
RF061A +IR Functional Specification

UPDATE NOTE

DATE	EDITION	NOTE	UPDATE BY
2012.2.17	V1.07	Added IR button code remark and delete button code of bin format in section7,added the remarks about default code 0281 in section13,added the Appendix list on the last page	Jin XianYong
2012.2.21	V1.08	Added IR distance spec in section14	Jin XianYong
2012.2.23	V1.09	Change angle of 15 degrees to angle of 30 degrees in section5.2	Jin XianYong

SUMMARY

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1. Keys: 27 individual keys



1.1 The Keys including:

1. Power,
2. Exit,
3. TV Power,
4. Page+/-,
5. Info,
6. 0-9 Digits,
7. Enter,
8. Volume +/-,
9. Channel +/-,
10. Last,
11. Mute,
12. Right Arrow,
13. Left Arrow,
14. Menu,
15. PROG

1.2 Protocol

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- a) Infrared from Universal North American Television Library for Volume +/-, Mute, & Power Toggle
 - b) Infrared 57kHz Cisco/Scientific Atlanta protocol on DTA
 - c) RF4CE for RF on DTA

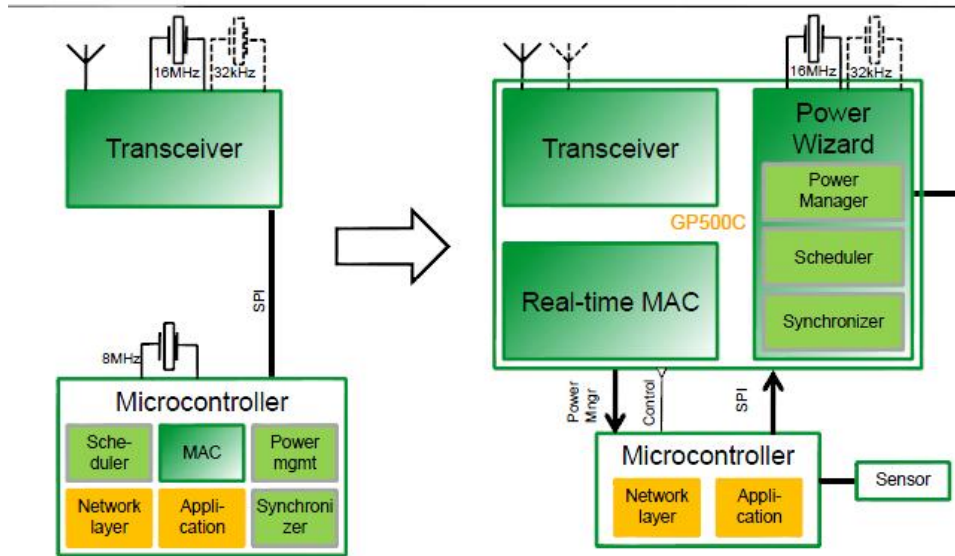
2. Development platform

The product will be developed based on a GP561 based RF Remote Control which adopts RF4CE protocol and the Universal Library.

GP561 supports :

- IEEE802.15.4 communication controller with PHY and All RF4CE-required MAC which provides a packet-level service to the RF4CE Network Layer, and handles packet transmissions and receptions autonomously.
- A low power Security Engine works independently from the PHY and MAC.
- The RF4CE Network layer which implements the RF4CE network functionality.
- The RF4CE Profile layer implements the ZigBee Remote Control (ZRC) profile, RF4CE profile 0x01: Consumer Electronics Remote Control (CERC).
- Application Configuration Data being stored in an external EEPROM
- A configurable set of peripherals including GPIO, Keyboard Scanner, IR, ADC, and TWI.
- Timing and Control for The GP561 is designed to work in an environment where low power consumption is very important

3. Blockdiagram



4. Battery

2AAA batteries

5. RF Range and IR range

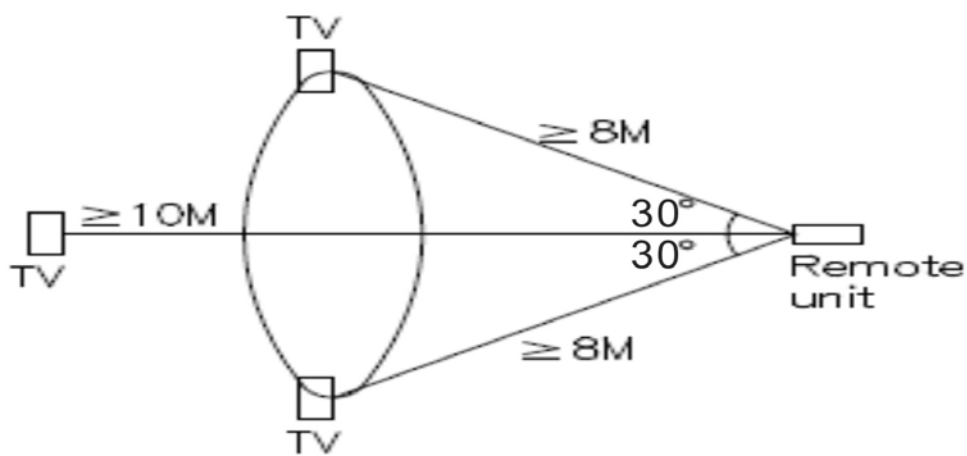
5.1 RF range

The remote control must support a transmission range of 16 meters in direct line-of-sight, 10 meters when not line-of-sight.

5.2 IR range

The remote control must support a transmission range of 10 meters in direct line-of-sight

The remote control must support a transmission range of 8 meters with the angle of 30 of degrees



6. Programming

6.1 Direct-Code-Entry programming

In this mode, user can program the code number directly. Look up the code in the code list for your TV brand.

1. Turn on your TV device.
2. Press “PROG” key for three seconds, the LED indicator will turn on, then press “TV Power” key
3. According to the TV brands, find the device code (four digits). Press to enter four digits code sequence.
4. If the device code is valid, LED indicator will blink two times quickly and then the device code will be retained. If this device code is invalid, the LED indicator will blink three times quickly. The remote control will retain the previous code. You can go back to the step 2.

6.2 Automatic Code Search

If you can't find the device code for your brand in the code list, you can try to search for your device code as follows:

1. Turn on your TV device .
2. Press and hold the “PROG” key for three seconds to enter Setup Sequence.
3. Press “CH+” key to enter the Automatic Code Search mode. The remote

control will transmit the TV power code every 1.5 seconds, the LED indicator will blink at the same time. When you see the TV device is powered off , it shows that the remote control has found one valid group device code. Then press the “TV POWER” key, the device code will be stored and the remote control will exit the search mod

6.3 Send volume control to IR TV/DTA

Key sequence to invoke the feature:

1. Press and hold “PROG” key for 3 seconds or until the LED turns on.
2. Press the “VOL-” key to assign the volume +,volume – and mute keys to control DTA.
3. Press the “VOL+” key to assign the volume +,volume – and mute keys to control TV.

Default state: volume+, Volume – and Mute keys to control DTA.

Remark: DTA Power button and TV Power button only use to power on/off TV/DTA.

7. Pairing the remote control and target (DTA)

User can adopt IR function to control DTA directly. If user wants to use the RF4CE function, the remote should be paired with the target (DTA) as steps below.

Pairing Scenario 1

1. Turn on your target (DTA) device.
2. Press “PROG” key until LED turns on, then press “Info” key.
3. The LED on the remote control will blink slowly to indicate that it is now in pairing mode.
4. The remote sends discovery request.
5. The target (DTA) responds after it has received a discovery request command.
6. The remote sends the pairing request.
7. The target (DTA) responds after it has received a pairing request command.
8. The target (DTA) will prompt the user via message on TV screen to enter a unique four digit number.
9. If enter the four digits are correct, the target (DTA) will prompt the user that pairing is successful.
10. If enter the four digits are incorrect, the target (DTA) will prompt the user that pairing failed and try again until correct code is entered.

Un-pairing Scenario

Once paired with a target (DTA), the remote can be unpaired using the following sequence:

1. Press and hold “PROG” key for 3 seconds or until the LED turns on.
2. Press <9> <8> <7>, LED will blink two times quickly to show procedure is successful.

8. IR Reset Mode

The configured TV IR codes can be reset to its factory default using the following sequence:

1. Press and hold “PROG” key for 3 seconds or until the LED turns on.
2. Press <9> <8> <6> , LED will blink two times quickly to show that procedure is successful.

9. Factory Reset Mode

At any time, the remote can be returned to the factory reset state using the following sequence:

1. Press and hold “PROG” key for 3 seconds or until the LED turns on.
2. Press <9> <8> <1>, LED will blink two times quickly to show procedure is successful.

Factory Reset Mode state :

1. The remote is in the IR mode. ;
2. RF function is invalid;
3. Vol+/Vol- us send to IR DTA
4. The IR codeset is 0281.

10. RF DTA switches to IR TV(IR TV switches to RF DTA)

10.1 The RC can switch to RF mode, this function will only be successful when the RC is actually paired with a target ; to switch to RF mode, use the following steps:

1. Press and hold “PROG” key for 3 seconds or until the LED turns on.
2. Press **VOL –** key.

10.2 The RC can switch to IR mode, this function will only be successful when the RC is actually paired with a target; to switch to IR mode, use the following steps:

1. Press and hold “PROG” key for 3 seconds or until the LED turns on.
2. Press **VOL +** key.

11.SA Protocol IR code

With this protocol the LSB is transmitted first:

KEY	CUSTOM CODE(HEX)	KEY CODE(HEX)
DTA Power	0x1B	0x07
TV Power	n/a	n/a
Info	0x1B	0x08
0-Digit	0x1B	0x19
1-Digit	0x1B	0x10
2-Digit	0x1B	0x11
3-Digit	0x1B	0x12
4-Digit	0x1B	0x13
5-Digit	0x1B	0x14
6-Digit	0x1B	0x15
7-Digit	0x1B	0x16
8-Digit	0x1B	0x17
9-Digit	0x1B	0x18
Enter	0x1B	0x0C
Volume + / (TV Vol +)	0x1B	0x20 / n/a
Volume - / (TV Vol -)	0x1B	0x21 / n/a
Arrow right	0x1B	0x04
Arrow left	0x1B	0x03
Channel + / arrow up	0x1B	0x1D
Channel - / arrow down	0x1B	0x1E
Last	0x1B	0x0E
Mute / (TV Mute)	0x1B	0x22 / n/a
Menu	0x1B	0x3E
Exit	0x1B	0x2C
Page+	0x1B	0x36
Page-	0x1B	0x37

12.RF4CE code

KEY	KEY CODE
DTA Power	0x6B
TV Power	N/A
Info	0x35
0-Digit	0x20
1-Digit	0x21
2-Digit	0x22
3-Digit	0x23
4-Digit	0x24
5-Digit	0x25
6-Digit	0x26
7-Digit	0x27
8-Digit	0x28
9-Digit	0x29
Enter	0x2B
Volume + / (TV Vol +)	0x41 / N/A
Volume - / (TV Vol -)	0x42 / N/A
Arrow right	0x04
Arrow left	0x03
Channel + / arrow up	0x30
Channel - / arrow down	0x31
Last	0x32
Mute / (TV Mute)	0x43 / N/A
Menu	0x0C
Exit	0x0D
Page+	0x37
Page-	0x38

13.TV Default code:0281

Device of TV code is 0281,TV brand is **Akai**. If TV default code is 0281,button code of“POWER”、
“VOL +”、 “VOL -” and “Mute” will be the list as below.

Key	Custom code	Key code
POWER	0x04FB	0x08
VOL +	0x04FB	0x02
VOL -	0x04FB	0x03
MUTE	0x04FB	0x09

14. IR distance spec:

Angles IR Test	Spec. (meter)	Spec. (ft)
0°	10	32.8
Right 30°	8	26.2
Left 30°	8	26.2
Right 45°	5	16.4
Left 45°	5	16.4
Right 60°	4	13.1
Left 60°	4	13.1
Top 30°	3	9.8
Top 45°	2	6.6
Bottom 30°	5	16.4
Bottom 45°	3	9.8
Close-in 0°	0.15 (max)	0.49 (max)

TV

888

A. R. Systems

0471 0701

0061 0601 2881 0661 0751

Accent

Acer

0021 0061 2881

2961 3281

Acoustic arch	2911	Andersson	1951 2041
Acura	0021	Anglo	0021 0471
Adcom	1061	Anitech	0021 0471 0061 2881 0481
Addison	1181 0201		0191
ADL	2181	Ansonic	1371 0061 2881 0021 1271
Admiral	0171 0231 1191 0821 0471		0661 0231 0191 0891 0461
Advent	1901		0431 2381 1621
Adyson	0081 2051	AOC	0021 0101 0171 0201 0281
AEA	0061 2881	Aolingpike	0471 0701
AEG	2501 1031 1951	Apollo	0761
Agashi	2051 0471 0081	Arc en Ciel	0211
AGB	1611	Arcam	2051 0081
Aiko	0021 0061 2881 2051 0641	Ardem	1221 1351 0061 1101 2881
	0041 0711 0121 0311 0291	Aristona	2881 0061
	0471 0081	Arthur Martin	0231
Aim	0061 0121 0701 2881 1521	ASA	1621 0181 0581 0111
	0341 1651 1701 1301	Asambal	2721
Airis	3221	Asberg	0061 2881 0191
Aiwa	0981 2341 2581 2401	Asora	0021
Akai	0021 0311 0341 2881 0061	Astra	0061 2881
	0641 2741 2431 0711 1481	Asuka	0351 0081 2051 0471 0481
	0291 0041 0351 1241 2641	ATD	1301
	0121 1521 0231 0701 1421	Atlantic	0061 2881 2051 0531 0461
	1351 1611 1341 0991 0911	Atori	0021
	0771 3121 0081 1091 2051	Auchan	0231
	0471 0281 0651 1031 2001	Audiosonic	0021 0061 0661 1721 0211
	2581 0761 1151 2421 2271		2881 1351 1341 0081 1371
	2601		0561 0471 0351 1221 2191
Akashi	2151 0021	Audioton	0081 1221 1371 0471
Akiba	0351 0481 0751 0061 2881	Audioworld	1301
Akira	0821	Aumark	0101
Akito	0061 2881	Autovox	0081 0431
Akura	0061 0351 0471 2881 1271	AVP	2581
	0701 0021 0481 1351 2621	AWA	0021 0031 0051 0661 0701
Alaron	2051		0061 2881 2051 1031 0081
Alba	0021 0061 2001 2881 0051		0201 0471 3021
	1351 0351 0821 1371 0641	Axxent	0021
	1271 0621 2051 0431 0231	Axxon	1351
	0811 2581 0731 2601	B&D	2181
Alfide	1241	Baier	1901
Alkos	0041	Baihe	0021 0471 0701
All-Tel	1881	Baile	0001 0021 0661 1211
Allorgan	0081	Baird	0211 2651 0301 0121 0131
Allstar	0061 2881		0081 0341 2091
Ambassador	0271	Bang & Olufsen	0951
Amplivision	0081 1371 0531	BaoHuaShi	0471 0701
Amstrad	0021 0271 0061 1611 0471	Baosheng	0021
	0671 0641 0351 0701 0711	Barco	0231
	2881 2001 1151 2621	Basic Line	0021 0661 0061 0351 0231
Anam	0061 2881 0021 1161 1871		1271 2881 0481 0081 0751
Anam National	0061 2881 1161		0571 2001

Bastide	0081	1271 0621 0231 0641 0661
Bauer	1701 0021	2661 1301 1191 0471 0311
Baur	0021 0061 0311 0791 0881 0011 2881 0291 2401	0811 0341 0081 2501 2881 2521 2581 1591 2421 2271
Bazin	0081	2341 3401
Beaumarck	0281	Caihong 0021
Beijing	0001 0021 0341 0371 0471 0661 0701 0801 1211 1741	Caishi 1971 Canton 0351
Beko	1371 1351 0041 1221 1341 0061 0821 2001 2881 1031 1821	Capsonic 0471 Carad 1011 0061 2881 1271 2001 Carena 0751 0061 2881 Carrefour 0051 0111 0061 2881 Carver 0261 Cascade 0021 0061 2881 Casio 0061 2881 0231 Cathay 0061 2881 CCE 0061 0081 2881 2641 CE 2721 Celestial 1711 1721 1741 2681 Centrex 1631 1971 Centrum 2001 Centurion 0061 2881 Century 0431 CGE 0141 0251 0431 0821 1371 0231
Belson	2071 2711	Changcheng 0001 0021 0471 0661 0701 1211
Bennett	2881 0061	Changfei 0021 2641 0661 Changfeng 0471 0701 1521 Changhai 0021 2641 Changhong 2681 1721 0021 0471 0871 1741
BenQ	2511	Chengdu 0021
Beon	0061 2881 0821	Ching Tai 0021
Berthen	1271	Chun Yun 0021 Chunfeng 0021 0471 Chung Hsin 0201 0051 ChungFeng 0701 Chunsun 0021 Cimline 0021 0351 Cinema 1241 Cinex 1151 2501 Citizen 0101 City 0021 Clarivox 0061 0821 2881 0111 0191 Clatronic 0061 0431 1371 0641 1351 0351 0471 2881 0081 0021 0191 0531 1151 1031 1951
Best	0561 1371	Clayton 2001
Bestar	0061 2881 1371 0661	CMS 2051 CMS hightec 0081
Bestar-Daewoo	0661	
Binatone	0081	
Black Diamond	1001 1721 2001 2881 1741 1521 1951	
Black Panther	0191	
Black Star	0431	
Black Strip	0041	
Blackway	0481 0351	
Blaupunkt	0011 0291 0881 0551 0401 0331 0751 0261 0051	
Blue Sky	0061 0351 2881 1271 1351 2001 0811 1341 2411 0481 0751 2581 2071 1821 2971	
Blue Star	0481	
Bondstec	0431	
Boots	0081 0021	
Bosch	0531 0401	
BPL	0061 0481 3111 2881 2721 2841 0341 2551 2811 2691 2791 3131 3391 3251 3101	
Brandt	0211 1061 0441 0491 2651 0961 2981	
Brandt Electrique	0491 0441	
Brinkmann	0061 2881 1271 2661 0821 1221	
Brionvega	0061 0671 2881	
Britannia	2051 0081	
Brother	0471	
Bruns	1221	
BSR	0231 0311	
BTC	0351	
Bush	0021 1001 0051 2001 0061 1201 3231 0351 1351 0481	

Cobolt	1971	Deitron	1891 1051 2581
Combitech	2581	Dell	0061 2881 0661 0351
Concorde	0021	Denko	2281
Condor	0531 0061 1371 2881 2051	Denver	0471
	0021 0481 0191 0431 0821	DER	0061 2881 1031 2061 1281
	0891 0231 0471	Desmet	0301
Conia	1531 1741 2711 1721	Diamant	0531 0061 2881 0021
Conrac	1821	Diamond	0061 2881
Conrad	0061 2881		0471 1301 0021 1731 2051
Conrowa	0021 0471 0701 1301 1521		0641 2151 1721
	2031	Digatron	0061 2881
Contec	0021 2051 0051 0031 0471	Digihome	2041
	0061 2881	Digiline	0061 2881 0181 1271
Continental Edison	0211 0491 0811	DigiLogic	0061 2881
Cosmel	0021 0561 0061 2881	Digitex	1721
Crosley	0141 0431 0251 0231	Digitor	0061 2881 1941 1871
Crown	0021 1331 0061 1371 1221	Digivision	0311
	2881 0821 0811 1351 1031	DigiX	1931
	1241 1341 0341 1181 0571	DiK	0061 2881
	2001	Dixi	0021 0061 2881 0431 0081
Crown Mustang	1241	DL	1971 1631 0061 1281 1881
CS Electronics	2051 0351 0431	DMTECH	3411 2951
CTC	0431	Domeos	1271
CTX	2511	Domland	0691
Curtis Mathes	0101 0171 0241	Dongda	0021
Cybertron	0351	Donghai	0021
Cytronix	2321	Dream Vision	2481
D-Vision	0061 2621 2881	DSE	1941 1871 2501 1721
Daewoo	1111 1211 0661 2411 0861	DTS	0021
	0061 2881 0021 2051 0351	Dual	2661 0081 2651 0061 2881
	0081 1891 0281 0261 2531		0461 0601 0691 0231 1891
	2581 1931 0201 2931 3361		1091 2041 2001
	1901 1881 1241	Dual Tec	0081
Dainichi	0351 2051	Dumont	0111 1621 0191 0081 0121
Daitso	2891	Dunai	0231
Danichi	0351	Durabrand	0061 0281 2381 2881
Dansai	0061 2881 0471 0041 2051	Dux	0061 2881
	0021 0051 0081 0341	DVX	1971
Dansette	0701	Dynatron	0061 2881
Dantax	1371 1221 1351 1031 1341	e:max	1031
	2581	Easy Living	2271 2421
Datsura	0341	Ecco	1581 1651
Dawa	0021 0061 2881	ECE	0061 2881
Daytek	1301 2101 1651 3021 1241	Edison-Minerva	0811
	3011	Elbe	0461 0721 0671 1371 0231
Dayton	0021 2101 3011		0061 2881 0351 0291 0891
Daytron	0021 0661 0061 2881		1011 0081 1611 0311 2251
Dayu	0661 1211	Elbe-Sharp	1611
de Graaf	0341 0071 0911 0231 1191	Elcit	0431 1611 0191 0231
DEC	1661 2151 1971	Elekta	0021 0061 2881 0471 0481
Decca	0061 0121 1611 2881 0081	Elfunk	2121 2001

ELG	0061 2881	2881 1351 0581 0891 1611
Elin	0061 2051 0911 2881 0181 1621 0311 0231 0021	0081 0231 1341 0191 1091 0841 0771 2501 0761 0821
Elite	0351 0061 0531 2881	1031 1051 1821
Elman	0191	Firststar 0021
Elta	0021 0471 2051	Firstline 0021 0061 2051 2881 0081
Emco	0431	0661 0431 1271 0541 1351
Emerson	0271 0281 1351 0431 0061 2881 0641 0111 0481 0531 0311 2411 1221 1371 0231 0541 1271	0231 2411 0191 0891 0121 0341 0311 2001 2071 1821 2971 1951 2991
Emperor	0481	Fisher 1621 0081 0051 0341 1371 0941 0091 0311 0231 0121
Enzer	1521	Flatdisplays 2701
Erae	2991	Flint 0061 0751 2881 1011 0121 0351 0471
Erres	0061 2881	FNR 0191
ESC	0061 2881 0081	Fonda 2831
Estèle	0231	Force 2041
Ether	0021	Forgestone 0301
Etron	0001 0021 0061 2881 0231 1721	Formenti 0061 0231 0531 2881 1221 2051
Eurofeel	0471 0081	Formenti-Phoenix 2051 0531
EuroLine	0061	Fortress 0171
Euroman	2051 0471 0061 2881 0081 1371	Fraba 0061 2881 1371
Europa	0061 2881	Friac 0021 0061 2881 0191 1371 0861 1171 1011
Europhon	0061 1611 0191 0231 0081 2881 0431 2051	Frontech 0231 0431 0471 1191 0081 0021
Evesham	2271 2421	Fujimaro 1881
Excel	0061 2881	Fujitsu 1261 0121 0191 1861 0081 0231 0021 0601 0061 2881 0311 0461
Expert	0461 0231	Fujitsu General 0021 0081 0231
Exquisit	0061 2881 0431	Fujitsu Siemens 2321 2421 2271 3001 1951 1821
Fagor	0061 2881	Funai 1271 0471 0701
FairTec	2071	Furi 0471 0701
Family Life	0061 2881	Furichi 2151
Feilang	0021	Futronic 0471 1661 2151
Feilu	0021	Future 0061 2881
Feiyan	0471 0701	G-Luxon 3221
Feiyue	0021	Galaxi 0191 0061 2881 0311 0231
Fenner	0661 0021	Galaxis 1371 0821 0061 0191 2881
Ferguson	0061 0131 0211 1061 0491 0441 2651 0961 0301 2881 0041 1181 1621 0201 0311 0911 0731 2001 3211 2341 2581	Galeria 0021
Fidelity	0231 2051 0791 0311 1191 0061 2881 0641 0701 0301 0471 2581	Gateway 2511
Filsai	0081	GBC 0231 0021 0661 0351 1191
Finlandia	0341 0581 0911 0311 0231 1191 0121 0491 2651 0091	GE 2651 0281 0481 0961 0491 0211 0441 1061
Finlux	0061 0181 0111 1621 0121	Geant Casino 0231
		GEC 0061 0231 0311 0121 0081 1611 2881

Geloso	0021 0431 1191 0231 0661	Haihong	0021
General	0211 0491	Haiyan	0471 0701
General Electric	2651 0491	Halifax	0471 2051 0081
General Tehnic	0021	Hallmark	0281
Genesis	0021 0061 2881	Hammerstein	0471 0101
Genexxa	0231 0351 0061 2881 0701	Hampton	2051 0081
	0021	Hanimex	0351 2581
Gericom	1881 2321 2771 2181 1931	Hankook	0281
Gevalt	2991	Hanseatic	0061 0531 2881 0311 0861
Giant	0081		2661 0231 1211 0481 0691
Gintai	1391		1111 1371 0021 0081 0651
Goldfunk	1271		1351 1821 1221
Goldhand	2051	Hantarex	0021 1611 0061 2881 0191
Goldline	0561		2951 3141
GoldStar	0001 0061 0021 0281 1371	Hantor	0061 2881
	0651 0081 0431 2881 2051	Harsper	1881
	0231 0311 0211 1191 1031	Harwa	1581 2091 2301
	0071 1351 1341 0751	Harwood	0021 0701 0061 2881 0811
Gooding	0811	Hauppauge	0061 2881
Goodmans	1111 2421 0051 2001 2271	Havermy	0171
	0061 0121 0861 0081 2881	HCM	0021 0481 0701 0061 2881
	1351 2651 1271 0641 2411		0081 0351 0821 0471
	0661 0471 1611 0021 0811	Hedzon	2881 0061
	0041 0771 0961 0441 0351	Hema	0081 0021
	2581 2251 1211 2521 1931	Hicon	3191
	2191 1281 3021	Hifivox	0211
Gorenje	1371	Higashi	2051
GPM	0351	Highline	0471 0061 2881
Gradiente	1181 0261 2731 0061 2881	Hikona	0351
Graetz	0231 1351 0311 0641 0061	Himitsu	1601
	0571 2881 1951	Hinari	0021 0341 0051 0061 2881
Gran Prix	1151		0351 0231 0621 0731 0811
Granada	0061 0091 0121 2881 0341		0471 2581
	0371 0081 0571 1611 0201	Hisawa	0481 0351 0751 1011 2581
	0051 0761 0441 0961 0231		1351
	1191 0361 2651 0911	HISense	2971 0341 0021 0871 1521
Grandin	0061 0481 2881 0021 0231		1741 2031 2121 1631 2881
	1011 1351 1341 1271 0661		3121
	0531 0351 0751 2001 1881	Hitachi	0361 2211 0021 0971 0051
	2071 1931 3011 3031		0071 0201 0761 0231 2651
Gronic	0191 0081 0231		0081 0211 0321 0281 1611
Grundig	0011 0021 0051 0061 0111		0121 0781 0861 0061 0871
	0281 0291 0721 0731 0811		2881 0911 1191 1381 1111
	0871 0881 2881 1021 1241		1491 2001 1891 2031 0181
	1281 1371 1471 1651 2191		0841 2391 0311 0791 0771
	2201 2251 2341 2581 2601		1991 2451 2041 1911
	2651 2991 3021 3441	Hitachi Fujian	0201 0361
Grunkel	1951	Hitsu	0021 1011 0751 0351
H&B	1821	HMV	0301
Haaz	1651	Höher	1351 2501 1881 1951
Haier	1301 0471 1601	Home Electronics	1031

Hongmei	0021 0171 0471	Interfunk	0061 0231 2881 0431 0311
Hongyan	0471 0701		0791 0401 1371 0211 0551
Hornyphon	0061 2881	Internal	0061 2881 0861 0661 2411
Hoshai	0351 0751 0481	International	2051
Hua Tun	0021	Intervision	0061 0481 0081 0191 0751
Huafa	0021		0471 0641 0651 2661 1221
Huanghaimei	0021		1371 0691 0811 0351 0231
Huanghe	0021		0431 0021 2881
Huanglong	0021	Irradio	0021 0061 2881 0351 0431
Huangshan	0021 0471 0701		0641
Huanyu	2051 0661 0471	IRT	1301
Huaqiang	0471 0701	Isukai	0351 0061 2881 0481 0751
Huari	0471 0701	ITC	0081 0531
Hugoson	1961 2181	ITS	0061 0641 0351 0481 0471
Hygashi	0081 2051		2051 0021 2881
Hyper	0021 2051 0081 0431	ITT	0231 0311 0771 0911 0761
Hypersonic	0311		0301 0581 0571 0341 1011
Hypson	0061 0471 2881 0481 1351	ITT Nokia	0311 0911 0231 0761 0771
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	1271 1221		1091 1191
Hyundai	0061 1881 3201 2881 1651	ITV	0471 0061 2881 0431 0661
	2151 1521 2751 2241 1901	JDV	2621
	3361 2501 3301 3311	Jean	0051 1391 0021
Iberia	0061 2881	JEC	0041
ICE	0081 0471 0061 0641 0021	Jialicai	0021 0471 0701
	2881 0351 2051	Jinfeng	0341 0371
Ices	0351 2051	Jinque	0021 0471 0701
Ict	0061 1891 2881	Jinta	0021 0471 0701
Igo	2781	Jinxing	0021 0471 1301 1741
IISonic	3021	JMB	0061 0861 1111 0661 2881
Iiyama	2181 1961		0731 2581
Imperial	0061 0141 0231 0431 1371	JNC	3411 1901
	0821 0251 2881 2251 0891	Jocel	1331
	0311	Jubilee	2881
Imperial Crown	0001 0021 0471 0661 0701	Juhua	0471 0701
	1211	JVC	0051 0171 0301 0351 0641
Indiana	0061 2881		0821 0871 1031 1161 1181
InFocus	2021 2771		1261 1451 2731 3481
Ingelen	0231 0811 1011 1351 0311	Kaige	0021 0471 0701
Ingersoll	0021	Kaisui	0021 0351 2051 0481 0061
Inno Hit	0021 0121 1611 0061 2881		0081 2881 0751
	0351 0081 0431 0191 0481	Kambrook	0651
	1951	Kamp	2051
Innova	0061	Kanghua	2551
Innovation	2661 0061 2881	Kangli	0001 0021 0471 0661 1211
Innowert	1881 2321	Kangyi	0021 0471 0701
inotech	1581 1721	Kapsch	0231 0311 0461 1621
Interactive	0061 2881 0791 0401 0231	Karcher	0061 2881 1371 1011 0231
	0311 1371 0211 0891		0481 0191 0471 1591 1351
Interbuy	0021 0061 0471 0431 0791		2501 1031
	2881	Kathrein	2881 0061

Kawa	0641	Lenoir	0021
Kawasho	2051	Lesa	0431
KB Aristocrat	0231	Levis Austria	0061 2881
Kendo	0061 1011 0671 2881 0231	Lexsor	2091
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	0891 0191 0431 1151 2001	LG	0001 0021 0061 0081 0101
	2381 1221		0201 0211 0231 0281 0311
Kennedy	0231 0721		0431 0651 2881 1031 1131
Kennex	2001		1301 1341 1351 1371 1761
Kenwood	0181		1851 2051 2071 2261 2801
KIC	0081 2641		2851 2921 3081 3471 3501
Kingsley	2051		3531 3591
Kiota	0001	Liesenk & Tter	0061 0401 2881
Kioto	2881 1651	Liesenkotter	0061 0401 0331 2881
Kiss	1681	Lifetec	0061 0021 2661 0661 1271
Kiton	2881 0061 1271		0791 1171 2001 1891 2881
KLL	0061		0351 0471 1261 2271 2421
Kneissel	0061 0461 1371 1011 0891		1351
	0661 0861 2881 0721 0671	Lloyd's	0001 0021
	2581	Local Calcutta TV	3171 2831 2841 2721
Kobra	3191	Local Chennai TV	0641 3171 0471 0991 3261
Kolin	0201 0051		2831 3051 3091 0021
Kolster	0061 2881 0191 0431 0351	Local Delhi TV	2741 3231 3171 3261 2831
Kongque	0021 0471	Lodos	2001 2041
Konichi	0021	Loewe	0791 1101 1641 0061 2881
Konka	0061 2881 0641 1351 0821		1171 1371 0671 1611
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	2711 1661		0021 0301 0471 0641 1931
Kontakt	0811		2181 2001
Korpel	0061 2881	Logix	1271 2661
Korting	1371 0531	Longjiang	0471 0701
Kosmos	0061 2881	Luker	2621
Kotron	0701 0471	Luma	0061 1191 0231 0891 2881
Koyoda	0021		0661 0021 0671 0461
KTV	0081	Lumatron	1191 0061 2881 0671 0231
Kuaile	0021 0471 0701		0461 0311 0081 0471 0131
Kuba	0231	Lux May	0061 0021 2881
Kuba Electronic	0231	Luxor	0321 1951 0311 1191 0771
Kulun	0021		0841 0341 0911 0231 0581
Kunlun	0341 0371 0471 0661 1211		0761 2001 0081 1091
Kyoshu	0701 0821 0471	LXI	0281
Kyoto	0231 2051 0081	Madison	0061 2881
L&S Electronic	1881 1351	Magnadyne	0191 0431 1611 0231
LaSAT	1221 1371	Magnafon	0191 1611 2051 0131
Lavis	2001 0061 0231	Magnavox	0061 2881 0051 1651 1631
Leader	0021	Magnum	1151 1351 0061 2881 1341
Lecson	0061 2881		2311
Legend	0021 0561	Mandor	0471
Lemair	0891	Manesth	0061 0081 2881 0471 0531
Lenco	0061 1391 0021 0231 0661		0041 0231 1191
	2881 1621 1281 2001	Manhattan	0061 1901 2881 1271 2001

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Marantz	0061 2881 0701 3311	Minoka	0701 0061 2881
Mark	0061 2881 0081 2051 0661	Mirror	2521
	0021 1351 1341	Mistral Electronics	0301
Master's	0861 0061	Mitsubishi	0201 0171 0791 0061 0281
Masuda	0351 0641 0021 0471 0061		0051 0301 0881 2881 0341
	0081 2881		2001 2371
Matsui	0021 0061 0031 2881 0041	Mitsuri General	0231
	0811 0051 0121 0271 0341	Mivar	2051 1611 1371 1141 0081
	0621 0081 0641 0731 0711	Monaco	0021
	1611 1191 0751 0231 0091	Morgan's	0061 2881
	0011 0291 0441 1351 2581	Motorola	0171
	2001 2341	MTC	0101 1371 0791 0231 2051
Matsushita	1161		0311
Matsuyama	1281	MTlogic	1351 2191
Maxam	0471	Mudan	0021 0341 0371 0471 0701
Maxdorf	1581	Multibroadcast	0301
Maxim	2621 2501	Multistandard	0191
MCE	0021	Multitec	0061 2881 1221 1271 2001
ME	2721		2501
Mediator	0061 2881	Multitech	0021 0191 1191 2051 1221
Medion	0061 1271 1351 2001 1821		0061 0081 1371 2881 0431
	2661 2881 0791 1891 1301		0471
	2581 2381 2521 2271 2421	Murphy	1621 2051 0121 0231
	1931 2311 2341	Musikland	0061 0351 0431 2881
Megas	1011	MyCom	3021 0281
Megatron	0281	Myryad	2881 0061
MEI	2001 0061 2881	NAD	0241 0281 0311 0231
Meile	0471 0701	Naiko	0061 2621 1031 2881
Melectronic	0021 0581 0061 0791 1621	Nakimura	0661 0061 2881
	0211 2651 0231 0431 0181	Nanbao	0021 0471 0701
	0081 0491 0661 0771 0841	Nansheng	0471 0701
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Memorex	0021 0281 2001 1161 0101	NAT	0371
Memphis	0561 0121 0021	National	0371 0341 0871
Mercury	0001 0061 0021 1301 0471	NEC	0021 0031 0051 0061 0081
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Merritt	0911 0311 0231		0701 0751 0861 0871 2881
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Metz	0681 0881 0741 1511 0631		2031 2481 2901 3551
	1951 0011 0291 0061 2881	Neckermann	0061 0291 1371 2881 2401
	1281 1271 2001 3321		0551 0231 0401 0821 0431
MGA	0281 0061 2881 0351 1621		0081 0891 0531 1191 0791
Micromaxx	0061 2881 1271 2001 2251	NEI	0061 0561 2881 0641 0231
	1821	Neovia	2771 1881 3411 3001 2991
Microstar	1821		1901 3021 3041 2951
MicroTEK	1721	Nesco	0431 2581
Mikomi	2041	Netsat	0061 2881
Minato	0061 2881	Network	0561
Minerva	0111 0811 0881 0011 0291	Neufunk	0061 0021 2881 1011 0351

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New Tech	0061 0021 2881 2651 0081		0061 0661 0621 2881
New World	0351	Osio	0061 2881
Newave	0021 1391 0281 0171	Oso	0351
Nfren	1681	Osume	0121 0051 0351 0061 2881
Nicamagic	2051	Otto Versand	0051 2401 0061 0081 0531
Nikkai	0121 0041 0351 0061 2881		2651 0171 0791 0881 2881
	2051 0081 0471 0561 0021		0011 0291 0311 0211 0371
	0051		0431 0021 0481 1611 2661
Nikkei	1351	Pace	2581
Nikko	0281	Pacific	0061 2881 1891 1351 2001
Nippon	2831		0731
Nishi	0801	Pael	2051
Nobliko	0191 0111 2051	Palladium	1371 0061 0821 1171 0891
Nogamatic	0211		2251 1351 1891 0291 2401
Nokia	0311 0231 0761 0771 0911		0551 2881 0431 0401 0231
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Nordic	0081		0081 0651 0351 1301 2881
Nordmende	0211 1351 1971 0491 2651		0001 0821 2761 1591 2091
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	0231 2421 2271	Panama	0021 0081 0471 2051 0061
Norfolk	0231		2881 0431
Normerel	0061 2881	Panashiba	0001
Novak	0061 2881	Panasonic	0001 0061 0101 0201 0231
Novatronic	0061 0181 0661 2881		0281 0311 0341 0371 0631
Novita	3041		0871 0911 2881 1161 1611
NU-TEC	0751 1301 1721 0061 2881		1841 1861 2361 2461 2551
Nurnberg	0231 0311		0501
Oceanic	0231 0311 0341 0761 0911	Panavision	0061 0891 2881
	0771	Panda	0021 0341 0371 0471 0701
Odeon	0471		0871 1301 1741
Okano	1371 0061 2881 0471 0121	Papouw	0061 2881
	0021	Pathe Cinema	0231 2051 0531 1371
Olidata	3021	Pathe Marconi	0211
Omega	0471	Pausa	0021
Omni	1631 1971 1301	Peng Sheng	1971
Onida	2721 0931 2781 2861 1181	Penney	0101 0281
Onwa	0641 0991 0351 0711 0191	Perdio	0531 0121 0231 0061 2051
Opera	0061 2881		0481 2881
Optimus	1161 0241	Perfekt	0061 2881
Optonica	0171	Philco	0251 0141 0821 0431 0061
Orbit	0061 2881		2881 0231 1371 0281 2661
ORcom	3071 3291		0781
Orion	0061 0271 0731 0621 2881	Philex	0301 0231
	2351 1351 0531 1171 0541	Philharmonic	0081
	0031 1611 0021 0191 0471	Philips	0021 0061 0151 0551 0201
	0701 2341 2581 1931 2091		0281 0291 0301 0311 0331
Online	0061 0351 2881		0391 0661 2881 1021 1081
Ormond	1271 2001 0061 2881		1391 1571 2511 2651 3271
Orsowe	1611		3451 0921 3541 3571

Phocus	2311 2191 1351	R-Line	0061 2881 0231
Phoenix	0061 2881 1371 1221 0231 0121 2051 0531	Radialva	0211 0351 0231 0061 2881 0491 0561
Phonola	0061 2881 0301 2051	Radiola	0061 2881 0081
Pilot	2881 0061 1331 1651	Radiomarelli	1611 0431 0061 2881
Pioneer	1551 0031 0241 0061 0211 0261 0231 1251 2881 0491 2871 1371 2651 0311 1221 0791	RadioShack	0061 2881 0281
Pionier	1371 1221	Radiotone	0021 0061 2881 1371 0821 0701 1151 1271 0471 2001
Plantron	0061 2881 0471 0021	Rank	0111
Playsonic	1351 0061 0081 0571 1341 3401	Rank Arena	0051 0991 1521
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Polytron	0481	RCA	1061 0101 0171 0281 0961 0441 1041 2651 1251 1521
Poppy	0021	Realistic	0281
Portland	0661 2411	Recor	0061 0821 2881
Powerpoint	0811 0061 2881 1301 2711	Rectiligne	0061 2881
Prandoni-Prince	0431 1611 0311 1191	Rediffusion	0311 0911 0051 0581
Precision	0081	Redstar	0061 2881
Premier	0021 0471	Reflex	0061 2881 2001 1271
President	2151	Relisys	1881 1901 1911 2771 2101 2171 2321
Prima	0021 0471 0701 2301	Reoc	1351 1111 2411
Princess	1301	Revox	0061 2881 1371
Prinston	2001	Rex	0231 0461 0471 1191 0891 0431
Prinz	0121 0311 0321	RFT	1371 0121 0471 0061 2881 1221
Profex	0021 0231 0311 1191	Rhapsody	2051
Profi	0021	Ricoh	0061 2881
Proline	0061 0541 2881 1061 1111 2251 0891 0121 1051 3021	Rinex	1581 0821
Prosonic	0061 2881 1371 0661 0641 1271 1351 2051 0081	Roadstar	0021 2001 0351 0471 0821 0061 2881 1351 1271 0481 2341 2061 2521
Protech	0021 0061 2881 0191 0081 0431 0471 0561 0821 1271 0481 0231 1221 2001	Rodex	0061 2881
Proton	0001 0281 0021 1131	Rover	0051 1911
Provision	0861 0061 2881 2001 1351	Rowa	0061 0471 1301 0021 0081 1331 2051 1281 2881
PVvision	2071 1901	Royal Lux	1371 0701 0441
Pye	0061 2881 0661 0701	Rukopir	2881 0061
Pymi	0021	Saba	0211 1061 0231 0491 0961 0441 2651 1611 0311 0851 0911 1161 1351
Qingdao	0341 0371 0471 0701	Sagem	1011 0751 0481 1771 1041 3351
Quadral	0351	Saige	0021
Quasar	0431 1161 1881 0021	Saisho	0021 0031 1611 0271 0471 0081 0231
Quelle	0031 0061 2401 0111 0141 1621 0311 0701 0211 0881 0791 0291 0051 0081 0431 0401 0251 0331 0181 1271 2881 0011 0551 0471 2001 0581 0021	Saivod	0061 2621 2881 1951 1271 1331 2001
Questa	0051	Sakai	0231
		Sakyno	0751

Salora	0231 0321 0311 0911 1611 1191 0571 0341 0771 1051	Seleco	0231 0461 0671 1191 0891 0641 0051 0471 0581 0721
Salsa	0441	Sencora	0021
Sambers	0191 1611	Sentra	0041 0351 0021
Sampo	0021 0051 0171 0281 1161 1391	Serino	1011 0751 2051 0171
Samsung	0021 0061 0081 0101 0121 0171 0231 0281 0341 0371 0471 0801 2881 1041 1061 1131 1281 1371 1741 2051 2111 2221 2641 2661 2671 3241 3341 3371 3771 0411 3601 3631 3661 3691 3721 3831 1231 1501 1751 1801 0901 1311 2291 1691	Shancha	0471 0701
Sandra	2051 0081	Shanghai	0021 0341 0371 0471 2641 0701
Sanjian	0471 0701	Sharp	0051 0171 0301 0331 0451 1611 1181 1551 1951 2081 2371 0021 1161 0551 3611 3641
Sansui	0061 1171 1421 2881 1651 0641 1411 3051 1871 2821 0991 0751 1941 1521 2991	Shen Ying	0021
Santon	0021	Shencai	0021 0471 0701
Sanyo	0341 2121 1391 0031 0051 0091 1371 0571 0121 2051 1621 0081 0941 0701 0021 0871 0231 0061 0201 2881 1221 0261 1321	Sheng Chai	0021
Sanyuan	0021 0171	Sheng Chia	0021 0171
Save	0061 2881	Shenyang	0021 0471 1521
Saville	2581	Sherwood	0021
SBR	0061 2881 0301	Shintoshi	0061 2881
Schaub Lorenz	0311 0911 1351 1031 1221 0661 2071	Shivaki	0061 2881 0731 0661 0281
Schneider	0061 1891 0351 0431 2881 0641 2661 1271 0691 0601 0461 2651 0081 0311 2001 0231 1151 1351 2411 2581 2621 2341 0111	Show	0821 0021 0121
Scotch	0281	Siarem	0191 1611 0231
Scotland	0231	Siemens	0061 0291 0011 0881 0551 0401 0331 2881 0311
Scott	2061 0281	Siera	0061 2881 1281
Sears	0281	Siesta	1371
Seaway	1111	Silva	0061 2881 2051 0311 1151
Seelver	2881 2001 0061	Silva Schneider	2501
SEG	0051 0061 0081 2881 0471 2001 1271 2381 0811 0021 0231 1111 0191 0431 0671 2051 1951 0351 2411 1351	Silver	0051 0061 0751 0311 2881 1341 0231
SEI	0191 0271 1611 2401 0231 0061 2881	SilverCrest	2001 0061 2881
Sei-Sinudyne	0191 1611 2401 0061 2881	Singer	0021 2431 0061 2881 0191 0431 0721 0441 0231
Seitech	2181	Sinotec	1581
		Sinudyne	0191 0271 1611 0231 0311 2401 0061 2881 2581
		Sky	0061 0481 1931 0281 2881 3071
		Skymaster	0181
		Skysonic	1521
		Skyworth	0061 2881 0021 0471 1301 1411 1521
		Sliding	1881 1931 3011 3031 1681
		SLX	1271
		Smaragd	0811
		Soemtron	1881 2321
		Sogera	0531
		Solavox	0231 0311 0121 0911 0061 2881
		Sonawa	0351
		Sonber	0191

Songba	0021	Sydney	2051 0081
Soniko	0061 2881	Synco	0051 0101 0171 0281
Soniq	3191	Sysline	0061 2881
Sonitron	0341 1371 0571 0081	Sytong	2051
Sonneclair	0061 2881	T+A	0741
Sonoko	0021 0061 2881 0471 0481 0081	Tacico	0281 0021
Sonolor	0231 0341 2401 0911 0311 0481	Tai Yi	0021
Sontec	0061 2881 1371 0021	Taishan	0021 0661
Sony	0031 0051 0061 0141 0171 0191 0261 0611 2881 1161 1791 1981 2331 2401 2471 3381 3701 3621	Tandberg	0631 0891 0211 0561 0671 0311 0231
Sound & Vision	0191 0351 0661 0061 2881	Tandy	0351 0121 0171 0081 0231 0431
Soundesign	0281	Targa	2991
Soundwave	0061 0821 2881 0531 1341	Tashiko	0051 1391 0081 1161 0261 2051 0231 1191
Sowa	0101 0371 0051 0281	Tatung	2501 0021 0051 0061 2881 0121 1611 0101 0081 0031 1051 2581 2511 2991 2421 2271 2071
Soyea	1581	TCL	1411 2721 0701 1301
Spectra	0021	TCM	1351 2311 1821
Ssangyong	0021	Teac	0021 1301 0061 0791 0471 0481 2381 0701 2001 0821 2881 0751 1331 1271 0081 1651 1391 2411 0281 0261 1351 2041 2491
Staksonic	0021	TEC	0081 0431 0021 0441 0561 0461 0061 2881 0311 0231
Standard	0021 0061 0081 2881 0351 2001 0531 0661	Tech Line	0061 2881 1271 2381 1951
Starlite	0021 0231 0061 2881 0471 0701	Tech Lux	2061
Stenway	0481 0351	Techica	0351
Stern	0231 0461 1191 0471 0891 0721	Technema	0531
Stevison	2621 2501	Technica	2621
Strato	0061 2881 0471 0021	Technics	1161
Strong	1951 2041 2001 0061 2881 2701	TechniSat	1171 0061 2881 0231 2891
Stylandia	0081	Technisson	1351 2311
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Sunkai	0541 0621 0751 0351 1011 0061 2881 0811 1881	Techwood	1951
Sunstar	0641 0061 2881 0021 0471	Tecnimagen	2881
Sunwatt	0751	Teco	0021 0051 0171 0281 0351 0471 1181
Sunwood	0061 2881 0021	Tedelex	0081 1301 1031 1651 0061 0821 0021 2431 0341 1971 1281 2881
Superla	1611 2051 0081	Teiron	0021
Supersonic	0341 2881 1301 0471 1701 0751	Tek	1661
SuperTech	0021 2051 0061 2881 0351	Teknika	0101
Supra	0281 0661 0021	Tele System	1901
Susumu	0351 0441 0491	Teleavia	0211 2651 0491
Sutron	0021	Telecor	0061 2881 0231 0351 0081 0461 0691
SVA	1281 1881		
Svasa	1701		
Swissline	0431		
Swisstec	3071 1931		

Telefunken	1061 0141 0961 0211 1281 0441 1301 2651 1331 0851 1721 2551 1531 3071 1631 0491 1971 0251 0131 0061 2881 1221 1351 2501 0581 1741	Tomashi	0481 0351
Telefusion	0061 2881	Tongguang	0471 0701
Telegazi	0061 0231 0461 0351 0471 2881	Tongtel	1631 1281
Telemeister	0531 0061 2881	Topline	2001 1271
Telesonic	0061 2881	Toshiba	0011 0021 0041 0051 0061 0081 0101 0111 0171 0191 0211 0291 0471 0701 0871
Telestar	0021 0061 2881 0701		1041 1131 1161 1301 1351 1361 1441 1741 1781 1951 2021 2121 2311 2341 2441 2481 2501 2581 2601 2611 2801 3671 3731
Teletech	0021 0061 2881 1271 0431 0561 2001	Towada	0191 0081
Teleton	0051 0081 0231 0461 1191	Toyoda	0021 0641 0471
Televideon	0531 0231 2051	Trakton	0021 0471 0081
Television	0061 2881	Trans Continens	1271 0081 2001 0061 2881 1221
Telexa	0191	TRANScontinents	1051 3011 3031 1881 2881
Tempest	0021 0061 2881 0471	Transonic	0061 1301 2881 1331 0751 1281 0791 0471 0821 0021
Tennessee	0061 2881	Transtec	2051
Tensai	1621 0351 0531 0061 2881 0081 0021 0181 0661 0641 0651 0431 1341 0231 2001	Triad	0061 2881 0351
Tenson	0531 0021	Trident	1611 0081
Tesla	0061	Tristar	0471 0351 0301
Tevion	2661 2711 2271 2321 0061 2421 2881 2681 2501 1151 1821 1271 1881 1891 1351 2001 2311	Triumph	0271 1611 0581 2881 0061
Texet	2051 0081 0351 0661 0021	Tsoschi	0481
Texla	1631	Tuntex	0021
Thomson	0061 0211 0441 0491 0531 2881 0961 1061 2051 2651 3651	TVTEXT-95	2881
Thorn	0041 0201 0301 0061 0211 0121 0131 0361 0141 2651 1621 0311 2401 0251 0861 0791 0881 2881 0031 0441 0051 0091 0661 0111	Uher	0531 0061 2881 0661 0821 1221 1371 0461 0771
Thorn-Ferguson	1621 0201 2651 0211 0301 0311 0441 0861 0131 0041	Ultravox	0191 0661 0431 2051 0231 0061 2881
Tiane	0171	Unic Line	0061 2881 0761 0751
Tiny	2091 2301	United	1351 0061 1341 2881 2341 2581 2001 1281 2621
Tiny Digital	1201	Universal	1351 0061 2881
TMK	0271 0281	Universum	0061 0581 0141 0181 1621 0011 0471 0761 1371 0881 0311 0431 0841 0771 0551 0821 0031 0791 0051 0111 0231 2881 0891 0401 0331 2401 1271 0081 0211 0671
Tobishi	0351		0561 0271 1091 0021 0251 2001 2381 0261 1951 2041 1041
Tobo	0021 0471 0701	Univox	0061 2881 0561 0231
Tokai	0121 0061 2881 0561 1271 0231 0081 0661 0021 2001	Utax	0231
Tokaido	2001	V7 Videoseven	2491 0281 1931 3021 2181
Tokyo	2051 0041 2641	Vestel	0061 0231 0081 2881 1271 2001 1951
		Vexa	0021 0061 2881

Victor	1181 0051 1161	Xianghai	0021
Videocon	0871 3161 3151 3181 2641	Xiangyang	0471 0701
	3061 2741 3331	Xihu	0471 0701
Videologic	0351 2051	Xinaghai	0701
Videologique	2051 0351 0081	Xingfu	0021
Videosat	0431	Xinghai	0471
VideoSystem	0061 2881	Xingyu	0021
Videotechnic	2051 0081 0531 0661	Xinsida	2641
Videoton	0231	Xlogic	1301 2151
Vidikron	0191	Xoro	2091 2181
Vidtech	0051 0281	Xrypton	0061 2881
Viewpia	1901	Yamaha	1161 2451
ViewSonic	2491 2941	Yamishi	0481 0751 0351 0061 2881
Viper	0561		0081
Visiola	2051	Yingge	0021
Vision	0061 0531 0471 2881 0081	Yokan	0061 2881
Vistar	0311	Yoko	0061 0081 0471 2881 0351
Vortec	0061 2881		0021 1371 0571 2051 0431
Voxson	0231 0281 0061 2881 1191	Yonggu	0021
	0821	Yorx	0351
Waltham	0081 0821 0491 0061 2881	Yousida	0021
	1271 0211 2001 0231 0731	Yuhang	0021
Wards	0281	Zanussi	1191 0081
Warumaia	0661 1211	Zenith	0281 2411
Watson	0061 2001 0531 2271 2421	Zenor	0571
	2881 0231 0021 1271 0351	Zhuhai	0021 0661
	2661 0691 2581 2381 3021	Zonda	1301 1601
	3291 0401	ZX	2581
Watt Radio	0191 0231 2051		
Wega	0051 0061 2881		
Wegavox	0021 0061 2881		
Weipai	0021		
Welltech	1351		
Weltblick	0061 2881 0531 0081		
Weltstar	2001		
Weston	0061 2881		
Wharfedale	0061 1871 2661 2551 2881		
	2501		
White Westinghouse	0061 0531 2051 2881 0561		
	2411		
Windsor	1271 2001		
Windstar	0481 0561		
Windy Sam	2881		
Wintel	1351		
World-of-Vision	1931 1961 1881 2311 2321		
	1911 2181		
Worldview	0751 0091		
X-View	2071		
Xenius	1111 1211		
Xiahua	0021 0471 0701 1301 1581		
	1601		

Appendix list :

Item	Key Name	SA IR Key Code	Code Read into Trident IR Driver IR Key Code	Final Translation by RF4CE/ IR Driver (HDDTA170)	C&D RF4CE Key Code
1	Power	0x07	0x38	0xB0	0x6B
2	TV Power	N/A	N/A	N/A	n/a
3	Info	0x08	0x4	0xC6	0x35
4	0-Digit	0x19	0x26	0x30	0x20
5	1-Digit	0x10	0x02	0x31	0x21
6	2-Digit	0x11	0x22	0x32	0x22
7	3-Digit	0x12	0x12	0x33	0x23
8	4-Digit	0x13	0x32	0x34	0x24
9	5-Digit	0x14	0x0A	0x35	0x25
10	6-Digit	0x15	0x2A	0x36	0x26
11	7-Digit	0x16	0x1A	0x37	0x27
12	8-Digit	0x17	0x3A	0x38	0x28
13	9-Digit	0x18	0x06	0x39	0x29
14	Enter	0x0C	0x0C	0xB4	0x2B
15	Volume + / (TV Vol +)	0x20/ n/a	0x01	0xC1	0x41 / n/a
16	Volume - / (TV Vol -)	0x21/ n/a	0x21	0xC2	0x42 / n/a
17	Arrow right	0x04	0x08	0xD6	0x04
18	Arrow left	0x03	0x30	0xD5	0x03
19	Channel + / arrow up	0x1D	0x2E	0xC4	0x30
20	Channel - / arrow down	0x1E	0x1E	0xC5	0x31
21	Last	0x0E	0x1C	0xBE	0x32
22	Mute / (TV Mute)	0x22/ n/a	0x11	0xC3	0x43 / n/a
23	Menu	0x3E	0x1F	0xBA	0x0C
24	Exit	0x2C	0x0D	0xB5	0x0D
25	Page+	0x36	0x1B	0x8C	0x37
26	Page-	0x37	0x3B	0x8D	0x38
27	Prog				

FCC WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

深圳市创荣发电子有限公司