1974	1878	1692	1688	1662
	1538	1535	1527	1518	1469	1441
	1418	1160	1156	1155	1149	1147
Daichi	1147					
Daimond	1434					
Dalco	1995	1994				
Dangaard	1920	1914	1805	1754	1753	1692
	1686	1684				
Dantax	1527	1518	1494	1459	1441	1431
	1425					
Davis	1458					
Dawa	1459	1458				
Daytek	1978					
Daytron	1772					
DCE	1451	1527	1518	1494	1459	
Decca	1459	1538	2029	1563	1483	
Dell	1998					
Denon	1597	1987	1829			
Denver	1899	1862	1693	1692	1872	1869
	1864	1863	1858	1807	1806	1780
	1762	1761	1754	1753	1749	1746
	1686	1685	1676	1660	1545	1147
Desmet	1459	1147				
DGM	1806					
Diamond	1147					
Diboss	1538	1537				
Digihome	1502	1423				
Digiline	2015	1453				
Digiloc	1792	1665				
Digital	1527	1441	1431			
Digital+	1441					
Digitech	1389	1451				
DIKOM	1724					
Dixi	2007	1459	1147			
DLD	1825					
DMTech	1502	1451	1925	1678	1559	1507
	1423					
DQT	2001	1704				
Dual	1459	1527	1502	1469	1434	1389
	1929	1494	1465	1461	1441	1431
	1147					
Dumont	2012	2011				
Durabrand	1527	1518	1502	1494	1451	1441
	1431					
Dynamic	1147					
Dynatron	1940					
Dynex	1946	1945				
E						
E-Max	1978	1883				
E-motion	1857	1858	1879	1869		
easy touch	1880					
Eaton	1288					
ECG	1911	1780				
Ecron	1451	1692	1527	1459		
Edison Minerva	1151					

Elbe	1502	1451	1538	1525	1523	1459
	1453	1431	2017	1978	1947	1942
	1869	1670	1655	1535	1527	1503
	1494	1441	1425	1423		
Elbit	1459	1478	1470			
Elecs	1459					
Electric CO	1797					
Electric Mirror	1970					
Electro Tech	1147					
Electrohome	1502	1845	1770			
Elekta	1441	1431	1294	1147		
Elektronika	1459					
Elemis	1538	1563	1558	1502	1451	
Elfunk	1423	1451				
Elin	1538	1459	1147			
Elite	1794	1770	1459	1288		
Elmak	2004	1471	1464	1459		
Elman	2045	2012				
Elta	1527	1518	1494	1459	1147	
Emerson	1451	1527	1940	1523	1459	2037
	2015	1871	1525	1518	1494	
enox	1805					
EON	1288					
Erres	1453	1582	1459	1434	2049	1454
	1418					
ESC	1459	1147				
Essentiel b	2004	1975	1900	1805	1780	1502
	1459	1426	1423			
Eternity	1857	1978	1858			
Etron	1459	1147				
Euro-Feel	1294					
Euroline	1527	1920	1518	1502	1494	1459
	1451	1441				
Euroman	1459	1294				
Europa	1527	1518	1494			
Europhon	2017	2012	1830	1459		
Everton	1857					
Excelsior	1418					
Expert	1398					
F						
Fenner	2015	1527	1518	1494	1459	1441
	1431	1147				
Ferguson	1459	1434	2050	2027	1595	1581
	1453	1414	1383	2055	2049	2048
	2045	2044	2029	1924	1857	1852
	1851	1845	1844	1843	1800	1794
	1791	1772	1597	1538	1458	1455
	1416	1387	1384	1173		
Fidelis	1459	1147				
Filsai	1147					
Finlandia	1770	2050				
Finlux	1502	1184	1503	1394	1453	1538
	1527	1434	1423	1408	1402	1400
	1395	2022	2016	2011	1981	1563
	1525	1524	1518	1494	1483	1459
	1451	1425	1406	1398	1396	1147
First Line	1527	1451	1459	1502	1453	2020
	2015	1907	1770	1581	1538	1518
	1494	1458	1441	1431	1149	1147
Fisher	1770	2007	2008	1772	1597	1153
Flint	1459					
Fluid	1977	1953	1354	1330		

Force	1978					
Formenti	1459	1458				
Fortress	1193					
Frontech	2050	1294	1147			
Fujitsu	1596	2020	1239	1238		
Fujitsu Siemens	2019	1755	1717	1596		
Fulton	1548	1538				
Funai	1939	1940	1527	1502	1451	2002
	1698	1596	1518	1494	1443	1441
	1432	1431	1294	1147		

G

Galaxis	2011	1459				
Galaxy	2011					
Galeria	1147					
GBC	1459	1147				
GE	2050					
GEC	1453	1845	1597	1459		
Geloso	1147					
Gemsound	1147					
General	1535	1994	1555	1147		
General Technic	1147					
Genexxa	1459					
Gericom	2020	1961	1355			
Giant	1459					
Gitem	1459	2050	2044	1434		
GMG	2011	1147				
GoGEN	1502					
Goldhand	1147					
Goldi	1460					
GoldStar	1538	1527	1459	2018	1755	1318
	1151	1845	1757	1681	1522	1518
	1489	1458	1434	1294	1288	1147
	1144					
Goldy	1994					
Goodmans	1857	1423	1451	1459	1502	1453
	1346	2015	1802	1538	2020	1978
	1921	1882	1858	1805	1726	1679
	1663	1544	1527	1518	1494	1473
	1460	1458	1441	1438	1431	1383
	1341	1325	1167	1162	1159	1149
	1147					
GPM	1147					
Gradin	1459					
Graetz	1423	1451	1502	1772	1527	1524
	1494	1468	1441	1431	1425	
Gran Prix	1905	1538	1907	1904	1903	1902
	1563					
Granada	1229	1770	1459	1844	1839	1791
	1485	1458	1193	2050	2029	1849
	1841	1794	1483	1453	1434	1424
	1406	1399	1398	1174		
Grandin	1502	1423	1451	1527	2020	2015
	1942	1681	1535	1518	1494	1459
	1441	1431				
Grenadier	1459	1147				
Gronic	1459					

Grundig	1502	1541	1241	1453	1459	1535
	1151	1978	1536	1527	1485	1460
	1245	1243	2048	2010	2004	1929
	1755	1740	1726	1601	1562	1558
	1555	1551	1509	1506	1441	1434
	1431	1427	1344	1246	1244	1242
	1240	1146				
Grunkel	1451	1870	1725	1688	1502	
GTT	2011	1147				
H						
H&B	1451	2020	1441			
Haier	1909	1744	1770	1896	1872	1742
	1473	1301	1296	1295	1291	1181
Halifax	1294					
Hannspree	1949	1767	1766	1615		
Hanseatic	1459	1434	1162	1161	2023	2018
	1895	1538	1527	1524	1518	1494
	1474	1469	1159	1147		
Hantarex	1459	1804	1458	1147		
Harley Davidson	1288					
HB	1541	1527	1451	1441	2020	2004
	1912	1910	1828	1678	1550	1535
	1528	1524	1443	1429		
HB Ingelen	1451	1518				
HCM	1294	1147				
Heathkit	1459					
Hifivox	2044	2042				
Hiline	1147					
Hinari	1538	1459	1147			
Hisawa	1527					
Hisense 海信	1908	1907	1906	1901	1426	
Hitachi	1502	1423	1839	1451	1829	1852
	1844	1849	1851	1836	1835	1848
	1845	1843	1841	1830	1459	1398
	1850	1847	1837	1833	1831	1485
	1460	1394	2049	2042	1984	1895
	1853	1846	1840	1838	1834	1809
	1794	1791	1772	1492	1483	1469
	1425	1193	1162	1159		
Höher	1451	1527	1502	1441	1518	1459
Home Electronics	2004	1943				
Horizont	1527	1518	1494	1459		
Hornyphon	1459	1458				
Humax	1887	1886	1889	1959	1892	1891
	1890	1888	1154			
Huspi Elektronik	2011					
Hyper	1459	1147				
Hypervision	1508					
Hypson	1459	1527	1502	1460	1494	1468
	1294	1147				
Hyundai	1502	1423	1527	2004	1999	1994
	1980	1979	1971	1914	1551	1518
	1503	1494	1441	1431	1292	1291
	1180	1158				
I						
I.V.	1459					
ICE	1459	1294	1147			
Iekei	1725					
Ikea	1615					
Ikusi	1530					

Imperial	2011	1459	1786	1781	1721	1551
	1458					
Indesit	2048					
Indiana	1459					
Infinity	1459					
Infratex	1459	2036	2035	2031	2024	2015
	2004	1993	1988	1469	1347	1293
Ingelen	1527	1942	2003	1518	1494	
Ingersoll	1147					
Inno Hit	1459	1502	1468	1458	1147	
Insignia	1945	1606				
InterACTV	1514					
Interbay	1147					
Interbuy	1302	1294				
Interdiscount	2050	2049	2044	1597	1459	1434
Interfunk	1434	1459	1453	2044	2011	1772
	1458					
Intertronic	1487					
Intervision	2018	1983	1453	1302	1294	1147
Ipure	1806	1978	1780	1652		
Irradio	1459	1527	1538	1518	1458	1441
	1431	1147				
Iskra	1527	1518	1494			
ISP	1418					
IST	1459					
Isukai	1459					
ITL	1147					
ITS	1147					
ITT	1502	1503	1193	1527	1770	1394
	2042	2016	1929	1772	1555	1535
	1518	1494	1459	1434	1406	1398
	1386	1147				
ITV	1538	1294				
J						
Jacson	2008					
JBL	1459					
JC Penney	1794	1288				
JDB	1943					
JEC	1794					
Jetpoint	1459	1434	1288			
Jinlipu	1147					
JMB	1857	1858				
John Lewis	1713					
Jumbotronic	1459					
JVC	1194	1502	1196	1195	1202	1204
	1203	1199	1197	1205	1770	1755
	1201	2016	1459	1458	1206	1200
	1198	1178				
K						
Kaiser	1459	1458				
Kaisui	1459	1147				
Kambrook	2049					
Karcher	1538	1459	2017	1563	1458	1431
	1147					
Kendo	1502	1423	1451	1383	1942	1538
	1524	1459	2041	1929	1527	1518
	1495	1443	1384	1147		
Kenmark	1438	1881				
Kennex	1460					
Kenstar	1813	1716				
Kenwood	1740	1747				

Kerion	1459					
Keymat	1828	1798	1719	1356		
Kimay	1294					
Kiota	1147					
Kishu	1913					
Kiton	1451					
Kloss Novabeam	1288					
Kneissel	1459	2015	2005	1942	1670	1460
	1149					
Kobic	1147					
Kogan	1911	1872				
Kolster	1459					
Konichi	1147					
Konka 康佳	1989	1607	1299	1165		
Kopernikus	1790	1498				
Korpel	1459					
Kortek	1962					
Kotron	1665					
Kriminal Forsorgen	1521					
KTC	1973					
Kuasho	1459					
L						
Latona	1959					
Lavis	1459	1460	2005	1149		
LCD	1680					
Leader	1147					
Legend	1459	1147				
Lenco	1502	2060	1147	1146	1975	1872
	1862	1754	1685	1527	1503	1467
	1459	1294	1164	1149		
Lenoir	1459	1147				
Lenuss	1320					
Level	1918					
Lexus	1294					
Leyco	1459	1294				
LG	1732	1740	1733	1731	1763	1755
	1741	1739	1538	1527	1757	1502
	2034	1963	1813	1764	1758	1756
	1751	1747	1743	1742	1681	1543
	1522	1518	1459			
Liesenköttler	1459	1434				
Life	1147					
Lifetec	1451	1459	2015	1595	1538	1527
	1494	1469	1294	1149	1147	
Linitron	1193					
Linsar	1184	1502				
Listo	1502	1423	1451			
LLoyd's	1147					
Lodos	1451					
Loewe	1434	1421	1458	1420	1229	1519
	1466	1483	2015	1517	1484	1480
	1459	1457	1435	1422		
Logik	1814	1952	1924	1878	1728	1726
	1703	1459				
Logix	1858					
Luma	1459	1147				
Lumatron	1451	2015	1913	1909	1678	1443
Lux-May	1459	2037				
Luxor	1502	1423	1503	1451	1394	1408
	1400	2016	1542	1533	1483	1468
	1460	1459	1425	1403	1402	1398
	1396	1147				

LXI	1770	1459	1193			
M						
M Electronic	1400	2045	1459	1408	1406	1402
	1398	1147				
Magnadyne	1459	2012	2011	1538	1458	1147
Magnafon	2017	2012	1459			
Magnasonic	1770	1538	1459	1193		
Magnavox	1453	1845	1481	1459		
Magnex	1459					
Magnum	1527	1523	1558	1557	1525	1518
	1494	1459	1441	1431		
Man City	1857					
Mandor	1294					
Manesth	1929	1459	1294			
Manhattan	1423	1451	1502			
Marantz	1459	1418	1829	1454	1434	
Mark	1451	1527	1459	2020	1518	1494
	1458	1149				
Marusys	1336					
Mascom	1538	1780	1535	1563	1560	1523
	1472	1395				
Match Italia	1459					
Matsui	1423	1451	1351	1346	1770	1596
	1538	1151	1147	1935	1933	1929
	1924	1800	1726	1683	1350	1348
	1284	1162				
Maxam	1147					
Maxwell	2020					
MCE	1147					
McMichael	1845					
McPerson	1545					
Media Station	1801					
Media TV	1475					
Medialine	2059					
Mediator	1459					
Medion	1502	1503	1451	1527	2020	1523
	1802	1538	1460	1394	2015	1805
	1726	1712	1711	1689	1672	1651
	1556	1550	1525	1518	1494	1479
	1469	1459	1441	1431	1423	1395
Megas	1942					
Megatron	1849					
Melbox	2026					
Melectronic	1527	1518	1494	1406	1401	1400
	1398					
Memorex	1770	1552	1294			
Memory	1502					
Mercury	1459	1147				
Meteor	2017					
Metz	1451	1640	2048	2020	2015	1644
	1643	1642	1641	1538	1502	1459
	1434	1413	1412	1411	1410	1409
	1361					
MGA	1434					
Micromax	1451	2004	1527			
Microspot	1423	1796				
Minerva	1151	1926	1803	1245		
Minoka	1459					
Minsonic	1146					
Mirage	1527	1518				
Mirai	1596	1948	1675	1588		
Mitsai	1879	1470				

Mitsubishi	1174	1451	1172	1434	1958	1957
	1485	1460	1459	1175	1173	1171
	1147					
Mivar	2006	1917				
Monitor	1288					
MTC	1458	1288				
Multichoice	2054	1997	1941	1509		
Multimedia	1145					
Multitec	1451					
Multitech	1538	1459	1458	1147		
Murphy	1503					
Mustek	1823					
Mx Onda	1815	1668	1538	1521	1283	

N

Naim	1510					
Namsunc	1147					
NAP	1458					
National	1459	1994	1434	1225		
NEC	1958	1957	1710	1959	1709	1355
	1288	1166	1147			
Neckermann	1459	1453	1434	1930	1929	1597
	1595	1582	1581	1538	1527	1518
	1469	1458	1196	1147		
NEI	1459	2037	1458			
NEO	2004	1994	1991	1990	1527	1518
	1503	1494	1441	1431	1150	1146
NEON	1691					
Neovia	1961	1538	1336			
Nevir	1502	1865	1724			
Newtech	1459					
Nikkai	1459	1794	1527	1494	1441	1431
	1294					
Nikkei	1527	1914	1913	1716	1518	1494
Nikko	2038	1538				
Nissan	1288					
Noblex	1153	1147				
Nobliko	2012					
Nogamatic	2044	2042				
Nokia	1459	1406	1394	1770	1408	1401
	1400	1399	1396	1147	2016	2011
	1929	1772	1434	1407	1405	1403
	1402	1398	1397	1294	1288	1284
Nordmende	1502	2050	1527	1383	2049	2047
	2045	2044	2042	1966	1813	1782
	1727	1718	1715	1714	1518	1494
	1460	1458	1441	1431	1384	1351
	1193					
Nortek	1459					
Northern Star	1959					
Notts Forest	1857					
Nova	1459					
Novatronic	1459	1458	1147			
Novox	1822	1677				
NPG	1776					

O

O General	1147					
Oceanic	1770	1400	1193	1408	1406	1402
	1398					
ODYS	1806	2059	2058	1955	1944	1919
	1821	1819	1808	1807	1759	1724
	1666	1656				

ok.	1857	1503				
Okano	2009	1147				
OKI	1502	1541	1423	1431	1872	1776
	1689	1671	1535	1467	1451	1441
	1425					
Olympic	1147					
Olympus	1459	1434				
Onceas	1147					
Onida	1459					
Onkyo	1338					
ONN	1878	1441				
Onwa	1930					
Opera	1913	1477	1459			
Optanka	1193					
Orava	1470	1459				
Orbit	1459					
Orbitech	1476	1460				
Orian	1995					
Orient	1147					
Orion	1459	1451	1346	1527	1978	1453
	1351	1342	1935	1523	1502	1460
	1458	1350	1349	2040	2020	1930
	1929	1726	1683	1597	1595	1525
	1518	1481	1468	1441	1431	1362
	1352	1347	1315	1300	1294	1180
	1179	1176	1147			
Osaki	1459					
Otake	1930	1929	1352			
Otava	1538	1553	1548	1486		
OTF	1147					
Otrum	1458					
Otto Versand	1459	1193	1453	1434	1597	1229
	1794	1595	1581	1538	1389	2050
	2045	2040	2018	1930	1929	1791
	1772	1582	1469	1457	1147	
OVP	1532	1531				
Oxygen	1873					
P						
Pacific	1527	1351	1518			
Pael	1538					
Palladium	1451	1459	1458	1527	1460	1538
	1494	1443	1441	1434		
Palsonic	1459					
Panama	1459	1294				
Panashiba	1147					
Panasonic	1223	1228	1226	1225	1229	1459
	1453	1597	1231	1230	2048	1458
	1434	1425	1236	1235	1234	1232
	1227	1224				
Panavision	1996	1527	1518	1494		
Panavox	1147					
Panorama	1147					
Panoramic	2044					
Pathe Marconi	2044	2042				
Pausa	1147					
PCE/PEC	1794	1772	1770	1288		
Peacock	1855	1678	1355			
PEAQ	1615	1503				
Perfekt	1459					
Philco	2011	2005	1845	1459	1147	
Philex	1434					

Philips	1418	1569	1570	1571	1896	1459
	1458	1453	1454	1485	1434	1432
	1430	1538	1455	1582	1568	1490
	1460	1424	1419	1444	1440	1438
	1193	2049	2048	2045	2042	1845
	1791	1597	1579	1575	1574	1573
	1572	1540	1504	1502	1501	1480
	1476	1456	1449	1448	1447	1442
	1439	1437	1433	1159		
Phocus	1527	1441	1431	2020	1550	1518
	1494	1241				
Phoenix	1459					
Phonola	1453	1459	1527	1518		
Phonotrend	1972					
Pioneer	1627	1619	1361	1459	1622	1453
	1628	1621	2049	1794	1631	1630
	1629	1626	1625	1624	1623	1620
	1458	1434	1364	1363	1360	1359
	1358					
PKS	1459					
Plantron	1459	1294	1147			
Platinum	1922					
Playsonic	1541	1527	1451	1518	1494	1441
	1431					
Polaris	1551					
Polaroid	1805					
Policom	2044					
Portland	1459					
Powerpoint	1909	1527	1460			
Prandoni Prince	1538					
Prima	1794	1770	1459	1294	1288	1147
Princess	1527	1528	1518	1441	1431	1147
Pringston	1527	1518	1459			
Pro Basic	1934					
Proelco	1459					
Profectis	1502					
Profex	1147					
Profilo	1523	1538	1525	1511	1792	1563
	1560					
Profitronic	1538	1459				
ProLine	1423	1451	1502	2023	1881	1878
	1702	1663	1564	1527	1521	1518
	1494	1483	1468	1460	1418	1162
Promethean	1768					
ProScan	1288					
Prosonic	1502	1527	1862	1692	1688	1535
	1451	1914	1872	1864	1857	1762
	1761	1754	1753	1686	1548	1518
	1494	1441	1431	1425		
Protec	1459	1294				
ProTech	1451	1459	2015	1453		
Protek	1869	1502				
Proton	2049					
ProView	1805					
Provision	1527	1538	1518	1453		
Pulser	1845	1459	1288			
Pye	1459	1453	1485	1434	1458	1454
Q						
Qty1	1459					
Quadro	1423	1451	1927	1502	2025	1883
	1499	1487	1480	1459	1443	1177
Quasar	1147					

Quelle	1451	1459	1434	1453	1595	1229
	1794	1597	1581	1538	1400	1389
	2055	2050	2015	2009	2008	1930
	1929	1791	1772	1683	1582	1466
	1458	1457	1454	1443	1408	1406
	1402	1398	1196	1147		

R

R-Line	1459					
Radio Shack	1770	1193				
Radiola	1453	1485	1454	1418	1459	1434
	1572	1455				
RadioMarelli	1459					
Radiotone	1451	2015	1558	1538	1459	1294
	1147					
Radix	1772					
RCA	1614	1613	1458	1288		
Realistic	1770					
Recor	1459	1434				
Record	1459	1143				
Red Star	1538	1563				
Reflexion	1809	1685				
Regal	1527	1518				
Regente	1147					
Relisys	1805					
Revox	1458	1459				
RFT	2007	1460	1467	1446	1428	
Rice Club	1288					
Roadstar	1527	1451	1459	1346	2020	1553
	1518	1494	1453	1443	1441	1431
	1294	1147				
Rosita	1147					
Rowa	1147					
Royal	1527	1518	1459	1294	1293	1147
Runco	1288					

S

SABA	1502	1423	2050	1383	1527	2049
	1416	2053	2051	2045	2044	2042
	2039	2012	1898	1550	1518	1451
	1425	1387	1384	1163		
	1942	1936	1923			
Sagem	1929	1683	1459	1434		
Saisho	1451	1527	1538	1523	1502	2015
	1749	1693	1563	1525	1518	
Sakio	1294	1147				
Sakura	1147					
Salora	1502	1394	1780	1770	1525	1503
	1400	2016	2010	2004	1876	1869
	1819	1818	1809	1806	1779	1778
	1754	1694	1678	1652	1559	1538
	1535	1523	1472	1460	1459	1457
	1423	1408	1406	1404	1402	1401
	1398	1395				
	2017	2012	1538			
	1319	1566	1336	1567	1338	1318
Samsung	1520	1538	1473	1459	1327	1328
	1323	1322	1545	1339	1332	1146
	2009	1870	1791	1583	1565	1555
	1544	1500	1458	1436	1434	1340
	1337	1335	1334	1333	1331	1329
	1326	1324	1317	1298	1294	1288
	1153	1152	1147			

Sansui	1459	1434	1294	1288	1147	
Sanyo	1502	1423	1770	1451	1769	1773
	1538	1527	2008	2007	1800	1772
	1771	1765	1563	1518	1425	1147
SBR	1459					
Scansonic	1610	1527				
Schaub Lorenz	1502	1541	1503	1451	1527	1913
	1792	1535	1441	1431	2020	2004
	1971	1914	1910	1909	1907	1866
	1828	1820	1780	1706	1678	1550
	1524	1518	1494	1429		
Schneider	1502	1459	1451	1538	1469	1527
	1453	1418	1458	1525	1523	1454
	1434	1389	2015	1859	1724	1572
	1563	1558	1557	1545	1537	1518
	1513	1494	1493	1485	1477	1470
	1455	1423	1417	1294	1284	1147
Scientific Labs	1525	1460				
Scott	1502	1975	1749	1723	1664	
Screenlant Tft	1469					
SEA	1502					
Sears	1770					
SEC	1284					
SEG	1423	1451	1502	1147	2015	2007
	1917	1869	1806	1776	1692	1691
	1653	1595	1535	1527	1512	1494
	1468	1467	1459	1452	1443	1294
Sèleco	1459	2022	2054	2050	2042	2041
	2032	2023	1514	1453		
Sencor	1780	1973	1913	1911	1809	1779
	1607	1535	1441			
Sentra	1794					
Serino	1942					
Sharp	1184	1183	1502	1187	1182	1342
	1185	1503	1896	1193	1453	1188
	1459	2050	2045	1895	1852	1794
	1775	1627	1434	1192	1190	1189
	1186					
Shintom	1538					
Shintosh	1538					
Shivaki	1538	1459	1441	1434	1431	1143
Shorai	1930					
Show	1147					
Siarem	2012					
Sicatel	2028					
Siemens	1538	2044	2042	2037	1843	1596
	1582	1563	1491	1485	1470	1459
Siena	1459					
Siera	1459	1460				
Sierra	1459	1453	1434			
Sigmax	1288					
Signature	1794					
Silma	1459	1458				
Silva Schneider	1502	1538	1780	2004	1905	1904
	1806	1792	1525	1523	1511	1469
	1459	1451	2010	1907	1903	1872
	1820	1785	1779	1694	1693	1673
	1671	1669	1662	1563	1560	1558
	1537	1535	1503	1472	1147	
SilverCrest	1502	1423	1451	1711	1468	
Singer	1459	2012	1458	1147		
Sinotec	1538					

Sinudyne	1459	1460	1527	1458	2040	2017
	2012	2004	1929	1683	1597	1550
	1518	1481	1471	1441	1434	1431
	1351					
Sky	1978	1950	1726	1701	1667	1357
	1297					
Sky Media	1857	1875	1858	1814	1693	1978
	1949	1928	1885	1879	1871	1869
	1813	1806	1796	1788	1726	1717
	1701	1674	1667	1649	1648	1357
	1355	1297				
Skyworth 创维	1193					
Smaragd	1151					
SMARTVISION	1792	1551				
Snyder	1459					
Sogo	1527	1523	1525	1518	1494	
Sole	1148					
Sonitron	1770	1772				
SONiX	1978	1797				
Sonoko	1459	1458	1294	1147		
Sonolor	1770					
Sontec	1459					
Sony	1581	1587	1589	1593	1595	1592
	1597	1582	1193	1453	1598	1594
	1591	1586	1583	1459	1169	2049
	1600	1599	1596	1590	1585	1584
	1580	1502	1434	1359	1170	1168
Soundcolor	1538	2020	1563	1550	1527	1518
	1494	1451	1441			
Soundesign	1288					
Soundmaster	1147					
Spectra	1149					
Spectrician	1459					
Splash Vision	1893					
Sr2000	1770					
Standard	1147					
Star	1994	1927	1547	1459	1441	1431
	1291					
Star General	1995					
Starlite	1538	1147				
Starlux	1147					
Staßfurt	2007					
Strato	1910	1441	1431	1294		
Sungoo	1803					
Sunkai	1929	1809	1683	1527	1518	1494
Sunny	1869					
Sunrise	1152					
Sunstar	1147					
Sunstech	1502	1909	1695	1693	1754	1749
	1692	1688	1678	1521		
Sunwatt	1459					
Sunwood	1459					
Supersonic	1434					
Supertech	1459	1147				
Supra	1147					
Supratech	1965	1932	1826	1825	1824	1817
	1816	1809	1661	1653		
SWEDX	1720					
Sweex	1809	1672	1647			
Swisstec	1978	1875	1701	1972	1961	1950
	1949	1928	1885	1879	1871	1813
	1796	1788	1726	1717	1700	1693
	1674	1667	1527	1357	1355	1297

Syc Line	1147					
Sylvania	1940	1459				
Symphonic	1940					
T						
Tadistar	1538					
Tandberg	2044	1805	1451			
Tandy	1193					
Targa	1711	1336				
Tashiko	1845					
Tatung	1459	1538	1460	1458	2029	1852
	1563	1548	1542	1534	1519	1483
	1430	1321	1151			
Taurus	1785					
TCL 创意感动生活	1909	1615	1616	1502	1385	
TCM	1524	1441	1431			
Teac	1728	1699	1648	1468		
Teak	1434	1459	1147			
TEC	2037	1149	1147			
Techline	1502	1423	1451	1535	1443	
Technica	1451	1523	1502	2004	1525	1288
Technical	1502	1423	1468	1451		
Technics	1223	1229	1459	1231	1581	1458
Technika	1502	1857	1423	1879	1858	1728
	1693	2060	1874	1871	1805	1780
	1730	1729	1649	1648	1451	
Techniland	1459	1458				
Technisat	1460	1433	2033	2004	1976	1485
	1476	1453	1446	1430	1428	1418
Technisson	1527	1518	1494			
Technol	1434	1459	1147			
Technosonic	1460					
Technotrend	1972	1459				
Techwood	1502	1423	1451	1468	1427	1425
	1288	1189				
Tecnimagen	1459	1460	1527	1454		
Tecnison	1538	1147				
TECO	1809					
Tedelex	1459	1147				
Teknant	1459	1458	1147			
Tekon	1288	1147				
Teleavia	2049	2048	2045	2044	2042	
Teleco	1515					
Telefac	1147					
Telefunken	1502	1383	1527	2050	2049	1511
	2055	2048	2047	2046	2045	2044
	2043	2042	2039	2020	1898	1550
	1518	1459	1451	1445	1432	1423
	1416	1415	1406	1384		
Teleopta	1147					
Telerent	1458					
Telestar	1538	2044	1563	1558	1525	1476
	1460	1147				
Telesystem	1502	1805	1777	1776	1535	1441
Teletech	1502	1423	1451	2015	1564	1147
Televue	1538	1523	1563	1525		
Telra	1538	1563				
Tempest	1147					
Tensai	1459	2020	2018	1550	1538	1528
	1527	1518	1460	1458	1434	1147
Tenson	1147					
TERRA	1744	1854	1811	1432		
Terris	1909	1502				

Tesco	1857					
Tesla	1527	1459	2004	1550	1538	1518
	1516	1494	1441			
Tevion	1423	1527	1451	1858	1538	2015
	1959	1956	1914	1909	1857	1802
	1717	1563	1556	1518	1494	1469
	1441					
Thomas	1845	1459	1288			
Thomson	1383	2050	2049	1615	1384	1193
	2045	1161	2055	2048	2046	2044
	2042	2027	1898	1871	1813	1727
	1718	1616	1550	1538	1527	1493
	1477	1416	1388	1387	1386	1385
	1382	1381	1163	1162	1159	
Thorn	1459	1434	1845	2051	2050	2049
	2048	2045	2044	2027	1843	1800
	1799	1794	1772	1771	1597	1538
	1458	1455	1285	1174	1173	
Thorn-Ferguson	1459	1434	2055	2049	2048	2045
	2044	2027	1597	1595	1458	
Time	1678	1441				
Tivo	1336					
TMK	1288					
Tobo	1147					
Tokai	1459	1454	1423			
Tokyo	1288	1152				
Toshebia	1994					
Toshiba	1502	1775	1774	1969	1791	1794
	1789	1451	1527	1793	1799	1459
	1453	1434	1346	1318	1831	1800
	1795	1792	1787	1784	1783	1772
	1770	1518	1458	1441	1345	1343
	1288	1245	1229	1162	1147	
Tosonic	1288					
Transonic	1459					
TRC	1538	1147				
Trevi	1778	1694	1672	1147		
Triad	1459	1434				
Triax	1539	1383				
Trilux	1459	2015	1780	1460	1419	
Triumph	1683					
TriVision	1147					
TV Star	1865					
TWF	1956	1910				
U						
Uher	1459	1595	1458	1434		
Ultravox	1459					
UMA	1434	1459	2049	2044	2042	
UMC	1857	1875	1858	1814	1693	1978
	1949	1928	1885	1879	1871	1869
	1813	1806	1796	1788	1726	1717
	1701	1674	1667	1649	1648	1357
	1355	1297				
Unimor	1459					
United	1502	1527	1451	1754	1672	1425
	1346	2020	1914	1805	1753	1692
	1686	1684	1524	1518	1494	1459
	1441	1431				
UnityDigitalTV	1336					

Universum	1459	1451	1595	1502	1453	1434
	2015	1394	2044	2011	1597	1538
	1458	1452	1443	1406	1395	1294
	1147					
Univox	1459					
Uranya	1147					

V

Vanguard	1502	1147				
Vasilinec	1147					
VD Tech	1810					
Veco	1459	1147				
Vector	1749					
Veseg	1423	1502				
Vestel	1502	1423	1451	1459	2015	1503
	1468	1425	1791	1708	1512	1452
	1443	1430				
Vexa	1459	1147				
Victor	1202					
Videcon	1459					
Video System	1459					
VIDEOCON	1878	1714				
Videseven	1978	1726	1596			
Videoton	1502	2049	2043	2011		
Vidion	1147					
Viditel	1294					
Viewpia	1971					
ViewSonic	1937	1462	1353			
Vision	1527	1518	1147			
Vision Plus	1879	1857				
Visual Innovations	1879					
VIVAX	1827	1915	1792	1551	1966	1906
	1869	1860	1820	1790	1608	1550
	1549	1498	1488	1441	1431	
Vizio	1748	1967	1752			
Vogells	1725					
Vortec	1459					
VOX	1502	1496				
Voxson	1527	1538	1518	1494	1459	1441
	1431					
VTQ	2007					

W

Waltham	1502	1423	1451			
Wards	1459	1202				
Watson	1451	1527	1459	2015	1802	1701
	1523	1518	1502	1494	1479	1443
	1147					
Watt Radio	2017	2012	2011	1538		
Wegavox	2011	1459	1458	1147		
Welltech	1527	1518				
Welstar	1451	1502	1701			
Weltblick	1459					
Wharfedale	1423	1441	1431			
White-Westinghouse	1451	1459	1434	2011	1770	1470
	1420					
Wilson	1869					
Windsor	1423	1451	2045	2015	1502	
Winston	1459	1458	1147			
Winternitz	1147					
Wizja	1430					
World of Vision	1527	1355	1316			
World-Tech	1149					

Worldview	1459	1434	1147			
X						
Xoro	1973	1809	1805			
Y						
Yalos	1956					
Yamaha	1839	1838	1833	1791		
Yevici	1147					
Yokan	1459					
Yoko	1502	1459	1770	2044	1294	1149
	1147					
York	1772	1459				
Yoshita	1459					
Yotaka	1459					
Z						
Zanussi	1732	1502				
Zenith	1612	1459				