Contents

DiSEqC is a trademark of EUTELSAT

Important Safety Instructions

❶ Read these instructions.

❷ Keep these instructions.

❸ Heed all warnings.

❹ Follow all instructions.

❺ Do not use this apparatus near water.

❻ Clean only with dry cloth.

❼ Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

❽ Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus(including amplifiers) that produce heat.

❾ 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 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.

❿ Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

⓫ Only use attachments/accessories specified by the manufacturer.

⓬ Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

⓭ Unplug this apparatus during lightning storms or when unused for long periods of time.

⓮ Refer all servicing to qualified service personnel. Servicing is required when the apparatus 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 apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Caution - These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualifie to do so.

WARNING : To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Precautions
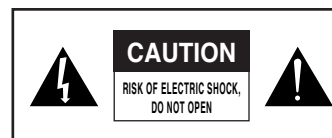
CAUTION RISK OF ELECTRIC SHOCK, DO NOT OPEN	TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER(OR BACK). NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.

This symbol indicates important instructions accompanying the product.

Do not install this equipment in a confined space such as a bookcase or similar unit.

WARNING : To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 limits 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 :
  ▶ Reorient or relocate the receiving antenna.
  ▶ Increase the separation between the equipment and receiver.
  ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  ▶ Consult the dealer or an experienced radio/TV technician for help."

Introduction

1.1 Overview

This satellite receiver is designed for using digital free-to-air channel reception. Enjoy the rich choice of more than 10,000 different channels, broadcasting a large range of culture, sports, cinema, news, events, etc. This receiver is a technical masterpiece, assembled with the highest qualified electronic parts.

1.2 Main Features

▶ Compliant MPEG-II/ MPEG-IV/ H.264.
▶ 2 tuner combo (DVB-Satellite & ATSC-Terrestrial)
▶ Compliant DVB-S/ S2 satellite standard & ATSC-Terrestrial standard
▶ Output resolution 480p & 480i(NTSC), 720p, 1080i
▶ 1 HDMI output
▶ Multisatellite search.
▶ On-screen display with true color full resolution.
▶ DiSEqC control version 1.0, 1.1, 1.2 and USALS compatible.
▶ Enhanced 16 favorite channel groups.
▶ Powerful channel control by favorites, lock, skip, move and delete function.
▶ Channel sort by alphabet, transponder and CAS.
▶ Multilingual GUI (OSG & Menu): English, Spanish, Portuguese, French, German, Italian, Turkish, Arabic, Persian, Russian, Chinese.
▶ Installation wizard
▶ Extended EPG and program reservation on EPG.
▶ Last channel memory function.
▶ Total 10,000 channels programmable.
▶ Preprogrammed channels (Optional)
▶ Dolby digital audio output (S/PDIF)
▶ S-Video
▶ Component output (YPbPr)
▶ Various games
▶ Software & channel database upgrade via RS-232C: PC to STB/ STB to PC.
▶ Parental lock / Installation lock / receiver lock.
▶ Zoom in function on pause/ live channel
▶ Multipicture display.
▶ High speed software upgrade via USB 2.0
▶ MP3 play and JPEG viewer
▶ **DD DOLBY DIGITAL** Manufactured under license from Dolby Laboratories. "Dolby" and the double-D Symbol are trademarks of Dolby Laboratories.
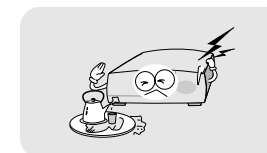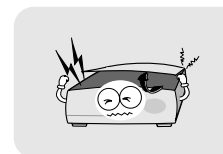
Safety/Precautions

2.1 Safety

Be sure to read this user's manual before starting the operation of the unit.
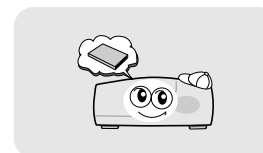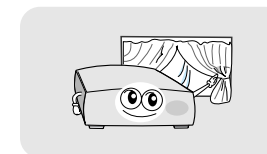
Do not touch the power cord with wet hands as it may cause electric shock.

Never open the cover. It is very dangerous to touch the inside of the unit due to possible electric shock.
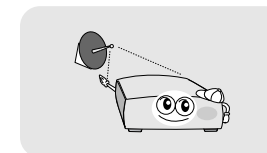
Place the unit in a well ventilated and no-heat environment.

When you do not use this unit for a long time, make sure that power cord is pulled out from the outlet. Also do not use a damaged power cord as it may cause fire or electric shock.
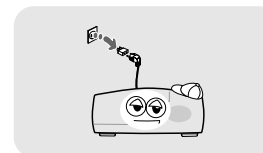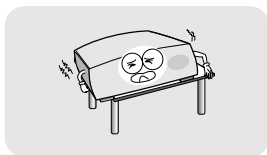
A professional installation is required. If reception is interrupted, contact your local service centre.
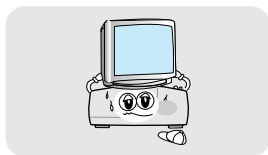
2.2 Precautions

When installing the unit

Install the unit horizontally. An uneven installation may cause the unit to be damaged.
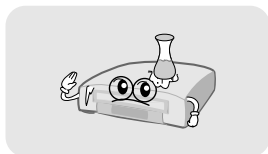
Do not put heavy items such as a TV set on the unit. That may damage the unit.

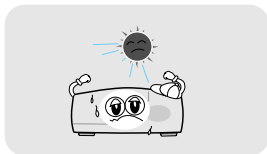Do not leave the unit where the water drops or splashes.

Do not put water holding items such as vases on the unit.

Do not install the unit:
- Where it is subject to vibrations
- Where it is exposed to direct sunlight
- Where there is humidity
- Where the temperature is too high or too low.
- Where there is no ventilation

Moving the unit to a hot area from a cold one will cause condensation. Do not operate the unit for one or two hours or until it has dried completely.
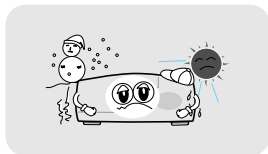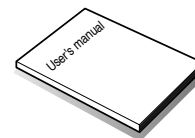
▶ The mains plug is used as the disconnect device. The disconnect device shall remain readily operable.

Points to Check before Use

3.1 Accessories

The accessories below are included with this receiver:
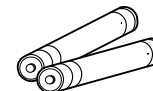
User's manual : 1

Remote control : 1

Batteries (AAA type) : 2

▶ If any of the above-listed accessories is missing, contact your sales representative.

3.2 The Satellite dish

Your dish should be properly installed and azimuth and elevation must be precisely set up.

▶ This unit supports DiSEqC 1.2 and can work with a compatible antenna positioner. Ask your dealer for information.

Controls/Functions

4.1 Front Panel

1 **Standby/Power on Indications Lamp** : Flashes red light in "Standby" mode and shows no light in "Power ON" mode.

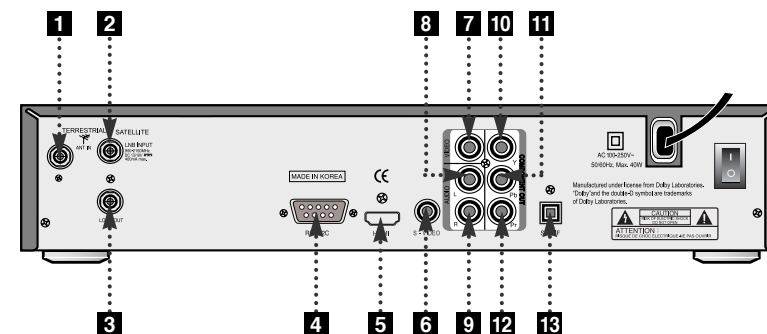**2** **Power** : Switches the receiver between "Standby" and "Power ON" modes.

3 **Menu** : To enter or exit the main menu.

4 **Select** : To show the Channel List in non-menu mode and select on item or confirm in menu mode.

5 - **6** **VOL** (◀/▶) : To change the volume level in non-menu mode and modify a setting in menu mode.

7 - **8** **CH** (▼/▲) : To switch channels or change the cursor position on the application screen.


| No.	Name	Connector	Function
1	ANT IN	IEC 169-2 FEMALE	Input from terrestrial antenna
2	LNB INPUT	IEC 169-24 FEMALE	IF input from LNB to digital tuner
3	LNB OUTPUT	IEC 169-24 FEMALE	IF loop-through output from digital tuner
4	RS-232C	DB-9	Low speed serial port
5	HDMI	HDMI	Digital Video/Audio Output
6	S-VIDEO	MINI-DIN	S-VHS Output
7	VIDEO	RCA cinch	Composite video output
8	AUDIO L	RCA cinch	Left audio output
9	AUDIO R	RCA cinch	Right audio output
10	Y	RCA cinch	Component video output(Y)
11	Pb	RCA cinch	Component video output(Pb)
12	Pr	RCA cinch	Component video output(Pr)
13	S/PDIF	Fiber Optic	Digital audio output (Optical)

1 POWER : To turn the receiver On/Off.

2 TV/RADIO : To switch between TV and Radio.

3 MUTE : To turn the sound On/Off.

4 SUBTITLE : To show the subtitle contents if subtitle is transmitted.

5 AUDIO : To show the Multi-language audio track, the stereo-mono mode and subtitle information. Used for special functions in menu mode.

6 MOSAIC : To display multiple pictures.

7 SLEEP : To set the STB off after minutes.

8 FREEZE : To pause the video. Press again to resume the video.

9 ZOOM : To zoom In/Out.

10 GUIDE : To show the TV/Radio program guide.

11 INFO : To show information about the current program. Press twice to show detail.

12 RECALL : To move to the previous channel. Used for special functions in menu mode.

13 GROUP : To change the channel groups(Satellites or favorite groups).

14 MENU : To enter or exit the main menu.

15 EXIT : To exit from the present menu and move to the previous menu.

16 - **17 Vol Up & Down :** To change the volume level in non-menu mode.
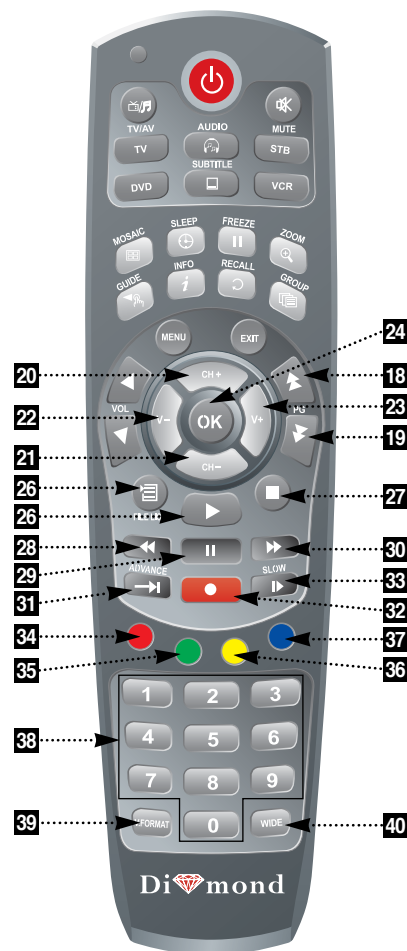
18 - **19 Double arrow Up/Down :** To move to the next or previous page when many pages are available.

20 - **21 Up & Down :** To switch channels in non-menu mode and move the cursor up/down in menu mode.

22 - **23 Left & Right :** To change the volume level in non-menu mode and modify a setting in menu mode.

24 OK : To show the Channel List in non-menu mode and select an item or confirm in menu mode.

25 FILELIST : To display the filelist.

26 PLAY : Play Content.

27 STOP : Stop Playback.

28 RWD : Playback in rewind mode.

29 PAUSE : Pause playback.

30 FWD : Playback in forward mode.

31 ADVANCE : Go to live channel.

32 REC : Start recording.

33 SLOW : Playback in slow mode.

34 - **37 Color Key :** Select the option such as View List, Select Disk, Rename.

38 Numeric Keys (0-9) : To enter numerical settings (such as channel numbers) directly.

39 V.FORMAT : To switch the resolution of video output.

40 Wide : To select a TV aspect ratio with Pan Scan or Letter-Box(4:3) (Full screen or Pillar box(16:9).

4.4 Front Display
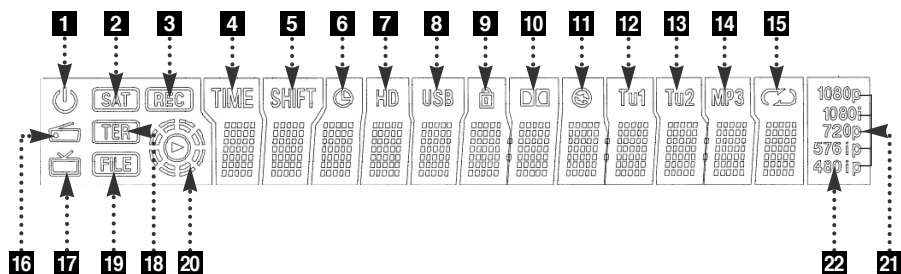
1	⏻	Indicates Power (On/Off) mode
2	SAT	Lights when the signal comes in via satellite dish
3	REC	Lights when the current channel is recording
4	TIME	Lights when Time-Shift Mode is set to enable
5	SHIFT	Lights when Time-Shift Mode is set to enable
6	⏲	Lights when a timer setting in standby mode
7	HD	Lights when the signal is HD
8	USB	Lights when USB devices is connected
9	🔒	Indicates the current channel is set to Lock mode
10	DD	Lights when the current chanel is Dolby audio format
11	🔇	Lights when the current sound is set to Off
12	Tu1	Feature not supported
13	Tu2	Feature not supported
14	MP3	Ligths when Mp3 player is enabled
15	↻	Lights when loop mode is setting in Mp3 player
16	📻	Lights when the current channel is Radio mode
17	📺	Lights when the current channel is TV mode
18	TER	Lights when the signal comes in via TV Antenna
19	FILE	Indicates when the current playback mode in file list
20	▷	Lights when Media & Recorded file is playing and revolving on the outer circle
21	1080i	Indicates the resolution of video ouput
22	(576)ip	Indicates the Progressive or interlaced scanning mode

How to Connect

5.1 When Connecting IRD to TV with RF, AV connectors

1 Connect the TV antenna to TV ANT IN

2 Connect the RF-IN of TV to RF-OUT

3 Connect the Video and Audio of TV to the Video and Audio. Connect Red and White connector to Audio R and Audio L, and Yellow into Video port respectively

4 Connect the Component Video of your TV to Component Video for best quality: connect the Y, Pb and Pr of your TV to Y, Pb and Pr respectively

5 Connect your satellite dish
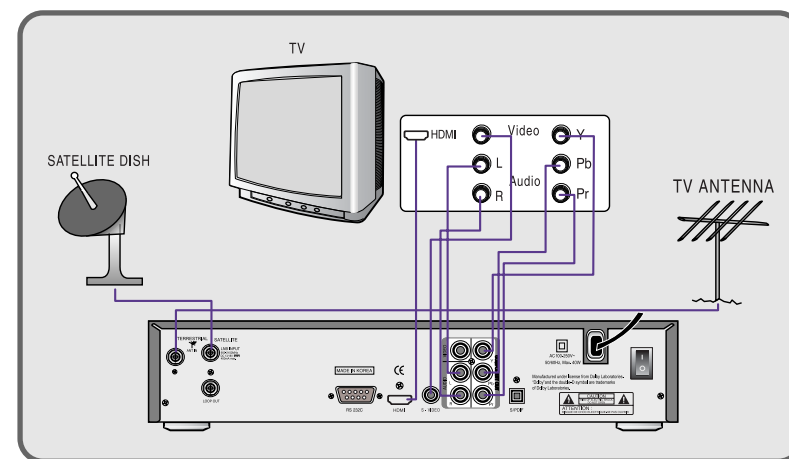
Operation

After your receiver is powered on, proceed with installation as follows :

(1) Installation Wizard

1) Menu Language Setting

❶ Turn on your TV and receiver.

❷ The pop-up menu for language selection will appear <Figure 6-1-1>.
Select one language and press the ⊙ to proceed.

<Figure 6-1-1>

2) A/V Output Setting

This sub menu allows you to set audio/video output setting. <Figure 6-1-2>

- **Audio Language** : Set the default audio language when selecting a channel.

- **Screen Format** : Select the screen format. (16:9 / 4:3)

- **Display Format** : Select the TV aspect ratio(Letter Box/Pan Scan, Full Screen/Pillar Box)

- **Video Format** : Select the Scanning type(Interaced, Progressive)

- **SPDIF** : Select the Audio output type (Dolby/PCM)

<Figure 6-1-2>
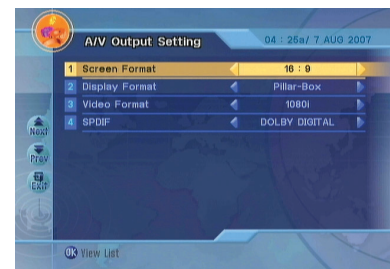
3) Time Setting

This sub menu allows you to set your local time, wake up time, wake up channel and sleep time. <Figure 6-1-3>

- **GMT Usage** : If you set ON, local time is determined by adjusting the differences from GMT (Greenwich Meantime) according to your location.

- **Current Date** : If GMT Usage ON, this date is determined by GMT. If GMT Usage OFF, you can modify this by pressing the ⊙ button. If you set OFF, receiver doesn't refer to GMT. Local time is determined by adjusting current date and current time.

- **Current Time** : If GMT Usage ON, this time is determined by GMT. If GMT Usage OFF, you can modify this by pressing the NUMERIC button.

- **Local Offset** : If GMT Usage ON, Local time is GMT time + Local Offset.

- **Summer Time** : you can set the summer time mode (Off/Last Sun in Oct~Mar/First Sun in Oct~Mar/Mar~Oct)

- **Wake Up Mode** : You can set the cycle of the wake up mode (Off/Once/Daily)

- **Wake Up Time** : You can set wake up time by pressing the NUMERIC button on the remote.

- **Wake Up Channel** : You can set wake up channel by pressing the ⊙ button on the remote.

- **Sleep Mode** : You can set the cycle of the sleep mode (Off/Once/Daily)

- **Sleep Time** : You can set sleep time by pressing the NUMERIC button on the remote
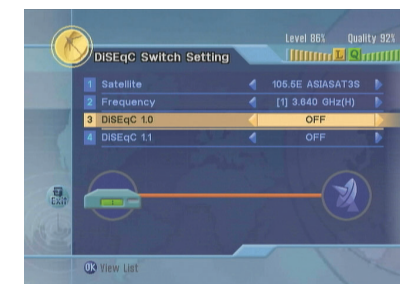

<Figure 6-1-3>

4) Dish Setup

❶ Press the MENU button to display the main menu.

❷ Use 🔼 / 🔽 and ◀ / ▶ to move in the menu.

❸ Press ⊙ on 'Dish Setting'. The following window will appear. <Figure 6-1-4>

∗ *Note : Enter a 4-Digit password if need arise. The default password is '0000'.*

<Figure 6-1-4>   <Figure 6-1-5>

❹ Select the item that you want to edit, and set its parameters as desired. <Dish Setting>

- **Satellite** : Select any satellite by pressing ◀ / ▶ buttons.

- **Frequency** : If the default TP frequency is not appropriate, you can select another TP frequency at which to check for signal

- **LNB Power** : Select among ON/OFF/13V/18V.

- **LNB Type** : Select among Universal/OCS/OCS-DP/Legacy Twin LNB1/ Legacy Twin LNB2/ Legacy Quad LNB1/ Legacy Quad LNB2/Single.

- **LNB Freq** : Set the frequency of the LNB oscillator.

- **22KHz** : When not AUTO, set the signal path from LNB or switch by selecting a control signal among 0/22KHz.

- **DiSEqC 1.0 / 1.1** : Select DiSEqC protocol among OFF/1.0/1.1 as appropriate for your configuration. <Figure 6-1-5>

- **DiSEqC Motor** : Select DiSEqC protocol among OFF/1.2/USALS as appropriate for your Motor. <Figure 6-1-6>

❺ **Auto Scan** : Press Green button the remote to begin Auto Scan.

(When the DiSEqC Motor parameter is set as 1.2)

<Figure 6-1-6>

- **Motor Step** : Select Motor Step

- **Move** : Move the dish position to west/east by pressing ◀ / ▶ buttons.

- **Go To** : Go to the position of the saved satellite.

- **Motor Control** : Control motor by press ⬤ button ot the remote.

∗∗ **Recalculate** : Recalculate the position of all other saved satellites relative to the known position.

∗∗ **Reset System** : Reset the position of all saved satellites.

∗∗ **Goto Reference** : Move the dish to the 0 position.

∗∗ **Set West Limit** : Edit & Save west limit by pressing ◀ / ▶ or ⬤ buttons.

∗∗ **Set East Limit** : Edit & Save east limit by pressing ◀ / ▶ or ⬤ buttons.

∗∗ **Enable Limit** : Enable the saved east and west limit.

∗∗ **Disable Limit** : Disable east and west limit.

∗∗ **Save** : Save the current setting of DISEqC 1.2 system.

(When the DiSEqC Motor parameter is set as USALS)

- **Move** : Move the dish position to west/east by pressing ◀ / ▶ buttons.

- **Motor Control** : Control motor by press ⬤ button ot the remote.

∗∗ **Goto Reference** : Goto reference by pressing ⬤ button.

∗∗ **Set West Limit** : Edit & Save west limit by pressing ◀ / ▶ or ⬤ buttons.

∗∗ **Set East Limit** : Edit & Save east limit by pressing ◀ / ▶ or ⬤ buttons.

∗∗ **Enable Limit** : Enable the saved east and west limit.

∗∗ **Disable Limit** : Disable Limit by pressing ⬤ button.

∗∗ **Save** : Save the current Setting of USALS system.

- **Sat Degree** : Displays the current defree of the selected satellite. Edit degree by pressing ◀ / ▶ buttons and numeric buttons.

- **Position Setting** : Select position setting by pressing ⬤ button.

∗∗ **Goto Reference** : Move the dish to the 0 position.

∗∗ **Antenna Longitude** : Edit antenna longitude by pressing ◀ / ▶ buttons and numeric buttons.

∗∗ **Antenna Latitude** : Edit antenna latitude by pressing ◀ / ▶ buttons and numeric buttons

- **Go To** : Save the current setting of USALS Systme.

5) Satellite Channel Search

▶ **Auto Scan <Figure 6-1-7>**

❶ To select more than one satellite, press the ⊙ button when the selection bar is positioned on the satellite.

❷ Press ⊙ on the names of the satellites that you want to scan under 'Satellite List'. Press the EXIT button to close the 'Satellite List'.

❸ Press ⊶ / ⊷ and set the 'Search Type' and 'Network Search' parameters.

　- **Search Type** : Decide for which channels to search (All channels/ Free channels only/ TV channels only).

　- **Network Search** : Set ON to find more transponders (frequencies) through a Network Information Table (NIT) scan. That is, when the broadcaster is sending a NIT through a given transponder, the receiver will also scan for transponders listed in the NIT and not otherwise recognized. (this can happen when a transponder is new)

❹ Press **RED buttom** under 'SCAN' to scan the selected satellites. <Figure 6-1-8>

<Figure 6-1-7>

<Figure 6-1-8>
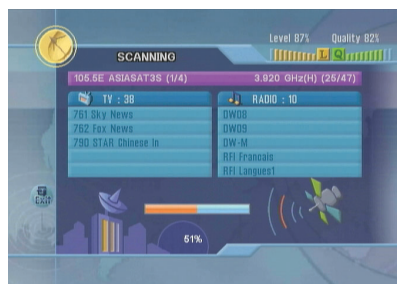
▶ **Manual Scan <Figure 6-1-9>**

❶ Select a transponder.

❷ To change a transponder's information (Frequency, Symbol Rate), use the **NUMERI**C buttons.

❸ To add a new transponder, press the **GREEN** button.

❹ To delete a transponder, press the **YELLOW** button with the cursor next to the Frequency parameter.

❺ To search a transponder, set its different parameters and **RED** button.

▶ **Package Identifier (PID) Scan <Figure 6-1-10>**

❶ Select a transponder.

❷ To change a transponder's information (Frequency, Symbol Rate), use the **NUMERIC** buttons.

❸ To add a new transponder, press the **GREEN** button.

❹ To delete a transponder, press the **YELLOW** button with the cursor next to the Frequency parameter.

❺ To search a transponder, set its different parameters and press ⊶ / ⊷ You can search a specific channel of the transponder by setting its PID data (Video, Audio and PCR).

<Figure 6-1-9>

<Figure 6-1-10>
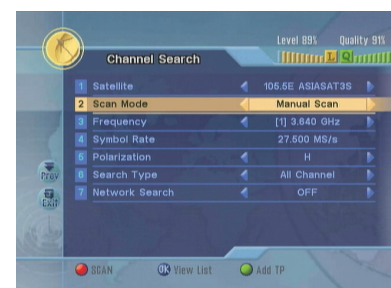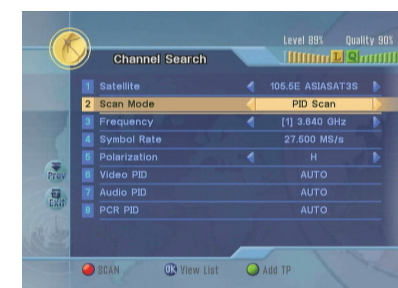
∗ *Note : If you cannot access programs after correctly completing a scan procedure, please contact your seller or your installer.*

6) Terrestrial Channel Search

Through this function, the receiver searches for all the available channels and saves them in memory.

▶ **Auto Scan <Figure 6-1-11>**

❶ To select a Terrestrial, press the ⊙ button when the selection bar is positioned on the satellite.

❷ Press ⊙ on the names of the satellites that you want to scan under 'Satellite List'. Press the EXIT button to close the 'Satellite List'.
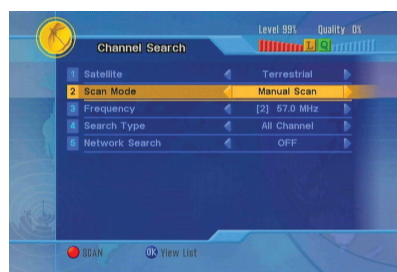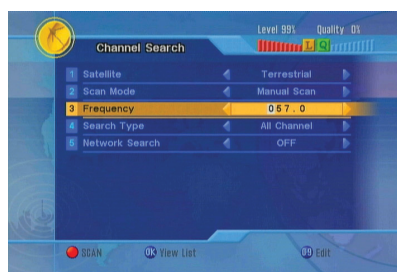
❸ Press **RED** to begin the scan. <Figure 6-1-12>

<Figure 6-1-11>

<Figure 6-1-12>
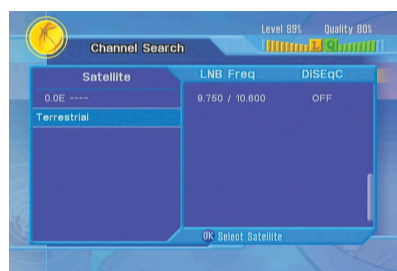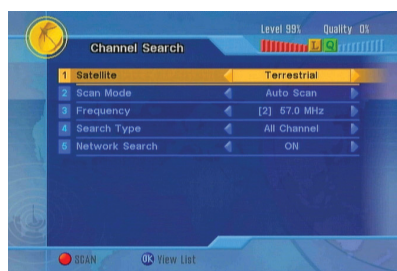
▶ **Manual Scan <Figure 6-1-13>**

❶ To change a scan mode, use ◁ / ▷, ⊙. Select a Manual Scan item.

❷ Select the frequency you want to search for select the frequency by pressing ◁ / ▷, ⊙, or specify a frequency by entering the frequency with the number keys. <Figure 6.1.14>
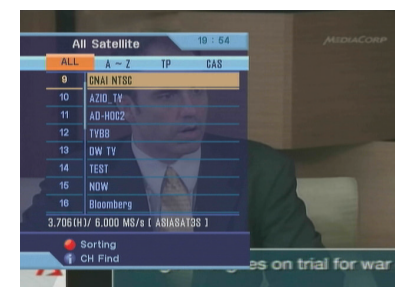
❸ Press **RED** to begin the scan. <Figure 6-1-14>

<Figure 6-1-13>

<Figure 6-1-14>

(2) To View Program

1) Channel Selection

You can use ▲ / ▼ to navigate between channels until you find the channel you want.

- If you know the channel number, you can enter it with the **NUMERIC** buttons and wait 2 seconds until the channel is changed.

- If you know the channel name or transponder or CAS, you can press to display the channel list <Figure 6-1-15>

<Figure 6-1-15>

❶ Detailed information about the selected channel will be displayed. (Satellite Name, Frequency(Polar) and Channel Name)

❷ You can use the following buttons to navigate between channels:

- ▲ / ▼ : Moves one channel up/ down.

- ◁ / ▷ : Moves one page up / page down.

- **RED** : Press RED button on the remote to use channel sorting.

∗∗ **ALL** : Shows all channels in the current group.

∗∗ **A~Z** : Shows all channels sorted alphabetically.

∗∗ **TP** : Shows all channels sorted by Transponder.

∗∗ **CAS** : Shows all channels sorted by CAS system.

❸ Press ⊙ when the selection bar is positioned on the desired channel.

(3) Electronic Program Guide

1) EPG

This submenu allows you to access the electronic program guide when available.

❶ Press the **EPG** button to display the guide menu. <Figure 6-1-14>

❷ Press 〈 / 〉 to see the previous/next guide.

❸ Press ⌒ / ⌣, 〈 / 〉 to select another channel. <Figure 6-1-14>

❹ Press ⊙ to watch the selected channel and access its EPG data. If you press ⊙ in the right side of the screen (Event display list).

   - If the current time EPG is selected, you will return to the previous menu and get signal from the selected channel.

   - If a future time (next) EPG is selected, the selected program will be reserved and the event color w ill change.

❺ You can select TV or Radio channels by pressing the **TV/RADIO** button

❻ You can choose a channel list group by pressing the **GROUP** button.

❼ You can access the timer menu by pressing the **RED** button. <Figure 6-1-16>

<Figure 6-1-16>

2) Timer

This sub menu allows you to set the on/off time of your receiver.

❶ This submenu allows you to set on/off times of your receiver. To display the timer menu, press the RED button while in the guide menu. <Figure 6-1-17>

❷ Press ⌒ / ⌣ to select a timer's parameter.

❸ Press 〈 / 〉 to change the parameter.

  - **Timer No** : Select the timer that you want to modify. (1- 8)

  - **State** : Select the timer frequency. (off/once/daily/weekly)

  - **Date** : Press ⊙ to display a Calendar pop-up; Select a date

  - **Start Time** : Input the time for your receiver power-on; use the NUMERIC buttons

  - **End Time** : Input the time for your receiver power-off; use the NUMERIC buttons

  - **Channel** : Press ⊙ to display a Channel list pop-up; Select a channel

<Figure 6-1-17>

- If you want to record a program in the right side of the screen, you can select a program by using . The selected program will be reserved and the evnet color text will change to red. <Figure 6-1-18>.
- You can also see change the timer menu.<Figure 6-1-19>

∗ *It is worked when a USB device is connected.*

<Figure 6-1-18>

<Figure 6-1-19>
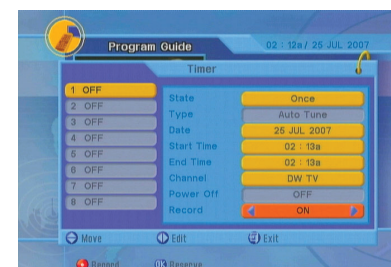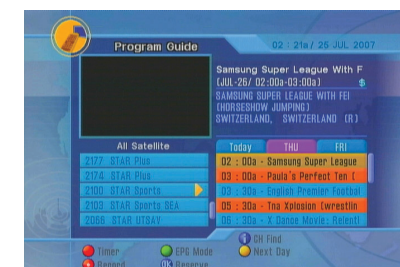
(4) Other Functions of Remote Control

▶ **Volume Control**

❶ While watching a program, press 🔉 / 🔊 control the volume.

❷ You can press the **MUTE** button to remove the sound of the program: the mute icon will be displayed. Press the **MUTE** button again to turn the sound back on.

▶ **Channel Information**

❶ You can press the **INFO** button to display the information banner for a few seconds.

❷ If you then press the **INFO** button again, a detailed banner will be displayed.

▶ **TV/ RADIO switching**

You can press this key to change from a TV channel to a Radio channel or vice versa.

▶ **RECALL**

Press this key to return to the previous channel.

▶ **Audio**

Press to adjust the subtitle and/or audio status of the current channel:

- **Audio Mode** : Select between, Stereo/Mono-Left/Mono-Right

- **Audio Track** : Select between tracks available in this program

- **Audio Level** : Select between, Low/Medium/High

▶ **FREEZE**

You can press this key to freeze the video. Press it again to resume the video.

▶ **GROUP**

When watching TV or listening to Radio, you can press this button to view the list of satellites and/or favorite channel groups.

Only registered satellites and favorite groups are displayed.

▶ **Multi Picture Display <Figure 6-1-20>**

You can press the **MOSAIC** button to display multiple pictures; you can choose the number of pictures such as 1X2, 2X2, 2X3 or 3X3.

<Figure 6-1-20>

▶ **ZOOM**

You can press to zoom in the video. <Figure 6-1-21>

❶ Press the PAUSE button and press 🔍. You can zoom in sections of Freezed Video <Figure 6-1-22>

❷ While watching a program, press 🔍. You can zoom in sections of playing video.

❸ To cancel the freeze status, please release the zoom status.

<Figure 6-1-21>   <Figure 6-1-22>

▶ **Closed Caption <Figure 6-1-23>**

You can press [ ] to select the subtitle language of current channel.

▶ **SLEEP <Figure 6-1-24>**

You can set the your receiver to turn off after a few minutes. Press [ ] to set the sleep timer.

- To cancel the sleep timer, please press [ ] until you set time as "0 min".
  (Disable, 10, 20, 30, 60, 100, 120 Minutes)

<Figure 6-1-23>

<Figure 6-1-24>

▶ **V.FORMAT <Figure 6-1-25>**

You can press to change the video resoultion Select between, 1080i → 720p → 480p

▶ **WIDE <Figure 6-1-25>**

You can press to change the TV aspect ratio.

- 4:3 : Pan-Scan or Letter-Box

-16:9 : Full-Screen or Pillar-Box

<Figure 6-1-25>

<Figure 6-1-26>

1) Time Settings

This submenu allows you to set your local time, wake up time, wake up channel and sleep time.

- See *(6.1 Getting Started 3) Time Settings)* for detailed description.

2) Timer Manager

This sub menu allows you to set the on/off time of your receiver.

❶ This submenu allows you to set on/off times of your receiver. To display the timer menu, press the **RED** button while in the guide menu. <Figure 6-2-1>

❷ Press [ ] / [ ] to select a timer's parameter.

❸ Press [ ] / [ ] to change the parameter.

 - Timer No : Select the timer that you want to modify. (1- 8)

 - State : Select the timer frequency. (off/once/daily/weekly)

 - Date : Press [ ] to display a Calendar pop-up; Select a date

 - Start Time : Input the time for your receiver power-on; use the **NUMERIC** buttons

 - End Time : Input the time for your receiver power-off; use the **NUMERIC** buttons

 **- Channel** : Press [ ] to display a Channel list pop-up; Select a channel

<Figure 6-2-1>

3) OSD Setting

This submenu allows you to set the menu language, OSD transparency and Information and Volume timeouts. <Figure 6-2-2>

- **Transparency** : Set the OSD transparency of the menu. (1% ~ 100%)
- **Information Timeout** : Select the display duration of the information banner. (1, 2, 3, 5 or 10 seconds)
- **Volume Timeout** : Select the display duration of the volume box. (1, 2, 3, 5 or 10 seconds)

<Figure 6-2-2>

4) Parental Control

This submenu allows you to set password options and to lock or unlock access to menus.

✳ *Note : PIN code and password are the same). <Figure 6-2-3>*

- **Receiver Lock** : Set ON to require entering a PIN code at powering on.
- **Install Lock** : Set ON to require entering a PIN code to access the installation menu.
- **Channel Lock** : Set ON to require entering a PIN code to access the channels menu.
- **Lock Channel Confirm** : Set ON to require entering a PIN code to access a locked channel.
- **Age Limit** : Set to prevent children or unauthorized people from watching programs. Select among (Free/ 8 above/12 above/15 above/18 above). When program information (age limit) is available from broadcaster and this age limit exceeds the selection, a PIN code is required to access the channel/program.
- **New Password** : Enter the new password that you want to set.
- **Verify Password** : Enter the new password again for confirmation.

✳ *Note : The default password is '0000'.*

<Figure 6-2-3>
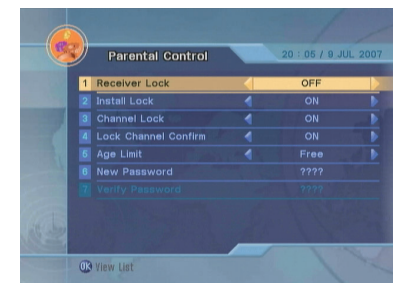
5) Language Setting

This submenu allows you to specify the audio/video output <Figure 6-2-4>

- **Menu Language** : Set the default Menu language.
- **Audio Language** : Set the default audio language when selecting a channel.
- **Subtitle Language** : Set the default subtitle language.

<Figure 6-2-4>
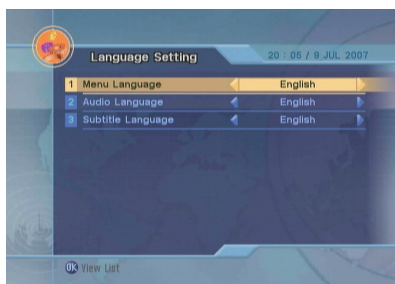
6) A/V Output Setting

This sub menu allows you to set audio/video output setting.
See **(6.1 Getting Started 2) A/V Output Setting)** for detailed description.

1) Set Favorites

This submenu allows you to set up favorite groups of channels. You can select **TV** or **Radio** channels in an alternative way by pressing the **TV/RADIO** button. The receiver supports 16 favorite groups.

❶ Press ⊙ on 'Set Favorites'. The list of groups will be displayed. <Figure 6-3-1>

❷ Press ⊙ / ⊙ and ⊙ to choose a group. The following menu will be displayed. <Figure 6-3-2>
If you want to change the name of a favorite group, press the **RED** button.

❸ Press ⊙ to add (or remove if previously added) the selected channel to/from the favorite channel group.

❹ Press the **EXIT** button to return to the previous menu.

<Figure 6-3-1>   <Figure 6-3-2>
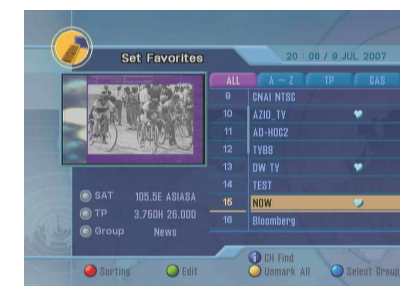
2) Lock Channels

This submenu allows you to lock channels to control access to them. Once a channel is locked, you will be asked to enter a password whenever you try to watch it. You can select TV or Radio channels in an alternative way by pressing the TV/RADIO button. You can choose a channel list group by pressing the GROUP button.

If you set 'Lock Channel Confirm' (refer to <6.2>security setting) to OFF, you will not be asked to enter a password even if the channel is locked.

❶ Press ⊙ on 'Lock Channels'. The following menu will be displayed. <Figure 6-3-3>

❷ Press ⊙ on the channel that you want to lock/unlock; the lock icon will be displayed/removed.

❸ Press the **EXIT** button to return to the previous menu.

<Figure 6-3-3>
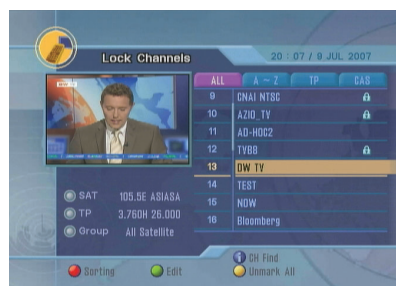
3) Move Channels

This submenu allows you to move channels.
You can select TV or Radio channels in an alternative way by pressing the **TV/RADIO** button.
You can choose a channel list group by pressing the **GROUP** button.

❶ Press ⊙ on 'Move Channels'. The following menu will be displayed.<Figure 6-3-4>

❷ Press ⊙ on the channel that you want to move; a 'move' icon will be displayed.

❸ Use the ⊙ / ⊙ , ◖ / ◗ **NUMERIC** buttons to move the selected channel.

❹ Press ⊙ again to place the channel.

❺ Press the **EXIT** button to return to the previous menu.

<Figure 6-3-4>
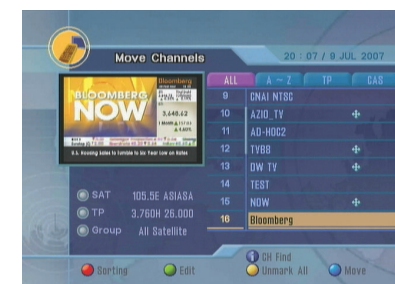
4) Delete Channels

This submenu allows you to delete channels. You can select TV or Radio channels in an alternative way by pressing the TV/RADIO button. You can choose a channel list group by pressing the **GROUP** button.

＊ *Note : Be careful! If you delete a channel, you will not be able to access it again until you rescan.*

❶ Press ⊙ on 'Delete Channels'. The following menu will be displayed. <Figure 6-3-5>

❷ Press ⊙ on the channel that you want to set/unset for deletion; the delete icon will be displayed/removed.

❸ Press the **INFO** button to delete all channels in the current list; you will be asked to enter your password.

❹ Press the **EXIT** button to return to the previous menu and confirm deletion.

<Figure 6-3-5>
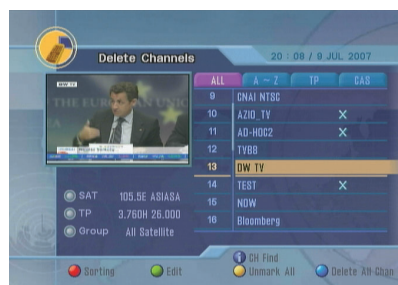
5) Skip Channels

This submenu allows you to skip channels. Once a channel is set to be skipped, it will be whenever you navigate channels using ⬇ / ⬆ in non-menu mode. You can select TV or Radio channels in an alternative way by pressing the **TV/RADIO** button. You can choose a channel list group by pressing the **GROUP** button.

＊ *Note : You can still access a 'skipped' channel if you enter its number using the NUMERIC buttons in non-menu mode.*

❶ Press ⊙ on 'Skip Channels'. The following menu will be displayed.<Figure 6-3-6>

❷ Press ⊙ on the channel that you want to skip/un-skip; the skip icon will be displayed / removed.

❸ Press the **EXIT** button to return to the previous menu.

<Figure 6-3-6>
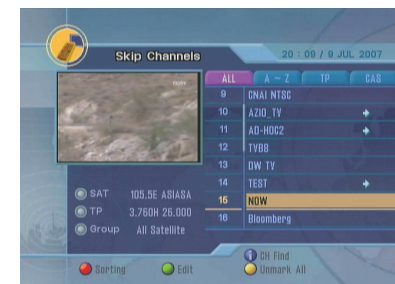
1) Dish Setting

Select the item that you want to edit, and set its parameters as desired. <Dish Setting>
See <Figure 6-1-4> for detailed description.

2) Channel Search

Through this function, the receiver searches for all the available channels and saves
them in Memory. Chose Auto Scan to search using transponders (frequencies) in
memory, or chose Blind Scan to look for new satellite/transponders.
See <Figure 6-1-8> for detailed description.

3) Data Transfer

This submenu allows you to transfer the software from a receiver to another receiver. You
can select and transfer Firmware/ Channel Data/ Games. <Figure 6-4-1>

- **Firmware** : Transfer the firmware of a receiver to another receiver.

- **Channel Data** : Transfer the channel data of a receiver to another receiver.

<Figure 6-4-1>

4) Database Reset

This submenu allows you to restore the factory set values (useful when encountering
problems after changing settings). <Figure 6-4-2>

- **Delete Radio Channels** : Erase all radio channels in the database.

- **Delete Scramble Channels** : Erase all scramble channels in the database.

- **Delete All Channels** : Erase all channels.

- **Factory Set** : Erase all channels and restore the factory default settings.

<Figure 6-4-2>
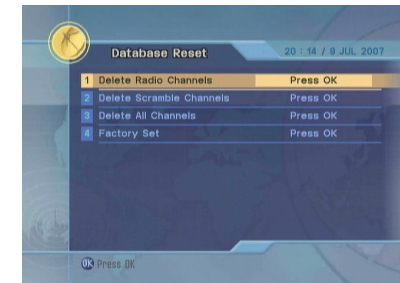
5) System Information

You can check the current information about your receiver such as receiver model
name, S/W (software) version, H/W (hardware) version, manufacturing date, etc. <Figure
6-4-3>

∗ *Note : This information is useful to download new software and/or repair the receiver.*

<Figure 6-4-3>
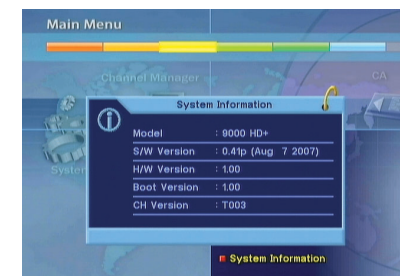
1) Calendar

This submenu allows you to use a calendar on the screen <Figure 6-5-1>

<Figure 6-5-1>
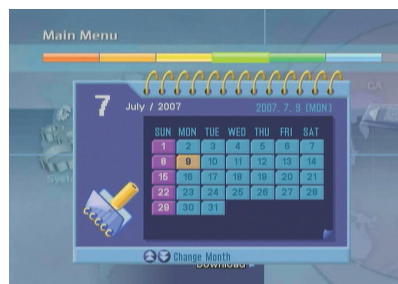
2) Calculator

This submenu allows you to use a calculator on the screen. <Figure 6-5-2>

- You can switch between Hex (Hexadecimal) and Dec (Decimal) basis for arithmetic with the **RED** button of the remote control unit.

- Use the Numerical and the ◁ / ▷ / ◉ buttons on the remote control unit.

<Figure 6-5-2>
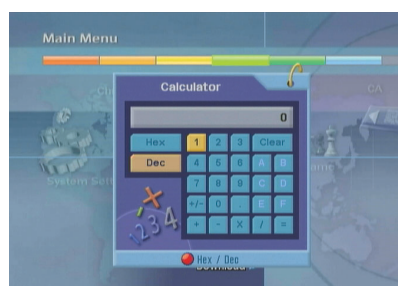
3) MP3 Menu

This submenu allows you to play various MP3 files, view JPG files or download a new software by connecting your USB flash drive.

❶ Select the MP3 file you want to play back by using ▲ / ▼, ◉ in the file list. <Figure 6-5-3>

❷ Press the EXIT button to hide the file list. You can then select an option using ◁ / ▷, ◉. <Figure 6-5-4>

❸ You can then change the volume by pressing ◁ / ▷.

❹ Press ◉ on (LIST) to display the MP3 file list.

❺ Press ◉ on (INFO) to display information about the selected MP3 file.

　- FILELIST : Shows/Hides the MP3 file list

　- INFO : Shows information about the MP3 file you selected.

　- YELLOW : Choose the Hard disk volume or usb device with USB hub.

<Figure 6-5-3>

<Figure 6-5-4>
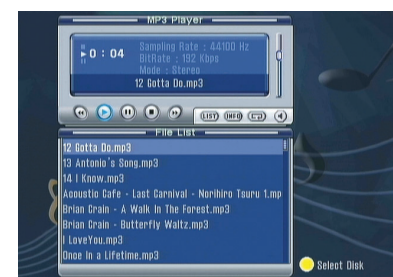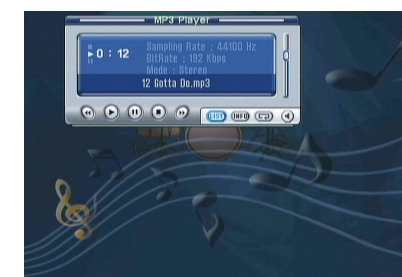
4) JPG menu

❶ Press ⏪ / ⏩ to select a picture. <Figure 6-5-5>

❷ Press ⏺ to show the picture you want to display.

- **RED** : Sets the time interval between slides.

- **GREEN** : Selects slide show.

- **YELLOW** : Choose the Hard disk volume or usb device with USB hub.

- **FILELIST** : Shows/Hides the JPEG file list.

<Figure 6-5-5>

5) Data Transfer menu

❶ Select the software you want to download by using ⏪ / ⏩ in the list <Figure 6-5-6>

❷ Press ⏺ to start software downloading

- **YELLOW** : Choose the Hard disk volume or usb device with USB hub.

- **FILELIST** : Shows/Hides the JPEG file list

∗ *Warning : Please do not switch off your receiver before software downloading is completed.*

<Figure 6-5-6>
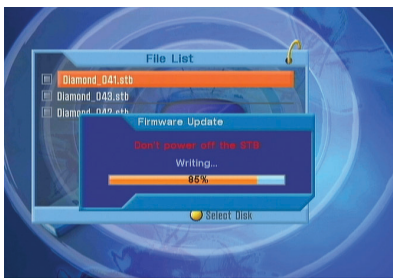
6) Management

- **Disk Information** : Choose the Hard disk volume or usb device with USB hub. You can view a information of usb devices (used size, total size, free size) <Figure 6-5-7>

- **Chek Disk** : Choose the Hard disk volume or usb device with USB hub. You can check the usb devices. <Figure 6-5-8>

<Figure 6-5-7>

<Figure 6-5-8>
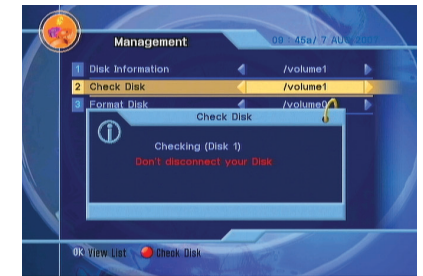
- **Format Disk** : You can format the usb devices. <Fig 6-5-9>

<Figure 6-5-9>

1) Tetris

❶ Press ⬤ on 'Tetris'. The following menu will be displayed. <Figure 6-6-1>

❷ You can choose a skill level using ◁ / ▷ .

❸ Press ⬤ to start the game <Figure 6-6-2>, or press the EXIT button to return to the previous menu.

❹ Press ⬤ to rotate a block.

❺ Press ◁ / ▷ to move a block.

❻ Press �〰 to drop a block.

❼ You can see the next block in the top-right small window.

❽ Press the EXIT button to quit the game

<Figure 6-6-1>   <Figure 6-6-2>

2) Sokoban

How to play Sokoban: you have to push the balls to their correct positions. The balls can only be pushed, never pulled, so you have to be careful not to push them into a corner where you can't get them out from. You can only push one ball at a time.

❶ Press ⬤ on 'Sokoban'. The following menu will be displayed. <Figure 6-6-3>

❷ You can choose a skill level using ◁ / ▷ .

❸ Press ⬤ to start the game <Figure 6-6-4>, or press the EXIT button to return to the previous menu.

❹ Press ⌢ / ⌣ , ◁ / ▷ to move.

❺ Press the RED button to undo the previous move. You can undo only one step.

❻ Press the GREEN button to restart the game.

❼ Press the YELLOW/BLUE buttons to jump to the previous/ next level. You can jump only between completed levels.

❽ Press the EXIT button to quit the game.

<Figure 6-6-3>   <Figure 6-6-4>

3) Snake

❶ Press ⬤ on 'Snake'. The following menu will be displayed. <Figure 6-6-5>

❷ You can choose a skill level using ◁ / ▷ .

❸ Press to start the game <Figure 6-6-6>, or press the EXIT button to return to the previous menu.

❹ Press ⌢ / ⌣ , ◁ / ▷ to move.

❺ Pass through the GREEN icon to increase your score; the length of the snake increases.

❻ Pass through the RED icon to decrease the snake's length.

❼ Avoid the BLACK icons. If you hit a BLACK icon (block), the game ends.

❽ Press the EXIT button to quit the game.

<Figure 6-6-5>   <Figure 6-6-6>
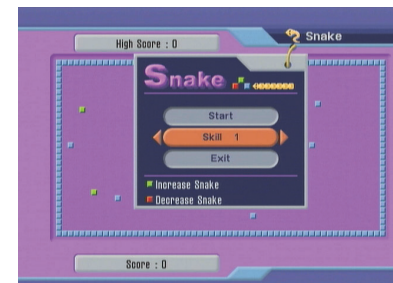
1) Card Initializing

To Enjoy CONAX CAS7 scrambled channels, you will need a Smart Card from the service provider (program distributor). If you are subscribing to services from more than one service provider, you will need a Smart Card from each one. Since a Smart Card is connected to a single service provider, a limited range of channels will be available via it.

∗ *Note : Without the Smart Card, you can watch only Free-To-Air programs.*

❶ Insert the Smart Card into the receiver's slot designed for it.

❷ The message **'Smart Card Initializing'** will appear on the screen. <Figure 6-7-1>

❸ After the message **'Smart Card Initializing'** has disappeared, you will be able to watch the channels offered by the service provider.

<Figure 6-7-1>
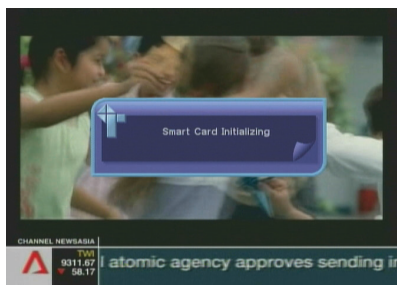
2) The Status of the Smart Card

❶ You can access detailed information about the Smart Card using the ◁ / ▷ keys in the Main Menu to select **'CA'** and pressing ⊙ . <Figure 6-7-2>

❷ Proceed with further instructions displayed on the screen to check more detailed information depending on the Smart Card in use.

∗ *Note: Further detailed information is not mentioned in this manual since the information depends on the Smart Card in use.*

<Figure 6-7-2>
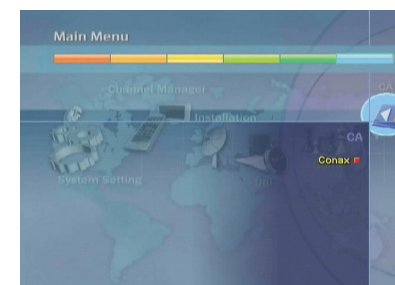
1) File List

▶ **File Playback**

❶ Press 📋 to show the file list. Select the file you want to play back by using ⬆ / ⬇ , 🔘 .

❷ Press 🔘 . In the left side of screen, detailed information about the selected file will be displayed. (Recorded Date/Time, Used size, Total Size) <Figure 6-8-1>

- To see a full screen, press 🔘 once more. And then the following time-bar will appear. <Figure 6-8-2>

<Figure 6-8-1>

<Figure 6-8-2>
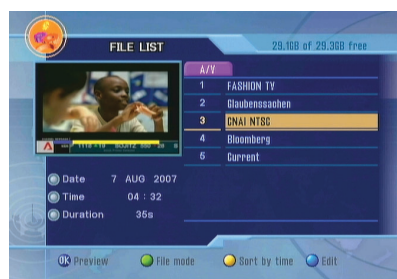
▶ **Edit Menu**

You will be asked to enter a password whenever you try to enter it. Press 🔘 . The pop-up menu for selection will appear<Figure 6-8-3>.

Select the item that you want to edit, and set its parameters as desired

❶ Normal Mode : Press 🔘 on the file that you can see the preview of a selected file.

❷ Lock Mode : Press 🔘 on the file that you want to lock/unlock.

❸ Delete Mode : Press 🔘 on the file that you want to delete.

  - **GREEN** : Select between, File Mode ↔ Dir Mode

  - **BLUE** : Shows all sorted files. Select between, Sort by name ↔ Sort by time.

❋ *If you set 'Channel Lock' (refer to <Figure 6.2.4>security setting) to OFF, you will not be asked to enter a password even if the channel is locked.*

<Figure 6-8-3>
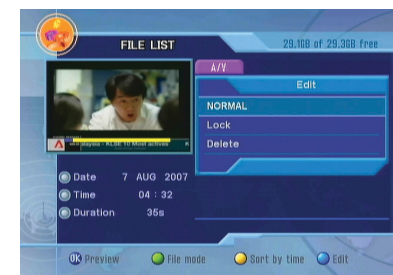
2) Play List

❶ While watching a program, press ▶ to show the play list. <Figure 6-8-4>

❷ While recording a program, press ⊙ to show the play list. <Figure 6-8-4>

❸ Select the file you want to play back by using ⟨ / ⟩, ⊙ . And then the following time-banner will appear. <Figure 6-8-5>

- **GREEN** : Select between, File Mode → Dir Mode

- **YELLOW** : Shows all sorted files. Select between, Sort by name → Sort by time

<Figure 6-8-4>

<Figure 6-8-5>
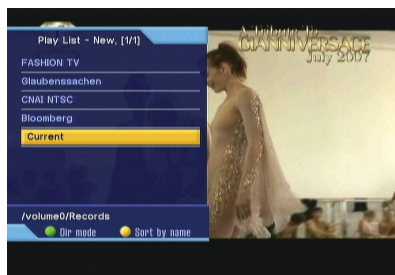
3) Trick Mode

You can operate the trick mode while you are playing the recording files. These functions are available in playback mode or time-shift mode powerfully.

▶ **PLAY**

This button will display a time- banner. If you want to show the play list while playing the file by using ▶ .

▶ **PAUSE**

This button will pause the playing file until you play again with ▶ or ⏸ .
<Figure 6-8-6>

▶ **ADVANCE**

- If the time-shift mode is enabled, You can press ⟶ to jump the live program.

- If the playback mode is enabled, You can press ⟶ to stop the current playing file and then jumping the live program.

▶ **FF(Fast Forward)**

- When playing the file, you can press ▶▶ to adjusting the playing speed.<Figure 6-8-7>

- The speed will change to x2, x4 and x8.

<Figure 6-8-6>

<Figure 6-8-7>
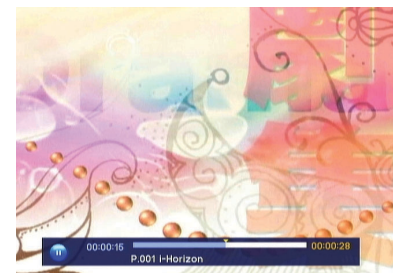
▶ **RWD(Rewind)**

When playing the file, you can press ◀◀ to adjusting the playing speed. <Figure 6-8-8>

The speed will change to x2, x4 and x8.

▶ **Slow(1/2x, 1/4x)**

When playing the file, you can press ▶ to adjusting the playing speed. <Figure 6-8-9>

<Figure 6-8-8>

<Figure 6-8-9>

▶ **Jump**

- You can locate the control position to the desired position by using the ◖ / ◗.

- If you press this key continuosly, You can locate the control position to the desired position very quickly.

▶ **Skip**

- You can skips and forward in 15 seconds using the ◣.

- You can skips and backward in 15 seconds using the ◢.

▶ **Bookmark**

To mark a specific place in a file for later retrieval. <Figure 6-8-10>

- **RED :** Press this button and red small triangle cursor will be placed at that position. If you want to delete the bookmarked position, press a this button once more when red small triangle cursor appear.

- **GREEN :** Press this button and the current position will jump to the previous bookmarked position and playback starts from this point.

- **YELLOW :** Press this button and the current position will jump to the next bookmarked position and playback starts from this point.

✳ *Note : The maximum number of the bookmark is 20 in a file.*

<Figure 6-8-10>

4) Instant Recording

❶ You can record a current channel by using 🔴. If you then press ▶️, a time-banner will be displayed.<Figure 6-8-11>

❷ Press 🔴 once more. The following picture shows that you can select item when you record a current channel. <Figure 6-8-12>

    - Channel : It shows a current channel.

    - Name : It shows a current recording name.

    - Duration : You can change the duration of recording time by using the 🔵 / 🔵. And current recorded time appear.

    - Stop : If you stop the recording, Press ⏹ .

<Figure 6-8-11>

<Figure 6-8-12>
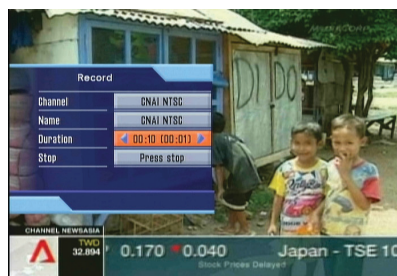
✳ **Note : 1. Do not remove the USB device while recording a program.**

      2. You can't change to another channel while recording a program.

5) Timer Recording

This function is availabe when usb device is connected. You can choose a channel to record the Program Guide menu by using 🔴. (Refer to 6.4 Electric Program Guide, 2)Timer)

6) Time Shift

❶ If you want to pause and resume live TV channel, press **PAUSE** button. The default time of Time-Shift is 30 min in your STB.<Figure 6-10-13>

❷ If you want to resume live TV channel, press **PLAY** button. <Figure 6-10-14>

❸ The trick-mode operations are provided. If you want to jump to live channel, please press ⏭ .

<Figure 6-8-13>

<Figure 6-8-14>
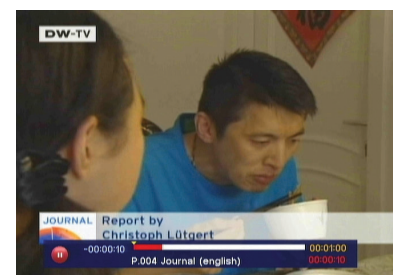
Trouble Shooting

There may be various reasons for the abnormal operation of the unit. Therefore, if the unit does not work properly, check it according to the procedures shown in the table below:

Problem	Possible causes	Remedy
LED on front panel does not light.	AC power cord is not connected.	Make sure that power cord is connected properly into the power socket. Make sure power switch is on.
No Picture or sound	The video/audio output of the receiver with TV is connected.	Make sure that video/audio cable is connected to the TV.
	The aerial is not connected to the receiver.	Make sure that the aerial is connected properly to the receiver.
	Menu setting is not done properly.	Make sure that menu setting is done properly on each menu. If you are not sure about proper menu setting, please contact your local dealer.
Black-and-white screen	Your TV mode is different from broadcasting mode.	Use TV of same mode. Use the NITSC/PAL converter connected to the receiver and TV.
The remote controller is not working.	Battery exhausted. Remote controller is incorrectly aimed.	Change the batteries of remote control. Aim the remote control at the Receiver correctly.

Specifications

System capabilities satellite LNB/Tuner input	Fully DVB compliant	
	Connector	IEC 169-24, female
	Frequency range	950MHz ~ 2150MHz
	Signal level	-65dBm ~ -25dBm
	LNB supply	DC 13/18V, max 400mA
	LNB switch control	22KHz
	DiSEqC	Ver 1.0/1.1/1.2/USALS Compatible
Demodulator	Front end	DVB-S/S2 QPSK, 8PSK
	Symbol rate	DVB-S : 2~45Msps
		DVB-S2 : 10~30Msps(QPSK) 10~31Msps(8PSK)
	SCPC and MCPC Capable	
	Spectral inversion	Auto conversion
TERRESTRIAL System capabilities Tuner & Channel Decoder	Input connector	IEC 169-24, Female
	Frequency range	57MHz ~ 803MHz
	Input impedance	75 Ohms Nominal
	Signal level	6MHz(-80dBm~-5dBm)
	IF Bandwidth	6MHz
	Waveform	8VSB
System resource	Processor	32bit processor (266MHz)
	DDR SDRAM	32Mbyte X 4
	FLASH	8Mbyte
	EEPROM	256Kbit
Video decoder	MPEG 2	MPEG-2, MPEG-4, H.264
	Data Rate	up to 15M bits/s
	Resolution	1920 X 1080i, 1280 X 720p, 720 X 480i/p
	Video format	NTSC
	Aspec Ratio	4:3,16:9
Teletext	DVB compliant	

MPEG Audio	MPEG 1 layer 1 &2	
	Type	Mono, Stereo, Joint Stereo
	Sampling rates	32, 44.1 and 48 KHz
Serial data interface	Connector	9pin D-sub male, Max 115K bps
Remote control	Code	NEC-IR
	Operating condition	up to 7 Meter
USB	USB Supply	DC 5V Max 500mA
Power supply	Power consumption	max 40W
	Supply voltage	100V ~ 250V
	Supply frequency	50Hz ~ 60Hz
Rear Panel	Video	1 X RCA cinch
connectors	Audio L/R	2 X RCA cinch
	Component(Y/Pb/Pr)	3 X RCA cinch
	Serial data	9pin D-sub
	Digital tuner input	IEC 169 - 24
	Loop-through Digital tuner	IEC 169 - 24
	Terrestrial ant input	IEC 169 - 24
	S/PDIF	Fiber Optic
	S-Video	Mini-DIN

Physical	Size (W X H X D)	335 X 58.5 X 247(mm)
Specification	Weight (Net)	3 Kg

Multi-Brand IR Remote Controller Specification

1) Features

This project will programmed and support **TV, VCR, DVD**, **SAT** for American. (chip:CMS81032 OTP 24PIN, ROM SIZE:16K)

※ The **TV, VCR, DVD** keys are used to select the device you Want to control.

2) Digit Programming & Key Activation

❶ Using your DEVICE code No.

Step 1. *Turn on your DEVICE.*

Step 2. *Press OK Key and press DEVICE Key in 2 seconds at the same time.*
  • *LAMP LED will turn on*

Step 3. *Press three Digit Codes Number*
  • *If the Digit Codes Number is not pressed in the course of 20 seconds, this function is canceled.*

Step 4. *LAMP LED will blink twice.*
  • *The current setting code is right.*
  • *The current setting code is right if your DEVICE will turn off.*

Step 5. *Press OK Key for saving.*

❷ Search method - If Your DEVICE Does Not Respond.

Step 1. *Turn on your DEVICE.*

Step 2. *Press OK Key and press DEVICE Key in 2 seconds at the same time.*
  • *LAMP LED will turn on*

Step 3. *Press CH+ or CH- key until DEVICE turns off,one and one.*
  • *LAMP LED will blink*
  • *If the CH+ or CH- key is not pressed in the course of 20 seconds, this function is canceled.*

Step 4. *If your DEVICE is turn off then press OK Key for saving.*
  • *LED will blink Twice*

 * *Please use this method if none of the Set-Up Code numbers worked for your device during the three digit code method or if the manufacturer or brand for your device if not listed in Set-Up Code Tables.*

3) Code Recall

If you forgot what code you used for any of your DEVICE.

Step 1. *Press OK key and press DEVICE Key in 2 second at the same time.*

Step 2. *Press INFO Key*
  • *LAMP LED will blink according to first,second and third digit for the current setup code.*
  • *case of digit 0, the LAMP LED blinks 10 times*

4) Factory Default

STEP 1. *Press TV + REC Key in 5 seconds at the same time.*

STEP 2. *Press TV > DVD > STB > VCR Key*
 * *Each LED will blink 3 times in the order of TV/DVD/STV/VCR, and then restores the default setting.*

4) KEY TABLE

No	WR653D-DI WUR019 KEY NAME	FUNCTION SAT	TV	VCR	DVD
	WUR019 KEY NAME	SAT	TV	VCR	DVD
00	STB	STB SEL			
01	TV		TV SEL		
02	VCR			VCR SEL	
03	DVD				DVD SEL
04	POWER	POWER	POWER	POWER	POWER
05	CH+	CH+	CH+	CH+	UP
06	CH-	CH-	CH-	CH-	DOWN
07	V+	V+	V+		RIGHT
08	V-	V-	V-		LEFT
09	MUTE	MUTE	MUTE		
10	TV/RAD	TV/RADIO	TV INPUT	INPUT	INPUT
11	0	0	0		
12	1	1	1		
13	2	2	2		
14	3	3	3		
15	4	4	4		
16	5	5	5		
17	6	6	6		
18	7	7	7		
19	8	8	8		
20	9	9	9		
21	MENU	MENU	MENU		MENU
22	INFO	INFO	INFO		
23	OK	OK	OK		OK
24	EXIT	EXIT	EXIT		
25	GUIDE	GUIDE	GUIDE		
26	PLAY	PLAY		PLAY	PLAY
27	STOP	STOP		STOP	STOP
28	FWD	FWD		FWD	FWD
29	REW	REW		REW	REW
30	PAUSE	PAUSE		PAUSE	PAUSE
31	REC	REC		REC	REC
32	ADVANCE	ADVANCE			
33	SLOW	SLOW			
34	AUDIO	AUDIO			
35	SUBTITLE	SUBTITLE			
36	MOSAIC	MOSAIC			
37	SLEEP	SLEEP			
38	FREEZE	FREEZE			
39	ZOOM	ZOOM			
40	RECALL	RECALL			
41	GROUP	GROUP			
42	VOL+	VOL+			
43	VOL-	VOL-			
44	PG+	PG+			
45	PG-	PG-			
46	FILE LIST	FILE LIST			
47	RED	RED			
48	GREEN	GREEN			
49	YELLOW	YELLOW			
50	BLUE	BLUE			
51	V.FORMAT	V.FORMAT			
52	WIDE	WIDE			

5) Brand list

❶ 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										
APRC_DIGITAL	015	226												
AUDIOVOX	073	103	043											
BAYSONIC	043													
BELL_HOWELL	072													
BRADFORD	043													
BROKSONIC	096													
CANDLE	006	002	003	004										
CAPEHART	059													
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													

Brand															
HITACHI	163	004	007	009	011	072	010	012	023	075	143	158			
INFINITY	164														
INKE	129														
INTEQ	073														
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	015	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	134	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													

Brand													
SAMPO	006	004	058	242									
SMSUNG	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												
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												

MAKER(BRAND) NAME	CODE NUMBER(3 DIGIT) LIST																
ADMIRAL	025	53															
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														
DYNATECH	034	053															
ELECTROHOME	059	101															
ELECTROPHONIC	101																
EMERSON	006	029	035	037	129	153	017	025	027	031	034	036	046	101	131	138	117
FISHER	003	010	008	009													
FUJI	031																
FUNAI	034																
GARRARD	034																
GE	031	072	144	147	063	107	109	040	053								
GO_VIDIO	132	155	040	136													
COLDSTAR	101	004	012	020													
HARLEY_DAVIDSION	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												
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												

❷ VCR

SYLVANIA	031	034	059	067									
SYMPHONIC	034												
TANDY	034	010											
SATUNG	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				

❸ 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								
POPNEER	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											
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