

remote control

The CR402 universal remote controller

The CR402 is a sophisticated ‘universal’ backlit remote control that can control up to eight devices. It is pre-programmed for use with the AVR and many other Arcam products (FM/DAB tuners, CD players and DVD players).

With its extensive built-in library of codes, it can also be used with thousands of third party audio-visual components – TVs, satellite and set-top boxes, PVRs, CD players, etc. See the list of codes at the back of this haddendum.

The CR402 is a ‘learning’ remote, so you can teach it almost any function from an old single-device remote.



Using the remote control

Please keep in mind the following when using the remote control:

- Ensure there are no obstacles between the remote control and the remote sensor on the AVR. The remote has a range of about 7 metres. (If the remote sensor is obscured, the Z1 IR remote control input jack on the rear panel is available. Please consult your dealer for further information.)
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the remote sensor of the AVR.
- Replace the batteries when you notice a reduction in the operating range of the remote control.

Inserting batteries into the remote control

1. Open the battery compartment on the back of the handset, by sliding its cover off.
2. Insert two ‘AAA’ batteries, as indicated in the battery compartment.
3. Slide the battery compartment cover back firmly into its locked position with a click.

English

Notes on batteries:

- Incorrect use of batteries can result in hazards such as leakage and bursting.
- Do not mix old and new batteries together.
- Do not use non-identical batteries together – although they may look similar, different batteries may have different voltages.
- Ensure the plus (+) and minus (-) ends of each battery match the direction indicated in the battery compartment.
- Remove batteries from equipment that is not going to be used for a month or more.
- When disposing of used batteries, please comply with governmental or local regulations that apply in your country or area.

Useful information

Backlight

A backlight comes on for eight seconds whenever a key is pressed. This helps you use the handset in subdued lighting conditions.

Power LED blinks

A blink indicate a valid key press.

Multiple blinks convey information (such as a device code) or signal the beginning and successful completion of a programming sequence.

The symbol ‘’ is used in the manual to indicate a power LED blink.

Timeouts and unassigned keys

Time out – After 30 seconds the CR402 exits the programming state and returns to normal operation.

Stuck key timeout – After any key is pressed continuously for 30 seconds, the CR402 stops sending IR transmission to conserve battery life. The CR402 remains off until all keys are released.

Unassigned keys – the CR402 ignores any unassigned key presses for a particular Device Mode and does not transmit IR.

Low voltage indicator

When the batteries are running down, the LED flashes five times whenever you press a button:



If this happens, fit two new AAA alkaline batteries as soon as possible.

Device Mode / Source keys

As the CR402 can control your AVR as well as a range of other equipment: many of the buttons have more than

one function depending on the ‘device mode’ selected on the remote control.

The Device Mode keys (shown below) select the source on the AVR. If one of these keys is pressed briefly, a command is transmitted to change the source on the unit. Also the functionality of the remote control changes to operate the selected source device; it’s like having a bundle of different remotes in your hand!



	Multi-channel input
	Internal FM or DAB tuner input
	Auxiliary input
	Ethernet input (e.g. Internet radio)
	iPod, input
	DVD or Blu-ray disc player
	Audio-visual sound input (use with TV)
	Video Cassette recorder input
	Tape input
	Phono input
	Satellite input
	Personal Video Recorder (or Digital Video Recorder) input
	Compact Disc player input

Each Device Mode changes the behaviour of many of the CR402 keys to control the source device appropriately. For example: in **CD** mode  plays the previous CD track, but in **AV** mode  issues the TV ‘channel down’ command.

The CR402 remains in the last selected Device Mode so it is not necessary to press a Device Mode key before every command key if all you are doing is playing or skipping tracks on a CD, for example.

Pressing the  or  keys will put the remote into **AMP** Device Mode.

Navigation keys

The Navigation keys steer the cursor in Setup menus or on-screen menus. They also replicate the navigation functions of original remotes supplied with other home entertainment devices in your system.  confirms a setting.

Volume control

By default, the CR402 is set up so that the volume control and mute buttons (, ) always control the volume of the AVR, regardless of which Device Mode the remote is currently set for. This is known as volume ‘punch through’.

For example, if you are listening to a CD, you will probably have the CR402 in **CD** Device Mode to control the CD player. You can use the volume controls on the remote directly to adjust the volume of the AVR without first having to press  to put the remote into **AMP** Device Mode. The volume buttons ‘punch through’ the **CD** Device Mode on the remote to the **AMP** Device Mode.

Volume ‘punch through’ can be disabled individually for any Device Mode if desired.

Customising the CR402

The CR402 offers a Code Learning feature that allows you to copy functions from an original remote control onto the CR402 keypad. For details of this, and other customisation features, see “customising the CR402” on page 7.

The CR402 complies with Part 15 of the FCC rules

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide a reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet or a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

AMP Device Mode

The Device Mode button configures the CR402 to control the AVR. Pressing this button does not affect the currently selected input on the AVR.

IMPORTANT: The CR402 must also be in **AMP** Device Mode to select the following sources: **TUNER, AUX, NET OR IPOD**.

The functionality of the CR402 is context sensitive for the internal sources and is described in the following table.

	Single press – Toggles AVR power between standby and on in the current zone (zone in which the command is received). Press and hold – Forces all zones into standby, regardless of which zone the command was received in.
	Displays the room EQ settings menu.
	The number keys can be used for source selection (without changing the CR402 Device Mode). 0 SAT (satellite) input 1 STB input 2 AV input 3 TUNER input 4 DVD input 5 GAME input 6 VCR input 7 CD input 8 AUX (front panel) input
	Cycles through the front panel display's brightness options.
	Cycles through the available surround and downmix modes.

	Brings up the speaker trim menu. Use the , , , and navigation buttons. Press TRIM again to exit the speaker trim menu. As this is a temporary adjustment, these additional trim levels are reset to zero when the unit is turned off or put into standby, but are retained if the selected input is changed. These temporary trim levels are independent of the speaker levels found in the setup menu.
	Stereo direct on/off. Provides a direct analogue path from the analogue inputs to the left and right front outputs. Switches off any surround processing modes and shuts down the DSP circuits for the best stereo sound quality.
	Sync. Delays may be introduced into the video signal by video processing which causes a mismatch between the audio and video timing. You will notice this by speech sound being out of synchronization with the lip movements in the video. To compensate for this, you can adjust the lip sync delay. Press the SYNC button and use the and navigation buttons. Press again to exit the lip sync trim menu.
	Toggles Dolby Volume on / off.
	Brings up a temporary subwoofer trim control. Use the and navigation buttons. Press SUB again to exit the sub trim control. As this is a temporary adjustment, the sub trim level is reset to the value set in the Speaker Levels menu when the unit is turned off or put into standby.
	Info cycles through the information displayed on the lower left portion of the front panel display when on TUN , NET & IPOD inputs.
	Displays the unit's setup menu on the On Screen Display.

	Navigate the files and menus on the screen. OK selects the highlighted file or enters the highlighted menu on the screen – equivalent to 'Enter' or 'Select' on some remote controls. Up Left Right Down + Power on from Standby + Standby from Power on + select zone 2 + changes the picture resolution
	Returns navigation to the top level of the network client menus ('Home').
	Calls up a pop-up to adjust the bass setting for a particular input.
	Toggles the mute function of the AVR.
	Increase amplifier volume .
	Calls up a pop-up to adjust the treble setting for a particular input.
	Resets remote to AMP mode.
	Decrease amplifier volume .
	Tuner / Red button
	Aux / Green button
	Network (NET) internal input / Yellow button
	iPod / Blue button
	DVD/BD input
	AV input
	VCR input
	Tape input
	Phono input
	Satellite input
	PVR input
	CD input

iPod commands

The iPod interface is selected by pressing key in **AMP** Device Mode on the CR402. When connected to an iPod via an optional rLead/rDock/irDock/drDock, the keys below are used to navigate music files in **AMP** Device Mode.

	Navigate the files on screen. OK selects/play the highlighted file.
	Selects the previous/next track in the current playlist.
	Toggles pause and playback of the current track.
	Stops playback.

Network commands

When using the network client, the keys below are used to navigate music files in **AMP** Device Mode.

	Navigate the files and menus on the screen. OK selects the highlighted file or enters the highlighted menu on the screen.
	Selects the previous/next track in the current playlist.
	Toggles pause and playback of current track.
	Stops playback.
	Adds the currently displayed file or radio station to favourites list when using the network client.
	Removes the currently displayed file or radio station from favourites list when using the network client.
	Returns navigation to the top level of the music files structure ('Home').

DVD Device Mode

The  Device Mode button configures the CR402 to control the functions of Arcam DVD and Blu-ray Disc players, although this can be changed. Pressing this button also selects **DVD** as the source.

	Toggles power between standby and on.
	Open/close disc tray.
	Sets track number.
	Cycles through the front panel display's brightness options.
	Cycles through the repeat options (track, disc, etc).
	Fast rewind
	Fast forward
	Press and release to skip back to the beginning of the current/previous track.
	Press and release to skip forwards to the beginning of the next track. Stereo direct on/off. Provides a direct analogue path from the analogue inputs to the left and right front outputs. Switches off any surround processing modes and shuts down the DSP circuits for the best stereo sound quality.
	Stop playback of a BD or DVD.
	Toggles pause and playback of current track.
	Start recording (on products that have this feature).
	Disc menu

	Activates BD/DVD player menu, if available.
	Navigate setup and BD/DVD programme selection menus.  selects the highlighted file or enters the highlighted menu on the screen – equivalent to 'Enter' or 'Select' on some remote controls.
	Up
	Left
	Right
	Down
 + 	Power on from Standby
 + 	Standby from Power on
 + 	Increases the picture resolution, note for BD only on the home screen.
	Returns navigation to the top level of the menu ('Home').
 	Changes audio decode format (Dolby Digital, DTS, etc).
 	Cycles through subtitle options, if available.
	Resets remote to AMP mode.
	Displays programming screen on Arcam DVD players.
	Clears bookmark, search and programme display entries on Arcam DVD players.
	Displays the Memory function (Bookmarks).
	Displays Status Info on Arcam DVD players.

AV Device Mode

The  Device Mode button configures the CR402 to control the functions of a television or other display device. You will need to configure this Device Mode to work with your equipment. Pressing this button also selects **AV** as the source.

	Toggles power between standby and on. (Some TVs require you to use a number key to turn them on.)
	Functions as original remote number key – usually for channel selection.
	Display INFO or OSD (On Screen Display) function, if available.
	AV, this function is TV specific.
	Channel down
	Channel up
	Displays picture information, this function is TV specific.
	Guide
	Navigate setup and programme selection menus.  confirms a selection (equivalent to 'Enter' or 'Select' on some remotes).
	Returns navigation to the top level of the menu ('Home').
 	Cycles through subtitle options, if available.
	Resets remote to AMP mode
	RED key for Text TV
	GREEN key for Text TV
	YELLOW key for Text TV
	BLUE key for Text TV

VCR Device Mode

The  Device Mode button selects **VCR** as the source. The VCR page allows code learning from a dedicated VCR remote – see "customising the CR402" on page 7.

SAT Device Mode

The  Device Mode button selects **SAT** as the source. If configured to work with your satellite receiver, the CR402 can subsequently control the device.

	Toggles power between standby and on.
	Functions as original remote number key – usually for channel selection.
	Display INFO or OSD (On Screen Display) function, if available.
	Channel down
	Channel up
	Displays programme information.
	Guide (or Setup on some set top boxes).
	Navigate setup and programme selection menus.  confirms a selection (equivalent to 'Enter' or 'Select' on some remotes).
	Returns navigation to the top level of the menu ('Home').
	Back
	Cycles through subtitle options, if available.
	Resets remote to AMP mode.
	RED key for SAT
	GREEN key for SAT
	YELLOW key for SAT
	BLUE key for Text SAT

PVR Device Mode

The  Device Mode button selects **PVR** as the source. If configured to work with your personal (hard disc) video recorder or similar device, the CR402 can subsequently control the device.

	Toggles power between standby and on.
	Functions as original remote number key – usually for channel selection.
	Display INFO or OSD (On Screen Display) function, if available.
	Selects the Library or Media function.
	Rewind
	Fast Forward
	Channel down
	Channel up
	Stop playback
	Toggles pause and playback of current track.
	Record
	Opens the EPG (Electronic Program Guide) on some Satellite and Cable set top boxes.
	Turns on the Menu function if the PVR uses this feature.
	Navigate setup and programme selection menus.  confirms a selection (equivalent to 'Enter' or 'Select' on some remotes).
	Returns navigation to the top level of the menu ('Home').

 	Selects the Help function.
 	Cycles through subtitle options, if available.
	Resets remote to AMP mode.
	RED key for PVR
	GREEN key for PVR
	YELLOW key for PVR
	BLUE key for Text PVR

CD Device Mode

The  Device Mode button selects CD as the source. The button is configured to control the CD functions of Arcam CD players, although this can be changed (see “Locking/Unlocking a specific Device Mode” on page 8).

	Toggles power between standby and on
	Open/close disc tray.
	Searches for and plays the track corresponding to the key pressed.
	Cycles through the front panel display's brightness options
	Cycles through the repeat options (track, disc, etc).
	Fast rewind.
	Fast forward.
	Press and release to skip back to the beginning of the current/previous track
	Press and release to skip forwards to the beginning of the next track.
	Stop playback of a CD
	Toggles pause and playback of current track.
	In ‘normal play’ mode (ie the display does not show the letter ‘P’) press the  and  keys to select the track and then the  stores the track. In ‘program play’ mode the  key deletes the stored track.

	Navigate setup and CD programme selection menus.  selects the highlighted file or enters the highlighted menu on the screen – equivalent to ‘Enter’ or ‘Select’ on some remote controls.  Up  Left  Right  Down  +  Power on from Standby  +  Standby from Power on
	Resets remote to AMP mode.
	Plays the programmed tracks.

customising the CR402

NOTE

On the following pages, a single 'blink' of the CR402's power LED is indicated by the symbol .

Code learning

The CR402 comes with a complete library of pre-programmed codes. After you have set up the CR402 for your device, you may find that there are one or more functions on your original remote which do not have a place on the CR402 keypad. For convenience, the CR402 offers a Code Learning feature that allows you to copy up to 16 functions from an original remote control onto the CR402 keypad.

Before you start, make sure that:

- The original remote control is working correctly.
- The remotes are not pointing at your device.
- The remotes have fresh batteries.
- The remotes are not in direct sunlight or under strong fluorescent lights.

NOTE

Learned functions are mode-dependent. You could assign up to eight different functions to a single key – a separate learned function for each mode.

Direct code setup (Method 1)

The first method is to program the remote with the 3-digit code number for the device you wish to control – see “device code tables” on page 9. Make a note of the suggested number or numbers – the most popular code is listed first. Now power on the device.

1. Press the Device key for the product you want to set up, together with the  key. Hold down both buttons for three seconds until the LED stays lit. You are now in setup mode, and you can release the buttons.
2. Enter a 3-digit code for the device. If the 3-digit code number you entered is correct for the device, it will turn off. If it doesn't turn off, enter the next code number from your list until the device does turn off.
3. Once you have found the correct code, press the Device key again. The LED blinks three times  to confirm that the code has been successfully stored.

Library search setup (Method 2)

Library search allows you to scan through all the codes contained in the CR402's memory. It can take a lot longer than the previous method, so only use this method if:

- Your device does not respond to the CR402 after you have tried all the codes listed for your brand.
- Your brand is not listed at all in the Device Code tables.

1. Press the Device key for the product you want to set up, together with the  key. Hold down both buttons for three seconds until the LED stays lit.
2. Point the remote control at the product you wish to control and press the  or  button on the navigation pad. Each time the  or  button is pressed, the code counts up (or down) one code number with a signal to power off the device.
3. Continue pressing the up or down button, in approximately one second intervals, until the device turns off. (DO NOT alternate the up and down button – you need to move in only one direction.)
4. To store the correct code, press the Device key again. The LED blinks three times  to confirm that the code has been successfully stored.

Learning setup (Method 3)

The third method involves ‘teaching’ the CR402 remote from the original remote for the device. The two remotes should be facing each other, about a metre apart.

1. Press the Device key for the product you want to set up, together with the  key. Hold down both buttons for three seconds until the LED stays lit.
2. Press the button on the CR402 that you want to assign a command to. The LED blinks once  indicating that the remote is ready to learn the command.
3. Press and hold the appropriate key on the other remote until the LED blinks twice . This indicates the CR402 has learned the command from your other remote.
4. Continue learning the commands from your other remote by pressing the next button on the remote and repeating steps 2 and 3.
5. Once the remote has learned all the selected commands, press and hold the Device key you used to enter learning together with the Numeric  key to store the learned commands. The LED blinks three times  to confirm that the code has been successfully stored.

NOTE

If the CR402 LED blinks five times  there was an error in the learning process. In this case, please start the Learning Setup from the start. The device keys, ,  and  do not learn commands.

Important notes

- Once you start a Code Learning session, you have approximately thirty seconds to conduct each step. Any longer, and a timeout means that you'll have to start the process again.
- The Learning feature is mode-specific – you can copy one feature *per mode* onto a key.
- The CR402 can learn approximately 16 functions in total.
- To replace a learned function, simply assign a new function to the same key.
- Learned functions are retained when you change batteries.
- If Code Learning fails, try altering the distance between the two remotes; make sure that the ambient light is not too bright.

Deleting the learned data

To delete all the learned data for a device:

1. Press the Device key for the product you want to set up, together with the  key. Hold down both buttons for three seconds until the LED stays lit.
2. Press and hold down the Device key for the product that you want to erase, together with the  key for three seconds until the LED blinks twice .
3. If any further key press is not made for 30 seconds after the LED blinks twice , the remote leaves erase mode without deleting the learned data.
4. If you press the Device key together with the  key one more time within 30 seconds after the LED blinks twice , you can finish the erase mode deleting all the data learned on the Device. The LED blinks three times  to confirm.

To delete the learned data for a key for a device:

1. Press the Device key for the product you want to set up, together with the  key. Hold down both buttons for three seconds until the LED stays lit.

English

- Press and hold down the key on which you want to delete the data for three seconds. The LED blinks twice . If any further key press is made, the remote escapes from erase mode without deleting the learned data.
- If any further key press is not made for 30 seconds, the LED blinks twice , the remote gets out of the erase mode automatically without deleting the learned data.
- If you press the Device key together with the **(3)** key again within 30 seconds after the LED blinks twice, the data learned for that key is deleted and you leave erase mode. The LED blinks three times in confirmation.

Reading stored code numbers

- Press the Device key for the product that you want to set up together with the **(4)** key. Hold down both keys for three seconds until the LED stays lit.
- Press the **(INFO)** key and count the number of blinks (= 1, = 2, = 3, etc.). There is a time gap between digits. (Note that '0' is represented by ten blinks: .)

Locking/Unlocking a specific Device Mode

When you first unpack your CR402 and insert the batteries, it is able to control certain Arcam components automatically (e.g. BD players, Amplifiers, Tuners and CD Players). We achieve this by programming specific Arcam device codes onto the relevant Device Mode keys, then locking the Device Modes so you don't reprogram them inadvertently.

If you want to override these locked default settings – to control a third-party DVD/BD player, for example – you will first need to unlock DVD Mode before setting up the CR402 using one of the learning methods described on the previous page.

Here are the factory default settings:

Device Mode	Default status	Default codes
AMP	Locked	001 (Arcam code 16)
DVD	Locked	001 (Arcam)
AV	Unlocked	108 (Philips TV)
VCR	Unlocked	Code learning only
SAT	Unlocked	128 (Sky+ Digital, from SAT database)
PVR	Unlocked	018 (Humax PVR, from SAT database)
CD	Locked	001 (Arcam)

Alternative codes are available for multi-room solutions, or in the case of code clashes with other manufacturer's products.

For example:

AMP (system code 19) : 002

Note that you need to change the system code on the product you wish to control, as well as the CR402.

- AMP, DVD and CD** are the Device keys that may be Locked or Unlocked.
Lock and Unlock are toggles (they change from Lock to Unlock to Lock, etc.).
- Press and hold the Device and **(6)** keys together for three seconds.
The power LED stays lit, showing that it is in Lock/Unlock setup mode.

- If there is no further key input for 30 seconds, the LED goes off and the remote leaves Lock/Unlock setup mode.

- To verify the status of a device, press the **(3) (6) (9)** keys in sequence:

If Lock is set, the LED blinks three times:

If Unlock is set, the LED blinks five times:

- If you press a valid Device key within 30 seconds, the LED blinks three times: and the remote leaves Lock/Unlock setup mode.

- : to send a Power On command
- : to send a Power Off command
- : to send a Resolution command

Factory default reset

You can reset your remote to the original factory default settings.

Press and hold both the **(H)** (home) and **(MENU)** keys for about five seconds until the power LED blinks five times .

All programming and setup codes that you have entered into the remote are erased and the remote returns to the original factory default settings.

Device codes

The tables that begin on the next page list 3-figure codes for different manufacturers' devices.

Use these when setting your CR402 up to control your devices, as described in Direct code setup: Method 1 (see previous page).

If more than one code number is listed, try the first number. If the results are unsatisfactory, continue trying the numbers for that manufacturer to get the best 'fit' with the functionality required.

If the manufacturer of your equipment is not listed, you can try Library search setup: Method 2 (see previous page). This method allows you to scan through every code contained in the CR402's memory.

Extended commands

- : sends a Power On command
- : sends a Power Off command
- : sends a Zone command
- : sends a Resolution command
- : sends a Red command to the Arcam amp
- : sends a Green command to the Arcam amp
- : sends a Yellow command to the Arcam amp
- : sends a Blue command to the Arcam amp

- : to send a Power On command
- : to send a Power Off command

device code tables

Amplifier

Adc	007
Adcom	082 092 225 161 269 356
Aiwa	170 018 104 202 203 213 211 188
Akai	189
Amc	125 126 127 281 282
Angstrom	142
Anthem	335 337
Arcam	001 002 141 418
Atlantic Technology	342
Audio File	071
Audio Matrix	167
Audio Technica	134
B & K	096 097
Bose	070 170 224 347 409 460 903 906
Boston Acoustics	447
Brix	555
Bryston	023
Cambridge Audio	522 523 525 630 683 684 552
Carver	006 028 061 071 201 214 226 185 022 077 284
Cinema Sound	134
Citation	148 272
Clarion	026
Classe	537 410 411
Delphi	515
Denon	109 215 230 234 330 801
Dvico	802
Elan	057 290
Enlightened Audio	099 098
Escient	368 451
Fisher	047 214 182 297
Flextronics	378
Fosgate Audionics	231 342
GE	056
Goldstar	008
Harman Kardon	231 233 153 154 118 318
Hitachi	020
Integra	275 781
Jamo	398
Jcpenney	216
Jensen	058
JVC	163 191 114 279 291
Kenwood	026 066 145 192 182 005 280 374
Klh	331
Klipsch	042 043 081 687
Koss	216
Krell	072 376 384
Kyocera	007
Lexicon	120 235 236 237 357 360
Linn	124 377
Loewe	904 905 907 908 909
Luxman	139 052 165 115 004 009
LXI	056
Magnavox	086 164 152 208
Marantz	006 028 031 040 063 185 479 251 265 119 289

CD

Mcintosh	238 286
Meridian	100 012 013
Mitsubishi	242 243 204
Mondial	157 158 042 043 081 112
Musical Fidelity	647 648
Myryad	276 293
Nad	113 283 478 479
Naim	533 534 535
Nakamichi	040 244 245 172 183 287
NEC	176
Niles	403
Onkyo	017 046 108 080 209 275
Optimus	026
Outlaw	342
Panasonic	032 195 219 177 292 383
Parasound	129 130 132 261 294 295 333 334
Philips	249 250 251 063 119 805
Pioneer	014 044 069 168 116 035 078 198 480
Polkaudio	515
Primare	461 462 463 464 465
Proceed	144 268
RCA	010 048 117 156 067 288
Realistic	019 056 073 075 095
Rotel	074 083 085
Russound	379 391 392
Samsung	016 804
Sansui	040 048 110 119 065 228
Sanyo	047
Scott	019 091
Sharp	026 094 026 175
Sherwood	024 102 106 447
Sirius	555
Sony	018 247 248 166 101 184 218 271 369 372 380
SSI	068
Sugden	430
Sunfire	344 345 346
Systemline	759
Teac	005 019 049 040 212 217
Technics	122 176 193 219 178 177 200 257 262
Theta Digital	136
Toshiba	060 087 198 278
XM Satellite Radio	515
Yamaha	026 253 169 067 173 264 232 089 264 274 285 373 803 644
Zenith	143 210
SAE	107
Sansui	107 128 171 190 125
Sanyo	050
Sharp	026 031 051
Sherwood	051 096 112 115 119 166
Signature	033
Sony	048 081 097 126 133 177 226 164
Soundesign	251
Sumo	155
Sylvania	107
Symphonic	052
Tandy	010
Teac	051 052 233 079
Technics	147 172 184 008 068
Theta Digital	234 235
Toshiba	006 067 091 160 148
Victor	004 022
Wards	185 033
Yamaha	024 046 054 186 183 245

DVD

Aiwa	146
Akai	281
Alpine	098
Apex Digital	087 282 115
Arcam	001
Broksonic	130
Cambridge Audio	215 323 333
Cinevision	091
Coby	260
Cyberhome	271
Denon	138 080 173 358
Durabrand	091
DVD 2000	017
Emerson	091 143
ESA	143
Fisher	147
Funai	143
GE	027
Go Video	137 091 220 221
Goldstar	091
Harman Kardon	084 140
Hitachi	101
Initial	282
Insignia	143
Integra	142 338
JBC	084
JVC	012
Kenwood	151
Kiss	279
KLH	135
Krell	104
Lexicon	148
LG	091 057
Linn	306 309
Liteon	264
Loewe	359 360
Magnavox	001 096 143 282
Marantz	083 095
Meridian	153
Microsoft	027
Mintel	282
Mitsubishi	017
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