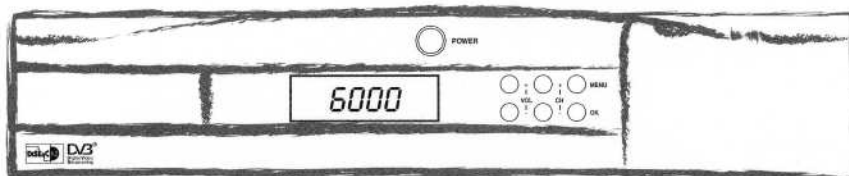


FREE TO AIR DIGITAL SATELLITE RECEIVER

# User's Manual

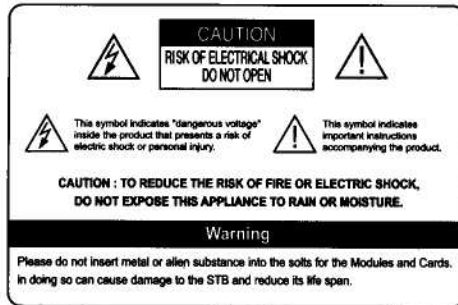
Model No.: **SV-4000**



SONICVIEW

## Caution Guide

Please read this safety information carefully and keep these instructions and heed all warnings. Always follow these instructions to avoid the risk of injury to yourself or damage to your equipment.



- **Placement:** Do not place the receiver on an unstable cart, stand, tripod, bracket or table. The receiver may fall to cause the serious personal injury and damage to the receiver. When a cart is used, use caution when moving the cart/Receiver combination to avoid injury from tip-over. Do not use or store the receiver where it is exposed to direct sunlight, or near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat. Never stack other electronic equipment on top of the receiver. Place the receiver at least 30mm from the wall.
- **Operating Power:** Operate the receiver using only the type of power source indicated on the marking label. Protect the power cord from being walked on or pinched. Particularly at plugs, convenience receptacles, and the point where they exit from the receiver.  
Unplug the receiver during lightning storms or when unused for long periods of time.
- **Ventilation:** Do not block the receiver ventilation holes.  
Ensure that free airflow is maintained around the receiver.
- **Cleaning:** Unplug the receiver from the AC power outlet before cleaning. Use only a dry cloth for cleaning the exterior of the receiver.
- **Attachment:** Do not use accessories or attachments not recommended by the receiver manufacturer as they may cause problems to the equipment and will void the warranty.

- **Water Proof:** Do not expose the receiver to the water or any liquids.
- **Grounding:** The ground of the LNB cable must be directly connected to the system ground for the satellite dish. The grounding system must comply with local regulations. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

## Service

Do not attempt to service the receiver by yourself as opening or removing cover may expose you to the dangerous voltage and will void warranty.

Refer all servicing to qualified service personnel. Servicing is required when the receiver has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the receiver, the receiver has been exposed to rain or moisture, does not operate normally, or has been dropped. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please contact the authorized service center and personnel.

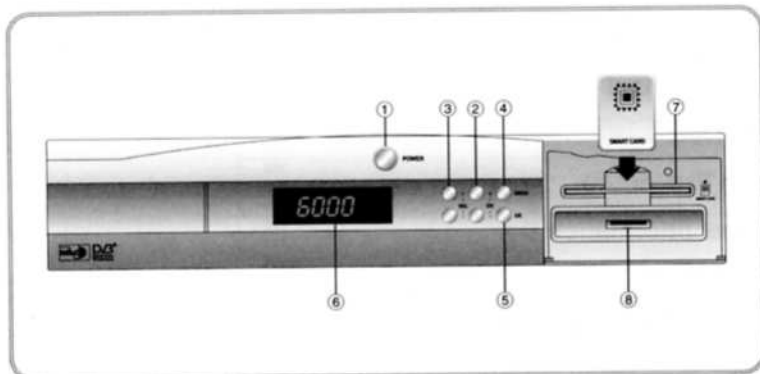
## Caution & Note for FCC Regulation

**Caution:** Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limit for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide 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.

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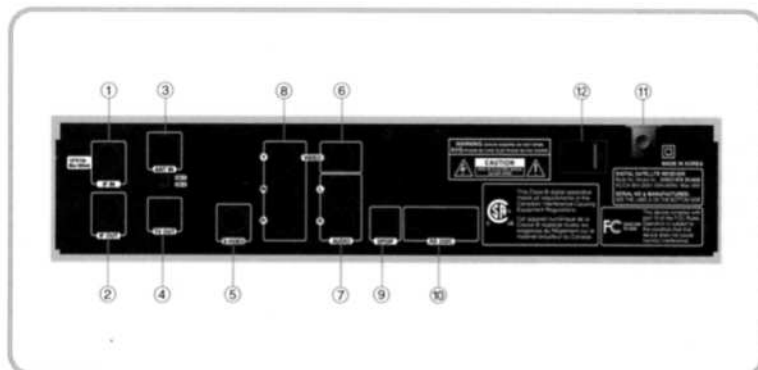
## Front Panel



- 1) Power Key
- 2) CH Up/Down
- 3) VOL Up/Down
- 4) MENU
- 5) OK
- 6) Display
- 7) Smart Card Slot  
(Option on model)
- 8) USB 2.0 Host Slot

Switch the receiver ON / OFF.  
 Channel Up/Down or direction key  
 Volume Up/Down or direction key  
 Call the main menu  
 Select the menu or its parameters  
 4-Digit ,7-Segment Display  
 Slot for the Smart Card  
 Host Slot for USB 2.0 Devices

## Rear Panel



- |                       |   |
|-----------------------|---|
| 1) IF IN              | Connect antenna cable from LNB  |
| 2) IF OUT             | Connect RF signal from the STB to RF input on your television or to the STB |
| 3) ANT IN             | Connect your local RF channels to your TV via loop                          |
| 4) TV OUT             | Connect your TV by RF cable   |
| 5) S-VIDEO            | Connect VCR   |
| 6) VIDEO              | Video output jack for TV or others  |
| 7) AUDIO              | Audio output jack for TV or others  |
| 8) COMPONENT          | Digital video output for Y, Pb, Pr  |
| 9) S/PDIF             | Digital audio output for digital amplifier                                  |
| 10) RS-232C           | Serial Port for software download by PC                                     |
| 11) POWER             | 95 ~250V ac, 50/60Hz  |
| 12) Main power switch |   |

## Universal Remote Control Unit

- 1) POWER (  )  
Power on/off
- 2) SAT (  )  
Select satellite name
- 3) FAV (  )  
Display the favorite channel group list
- 4) Universal Mode  
Select mode of TV, DVD, VCR, STB
- 5) EPG(Guide) (  )  
Call the EPG
- 6) TV/SAT (  )  
Change the mode of TV/Satellite
- 7) Audio (  )  
Select audio mode
- 8) Help (  )  
Call the help bar
- 9) FAV (  )  
Display the favorite channel group list
- 10) TV/RADIO (  )  
Select mode of TV/Radio
- 11) SIGNAL (  )  
Show the signal meter
- 12) ZOOM (  )  
Zoom the screen
- 13) FIND (  )  
Find the channel name
- 14) MENU (  )  
Call the main menu
- 15) EXIT (  )  
Exit the menu
- 16) EPG (  )  
Call the EPG
- 17) LAST (  )  
Call the previous channels

- 18) Page Up ( )  
Up the page
- 19) Page Down ( )  
Down the page
- 20) OK ( )  
Confirm the selection
- 21) Channel Up/Down ( )  
Up/Down the channel & move Up/Down
- 22) Volume Up/Down ( )  
Up/Down the volume & move left/right
- 23) Information ( )  
Show the channle information
- 24) SAT ( )  
Select satellite name
- 25) Mute ( )  
Mute the audio
- 26) SORT ( )  
Sort the channel list
- 27) SET ( )  
Set up the color of screen
- 28) MULTI ( )  
Turn to multi-channel display
- 29) USER ( )  
Turn to user mode
- 30) SLEEP ( )  
Sleep timer
- 31) PAUSE ( )  
Pause the channel
- 32) Red function key
- 33) Green function key
- 34) Blue function key
- 35) Yellow function key
- 36) Numeric key

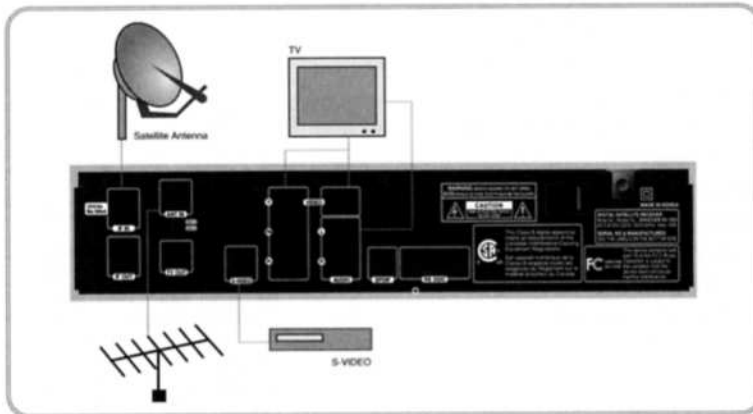




## How to connect your equipment

You can connect your equipment, TV, VCR & Hi-Fi System with the STB.  
The following is the standard connection for your setting up your system  
Contact your authorized dealer or service personal if you have any problem.

**Please DO NOT plug in the power supply cord until you have finished all the connections !**



### 1) STB to TV Set

Please connect TV to modulator or RCA jacks, or component.

### 2) STB to VCR Set

VCR connection is with S-VIDEO scart connector.

### 3) STB to Hi-Fi System

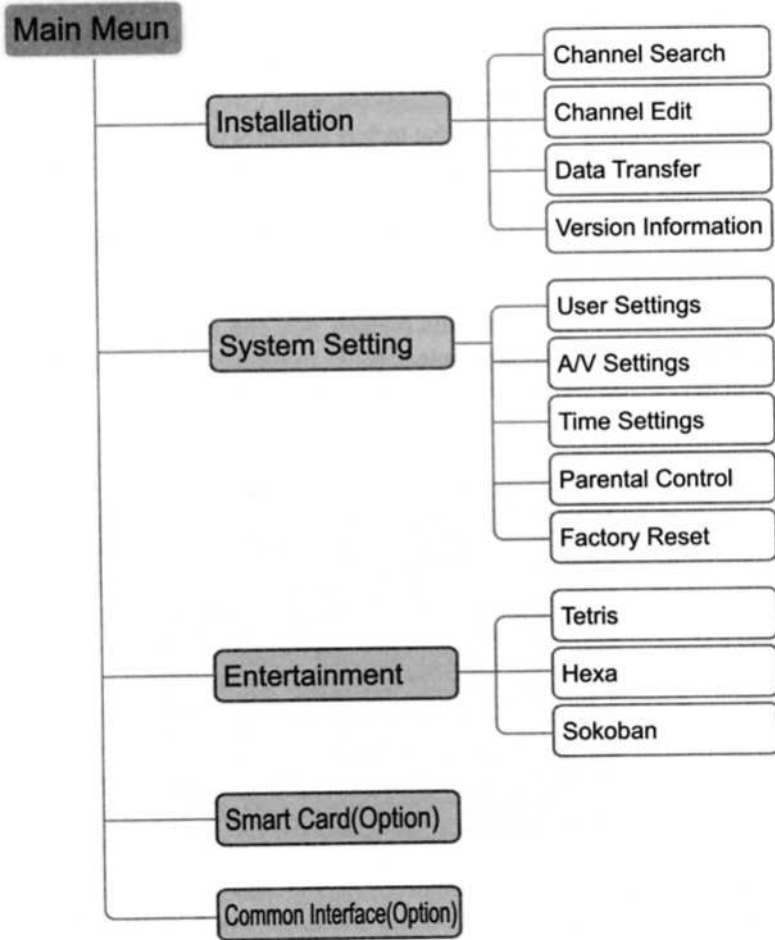
RCA audio R/L jack is for Hi-Fi system. If you have digital amplifier to support DOLBY digital system, please connect S/PDIF to it.

### 4) Loop Through

If you want to use the same LNB with other analog or digital satellite receiver, you can connect them via the loop through.

## Menu Tree

Menu Tree helps you to understand the STB operation structure.



## Set Up Procedure

Set up procedure is completed by the following process.

### Main Menu => Installation Menu => Channel Search

#### 1. Language Selection

When you plug in the receiver, you can see the **Select Language** menu on the screen. You can select the GUI language you want using the RCU direction keys and press the **OK** key. Only when the factory default is done, this menu appears.

After language selection, you see the black screen with the channel information bar that mentions "No TV Channel". Then, press the **MENU** key on the RCU and the **Main Menu** appears on the screen.

In case channel list is preset in the factory, you can see the No. 1 channel of the channel list after language selection. In this case you can change the channel list, if you want, using the Channel Search menu.

#### 2. Channel Search



In the **Main Menu**, move to **Installation** menu and choose its sub-menu, **Channel Search** menu, pressing **OK** key and **Enter PIN Code** menu appears. The default PIN Code No. is "0000" and enter it using numeric keys on the RCU.

You can change PIN Code No. in the Parental Control menu of System Settings menu in the Main Menu.



## (1) Satellite

You can choose the satellite you want to search pressing **Vol Up/Down** keys on the RCU.

Or press **OK** key and you can see all the preset satellite list with alphabetic-order.

Multi-selection is available using **Blue** function key.

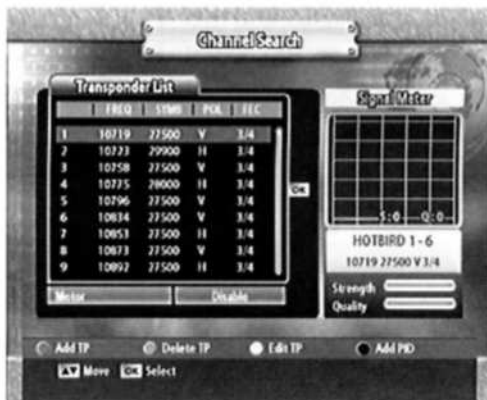
**Red** function key : Add new satellite

**Green** function key : Delete the satellite

**Yellow** function key : Rename satellite

**Blue** function key : Add this satellite to multi selection

**SORT** key : Sort satellite list by name or location



## (2) Transponder

You can choose the Transponder frequency you want to search pressing **Vol Up/Down** keys on the RCU.

Or press the **OK** key and you can see all the preset transponder list with alphabetic-order.

**Red** function key : Add new transponder

**Green** function key : Delete the transponder

**Yellow** function key : Edit current transponder parameters

**Blue** function key : Add user channel to this transponder

(3) Search Option

3 modes are available.

**All:** FTA + Scrambled channels

**FTA:** FTA channels

**Scramble:** Scrambled channels

**Network Search:** On / Off

**DiSEqC:** Off / Mini-A, Mini-B, Port 1,2,3,4

(4) Channel Scan Start

4 modes are available.

**Red** function key : Start Satellite Scan

**Green** function key : Start Transponder Scan

**Yellow** function key : Start Multi-Satellite Scan

**Blue** function key : Start blind Scan

**Before channel scan start, you can check the signal's strength and quality with Signal Meter and Strength & Quality Bar on the screen of Channel Search menu.**



## (5) Channel Scanning

After channel scan start, **Channel Scanning** menu appears.

During the channel scanning, you can see the parameters related to the scanning.

- Satellite name
- Scanning percentage bar
- Scanned TV channel name & quantity
- Scanned Radio channel name & quantity
- Data channel quantity
- Scanning time

After Channel Scanning is completed, "Channel Changed!" pop-up menu appears. If you select Yes, the scanned channel list is saved.

Then, press EXIT key and Channel Search is completed to move to the no.1 channel.

## Channel Information Bar

Once Channel Search is finished, you can enjoy the scanned channels. During enjoying the TV & Radio programs, you can manage several functions with Channel Information Bar.



Whenever you change the channels, **Channel Information Bar** appears for a while at the bottom of screen and disappears. The program information is shown through this **Channel Information Bar**.

**The Channel Information Bar consists of various icons and functions.**

① TV / Radio program

This shows that the current channel is either TV program or Radio program. When you press TV / RADIO key on the RCU and it converts between TV & Radio program.

② Current Time

Current time is shown.

③ Channel No. & Name

This is the channel no. and name that you are watching. The channel no. is decided during the channel scanning.

④ Program Information

The program information is described in this area.

## ⑤ Program Information

- a. During the **Channel Information Bar** is appearing, you can press **INFO** key on the RCU.



Then, EPG (Electronic Program Guide) Information of the current channel is popped up above the **Channel Information Bar**.

- b. When the Channel Information Bar disappears, You can press **INFO** key to recall the Channel Information Bar and press **INFO** key one more time to hide the Channel Information Bar.

## ⑥ Red key & Channel Group Indicator

When you are watching the program, you can choose channel group you want to see.

The channel group is 3 groups;

FTA Only : FTA Channel Group

CAS Only : CAS Channel Group

FTA & CAS : FTA & CAS Channel Group

If you press **Red** key on the RCU, the channel group is changed by circle and the program is also changed according to the channel group.

## ⑦ FAV Key & Favorite Channel Group Indicator

You can make favorite channel group in the **Channel Edit** menu. If you press **FAV** key, the list of all favorite groups is appeared, so you can select the group you want.





8 favorite channel groups are available in total. You can add current channel to the selected favorite list directly by pressing **Red** function key.

#### ⑧ Signal Strength & Quality Bar

These indicate the current channel's signal strength and quality.

#### ⑨ Icons of Channel Features

These icons show the specialty of the current channel.

\$ icon(💰): Scrambled (CAS) channel

Lock icon(🔒): Channel is locked

Teletext icon(📺): Channel contains teletext.

Subtitle icon(📄): Channel contains subtitle.

Audio icon(🔊): Channel contains multiple audio.

Dolby icon(🔊): Channel contains Dolby digital audio.

When the channel has above specialties, the icons are on,

#### ⑩ Channel Data

These indicate satellite name, channel frequency, symbol rate, polarity & FEC of the current channel.

## Channel List

During watching the channels, Channel List menu helps you to select easily the channel you want to see. Also, you can see the channel list that you have searched before group by group.



1. During watching the channel, press **OK** key to move to the **Channel List** menu.
2. You can change the **Channel List** using **Red** key on the RCU channel group by channel group and its 8 favorite channel group can be listed by **FAV** key on the RCU.
3. The selected channel's video & audio are shown in the small frame.
4. Pressing **OK** or **EXIT** key, the channel is returned to the main frame.

You can sort the channel list using **SORT** key on the RCU.

1. Press **SORT** key on the RCU.
2. Then, the **Sort Channel List** window pops-up.
3. You can select 3 sort types.  
Alphabetical / Satellite / Default, and press **OK** key.

In the Channel List press **OK** key, after selecting the channel you want to see, and the selected channel is shown in the small frame.

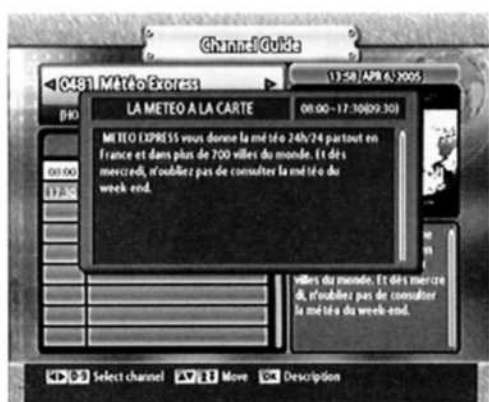
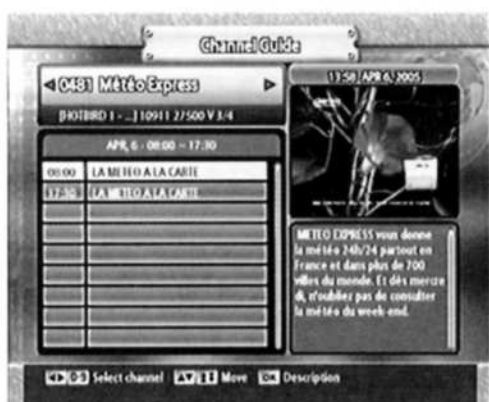
Also, you can enjoy the Multi-Picture function in the Channel List menu.

1. In the Channel List, you can Implement Multi-Picture function using **Blue** key on the RCU.
2. Pressing **Blue** key, Multi-Picture window pops-up and choose the mode you want.

In the Channel List, you can change TV Channel List to Radio Channel List to press the TV/RADIO key on the RCU.

## Electronic Program Guide (EPG)

You can view program guide information in EPG menu.



1. During watching the channel, press **EPG** key to enter the **EPG** menu.
2. In **EPG** menu, press **VOL Up/Down** key to change channel. You can also enter channel number directly by number key. The **FIND** key is also available.  
You can select specific event by **CH Up/Down** key. If you want to view information about the selected event, press **OK** key.  
This information is also displayed in the right window with automatic scrolling feature.

**You can also view the information about the current event immediately from channel information bar by pressing INFO key.**

## Audio

Some channel contains multiple audio data.

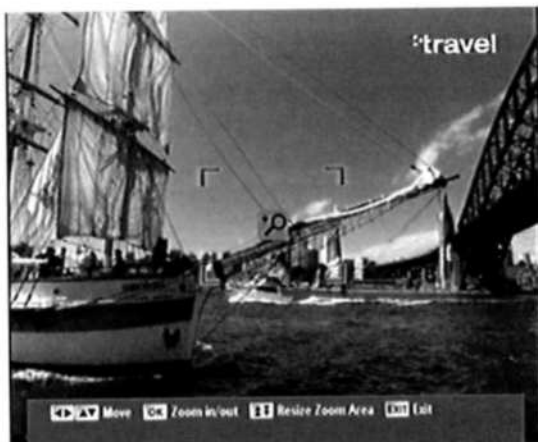


1. When the current channel contains multiple audio data, the audio icon in the channel information bar is activated. Pressing **AUDIO** key, the audio selection window pops up.
2. Initially the default audio language in **User settings** menu is automatically selected.  
You can change audio language for the current channel. Once changed, it remains as selected by user for this channel.
3. You can change audio mode such as **Stereo**, **Mono**, **Left** and **Right** in this menu also.

**The audio settings are channel specific, which means you can select different audio settings per channel.**

## Zoom

These functions are user-friendly functions to enjoy programs more usefully.



1. During watching TV program, press **ZOOM** key on the RCU.  
Then, the zoom cursor appears.
2. Using **CH Up/Down** & **VOL Up/Down**, you can move the cursor where you want to move.
3. When you want to resize the cursor, please use **Page UP/Down** key on the RCU.
4. After moving the cursor, please press **OK** key and the zoom is active and returning to the main frame is to press **EXIT** key.
5. In the zoom mode, you can see the zoom indicator on the upper right side and can move the zoomed spot directly.

**Zoom function is also workable in the Pause mode.**

## Multi-Picture

This function is to show multi-channels of Channel Group at the same time in one main frame.



1. During watching TV program, press **Blue** key on the RCU.  
Then, the **Multi Picture** menu pops up.
2. You can select how many picture you want to see among 4, 9, 16 pictures and press **OK** key.
3. Then, multi-pictures are shown from the channel of the TV program that you are watching to the same number of channels of the channel list.
4. In the multi-picture mode, the selected channel no. & name is blinked.
5. After multi-pictures are shown, only one channel is activated and others are in the still picture.
6. You can move the yellow frame cursor to select the TV program using **CH Up/Down** & **VOL Up/Down** key and press **OK** key to activate the TV program.



7. After activating the channel, press **OK** key and the channel becomes main frame.
8. In the main frame mode, you can see the multi-picture indicator on the upper left side.  
Using the indicator's cursor, you can change the channel directly in the main frame mode.

This Multi-Picture function can be implemented in the main frame and Channel List menu both.

## Find

This function enables you to find the channel you want easily by its name.



1. During watching TV program, press **FIND** key on the RCU if you want to find channel by its name.
2. Using **CH Up/Down**, **VOL Up/Down** and **OK** button, enter the name of the channel you are looking for.  
Every time you enter the character, all the channels whose name contains the string are listed in the right window.



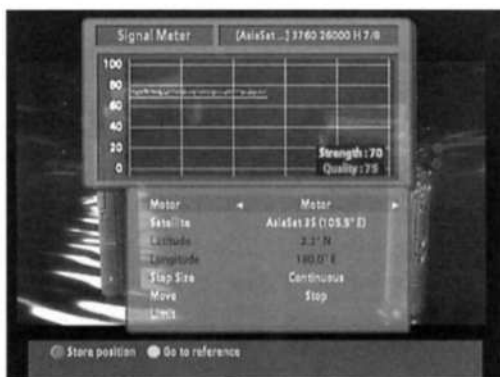
3. You can move to the **Channel List** window in the right side at any time by press **Green** button and select channel by pressing **OK** key.

This function is also available in channel list and channel edit menu.



## Signal

This function shows the signal status of the current channel with a larger view.



1. During watching TV program, press the **SIGNAL** key on the RCU to view signal status such as signal strength and quality.
2. You can control DisEqC or USALS setting here.

## Sleep



1. Press the **SLEEP** key on the RCU to set time the receiver will be turned off.
2. You can select time by **VOL Up/Down** and **OK** button.
3. Once sleep timer set, a small icon appears on the left top corner of the screen.

## Miscellaneous Functions

- **PAUSE**

When you press **PAUSE** key, the video stops temporarily until you press **PAUSE** key again or press **EXIT** key.

- **MUTE**

When you press **MUTE** key, the audio is changed between mute and un-mute state.

- **TV/RADIO**

When you press **TV/RADIO** key, the current channel list is switched between TV channels and Radio channels.

- **LAST**

The receiver remembers up to 8 recent channels. When press **LAST** key the 8 recent channels are listed, and you can select one of those channels. You can also erase this list by pressing **RED** key in the list.

- **FAV**

Once the favorite group is made in **Channel Edit** menu, you can select one of the favorite list by pressing **FAV** key.

- **TV/SAT**

You can feed TV input from this receiver or other A/V device such as VCR by pressing **TV/SAT** key. The device should be connected to the SCART port to make this function work.

- **SAT**

You can list channels in specific satellite by pressing **SAT** key.

## Main Menu

This section describes each item in the main menu. Please note that some items in the menu are protected by PIN code to prohibit unauthorized modification. You can change PIN code in Parental Control menu.

### 1. Installation

#### A. Channel Search

You can search available channels in this menu. You can also add, delete or modify satellite and transponder information here.

(Please refer to the previous section for more information.)

#### B. Channel Edit

You can delete, rename, lock or unlock the scanned channels in this menu.



**Delete Channel:** Press **Green** button.

**Rename Channel:** Press **Yellow** button.

**Lock/Unlock Channel :** Press **Blue** button.

**Move Channel:** Press **INFO** key after selecting the channel to be moved and press **CH Up/Down** key to move. After moving the channel, press **OK** button to place the channel at new location. Multiple channels can be move at a time.

You can also make, edit or delete favorite channel groups in this menu.



**Change current favorite group:** Whenever press **FAV** key, current favorite group changes in rotation.

**Add favorite channel:** Press **FAV** key to select the favorite group you want to add new channel. And press **OK** button to add selected channel to this group.

**Delete favorite channel:** After select channel in the left window, press **OK** button to remove this channel from any favorite group. Or press **Green** button in the right favorite group window.

**Rename favorite channel:** Move cursor the favorite group window, and press **Yellow** button.

### C. Data Transfer

You can upload software or data in this receiver to other receiver for set-to-set upgrade.



### D. OTA Upgrade

You can make your receiver up to date via satellite if there is a newer software available.

### E. Version Information

You can check the current software version in your receiver in this menu.

## 2. System Settings

### A. User Settings

You can modify various properties of your receiver in this menu.



**Menu Language:** The language displayed in menu.

**Audio Language:** The default language for audio. If there are multiple audio in the current channel, this default language will be automatically selected initially. When the user selects other language in some channel, it remains till user change it again.

**Information Timeout:** It specifies the displaying time of channel info bar.

**Channel Change Mode:** It specifies the mode for changing channel. There are three types of channel changing as followings.

Black Out: Video goes black during shifting channel.

Freeze: Video remains still during shifting channel.

Fade In/Out: Video fades out slowly, and fades in again with new channel.

**Menu Blink Effect:** In some menu such as main menu, channel list and channel edit, selected item blinks for visual effect. You can enable or disable this function with this setting.

**Remote Control Beep:** You can enable or disable beep sound of the RCU.

**Beep Frequency:** You can change tone of beep sound of the RCU. Lager value means higher tone.

**Beep Volume:** You can change the volume of the RCU beep.

## B. A/V Settings

The settings related audio and video outputs can be modified in this menu.



**TV Type:** You can select the type of your TV set such as NTSC, PAL and AUTO.

**Screen Type:** You can select the type of your TV set such as 4 : 3 or 16 : 9.

### C. Time Settings



**Time mode:** There are two time modes.

- Auto
- Manual

**Time offset:** In automatic time mode, you can set the time offset from GMT for your location.

**Current Time:** In manual time mode, you can enter current time directly.

**Summer Time:** It enables summer time (day light savings) option.

**Wakeup Time:** It specifies the time when the receiver turned off every day.

**Sleep Time:** It specifies the time when the receivers turned off every day.

**Sleep Time and Sleep Timer.**

## D. Parental Control



**Receiver Lock:** To lock receiver

**Menu Lock:** To lock menu

**Scramble Lock:** To lock scrambled channel

**Adult Channel Lock:** To lock known adult channels at a time

**Change PIN Code:** To change PIN code, press **OK** button and enter new PIN code

## E. Factory Reset

You can reset all settings and data to the initial state. Please note that all data will be erased and unrecoverable.

## 3. Entertainment

There are a few games for amusement. Please select game and enjoy it.

## 4. Common Interface / Smart Card (Optional)

In case of CI model or smart card embedded model, you can find information about your CAM or smart card in this menu. To view the information, select item and press **OK** button.



## Trouble Shooting

| Problem  | Solution   |
|--|--|
| Does not display LED on the front panel or the receiver has no power | <ul style="list-style-type: none"><li>• Connect the power cord to the power outlet properly.</li></ul>   |
| No pictures on the screen  | <ul style="list-style-type: none"><li>• Check if the receiver is in standby mode.</li><li>• Check if the video output port is firmly connected to the TV.</li><li>• Check if you have selected the correct channel or video output on your TV.</li></ul> |
| No sound   | <ul style="list-style-type: none"><li>• Connect the audio cords properly.</li><li>• Check the volume level of the TV.</li><li>• Press <b>✕</b> key.</li></ul>  |
| Remote Control does not operate                                      | <ul style="list-style-type: none"><li>• Point remote control directly towards the receiver.</li><li>• Check and replace batteries.</li></ul>   |
| Poor picture quality   | <ul style="list-style-type: none"><li>• Check the signal strength in the "Automatic Channel Search" menu. If this is low, try to adjust the alignment of your dish.</li></ul>  |

## Technical Specification

|                                   |   |
|-----------------------------------|---|
| <b>Tuner &amp; Band Switching</b> |   |
| • Input Frequency                 | 950 -150MHz   |
| • Input Impedance                 | 75 Ohm Unbalanced   |
| • Connector                       | 2 x F-Type  |
| • LNB Power Supply                | 13/18V/OFF, Max. 500mA<br>With Short Circuit Protection   |
| • 22KHz Tone                      | Frequency : $22 \pm 4$ KHz<br>Amplitude : $0.6 \pm 0.2$ V |
| • DiSEqC                          | 1.0 & 1.2 Version Compatible                              |
| <b>Demodulator</b>                |   |
| • Waveform                        | QPSK  |
| • Symbol Rate                     | 1-45MS/s  |
| • Outer Decoder                   | Reed Solomon (204,188,8)                                  |
| • Inner Decoder                   | Convolutional, Length K=7                                 |
| • Code Rate                       | 1/2, 2/3, 3/4, 5/6, 7/8                                   |
| • SCPC and MCPC Capable           |   |
| <b>Video Decoder</b>              |   |
| • Video Decoder                   | MPEG-2 ISO/IEC 13818-2                                    |
| • Profile Level                   | MPEG-2 MP @ ML  |
| • Video Format                    | 4:3, 16:9 (Letterbox)                                     |
| • Video System                    | PAL <-> NTSC Converter                                    |
| • RF Output                       | CH3-4(NTSC-M)   |
| <b>Audio Decoder</b>              |   |
| • Audio Decoder                   | MPEG-1 Layer I and II (Musicam Audio)                     |
| • Audio Channel                   | Mono, Dual Channel, Stereo, Joint Stereo                  |
| • Audio Volume Control            | 40 Steps Level  |
| <b>Chip &amp; Memory</b>          |   |
| • CPU                             | 32 Bit RISC CPU   |
| • Memory                          | 32M Byte DDR SDRAM/2M Byte Flash<br>16K Bit EEPROM        |

|                                      |                             |
|--------------------------------------|-----------------------------|
| <b>Demultiplexer</b>                 |                             |
| • ISO/IEC 13818-1 Compliant          |                             |
| <b>USB 2.0 Interface</b>             |                             |
| • Host Slot                          | 1 x Slot                    |
| <b>Serial Data Interface</b>         |                             |
| • Connector                          | 9-Pin D-Sub(Male)           |
| • Signal                             | RS-232C Max. 115000bps      |
| <b>Smart Card Interface (Option)</b> |                             |
| • ISO 7816                           | 1 x Smart Card Reader       |
| <b>Audio/Video Connectors</b>        |                             |
| • S-VIDEO                            | Y,C output                  |
| • Audio Output                       | 2 X RCA Cinch (L/R)         |
| • Video Output                       | 1 X RCA Cinch               |
| • Digital Audio Output               | 1 X SPDIF Optical Connector |
| <b>Power Supply</b>                  |                             |
| • Input Voltage                      | AC 90 to 250V, 50/60Hz      |
| • Type                               | SMPS                        |
| • Power Consumption                  | Max. 15W                    |
| <b>Physical Specification</b>        |                             |
| • Operating Temp.                    | +5℃ to +40℃                 |
| • Gross Packed                       | 2.4 Kgs / Unit              |
| • Weight                             | 12Kgs / Carton              |
| <b>Dimensions</b>                    |                             |
| • Set                                | 300(W) x 210(D) x 60(H)mm   |
| • Gift Box                           | 315(W) x 75(D) x 315(H)mm   |
| • Carton Box                         | 335(W) x 415(D) x 335(H)mm  |

## Universal Remote Control Setting & Key Code List

### 1. Set up-programming mode

1.1 Device Default: STB

1.2 Mode Default

STB.....001 Only

TV.....001

VCR.....001

DVD.....001

### 2. DEVICE Buttons

The DEVICE(SRB,TV,VCR,DVD)buttons are first used to select a device to be programmed, Once programming is complete, press these keys to select the device you wish to operate before starting to use the relevant function buttons.

### 3. How to Program Your Remote Control

3.1 Basic programming by 3 digit code

3.1.1 Press both the DEVICE and OK buttons simultaneously for two seconds

The LED will turn on for approximately 20 seconds.

On set-up mode, if there is no input for 20 seconds, LED is off set-up mode is off.

Also, set-up mode is off if OK button pressed with LED off.

3.1.2 While the LED is still "ON", enter the three digit BRAND CODE NUMBER sequentially on the keys numbered 1 to 0. (LED Blink when key pressed)

If it is the correct BRAND CODE NUMBER, you can check to press Power On/Off on each devices with POWER Code output(LED on)

Unavallable buttons input, LED will turn-off for 1.5 seconds and on again(stand-by)

No response when buttons input except OK, 0-9, CH+, CH- and Power buttons.

3.1.3 Finally, when you have found the correct BRAND CODE NUMBER, and again while the LED is still "ON" press and release the OK button. The LED will then blink twice to confirm that the code has been stored.

### 3.2 Auto Search

- 3.2.1 Press both the DEVICE and OK buttons simultaneously for two seconds  
The LED will turn on for approximately 20 seconds.  
On set-up mode, if there is no input for 20 seconds, LED is off and set-up mode is off.  
Also, set-up mode is off if OK button pressed with LED off.
- 3.2.2 Press UP/CH+ or DOWN/CH- button. The POWER code of the next set-number of the current set-number put on every button input(LED on)  
No response when buttons input except OK, 0-9, CH+, CH- and Power buttons.
- 3.2.3 Finally, when you have found the correct BRAND CODE NUMBER, and again while the LED is still "ON", press and release the OK button. THE LED will then blink twice to confirm that the code has been stored.

## 4. How to Identify Your Brand Code Number

- 4.1 Press both Device and the OK buttons simultaneously for seconds.  
On set-up mode, if there is no input for 20 seconds, LED is off and set-up mode is off.  
Also, set-up mode is off if OK button pressed with LED off.
- 4.2 Press INFO buttons  
Set up code will blink hundred-position, ten-position, single-position one by one If "0" will blink 10times.  
All set up code out out, Set-up mode is off automatically.

## 5. Factory Reset Function

- 5.1 Press the TV and the SET buttons simultaneously for five seconds
- 5.2 LED blinks 3 times and off as following sequence TV→ VCR→ DVD .STB
- 5.3 Current Set-up code will change "Default"

| TV                |   |
|-------------------|---|
| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST                                  |
| ADMIRAL           | 072 081 160 161 096   |
| ADVENT            | 247   |
| AIKO              | 103   |
| AKAI              | 006 146 248   |
| ALARON            | 028   |
| AMARK             | 112 143   |
| AMERICA ACTION    | 043   |
| AMPRO             | 073   |
| ANAM              | 043 054 055 056 080 112                                     |
| AOC               | 058 006 004 112   |
| APEX DIGITAL      | 015 226   |
| AUDIOVOX          | 076 103 043   |
| BAYSONIC          | 043   |
| BELL&HOWELL       | 072   |
| BRADFORD          | 043   |
| BROKSONIC         | 096   |
| CANDLE            | 006 002 003 004   |
| CAPEHART          | 058   |
| CARVER            | 164   |
| CELEBRITY         | 001   |
| CETRONIC          | 043   |
| CINERAL           | 103 120   |
| CITIZEN           | 006 002 003 004 101 103 143                                 |
| CLASSIC           | 043   |
| CONCERTO          | 004   |
| CONTEC            | 043 051   |
| CORONADO          | 143   |
| CRAIG             | 043 054 028   |
| CROSLEY           | 164   |
| CROWN             | 043 143   |
| CURTIS MATHES     | 006 004 101 143 011 072 081 120 164                         |
| CXC               | 043   |
| DAEWOO            | 076 103 055 004 127 143 016 043 044 125 120                 |
| DAYTRON           | 004 143   |
| DENON             | 011   |
| DUMONT            | 004 073   |
| DWIN              | 161   |
| DYNASTY           | 043   |
| DYNATECH          | 062   |
| ELECTROBAND       | 001   |
| ELECTROHOME       | 024 076 143   |
| EMERSON           | 005 028 043 048 076 096 155 004 051 143 151 153 154         |
| FISHER            | 007 057   |
| FUJITSU           | 164 028 198 246   |
| FUNAI             | 028 043 052 249   |
| FUTURETECH        | 043   |
| GATEWAY           | 242   |
| GE                | 006 073 144 160 161 004 008 009 034 056 074 091 155 081 120 |
| GIBRALTER         | 004 073   |
| GOLDSTAR          | 004 106 119 110 112 113 127 143                             |
| GRUNPY            | 028 043   |
| HALL MARK         | 004   |
| HARLEY DAVIDSON   | 028   |
| HARMAN KARDON     | 164   |
| HARVARD           | 043   |
| HITACHI           | 163 004 007 009 011 072 010 012 023 075 143 158             |
| INFINITY          | 164   |
| INKEL             | 129   |
| INTEQ             | 073   |

| TV                |   |
|-------------------|---|
| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST                                  |
| JBL               | 164   |
| JCB               | 001   |
| JCPENNEY          | 004 006 008 024 030 065 101 143 156 160                     |
| JENSEN            | 013   |
| JVC               | 038 001 034 083 206   |
| KENWOOD           | 006 001   |
| KLOSS             | 002 059   |
| KTV               | 006 043 143 154   |
| LG                | 004 106 119 110 112 113 127 143                             |
| LODGENET          | 072   |
| LOEWE             | 207 164   |
| LOGIK             | 072   |
| LUXMAN            | 004   |
| LXI               | 007 015 052 081 160 164                                     |
| MAGNAVOX          | 006 003 004 022 059 060 061 063 064 127 164 094 160 028 250 |
| MAJESTIC          | 072   |
| MARANTZ           | 164 006   |
| MATSUI            | 164   |
| MATSUSHITA        | 080   |
| MEGATRON          | 004   |
| MEMOREX           | 004 007 072 028 096   |
| METZ              | 088   |
| MGA               | 024 006 004 042   |
| MIDLAND           | 073   |
| MINERVA           | 088   |
| MINUTZ            | 008   |
| MITSUBISHI        | 109 024 042 004 040 146 028 081 225                         |
| MOTOROLA          | 081   |
| MTC               | 006 004 062 101   |
| MULTITECH         | 043   |
| NAD               | 025   |
| NEC               | 006 134 040 056 007 019 024 237                             |
| NIKEI             | 043   |
| NIKKO             | 103   |
| NTC               | 103   |
| ONKING            | 043   |
| ONWA              | 043   |
| OPTIMUS           | 080   |
| OPTONICA          | 019 081   |
| ORION             | 096 201 202 203 204 205 028                                 |
| PANASONIC         | 034 056 080 164 208 222                                     |
| PHILCO            | 006 003 004 024 056 059 060 063 064 127 143 164             |
| PHILIPS           | 164 005 038 093 127 006 003 004 059 210                     |
| PIONEER           | 023 025 135 176 004 018 006 209 234                         |
| PORTLAND          | 004 143 103   |
| PRISM             | 034   |
| PROSCAN           | 144 160 161   |
| PROTON            | 004 058 143 171 173 112                                     |
| QUASAR            | 034 056   |
| RADIO SHACK       | 004 019 127 143 043   |
| RCA               | 160 161 144 156 065 006 004 023 024 056 074 152 081         |
| REALISTIC         | 007 019   |
| RUNCO             | 072 073   |
| SAMPO             | 006 004 058 242   |
| SAMSUNG           | 004 101 127 133 143 160 089 105 211 228 229                 |
| SANSEI            | 120   |
| SANSUI            | 096   |
| SANYO             | 007 053 057 082 020   |
| SCOTCH            | 004   |
| SCOTT             | 004 005 028 043 048 143                                     |
| SEARS             | 004 007 015 028 030 057 082 094 143 160 052 164             |
| SEMIVOX           | 043   |
| SEMP              | 015   |

| TV                |   |
|-------------------|---|
| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST                          |
| SHARP             | 081 014 019 028 004 022 143 175                     |
| SIGNATURE         | 072   |
| SONY              | 001 126 139   |
| SOUNDESIGN        | 003 004 028 043                                     |
| SPECTRICON        | 112   |
| SQUAREVIEW        | 052   |
| SSS               | 004 043   |
| STARLITE          | 043   |
| SUPRE MACY        | 002   |
| SUPREME           | 001   |
| SYLVANIA          | 006 003 059 060 063 064 127 160 164 044 249         |
| SYMPHONIC         | 052 249   |
| TANDY             | 081   |
| TATUNG            | 056 062   |
| TECHNICS          | 034 080   |
| TECHNOL ACE       | 028   |
| TECHWOOD          | 004   |
| TEKNIKA           | 002 003 004 024 028 043 072 101 143 103 164         |
| TELERENT          | 072   |
| TERA              | 172   |
| TMK               | 004   |
| TNCI              | 073   |
| TOSHIBA           | 015 030 007 040 062 101                             |
| TOTEVISION        | 143   |
| UNIVERSAL         | 008 009   |
| VIDEO CONCEPTS    | 146   |
| VIDIKRON          | 174 188 164   |
| VIDTECH           | 004   |
| WARDS             | 004 064 164 008 009 019 028 060 061 063 072 074 143 |
| WESTING HOUSE     | 076   |
| YAMAHA            | 004 006   |
| YORK              | 004   |
| YUPITERU          | 043   |
| ZENITH            | 072 073 095 103 011 096                             |
| ZONDA             | 112   |

| VCR               |                                 |
|-------------------|---------------------------------|
| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST      |
| ADMIRAL           | 025 053                         |
| AIKO              | 117                             |
| AIWA              | 034 161 101                     |
| AKAI              | 043 046 124 146                 |
| AMERICA ACTION    | 117                             |
| AMERICAN HIGH     | 031                             |
| AMPRO             | 072                             |
| ANAM              | 031 103                         |
| ASHA              | 040                             |
| AUDIO DYNAMICS    | 012 023 043                     |
| AUDIOVOX          | 101                             |
| BEAUMARK          | 040                             |
| BROKSONIC         | 035 037 129 025                 |
| CALIX             | 101                             |
| CANON             | 028 031                         |
| CAPEHART          | 108                             |
| CCE               | 024 117                         |
| CINERAL           | 117                             |
| CITIZEN           | 101 117                         |
| COLT              | 024                             |
| CRAIG             | 003 040 135 024 101             |
| CUIRTIS MATHES    | 031 041                         |
| CYBERNEX          | 040                             |
| DAEWOO            | 005 108 111 117 017 065 007 010 |
| DAYTRON           | 108                             |
| DBX               | 012 023 043                     |



# VCR

| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST                  |
|-------------------|---|
| DYNATECH          | 034 053                                     |
| ELECTROHOME       | 059 101                                     |
| ELECTROPHONIC     | 101   |
| EMERSON           | 006 029 035 037 129 153 017 025 027 031     |
| FISHER            | 034 036 046 101 131 138 117                 |
| FUJI              | 003 010 008 009                             |
| FUNAI             | 031   |
| GARRARD           | 034   |
| GE                | 031 072 144 147 063 107 109 040 053         |
| GO VIDEO          | 132 155 040 136                             |
| GOLDSTAR          | 101 004 012 020                             |
| HARLEY DAVIDSON   | 034   |
| HARMAN KARDON     | 012 045                                     |
| HARWOOD           | 024   |
| HITACHI           | 004 026 034 043 063 137 150                 |
| HQ                | 034   |
| HUGHES            | 004   |
| INSTANTREPLAY     | 031   |
| JCL               | 031   |
| JCPENNEY          | 004 012 031 040 101                         |
| JENSEN            | 043   |
| JVC               | 048 043 055 060 130 150 152 012 031         |
| KEC               | 101 117                                     |
| KENWOOD           | 034 150 014 048                             |
| KLH               | 024   |
| KODAK             | 031 101                                     |
| LG                | 101 004 012 020                             |
| LLOYD             | 034   |
| LOGIK             | 024   |
| LXI               | 003 009 017 034 101 004 106                 |
| MAGIN             | 040   |
| MAGNASONIC        | 117   |
| MAGNAVOX          | 067 031 034 068 041 156 170                 |
| MARANTZ           | 067 069 012 031                             |
| MARTA             | 101   |
| MATSUI            | 027 030                                     |
| MATSUSHITA        | 031   |
| MEI               | 031   |
| MEMOREX           | 040 101 003 014 031 034 053 072 134 139 025 |
| MGA               | 045 046 059                                 |
| MGN TECHNOLOGY    | 040   |
| MINOLTA           | 004 020                                     |
| MITSUBISHI        | 059 061 051 004 046 020 045 053             |
| MOTOROLA          | 031 053                                     |
| MTC               | 034 040                                     |
| MULTITECH         | 024 034                                     |
| NEC               | 012 023 043 048                             |
| NIKKO             | 101   |
| NOBLEX            | 040   |
| NORDMENDE         | 043   |
| OLYMPUS           | 031   |
| OPTIMUS           | 053 101                                     |
| OPTONICA          | 053 054                                     |
| ORION             | 025   |
| PANASONIC         | 031 070 133 140 163                         |
| PENTAX            | 004 031 063 020                             |
| PHILCO            | 031 034 067 025                             |
| PHILIPS           | 031 034 054 067 101 150                     |
| PILOT             | 101   |
| PIONEER           | 021 004 048                                 |
| PORTLAND          | 108   |
| PROFITRONIC       | 040   |

| VCR               |   |
|-------------------|---|
| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST                          |
| PROTEC            | 024   |
| PULSAR            | 072   |
| QUARTZ            | 014   |
| QUASAR            | 031 070 133 140 163 014                             |
| RADIO SHACK       | 123 034   |
| RADIX             | 101   |
| RANDEX            | 101   |
| RCA               | 107 109 144 041 031 004 020 034 040 140 147 158 053 |
| REALISTIC         | 003 008 014 031 034 040 053 054 101 010             |
| RICO              | 058   |
| RUNCO             | 072   |
| SALORA            | 014   |
| SAMSUNG           | 040 017 107 109 113 115 124 122                     |
| SANKY             | 053   |
| SANSUI            | 043 135 048 025 034                                 |
| SANYO             | 003 014 040 134                                     |
| SCOTT             | 017 037 129 131                                     |
| SEARS             | 003 004 008 014 017 081 101 010 031 034             |
| SHARP             | 053 031 054 159                                     |
| SHINTOM           | 024   |
| SHOGUN            | 040   |
| SINGER            | 024   |
| SONY              | 001 057 058 003 052 053 031 154 171 009 034         |
| SOUNDESIGN        | 034   |
| STS               | 004   |
| SYLVANIA          | 031 034 059 067                                     |
| SYMPHONIC         | 034   |
| TANDY             | 034 010   |
| TATUNG            | 043   |
| TEAC              | 034 043   |
| TECHNICS          | 031 070   |
| TEKNIKA           | 031 034 101   |
| THOMAS            | 034   |
| TMK               | 006 040   |
| TOSHIBA           | 017 131 004 008 059 082 150                         |
| TOTEVISION        | 040 101   |
| UNITECH           | 040   |
| VECTOR RESEARCH   | 012   |
| VIDEO CONCEPTS    | 012 034 046   |
| VIDEOSONIC        | 040   |
| WARDS             | 003 004 017 024 031 034 040 053 054 131             |
| WESTINGHOUSE      | 024 025   |
| XR-1000           | 024 031 034   |
| YAMAHA            | 012 034 043   |
| ZENITH            | 072 034 001 058 080 101 153 048 025                 |

| DVD               |                            |
|-------------------|----------------------------|
| MAKER(BRAND) NAME | CODE NUMBER (3 DIGIT) LIST |
| AIWA              | 202                        |
| ALPINE            | 221                        |
| APEX DIGITAL      | 251 246                    |
| ARCAM             | 215                        |
| CYBERHOME         | 220                        |
| DAEWOO            | 220                        |
| DENON             | 226 241                    |
| FUNAI             | 208                        |
| GE                | 230 231                    |
| GOLDSTAR          | 235 239                    |
| GO VIDEO          | 201                        |
| HARMAN KARDON     | 243                        |
| HITACHI           | 223                        |
| HITEKER           | 246                        |
| JVC               | 238                        |
| KENWOOD           | 216                        |
| KLH               | 210                        |
| LG                | 235 239                    |
| MAGNAVOX          | 254 237                    |
| MARANTZ           | 253 242                    |
| MCINTOSH          | 217                        |
| MEMOREX           | 207                        |
| MITSUBISHI        | 227                        |
| MYRYAD            | 224                        |
| NAD               | 247 239                    |
| NAKAMICHI         | 225                        |
| ONKYO             | 240                        |
| OPTIMUS           | 229                        |
| PANASONIC         | 228 206 226                |
| PHILIPS           | 253 237 214 242            |
| PIONEER           | 255 222 229                |
| PROCEED           | 245                        |
| PROSCAN           | 230 231                    |
| RCA               | 230 231                    |
| SAMSUNG           | 236 248 201                |
| SANSUI            | 205                        |
| SANYO             | 204                        |
| SHARP             | 252                        |
| SONY              | 232 218 203                |
| SYLVANIA          | 208                        |
| SYMPHONIC         | 208                        |
| TATUNG            | 224                        |
| TECHNICS          | 228                        |
| THETA DIGITAL     | 229                        |
| TOSHIBA           | 233 244 219 205            |
| VENTURER          | 209                        |
| YAMAHA            | 249 226                    |
| ZENITH            | 239 226 235 239            |

