

# RCX4

## PRE-PROGRAMMED UNIVERSAL REMOTE CONTROL



*A single remote to operate  
Televisions  
DVD Players  
Video Recorders  
Satellite Receivers including the latest Digital Satellite Receivers  
Cable Television Boxes*

*Set up instructions .....pages 2-5*

*Codes for Televisions .....pages 6-9*

*Codes for Video Players .....pages 9-11*

*Codes for Satellite Receivers & CTV Boxes .....page 11*

*Codes for DVD Players .....page 12*

**Customer Care Line - Tel: 08457 573 479 (UK only)**

## MAIN FEATURES

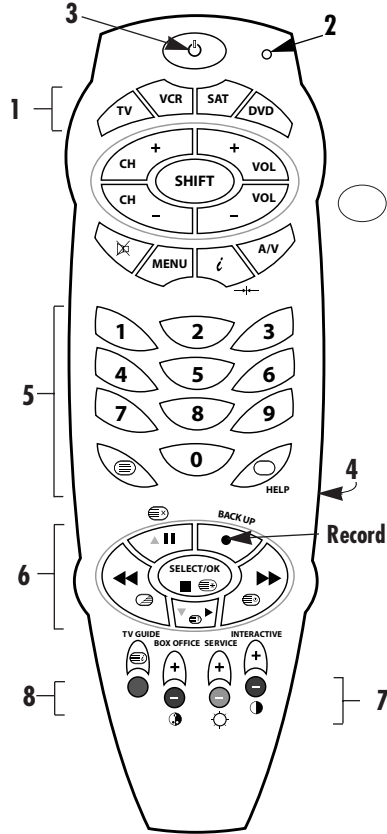
### FUNCTION KEYS

KEY SYMBOL	DESCRIPTION
	POWER ON/OFF
	MUTE
	VOLUME +/-
	CHANNEL +/-, C/P +/-
	CHANNEL 1/2 DIGIT MODE
	A/V SOURCE 1
	INFORMATION/INDEX
	NORMAL
	HELP
	PLAY
	STOP
	PAUSE
	FAST FORWARD (SKY™ MENU RIGHT)
	REWIND (SKY™ MENU LEFT)
	SKY™ MENU UP
	SKY™ MENU DOWN
	RECORD (red circle)
	TELETEXT ON
	TV ON (FROM TEXT TO TV)
	MIX (TV AND TELETEXT COMBINED)
	HOLD PAGE (TELETEXT)
	REVEAL (TELETEXT)
	UPDATE (TELETEXT)
	TIMER (TELETEXT)
	TOP OF PAGE (TELETEXT)
	BOTTOM OF PAGE (TELETEXT)
	FASTEXT RED
	FASTEXT GREEN
	FASTEXT YELLOW
	FASTEXT BLUE
	CHANNEL/PROGRAMME STORE
	CHANNEL/PROGRAMME STORE
	C/P (CHANNEL PROGRAMME)

### SHIFT KEY FUNCTIONS

KEY STROKES	FUNCTION
<b>SHIFT</b>	+/- (COLOUR)
<b>SHIFT</b>	+/- (BRIGHTNESS)
<b>SHIFT</b>	+/- (CONTRAST)
<b>SHIFT</b> ①..⑨	Shift 1-9 contain the following groups of functions 10+, 20+, 30+, 40+ ... 11, 12, 13, 14, 15 ...

**PLEASE NOTE:** You are advised to read the following instructions fully, before attempting to program your Universal Remote Control. The set-up procedure will cancel itself if no keys are pressed for more than 10 seconds in order to protect your code against accidental re-programming, and to conserve battery power. It would therefore be helpful to you to understand the required programming steps, before you carry out the actual set-up procedure.



- |                          |                                 |
|--------------------------|---------------------------------|
| 1. DEVICE INDICATOR keys | 5. Number keypad                |
| 2. STATUS INDICATOR      | 6. Text & VCR keypad            |
| 3. Infra-red transmitter | 7. Colour, Brightness, Contrast |
| 4. Battery compartment   | 8. Fastext keys                 |

### RCx4 - UNIVERSAL REMOTE CONTROL

Congratulations! Your Universal Remote Control is a state-of-the-art device, which replaces the main functions of several separate remote controls to operate infra-red controlled televisions (TV), videos (VCR), Freeview™ & satellite receivers (SAT), cable TV boxes (CTV) & DVD players (DVD).

Your Universal Remote Control (URC) is pre-programmed in the factory. Simply enter the correct device codes for your equipment and your URC is ready to use. A DEVICE CODE LIST is included in the user's manual.

### INSTALLING BATTERIES

Your URC requires 2 fresh AAA-size (LR03) batteries (alkaline batteries recommended) :-

1. Remove the battery cover on the back of your URC.
2. Insert the batteries ensuring that the polarity corresponds with the markings in the battery compartment.
3. Push the battery cover back in place.

## HOW TO SET UP YOUR RCx4

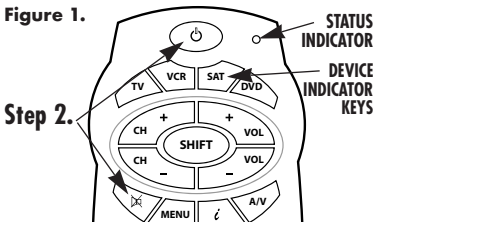
The RCx4 has 4 Device Modes (TV, VCR, SAT & DVD)  
Your RCx4 can be set-up either by entering the appropriate codes from the list of codes supplied or by using either the Auto or Manual code search facility. Instructions for all three methods follow.

### SET-UP BY AUTO CODE SEARCH

Probably the easiest way to set-up your RCx4 for most devices, especially if there are a lot of codes listed for your particular brand, is by Auto Code Search.

#### TV SETUP BY AUTO CODE SEARCH

1. Turn on your TV
2. Hold down both **POWER** and **MUTE** keys on your RCx4 simultaneously until the STATUS INDICATOR LED lights up and stays red (about 4 seconds).



3. Release the **POWER** and **MUTE** keys. The STATUS INDICATOR should still be lit. If not repeat step 2.
4. Press the TV DEVICE INDICATOR key once. The STATUS INDICATOR and the DEVICE INDICATOR should now both be lit RED.



5. To search, aim your RCx4 at your TV.
6. Hold down the power key for about 8 seconds until the STATUS INDICATOR lights up.
7. The STATUS INDICATOR will repeatedly flash twice then remain unlit for 1 second, flash twice and remain unlit for 1 second. The DEVICE INDICATOR key will also flash repeatedly.
8. When a suitable code is found the TV will switch off. When the TV switches off the TV DEVICE INDICATOR key must be pressed **immediately** to store the correct code (**Please Note:** if the TV DEVICE INDICATOR key is not pressed immediately the search will continue).
9. Now press the POWER key. If the TV switches on the code has been stored and you can check that other functions work properly.
10. To stop the Auto Code Search at any time press any key and the remote will go to Manual Code Search.

If you are unable to find a correct code or cannot store the code fast enough try finding the code either using Manual Code Search or by using Setup by Entering Device Code

#### VCR, SAT/CTV & DVD SETUP BY AUTO CODE SEARCH

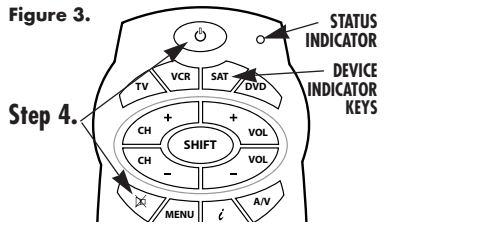
Simply turn on your VCR, SAT/CTV or DVD and repeat the above procedure to search for the Device Codes for your VCR, SAT/CTV or DVD but instead of the TV DEVICE INDICATOR key press either the VCR, SAT or DVD DEVICE INDICATOR key in steps 4 & 8.

## SETUP BY ENTERING DEVICE CODE

(Note: If no keys are pressed on the RCx4 for a period longer than 10 seconds during set-up, the RCx4 will automatically exit the set-up process and revert to the last entered code. This feature reduces accidental erasure of your codes)

#### SET UP FOR TV

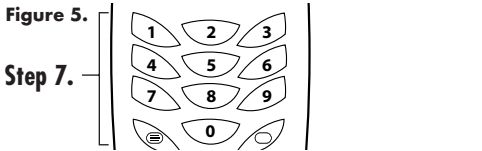
1. Turn on your TV
2. Look up the brand name of your TV in the DEVICE CODE LIST (See pages 7-11).
3. Look up the 3-digit Device Code next to the brand name of your equipment. If there is more than one code listed for your brand, start with the first code listed and follow the instructions below:
4. Hold down both **POWER** and **MUTE** keys on your RCx4 simultaneously until the STATUS INDICATOR LED lights up and stays red (about 4 seconds).



5. Release the **POWER** and **MUTE** keys. The STATUS INDICATOR LED should still be lit. If not repeat step 4.
6. Press the TV DEVICE INDICATOR key once. The STATUS INDICATOR LED and the DEVICE INDICATOR should now both be lit.



7. Use the number keys on your RCx4 enter the 3-digit Device Code. If you have entered a valid code, the STATUS INDICATOR will blink once. If you have entered a wrong code, the STATUS INDICATOR will blink twice.



8. Try the keys on your RCx4 that correspond to similar keys on your original remote control, especially those you use most. (Note that the RCx4 will exit the set-up procedure if you do not press any keys on the RCx4 for more than 10 seconds). If your TV works on all or most of the keys on your RCx4, you have entered a suitable Device Code. Go to step 11. (Note: Your RCx4 will only operate functions controlled by your original remote nor are the supplied codes guaranteed to operate all these functions)
9. If the Device Code does not work properly on your TV, press the TV INDICATOR KEY once. The STATUS INDICATOR LED will flash briefly, and remain lit. The TV INDICATOR key should still be RED. (If either of the indicators switch off whilst you are still programming your RCx4, you should start again from step 3.)
10. Repeat steps 7-9 with the other codes listed for your brand of TV until your RCx4 operates most or all of the functions that correspond with the keys on your original remote control.

**SETUP BY ENTERING DEVICE CODE continued**

- Once you have found a suitable code, to store it, press the TV INDICATOR key twice. The TV INDICATOR key will flash twice and then go out as will the STATUS INDICATOR.
- If none of the TV codes listed for your brand of TV work correctly, select the code that provides the best results. Alternatively, try the Library Search method, which is fully explained further on in these instructions.

**SET UP FOR VCR AND SAT**

Repeat the same set-up method for your VCR and SAT, but remember to press the VCR, SAT or DVD DEVICE INDICATOR key, and select the corresponding Device Code listing.

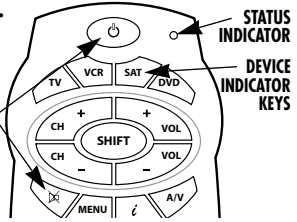
**SET-UP BY MANUAL CODE SEARCH**

If you cannot identify a suitable Device Code for your equipment from the Device Code List and have been unable to store a code when using Auto Code Search you may try our library search method. (For many lesser known brands codes may be present but not listed under that brand.) During the search the selected DEVICE INDICATOR will flash at various speeds. The entire search procedure may take several minutes to complete. The following instructions use your television as an example for set-up using the Manual Code Search method.

**TV SETUP BY MANUAL CODE SEARCH**

- Turn on your TV
- Hold down both POWER and MUTE keys on your RCx4 simultaneously until the STATUS INDICATOR LED lights up and stays red (about 4 seconds).

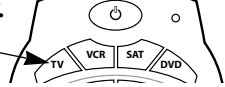
Figure 6.



**Step 2.**

- Release the POWER and MUTE keys. The STATUS INDICATOR should still be lit. If not repeat step 2.
- Press the TV DEVICE INDICATOR key once. The STATUS INDICATOR and the DEVICE INDICATOR should now both be RED.

Figure 7.



**Step 4.**

- To search, aim your RCx4 at your TV.
- Press the POWER key repeatedly for 2 seconds ON and 2 seconds OFF, until your TV goes into standby mode (i.e. the TV switches OFF). Then continue with step 7. If the TV INDICATOR key flashes twice and then goes out before your TV goes into standby mode you have reached the end of the code library. Return to step 2 and repeat library search one more time.
- Try the number keypad to see if your device switches ON again and the keys work correctly. If your device does not switch ON, press the Mute key and then the Power key to repeat the code so that the Device comes ON. Now try the number keypad. (NOTE: If you accidentally skipped a code that turned your TV ON or OFF, you can return to the skipped code by pressing the Mute key.)

- If the code you have found does not work correctly, make sure that the TV INDICATOR key and STATUS INDICATOR LED are still lit, before you repeat steps 6 and 7 until you find a better code. If the indicator lights have gone out, repeat the set-up procedure from step 2.
- Once you are happy with the code found, press the TV INDICATOR key once to store the code. The STATUS INDICATOR LED and DEVICE INDICATOR key will turn off and set-up is complete.

**VCR/DVD/SAT SETUP BY MANUAL CODE SEARCH**

Simply repeat the above procedure to search for the Device Codes for your VCR/SAT/DVD but instead of the TV DEVICE INDICATOR key press either the VCR, SAT or DVD DEVICE INDICATOR key in step 4

**OPERATING YOUR RCx4**

Once you have set up your RCx4, it should operate similarly to your original remote control and perform most or all of the main functions. To operate, just aim it at your equipment, press the appropriate DEVICE INDICATOR key and press the required function key. The DEVICE INDICATOR flashes during signal transmission to confirm that a function key is in operation.

Please Note: The RCx4 can only duplicate functions that are on your original remote control. Any extra keys on the RCx4 which are not on the original will not function.

**SHIFT Functions**

To operate a secondary function, press SHIFT followed by the corresponding function key. The SHIFT key remains functional for as long as any other key is operated, or until 5 seconds have elapsed after the last key was pressed. When the SHIFT key is operated, the STATUS INDICATOR lights up green and the DEVICE INDICATOR key red while the SHIFT key is pressed down. The STATUS INDICATOR then stays ON for another 5 seconds. The SHIFT key can be cancelled before the 5 seconds time-out period by pressing the SHIFT key again.

**DEVICE CODE RECALL - 888**

The RCx4 has a special code which can be entered to find the code that has been set for each device. ( e.g. after Code Search set-ups )

- Press POWER and MUTE keys together until STATUS INDICATOR RED LED lights up and flashes 3 times.
- Then press the required DEVICE INDICATOR key [TV, SAT, VCR or DVD], STATUS INDICATOR LED & DEVICE INDICATOR key will light up RED.
- Key in Device Code Recall code 888.
  - To find the first digit of your code, press 1 and then count the number of times the STATUS INDICATOR LED flashes red.
  - To find the second digit of your code, press 2 and then count the number of times the STATUS INDICATOR LED flashes red.
  - To find the third digit of your code, press 3 and then count the number of times the STATUS INDICATOR LED flashes red.

[Note: If the STATUS INDICATOR LED does not flash at all the digit is zero (duration between flashes is 1 sec.)]  
E.G. Code=106, Number 1=1 flash, Number 2=no flash, Number 3=6 flashes.

- Press Any Device key [TV, SAT, VCR or DVD] once to exit Device Code Recall. (Note that the RCx4 will exit the Recall procedure if no key is pressed for 30 seconds)

**KEY RECONFIGURATION - 777**

- Press POWER and MUTE keys together until STATUS INDICATOR RED LED lights up.
- If you are reconfiguring a SHIFT Function key, you must next press the SHIFT key and the STATUS LED will change to GREEN.

3. Press the required DEVICE KEY and the DEVICE KEY will light up.
  4. Enter the Key Reconfiguration activation code 777.
  5. Press slowly and repeatedly the key you wish to re-program until your device performs the required/correct function.
- NB During the search, your RCx4 will transmit the code of every key command programmed into the device code you are reconfiguring to find the key function you want. If you reach the end of the command set without finding the required function, the STATUS LED will flash twice red and the RCx4 will exit reconfiguration mode.
6. Press the relevant DEVICE KEY [TV, VCR, SAT, DVD] to store the corrected code. The DEVICE INDICATOR key will flash twice.
  7. Repeat 4 and 5 for any other keys you wish to modify.
  8. Press the relevant Device key 2 times to exit the reconfiguration function.

**Please Note:**

A maximum of 4 keys can be reconfigured for each Device (TV, VCR, SAT and DVD). After the 4 keys are reconfigured for one Device, if you try to reconfigure a fifth key, the DEVICE INDICATOR key will blink several times and then go out (exiting Reconfiguration Mode).

If no other key is pressed for more than 20 seconds, the RCx4 will automatically exit Reconfiguration Mode.

During key reconfiguration, only the key you are reconfiguring and the DEVICE INDICATOR key will function.

Not all key functions may be relevant to your device or be programmed into the Device code selected. If there are no functions programmed for a particular key instead of the DEVICE INDICATOR key flashing twice it will remain lit for one second and then go out and the RCx4 will exit reconfiguration mode.

You can clear reconfigured codes by entering a new Device code. When a new Device code is entered all Key functions will be reset to the default key settings for the new code including any that may have been previously reconfigured.

**RECORDING DEVICE CODES**

It is recommended that you record your device codes in case they are lost from storage when the batteries run out or are changed.

DEVICE KEY	DEVICE	CODE
TV		
VCR		
SAT/CTV		
DVD		

**MAINTENANCE**

**LOW BATTERY LEVEL**

If the indicator flashes twice slowly after pressing a key function, the battery level is low & you must fit new batteries. If the batteries are removed, your RCx4 will retain its memory for approximately 10 minutes only.

- Do not use old and new batteries together as old batteries tend to leak.
- We do not recommend the use of rechargeable batteries.
- Please follow manufacturers instructions when disposing of used batteries
- Do not expose the RCx4 to dust, strong sunlight, humidity, high temperature or mechanical shock.
- Do not use corrosive or abrasive cleansers on your RCx4.
- Keep the unit dust free by wiping it with a soft, dry cloth.
- Do not disassemble your RCx4, it contains no user serviceable parts.

**FREQUENTLY ASKED QUESTIONS**

- Q. I am unable to program or operate my RCx4, but the indicator lights on my RCx4 operate correctly.
- A. Check your A/V device. If the device's mains switch is turned off, your RCx4 can not operate your device.
- A. Check if the batteries are low and replace the batteries.
- A. If several Device Codes are listed under the brand name of your A/V device, try each code one by one until most or all of the keys work correctly.
- Q. The STATUS INDICATOR light does not stay ON when entering set up mode.
- A. Make sure both the POWER and MUTE buttons are pressed simultaneously
- Q. My A/V equipment responds only to some commands.
- A. You may have selected a code for which only some commands work correctly. Try the other codes listed for your brand.
- A. Try the Library Search if you are still unsuccessful.
- Q. Some of my equipment will not work with any of the codes listed.
- A. Make sure that you have selected the correct device listing
- A. Try the Library Search function as some more recent codes may be available on the RCx4 but have not been listed yet or have not been listed under all applicable brands.

Disclaimer: Whilst we have tried to supply a comprehensive library of codes we cannot guarantee that your RCx4 will be fully compatible with all equipment. Some brands, models or functions may not be available in the code library due

to differences in operation to your original remote or where the code has not yet been added to the library.

The manufacturer cannot accept any liabilities resulting from incorrect use of this product.

**SPECIFICATIONS**

- Operating system:- Pre-programmed infra-red remote control system.
- Compatibility:- Operates most brands of infra-red remote controlled TVs, VCRs, Satellites, Cable boxes and DVD players.
- Power requirement:- 2 x AAA-size alkaline batteries.
- Effective range:- 7.65M (25 feet), +/- 25 degrees.
- Alkaline battery life:- Normal operation 6 months.
- Dimensions:- 199 (L) x 56 (W) x 24 (H) mm.
- Weight without batteries:- 105g

**TECHNICAL SUPPORT**

Customer Care Line - Tel: 08457 573 479 (UK only)  
 Technical Support Web Site: <http://technical.philex.com>  
 Technical Web Site Enquiries: [technical@philex.com](mailto:technical@philex.com)



DEVICE CODES							
BRAND	CODE	BRAND	CODE	BRAND	CODE	BRAND	CODE
GORENJE	188 122	ICE	117 196 139	KUASHO	063 196	MEMPHIS	086 139
GPM	117		134	KUBA ELECTR.	014 033	METZ	244 102 101
GRANDIN	196 117 139	IMA	033 063 114	LENCO	134 139 143	MGA	145
GRAETZ	023 025 027		144 145		196	MIDLAND	063
	029 135 152	IMPERIAL	196 025 188	LENOIR	139	MINERVA	244 078
	158 161 197		083 001	LEYCO	062 086 134	MINOKA	196
GRANADA	033 047 086	INGELEN	135 152 158		196	MITSUBISHI	011 091 101
	103 110 067		161 197	LG	003 035 049		102 103 074
	070 196	INGERSOL	139		063 124 119		113 114 122
GRUNDIG	033 092 078	INNO HIT	216 086 117		086 090 026		072 070 142
	081 195 244		196 139		134 137 139	MITSUBISHI	145 151 153
	261 120	INTERBUY	134 139		154 196 077		163 189 196
HALIFAX	134	INTERFUNK	009 015 016		017		221 232 244
HALLMARK	033 063 104		025 028 029	LIFETEC	134 139		257 279 280
	114		030 033 041	LINTON	063 111 114	MITSUBISHI	281 282 092
	144 145		068 158 090		146		067 131
HANSEATIC	014 139 025		101 102 110	LLOYD'S	033 063 114	MONITOR	137
	062 196		151 152 153		144 145	MOTOROLA	146 196
HANTAREX	139	INTERVISION	134 087 117	LOEWE	101 102 153	MRELLI	101
HARLEY DAVIDSON	033 063 114	IRRADIO	196 139 117		196 089 091	MTC	033 063 137
	137 144 145	IST	117 196	LOGIK	107 108	MULTISTANDARD	087
HARRAD	033 063 114	ISUKAI	117 139	LUMA	024 132 196	MULTITECH	025 033 035
	144 145	ITS	117 139	LUXOR	004 013 023		063 087 114
HARVARD	033 063 114	ITT	024 025 033		025 028 029		188 145 139
	144 145		045 218 017		033 034 047		144
HCM	139 117 134	ITT-NOKIA	135 152 158		208 068 086	MURPHY	266 103
HEATHKIT	144 196		161 171 197		126 132 171	NAD	114 177
HEMMERMANN	014		208		158	NAONIS	024
HIFIVOX	090 094	ITV	017 077	LXI	042 146 177	NATIONAL	155 196
HINARI	041 114 117	JASON	088		196	NEC	114 137
	121 132 139	JBL	196	M. ELECTRONIC	139 196 090	NECKERMANN	025 033 034
	142 154 196	JCB	144		104 174		196 188 101
	208 067 017	JET POINT	137	MACYS	063 114		102 154 132
HISAWA	117	JUMBOTRONIC	196	MAGNADYNE	014 102 087		144 147 151
HIT	102	JVC	114 121 067		101		153
HITACHI	004 005 009		142 169 176	MAGNAFON	087	NEI	117 196
	012 018 020		193 196	MAGNASONIC	042 063 139	NEW WORLD	117
	021 023 025	KAIDO	035		146 154 177	NEWTECH	139 196
	033 034 045	KAISUI	117 196 121		196	NIKKAI	196 063 086
	276 047 049		139	MAGNAVOX	049 114 196		117 134 121
	050 051 052	KAPSCH	009 015 016	MANDOR	134	NIKKO	154
	053 054 055		025 033	MANESTH	134 059 196	NISSAN	137
	056 057 063	KARCHER	216 196	MARK	196	NOBLIKO	078
	264 043 086	KATHREIN	122	MATSUI	065 014 035	NOGAMATIC	090 094
	090 094 095	KENDO	025 059 087		058 059 085	NOKIA	004 009 012
	104 114 060		154 196		108 067 017		013 015 016
	125 126 142	KENWOOD	063		066 139 031		022 023 024
	144 175 180	KLH	033 063 086	MATSUI	142 154 196		025 027 028
	196 205 217		114 144 145		123 081 228		029 030 033
	222 223 225	KLOSS	137		231 259 261		036 038 039
	067 252 260	KOLSTER	196		262 001		041 042 045
HORIZONT	196	KONKA	117	MAVA	063		068 110 134
HORNYPHON	196	KORPEL	196	MCMICHAEL	049		135 137 284
HOSHAI	117	KORTING	101	MEDIATOR	196		152 271 212
HUSPI ELEKTRONIK	083	KRIESLER	110 159 187	MEGATRON	047		158 197 161
HYPER	139	KTV	033 063 114	MEMOREX	042 134 139		219
HYPSON	196 134		145 144		145		

BRAND		CODE		BRAND		CODE		BRAND		CODE	
<b>TV codes</b>											
NORDMENDE		015 090 094		PHILIPS		049 115 086		SEG		063 087 114	
		095 101 174				095 098 101				117 139 134	
		185 215 217				109 110 114		SEI-SINUDYNE		014 024 025	
		249 061				144 147 151				058 059 062	
NOVA		800				154 159 187				087 101 102	
NOVABEAM		196		PHOENIX		196 216 079		SELECO		144 151 196	
OCEANIC		016 023 025		PHONOLA		263 077				024 067 093	
		029 033 036				101 196		SEMUA		063	
		042 062		PILOT		101 196		SENCORA		139	
ONWA		117		PIONEER		032 090 095		SENTURA		041 117	
OPERA		196				217 196		SHARP		063 111 113	
OPTANKA		146		PLANTRON		134 196				114 142 146	
ORBIT		196		POPPY		139				067 214 002	
ORION		014 123 033		PORTLAND		063 144				256 156 069	
		058 059 062		PRANDONI-PRINCE		024 025		SHINTOM		144 154	
		063 107 108		PRIMA		042 196 063		SHORAI		062	
		114 130 139				114 137 139		SIAREM		087 101 102	
ORION		144 145 196		PRINZ		086		SIEMENS		021 063 244	
		201 017 031		PROELCO		196				111 196	
		066		PROFEX		035 139		SIERA		110 159 187	
OSAKI		086 117		PROFILO		164		SIERRA		196	
OSUME		086 111		PROFITRONIC		154 196		SIGMAX		137	
OTTO VERSAND		003 014 174		PROLINE		164		SIGNATURE		144	
		025 029 033		PROSCAN		137		SILVER		114 117	
		034 035 045		PROTECH		025 087 196		SINGER		087 101 102	
		059 062 244				134		SINOTEC		154	
		154 196 090		PROTECH		139		SKANTIC		025	
		114 186 139		PROTON		063 139		SKY		297	
		144 146 147		PROVISION		154		SNYDER		196	
		151 153		PULSER		049 063 086		SOLAVOX		041	
OVP		196				090 137 139		SONITRON		045	
P.T. ACTRON		109		PYE		110 159 187		SONOKO		196 134 139	
PACIFIC		236 237 238				265		SONOLOR		016	
		266		PYMI		139		SONTEC		196	
PALLADIUM		025 196 101		QUELLE		003 014 025		SONY		112 107 113	
		151				029 030 035				114 017 076	
PANAMA		139 134				045 058 059				144 069 067	
PANASONIC		015 025 037				062 063 114				270	
		075 116 136				244 147 196		SOUND&VISION		087 117	
		148 150 155				186 078 144		SOUNDESIGN		033 063 114	
		186 196 198				139 154 153				137 144 145	
		290 291 292				090 152 151		SPECTRA		143	
		293 294 092				107 111 113		SPECTRICIAN		063 196	
		296 128 149		QUESTAR		114		SR2000		042 177	
PATHE MARCONI		090 094		R.LINE		196		STANDARD		139 117	
PAUSA		139		RADIALVA		090		STERN		025	
PCE/PEC		042 045 177		RADIOLA		110 159 187		SUNKAI		059 062 117	
		063 114 137				196		SUNSTAR		139	
		045		RADIOMARELLI		103 101		SUNWOOD		196	
PENNEY		137 063		RADIOSHACK		042 063 146		SUPREME		144	
PERFEKT		196		RADIOTONE		134 139 154		SUPRTECH		014 139	
PERFORMANCE		107 114 144				196		SUTRON		139	
PHILCO		049 196 083		RADIX		045		SYLVANIA		111 196	
		188 101 102		RANK		003 025 035		SYMPHONIC		033 063 114	
		114								144 145	
								TADISTAR		154	

DEVICE CODES							
BRAND	CODE	BRAND	CODE	BRAND	CODE	BRAND	CODE
TANDY	086 117 146	TOWADA	025 087	AKIBA	040	CROWN	040 064
	121	TRILUX	196	AKURA	031 116 144	DAEWOO	064 174 016
TASHIKO	035 049 114	TRISTAR	117		007 043		065 067 068
	142	TRIUMPH	058	ALBA	064 031 065		072 073 163
TATUNG	048 057 086	UHER	078 196 087		077 118 129		173
	107 109 065	ULTRAVOX	086 087 101		124 125 008	DANSAI	040
	283 275 196		102 132		060 059	DAYTRON	065
TEC	253 273	UNIMOR	196	ALLORGAN	160	DE GRAAF	020 041 052
TECHLINE	143 139	UNIVERSUM	018 134 244	AMSTRAD	041 004 076		057
TECHNICS	087		196 104		078	DECCA	041 047 004
TECHNIMAGEN	155 196	UNIVOX	102	ANITECH	040		007
TECHWOOD	236	VECTOR/VICTOR	176	ARC EN CIEL	047 048 094	DENON	138
TECNISON	137 144	VESTEL	196 238 266	ARISTONA	052 095 113	DIGITAL	024 029 144
TEKNIKA	154		105 119	ASA	029 057 058	DTS	160
TEKON	063 137 145	VEXA	139 196	ASTRA	029 160	DUAL	047 094 138
TELEAVIA	137 139	VIDEOLOGIQUE	117	ASUKA	029 040 138		142
TELECOM	090 094 099	VIDEOTON	004 095 099	AUDIO DYNAMICS	144		143 144
TELEFUNKEN	154		196	AUDIOVOX	029	DUMONT	016 029 040
	090 145 174	VISION	196	AVIS	040 160		041
	217 249	VOXSON	024 196 101	BAIRD	047 107 144		057 138
TELETECH	139		102		004 007 011	DYNATECH	040 041
TELETON	025 033	WALTHAM	004 025 099	BANG & OLUFSEN	142	ECONOMIC	148
TELIVA	090	WARDS	176 196	BASIC LINE	031 040 065	ELECTROHOME	029 160
TENSAI	030 196 062	WATSON	244 117 139		077	ELECTROPHONIC	029
	066 104 117		196	BEAUMARK	160	ELIN	160
	017 046 139	WATT RADIO	014 087	BELL & HOWELL	016	ELTA	040
	154	WEGA	101 114	BLAUPUNKT	090 095 102	EMERSON	013 029 034
TENSON	139	WELTBlick	196		111 113 138		041 077
TESLA	196	WHITE			145 146	ESC	148
THOMAS	049 063 086	WESTINGHOUSE	042	BONDSTEC	040	ETZUKO	040
	090 137 139	WORLDTECH	143	BRANDT ELECTRON	047 048 094	FERGUSON	002 005 047
	144 196	YOKO	035 196 117		142 143 144		087 089 094
THOMSON	006 100 033		143 134 139	BRIONVEGA	010		178 104 133
	090 094 095	YORK	045 196	BROKSONIC	029		112 126 007
	096 099 174	YORX	117	BRUNS	040		141 144 152
	185 217 229	ZANUSSI	024	BUSH	030 031 065		153 171
	233 249 073	ZENITH	144 196		077 123 124	FIDELITY	040 041
	092				125 008 114	FINLANDIA	057 099
THORN	020 028 029				059 060	FINLUX	016 020 024
	030	<b>VCR codes</b>		CALIN	029		041 057 004
	041 044 045	ACTION	016 029 160	CAPEHART	065		007 011 099
	196 049 054	ADMIRAL	029 040	CARRERA	160	FIRST LINE	024 029 040
	070 046 174	ADVANTZ	029	CARVER	138	FISHER	016
	088 090 097	ADVENTURA	016 029 160	CGE	041 047 094	FUNAI	029 040 041
	107 113 114	ADYSON	040		144		169 181 004
	153 138 144	AGHA	160	CIE	040	GAB	040
THORN-FERGUSON	071 078	AIWA	029 041 047	CITIZEN	029 040 160	GBC	097
TMK	137		058 077 116	CLASSIC	029	GE	160
TOKAI	086 196		120 125 144	COLORTYME	160	GELOSO	097
TOKYO	137		167 170 007	COLT	040	GOLDHAND	040
TOSHIBA	042 045 287	AKAI	003 024 029	CONTINENTAL EDIS.	040 047 048	GOLDSTAR	016 029 058
	157 085 114		030 032 036		094 142 143		160 004
	127 137 138		037 038 047		144	GOODMANS	064 031 040
	067 177 288		074 094 164	CRAIG	029 040 045		041 045 053
	286		107 128 144		160		057 058 065
TOSONIC	137		159 007 011	CROSLEY	029 138 145		077 071 004
TOTEVISION	063		014		160		

BRAND		CODE		BRAND		CODE		BRAND		CODE	
<b>VCR codes</b>				KODAK	029	NEC	047 050 094	PHILIPS	160		
		KORPEL	040				143 144	PHONOLA	052 057 086		
GRAETZ	016 047 048	KRIESLER	052 095 113	NECKERMANN	010 013 017				095 113 138		
	088 094 110	KUBA ELECTRONIC	143 144 148		024 047 094			PILOT	029		
	144	LG	016 029 058		113 144 147			PIONEER	024 050 057		
GRANADA	016 024 057		160 004		148				138		
	113 129 099	LEYCO	040	NESCO	040			PIONEER	133		
GRANDIN	029 040	LLOYD'S	029 040 041	NIKKAI	029 064			PORTLAND	065		
GRUNDIG	057 090 095		160	NOBLIKO	113			PRIMA	144 160		
	101 102 103	LOEWE	029 069 138	NOGAMATIC	047 048 094			PROFEX	040		
	113 138 145		098 105	NOKIA	010 016 017			PROFILE	160		
	114	LOEWE OPTA	057 086 095		036 047 048			PROLINE	041 004 114		
HANSEATIC	029		113		088 094 107			PROSCAN	024 029 036		
HARVARD	040	LOGIK	031 040 045		110 130 071				160		
HCM	040		077 082 107		115 117 142			PROTECH	040		
HEADQUARTER	016		147 160 071		143 144 148			PULSAR	029 160		
HIFIVOX	047 048 094	LORWD	024		149 150 151			PULSER	016 029 160		
HINARI	013 031 040	LUXOR	016 036 107		160 007 011			PYE	052 057 086		
	077 082 097		110 150 151		180 163 164				095 113		
	116 121 125	LXI	016 024 029		168			QUARTER	016		
	147 008 114		058	NORDMENDE	001 009 012			QUARTZ	029 160		
HITACHI	020 021 023	M. ELECTRONIC	160		018 022 025			QUASAR	138 145		
	024 027 028	MAGNASONIC	017 029 040		047 048 094			QUELLE	010 013 017		
	029 039 041		110 160		153 101 144				024 028 038		
	047 179 091	MAGNAVOX	029 160 145		143 142				040 051 102		
	142 144 099		138	OCEANIC	036 117				113 142 143		
	106 004 007	MAGNIN	029 160	OKANO	040				144 147 148		
HYPSON	040	MANESTH	040	OLYMPUS	145			RADIALVA	029 040 138		
IMPERIAL	041 100 148	MARANTZ	053 057 077	OPTONICA	052 053			RADIOLA	052 095 113		
INGELEN	047 048 094		095 113	ORION	013 029 033			RADIX	029		
	110	MARQUANT	040		034 035 063			RCA	024 029 036		
INGERSOL	082 147	MARTA	029		077 082 147				160		
INNO HIT	097 148	MATSUI	013 034 045		008 059			REALISTIC	016 029 041		
INTERBUY	029 040		058 077 082	OSAKI	041 058				045 052 053		
INTERFUNK	016 138		118 122 125	OTTO VERSAND	138				160		
INTERVISION	040		137 138 147	PACIFIC	181			REX	001 047 048		
IRRADIO	029 040		008	PALLADIUM	029 040 144				094 142 144		
ITT	010 016 036	MEMPHIS	040	PANASONIC	019 075 092			RICOH	029		
	047 088 107	MENOREX	016 029 041		093 111 134			ROADSTAR	031 040 045		
	144 007 011		052 058 160		135 136 138				058 160 071		
	130 132	METZ	095 102 145		145 146 156			ROYAL	040		
ITT-NOKIA	047 048 094		113 138	PANASONIC	157 161 098			SABA	001 009 018		
	110	MGA	056 160		105				025 047 048		
ITV	029	MINERVA	090 102 113	PATHE MARCONI	047 048 094				094 153 142		
JENSEN	047 144	MINOLTA	020 024 027		142 144				143 144		
JVC	001 009 012	MITSUBISHI	050 056 080	PAXSONIX	160			SAISHO	013 034 077		
	047 048 050		127 138 144	PENNEY	024 029 138				082 091 118		
	089 094 116		004 133	160					147 008		
	119 129 142	MTC	040 041 045	PENTAX	020 024 027			SALORA	150 016 017		
	143 144 007		160	PERDIO	041				036 056 129		
	132 133 139	MTS	016 024 029	PHILCO	029 138 145				149		
	140 108	MULTITECH	041 029 031		160			SAMEX	160		
KAISUI	040		040	PHILIPS	006 029 044			SAMSUNG	045 071 160		
KENDO	036	MURPHY	041		046 049 052				148 100		
KENWOOD	016 047 050	NAD	160		053 057 069			SANKYO	040		
	116 144	NAONIS	047 048 094		083 086 095			SANSUI	047 050 144		
KLH	029 040	NATIONAL	111 145	PHILIPS	113 132 145			SANWA	147		

BRAND		CODE		BRAND		CODE		BRAND		CODE	
SANYO	016 017 042	TEKNIKA	029 041	<b>SAT/CTV codes</b>				SONY	170		
	077 110 131	TELEAVIA	047 048 094	ALBA	153	STAR TRAK	153				
	109		142 144	AMSTRAD	021	STRONG	039 153				
SBR	057 083 086	TELEFUNKEN	009 018 153	ARCON	021 154	TELE+1	016				
	138		047 048 094	AXIS	021	TELEFUNKEN	153				
SCHAUB LORENTZ	010 016 036		144 142 143	BIRMINGHAM CABLE	035	TELEKA	154				
	047 048 088	TELEORDER	160	CABLETIME	035	THOMSON	014 019				
	094 110 144	TELERENT	144	CARLTON	035	TOSHIBA	168				
SCHNEIDER	024 028 029	TELETECH	040	CRUPTVISION	024	TRIAD	039				
	031 040 041	TENOSAL	031	ECHOSTAR	020 022 025	VISIOPASS	028				
	052 095 100	TENSAI	029 040 147		031 065 017	VORTEC	153 154				
	113 138 148	THOMAS	160		082 088 108	WITTENBERG	021				
	064 169 008	THOMSON	018 022 047	FIDELITY	021						
	004		048 094 144	FILMNET CABLECRYPTO16							
SCOTT	029		142 143 026	FILMNET COMCRYPT 016							
SEARS	016 024 029		132 133 139	FREECOM	039 153						
SEG	040 100 148		007	GOLDSTAR	039						
	160	THORN	032 047 089	GRAETZ	110						
SEI-SINUDYNE	082 138 147		094 007 141	GRUNDIG	021						
SELECO	047 048 094		142 143 144	HANTOR	153						
	142 143 144	THORN FERGUSON	025 047 087	HUMAX	033						
SENTRA	065		089 094 112	INGELEN	110						
SETRON	040		104	ITT	085						
SHARP	016 052 053	TIVO HDD	026	ITT-NOKIA	025 110						
	062 079 175	TOKAI	029 040	JERROLD	202 203 211						
	015	TOSHIBA	132 029 047		210						
SHINTOM	031 040		048 056 084	KOSMOS	039						
SHIVAKI	029		094 138 144	KYOSTAR	153						
SHOGUN	160		160 007	LENCO	153 039						
SHORAI	147	TOWADA	040	LG	039						
SIEMENS	016 017 029	TOWIKA	040	LORRAINE	039						
	090 095 102	TRIX	029	LUXOR	110 012 013						
	110 113	UHER	024 029 047	MANHATTAN	002						
SIERA	052 095 113		100 142 144	MEDIASTAR	035						
SILVA	029		148	METRONIC	153						
SINGER	040 160	ULTRAVOX	010	MOVIE TIME	018						
SINUDYNE	082	UNITECH	045 160	MURAITO	039						
SONTEC	029	UNIVERSUM	029 036 138	NOKIA	008 003 012						
SONY	051 054 055		169		013 001 110						
	081 085 061	UNIVERSUM	160	NORDEMEDE	153						
	070 096	VICTOR	047 050 144	ORBITECH	153						
SR1000	160	VIDEOSONIC	160	PACE	034						
STERN	047 048 094	VIEWMARK	029	PANASONIC	036						
STS	020 024	WARDS	024 040 160	PHILIPS	023 038 010						
SUNKAI	077	WELTBlick	029		004 006 007						
SUNWOOD	040	WHITE		PIONEER	021 029 011						
SYLVANIA	041 056 138	WESTINGHOUSE	010	SALORA	110 012 013						
SYMPHONIC	029 040 041	XR-1000	040 160	SAMSUNG	153 154						
	056 138	YAMAHA	047	SAT	021						
TAISHO	147	YAMASHI	040	SATPARTNER	153 039						
TANDY	016	YOKO	160 029 040	SCHAUB LORENTZ	110						
TASHIKO	041		148	SCIENTIFIC ATLANTA	015 201						
TATUNG	041 047 138	ZANUSSI	047 048 094	SEG	153						
	144 004 007	ZENDER	094	SILVA	039						
TEAC	041 047 144	ZOPPAS	047 048	SKY	151						
TECHLINE	040			SKY PLUS	212						
TECHNICS	138 156										

DEVICE CODES							
BRAND	CODE	BRAND	CODE	BRAND	CODE	BRAND	CODE
<b>DVD codes</b>		HARMAN KARDON	036 060 061	MEDION	072	ROADSTAR	037
		HE	029	MEMOREX	032	ROTEL	018
3DLAB	017	HITACHI	020 021 022	MICROMAXX	032 070 071	SAMSUNG	022 059 060
AIWA	027 050		008	MICROSTAR	032 070 071	SCHAUB LORENZ	055
AKAI	031	HOME ELECTRONICS	029	MITSUBISHI	053	SCHNEIDER	072 073 074
ALBA	065 066 067	INNOVATION	032 070 071	MUSTEK	029	SHARP	070 011
APEX	047 035	IRRADIO	019	NAD	074 043	SHINCO	015
BUSH	065 066 067	JVC	007 018 057	NAKAMICHI	042	SILVASCHNEIDER	032
CLASSIC	029		063 058	NORDMENDE	032	SINUDYNE	025
COBY	029	KENDO	032	ONKYO	026 062 051	SKYMASTER	029 075
CYBERCOM	032	KENWOOD	046 006 054		064	SKYWORTH	034 049
DAEWOO	038 040		055	OTHERS	033 066	SONY	001 045
DANSAI	065	KLH	010	PACIFIC	032	TCM	032 070 071
DENON	006 016	LENCO	039	PANASONIC	002 006 011	TEAC	020 015
DIK	032	LENCO	039 032	PHILIPS	068 055 024	TEVION	032 070 071
DK DIGITAL	032	LG (GOLDSTAR)	009		012 017 051	THETA DIGITAL	058 059
DMTECH	072	LIFE	070 071	PIONEER	052 056	THOMSON	013 023
DRAGON	032	LIFETEC	032 070 071		004 014 020	TOSHIBA	003 0051 052
DUAL	032 029	LOEWE	068		048 053 058	UNK	028
ELTA	075	LOEWE OPTA	055 615		054 059	VOXSON	032
ENZER	044	LUXMAN	022	PROFILO	066 067	WELKIN	032
FISHER	041	MAGNAVOX	051 052	PROLINE	066 067	WHARFEDALE	076
GOODMANS	065 066 067	MARANTZ	017 024	RAITE	044	YAMAHA	006 030 056
GRUNDIG	068 055 069	MBO	029	RCA	005		057
	070 071	MEDION	032 070 071	REVOX	055	ZENITH	009 051 061
				REVOY	039		062 052