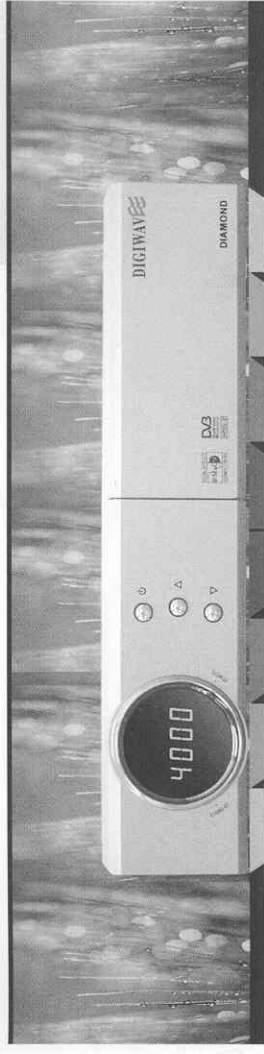


# USER'S MANUAL



Digital Satellite Receiver

☐ DIAMOND

**DIGI WAVE**

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DiSeqC is a trademark of EUTELSAT

# Introduction

## 1.1 Overview

This satellite receiver is designed for using digital free-to-air channel reception. Enjoy the rich choice of more than 4,000 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

- ▶ MPEG-II Digital & fully DVB compliant.
- ▶ 2MB Flash Memory makes faster scanning.
- ▶ On-screen display with 256 color resolution.
- ▶ DiSEqC Control Version 1.0, 1.1, 1.2 and USALS compatible.
- ▶ Renameable 8 Favorite channel groups.
- ▶ Powerful Channel control by Favorites, Lock, Skip, Move and Delete.
- ▶ Channel Sorting by Alphabet, Transponder and CAS.
- ▶ Extended EPG and Program Reservation through EPG.
- ▶ Last channel memory function.
- ▶ Total 4,000 Channels programmable.
- ▶ Multi-Satellite Search
- ▶ Blind Search
- ▶ Games Included. (Tetris, Sokoban, Snake)
- ▶ Parental lock/ Installation Lock / Receiver Lock / Channel Lock / Lock Channel confirm.
- ▶ Zoom Function in Pause.
- ▶ 10 languages(OSD & Menu) : English, Italian, Turkish, Arabic, Parsi, German, French, Russian, Spanish, Portuguese.

## 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."

## Check Points before Use

### 3.1 Accessories

Accessories of this are as below

User's manual : 1



Remote control : 1



Batteries (AAA type) : 2



► If any accessories listed above are missing, contact the sales representative where you purchased this unit.

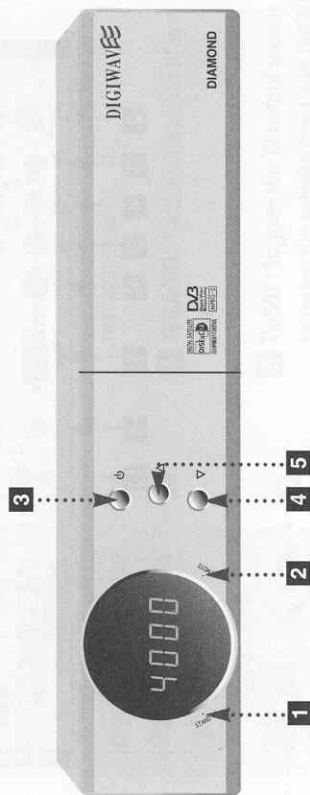
### 3.2 The Satellite dish

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

► This unit is working with DiSeqC 1.2 on a compatible antenna positioner.  
Ask your dealer for information.

## Controls/Functions

### 4.1 Front Panel



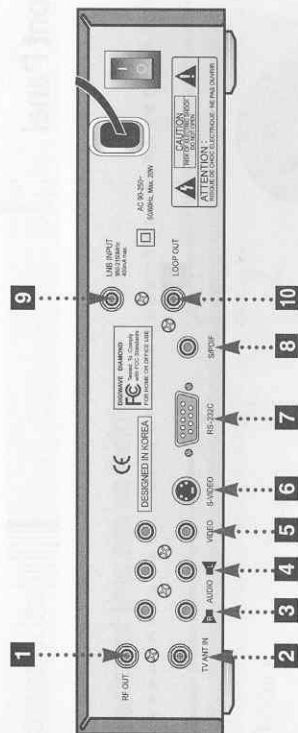
**1** Standby/Power on Indication Light : Flashing red on "Stand By" mode and no right on "Power On" mode.

**2** Indication Light : While pressing RCU key, this light will be flashing at the same time.

**3** Power : To switch the receiver in "standby" mode or in power on mode.

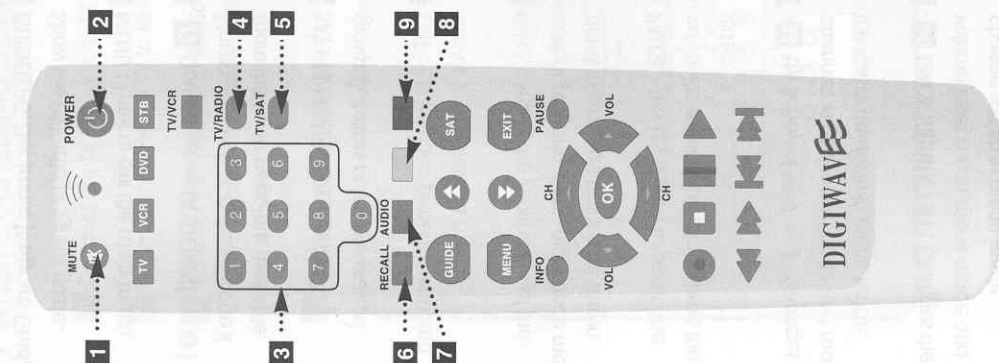
**4 - 5** CH. (▲▼) : To change channel or cursor position on the application screen.

## 4.2 Rear Panel

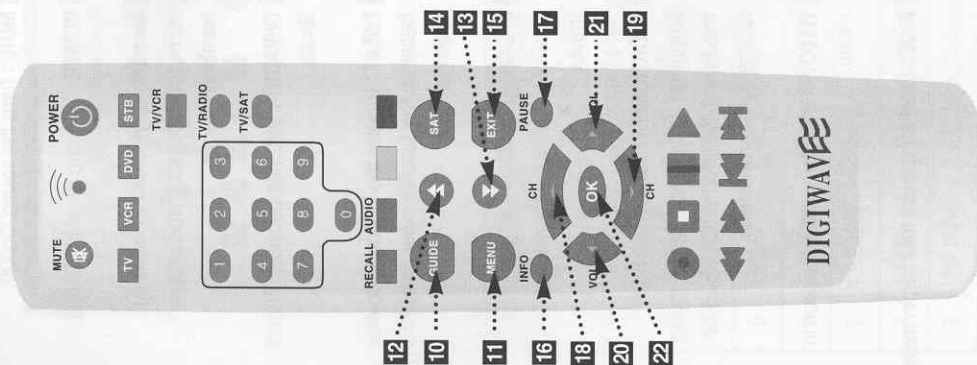


No.	Name	Connector	Function
1	RF OUT	IEC 169-24 female	Output to TV.
2	TV ANT IN	IEC 169-24 female	Input from terrestrial antenna.
3	AUDIO R	RCA cinch	Right audio output.
4	AUDIO L	RCA cinch	Left audio output.
5	VIDEO	RCA cinch	Composite video output.
6	S-VIDEO	MINI-DIN	S-VHS video output.
7	RS-232C	DB-9	Low speed serial port.
8	S/PDIF	RCA cinch	Digital audio output.
9	LNB INPUT	IEC 169-24 female	IF input from LNB to digital tuner.
10	LOOP OUT	IEC 169-24 female	IF loop-through output from digital tuner.

## 4.3 Remote Controller



- 1 MUTE** : Turns the sound On/Off.
- 2 POWER** : Turns the receiver On/Off.
- 3 Numeric Keys(0-9)** : Controls the numerical operation and channel numbers directly.
- 4 TV/RADIO** : Switches between TV and Radio.
- 5 TV/SAT** : Toggles the TV output source between the satellite input and UHF/VHF antenna input.
- 6 RECALL(RED)** : Moves to previous channel. Used for special function in menu.
- 7 AUDIO(GREEN)** : Shows the multi-language audio track, stereo-mono mode, subtitle information. Used for special function in menu.
- 8 YELLOW** : Used for special function in menu.
- 9 BLUE** : Used for special function in menu.



**10** **GUIDE**(EPG:Electronic Program Guide) :  
Show the TV/Radio program guide.

**11** **MENU** : Enter or exit the main menu.

**12 - 13** **Double arrow UP/DOWN** ( ) :  
Move to the next or previous page if  
more than one page are available.

**14** **SAT** : To change the channel  
groups(Satellites or favorite groups).

**15** **EXIT** : Exit from the present menu and  
moves to the previous menu.

**16** **INFO** : Shows the information of the  
current program. If you press once more,  
detail information box will be shown.

**17** **PAUSE** : This key is used to pause the  
video. Press once more to resume the  
video.

**18 - 19** **Up & Down** ( ) : Changes  
channels in non-menu mode and moves  
the cursor up/down in menu mode.

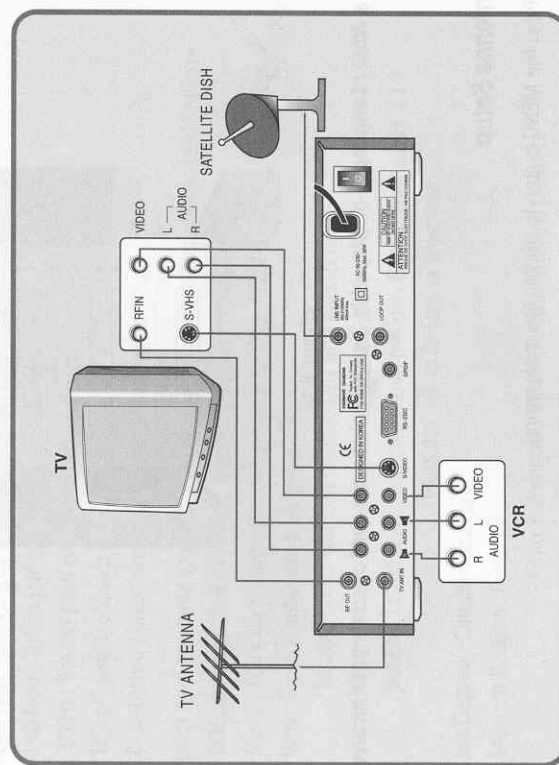
**20 - 21** **Left & Right** ( ) : Changes the  
volume level in non-menu mode and  
change setting in menu mode.

**22** **OK** : Shows the Channel List in non-  
menu mode and select an item or  
confirm in menu 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 your satellite dish




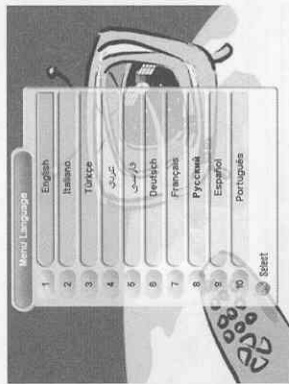
# Operation

## 6.1 Getting Started

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

### 1) Menu Language Setting





- ① Turn on your TV and receiver.
- ② The pop-up menu for language selection will appear <Figure 6-1>.  
Select one language and press the  to proceed.



<Figure 6-1>

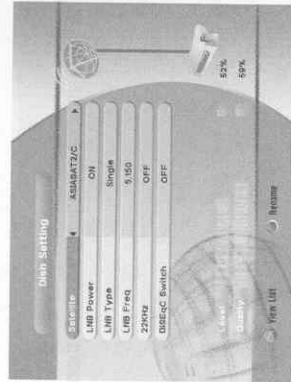
\* Note : Languages displayed in 'Language' raw are supported by your receiver.

### 2) Antenna Setup

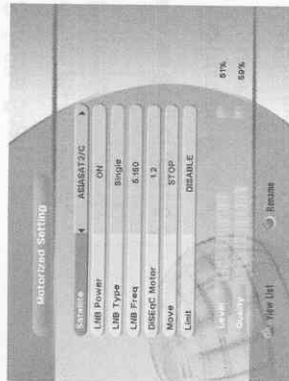
- ① Press the MENU button to display the main menu.
- ② Use the  and  to move in menu.
- ③ Press the  on the "Dish Setting". The following window will appear. <Figure 6-2>  
If you have motorized dish, press the  on the "Motorized Setting". <Figure 6-3>

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

## 6.1 Getting Started



<Figure 6-2>







<Figure 6-3>

#### ④ Select item you want to edit and change each parameter. <Dish Setting>


- LNB Power : Select LNB power( ON / OFF / 13V / 18V)
- LNB Type : Select your LNB Type.(Single / Universal / OCS)
- LNB Freq : Select LNB oscillator frequency.
- 22KHz : Set the path of 0/22KHz switch box.
- DiSEqC switch : Select DiSEqC box type(OFF / 1,0 / 1,1)
- Committed / Uncommitted : Select DiSEqC port.

#### ⑤ Select item you want to edit and change each parameter. <Motorized Setting>

- DiSEqC Motor : Select DiSEqC Motor type (OFF / 1,2 / USALS)
- Move : You can change the dish position to West / East.
- Limit : If you want to set limit, press .
- Disable Limit : You can disable East and West Limit.
- Goto Center : Move the dish to the 0 position.
- Set East / West Limit : You can move the dish East or West using  / .

Press the  to fix East or West limit.

- Sat Degree : Satellite location.

- Antenna Position : Press .

- Goto Reference : Move the dish to the 0 position.

- Antenna Longitude : Your longitude at present.

- Antenna Latitude : Your latitude at present.

\* Note : When you change each parameter, you need to know exact parameter of LNB to modify L.O.(local oscillator) frequency.

\* Note : When you change each parameter, you need to understand environment of connecting the receiver and antenna in order for you to set 22KHz and DiSEqC properly.

⑥ After setting, press the EXIT button to store the changed data.






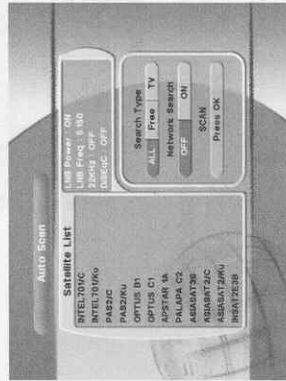
## 6.1 Getting Started

### 3) Satellite Scan

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

► Auto Scan <Figure 6-4>

- ➊ Press the  on which you want to scan in satellite list. You can select more than one satellite.
- ➋ Press the  and select "Search type" or "network Search" option.
  - Search Type : Determine searching channels(All channel / Free channel only / TV channel only)
  - Network Search : If you set to ON, you can find more transponders through NIT Scan.
- ➌ If you press the  on the "SCAN" the selected satellites will be scanned. <Figure 6-5>





<Figure 6-4>

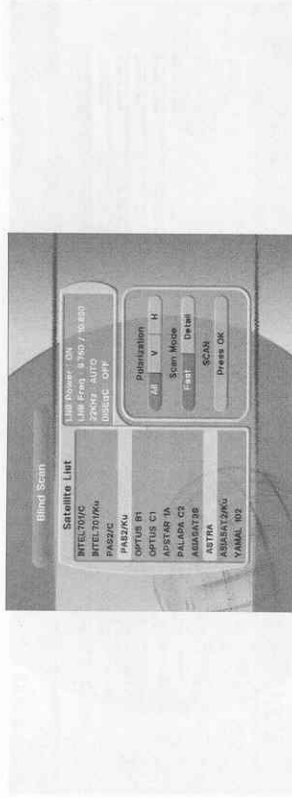


<Figure 6-5>

► Blind Scan <Figure 6-6>

- ➊ Select the satellites you want to search by pressing  button on the remote.
- ➋ Press the  and select "Polarization" or "Scan Mode" option.
  - Polarization : Select Vertical / Horizontal / All.
  - Scan Mode : Select Fast / Detail.
  - SCAN : Begin channel search of the selected satellites.
- ➌ Press RED button on the remote to begin blind scan of all of the satellite in the satellite list.

## 6.1 Getting Started



<Figure 6-6>

► Manual Scan <Figure 6-7>

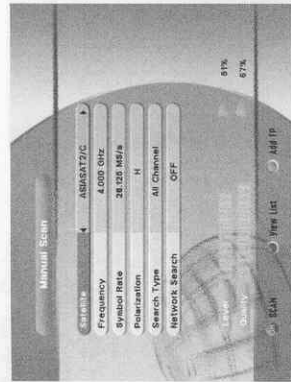
- ➊ Select transponder which you want to scan.
- ➋ If you want to change an information of current transponder(Frequency, Symbol Rate and Polarization), just input information using **NUMERIC** button.
- ➌ If you want to add new transponder, press **GREEN** button.
- ➍ If you want to delete current transponder, move cursor to the Frequency and press **YELLOW** button.

► PID Scan <Figure 6-8>

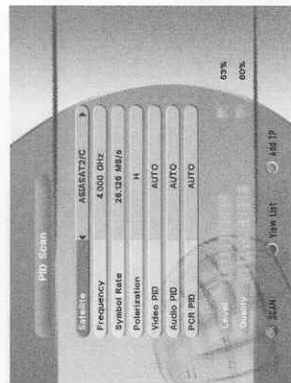
- ➊ Select transponder which you want to scan.
- ➋ If you want to change an information of current transponder(Frequency, Symbol Rate and Polarization), just input information using **NUMERIC** button.
- ➌ If you want to add new transponder, press **GREEN** button.
- ➍ If you want to delete current transponder, move cursor to the Frequency and press **YELLOW** button.
- ➎ You can also search a channel of the specified transponder by specifying PID data(Video, Audio and PCR).



## 6.1 Getting Started



<Figure 6-7>



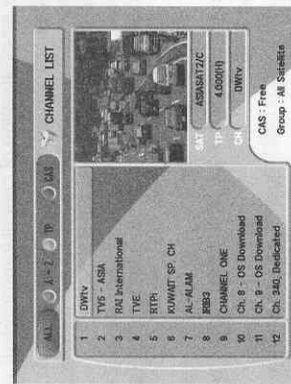
<Figure 6-8>

**\* Note :** Now you have complete all steps needed for watching programs.  
If you could not see the program after finishing these procedures, please contact a shop where you bought your receiver or installer who installed your receiver.

### 4) Select Channel

You can change the current channel to any other channel you want.

- ▶ In case you want to select a channel at random without knowing the channel name, you can navigate between channels until you find the channel you want.
- ▶ If you know the channel number, enter the number and wait 2 seconds till the channel changed.
- ▶ If you know the channel name, press and the channel list will appear. <figure 6-9>



<Figure 6-9>

## 6.1 Getting Started

- ① In the right side of screen, detailed information of the selected channel will be displayed.  
(Satellite Name, Frequency(polar) and Channel Name)
- ② You can navigate between channels with this buttons.
  - / : Moves up / down.
  - or : Moves page up / page down.
  - RED : Shows all channels in current group.
  - GREEN : Shows channels sorted by alphabet.
  - YELLOW : Shows channels sorted by Transponder.
  - BLUE : Shows channels sorted by CAS system.
- ③ When the scroll bar is positioned on the channel you want to see, press .

### 5) Other Function on Remote Control

#### ▶ Volume Control

- ① While you are watching a program, press or to control volume.
- ② When necessary, press MUTE button to remove the sound of the program.  
Then, your receiver goes into mute condition and the mute icon will be displayed.  
Press MUTE button again to turn the sound on.

#### ▶ Channel Information

- ① Whenever press the INFO button, the information banner will appear for a few seconds.
- ② If you press the INFO again on the information mode, the detail banner will appear.

#### ▶ TV / SAT switching

If you press TV/SAT, the signal reception path will be changed to RF modulator.

- TV Mode : TV ANT In signal will be out. (front will display "TV")
- SAT Mode : Decoded signal will be out through RF. (front will display channel number)

## 6.1 Getting Started

### ► TV / RADIO switching

You can use this menu when you change a TV channel to a Radio channel or vice versa.

### ► RECALL(RED)

Return to the previous channel.

### ► Subtitle / Audio

You can adjust the subtitle and audio status of the current channel.

Press **AUDIO(GREEN)** button, then subtitle and audio related menu will be displayed.

- Audio Mode : Stereo -> Mono-Left -> Mono-Right

- Audio Track : All tracks available in this program.

- Subtitle : All subtitle language available in this program.

**\* Note : These subtitle and audio parameters are workable only when the receiving channel supports these functions.**

### ► Teletext(YELLOW)



Teletext Service is text data service from Service Provider.

It is available only when the satellite signal carries teletext service data.

### ► PAUSE

This key is used to pause the video. Press once more to resume the video. In pause mode you can zoom in partial of video.

① In pause mode, select position using  /  /  / .

② Press  to zoom in. Press  again to zoom out.

### ► GROUP

When watching TV or listening to Radio, you can get the satellite or favorite channel group list by pressing the **GROUP** button on the remote control unit.

Group menu will display only registered satellite and favorite group.

## 6.2 System Setting

### 1) Time Setting

This sub menu allows you to set your local time, wake up time, wake up channel and sleep time. <Figure 6-10>

- 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 .

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 **NUMERIC** button.

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

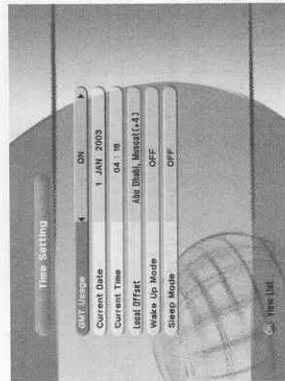
- Wake Up Mode : You can set the cycle of the wake up mode.(Off / Once / Daily)

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

- Wake Up Channel : You can set wake up channel by pressing .

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

- Sleep Time : You can set sleep time by pressing **NUMERIC** button.



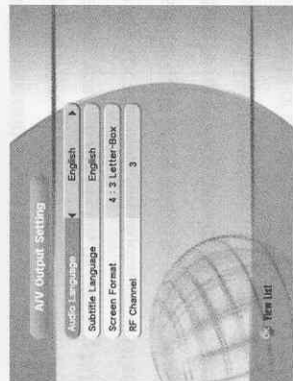
<Figure 6-10>

## 6.2 System Setting

### 2) A/V Output Setting

This sub menu allows you to set audio/video output setting. <Figure 6-11>

- Audio Language : Default language of audio when changing channel.
- Subtitle Language : Default language of subtitle.
- Screen Format : TV aspect ratio(16:9 / 4:3 Letter-Box / 4:3 Pan Scan)
- RF Channel : Sets the channel to display the audio and video signal on your TV.(3 or 4)  
If you select 3, receiver will be displayed at channel 3 on your TV.



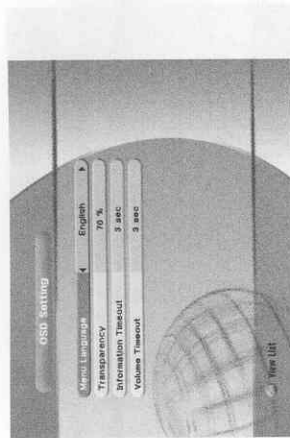
<Figure 6-11>

### 3) OSD Setting

This sub menu allows you to set menu language, OSD transparency, Information and volume timeout. <Figure 6-12>

- Menu Language : Select the desired language of the menu.
- Transparency : Select OSD transparency of the menu.(1% ~ 100%)
- Information Timeout : Select the display duration of the information banner.  
(1 sec / 2 sec / 3 sec / 5 sec / 10 sec)
- Volume Timeout : Select the display duration of the volume box.  
(1 sec / 2 sec / 3 sec / 5 sec / 10 sec)

## 6.2 System Setting



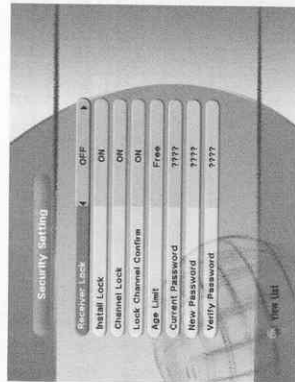
<Figure 6-12>

### 4) Security Setting

This sub menu allows you to change the password option to unlock or lock some menu entry and to change password. <Figure 6-13>

- Receiver Lock : If you set ON, receiver asks you to enter PIN code when power on.
- Install Lock : If you set ON, receiver asks you to enter PIN code when entering Installation menu.
- Channel Lock : If you set ON, receiver asks you to enter PIN code on channels menu.
- Lock Channel Confirm : If you set ON, receiver asks you to enter PIN code when changing to locked channel.
- Age Limit : Prevents children or unauthorized people from watching programs.  
(Free / 8 above / 12 above / 15 above / 18 above)
- Current Password : Input current password for change your password.
- New Password : Input new password you want to change.
- Verify Password : Input new password one more for confirmation.

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



&lt;Figure 6-13&gt;

### 5) Database Reset

This sub menu allows you to restore the factory set values in case the user has encountered some problems after changing any new values of channel data and others which may be in error. <Figure 6-14>

- Delete Radio Channel : Erase all radio channels in database.
  - Delete Scramble Channel : Erase all scramble channels in database.
  - Delete All Channel : Erase all channels in database.
  - Factory Set : Erase all channels and restore default setting.
- The receiver will return to factory default parameters.



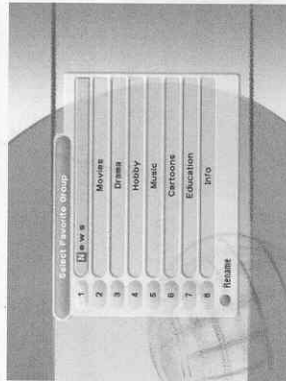
&lt;Figure 6-14&gt;

## 6.3 Channels

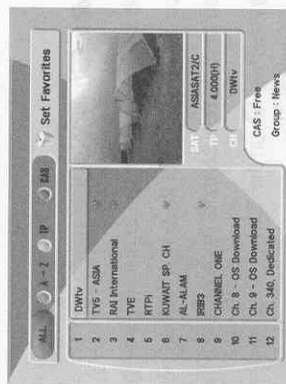
### 1) Set Favorites

This sub menu allows you to set up favorite name and favorite lists as you want. You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button. This receiver support 8 favorite list.

- 1 Press the **OK** on the "Set Favorites". The following menu will be displayed. <Figure 6-15>
- 2 Press **TV** / **RADIO** and **OK**. The following menu will be displayed. <figure 6-16>  
If you want to change favorite group name, press the **RED** button.
- 3 Press **OK** to select the channel that you want to add into favorite channel list.
- 4 Press **OK** one more to remove the channel that added favorite channel list.
- 5 Press **EXIT** button to return to previous menu.



&lt;Figure 6-15&gt;



&lt;Figure 6-16&gt;

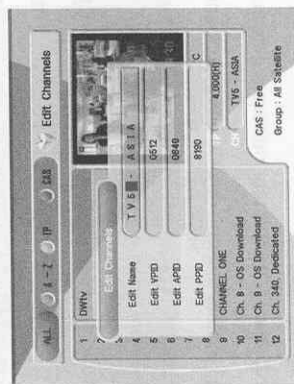
### 2) Edit Channels

This sub menu allows you to rename the channels and input user PID. You can choose TV or Radio channels in an alternative way by pressing **TV/RADIO** button. You can change channel list group by pressing **GROUP** button.

- 1 Press the **OK** on the "Edit Channels". The following menu will be displayed.  
<Figure 6-17>
- 2 Press **OK** to select the channel that you want to edit.
- 3 Press **OK** in Edit Name to rename the channel, the keypad will be displayed.
- 4 You can edit PID by pressing **NUMERIC** key.

## 6.3 Channels

\* Note : The VIDEO PID, AUDIO PID and PCR PID are very important for optimal satellite signal reception. We recommend you get professional advice where available.

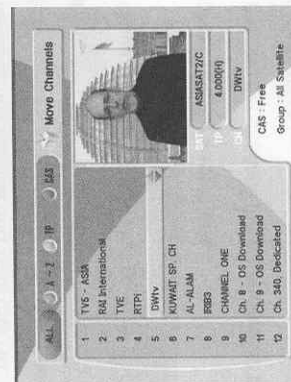


<Figure 6-17>

### 3) Move Channels

This sub menu allows you to move the channels. You can choose TV or Radio channels in an alternative way by pressing TV/RADIO button. You can change channel list group by pressing GROUP button.

- 1 Press the on the "Move Channels". The following menu will be displayed. <Figure 6-18>
- 2 Press to select the channel that you want to move. Moving icon will be displayed.
- 3 Press / / / NUMERIC button to move the selected channel.
- 4 Press one more to place the channel.
- 5 Press EXIT button to return to previous menu.



<Figure 6-18>

.... 24 ....

## 6.3 Channels

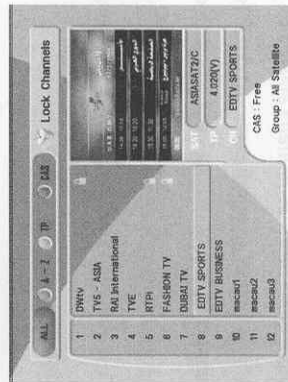
### 4) Lock Channels

This sub menu allows you to lock the channels for prevent watching this channel. Once the channel is locked, every time you try to watch the channel, you will be asked to enter password.

You can choose TV or Radio channels in an alternative way by pressing TV/RADIO button. You can change channel list group by pressing GROUP button.

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

- 1 Press the on the "Lock Channels". The following menu will be displayed. <Figure 6-19>
- 2 Press to select the channel that you want to lock. Lock icon will be displayed.
- 3 Press one more to cancel lock. Lock icon will be disappeared.
- 4 Press EXIT button to return to previous menu.



<Figure 6-19>

### 5) Skip Channels

This sub menu allows you to skip the channels.

Once the channel is skipped, every time you try to change channel using in non-menu mode, this channel will be skipped.




You can choose TV or Radio channels in an alternative way by pressing TV/RADIO button. You can change channel list group by pressing GROUP button.

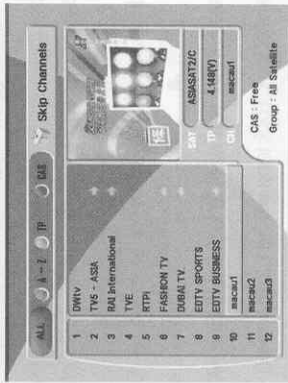
\* Note : If you try to change channel using NUMERIC button in non-menu mode, you can watch this channel.

.... 25 ....



## 6.3 Channels

- 1 Press the  on the "Skip Channels". The following menu will be displayed. <Figure 6-20>
- 2 Press  to select the channel that you want to skip. Skip icon will be displayed.
- 3 Press  one more to cancel skip. Skip icon will be disappeared.
- 4 Press EXIT button to return to previous menu.






<Figure 6-20>

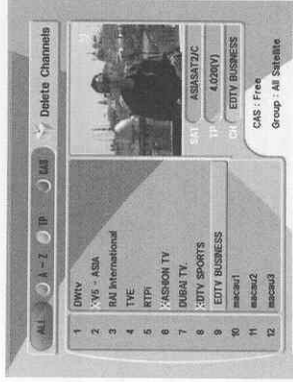
## 6) Delete Channels

This sub menu allows you to delete the channels.  
You can choose TV or Radio channels in an alternative way by pressing TV/RADIO button.  
You can change channel list group by pressing GROUP button.

**\* Note : Be careful!! If you delete channel, you can't watch this channel until re-scan.**

- 1 Press the  on the "Delete Channels". The following menu will be displayed. <Figure 6-21>
- 2 Press  to select the channel that you want to delete. Delete icon will be displayed.
- 3 Press  one more to cancel delete. Delete icon will be disappeared.
- 4 Press INFO button to delete all channels in current list. You will be asked to enter password.
- 5 Press EXIT button to return to previous menu.

## 6.3 Channels









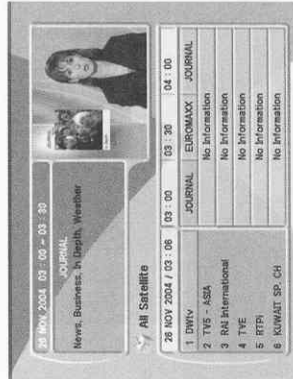
<Figure 6-21>

## 6.4 Guide

### 1) GUIDE(EPG:Electronic Program Guide)

This sub menu allows you to get the electronic program guide if available.

- 1 If you press GUIDE button, guide menu will be displayed. <Figure 6-22>
- 2 Press the  /  to see previous/next guide.
- 3 Press the  /  to move to other channel.
- 4 Press  to watch and get the EPG data.  
If you press  in current viewing channel  
- If current EPG is selected, return to previous menu and change to selected channel.  
- If next EPG is selected, selecting event will be reserved and event color will be changed.
- 5 By pressing TV/RADIO button, you can choose TV or Radio list.
- 6 By pressing GROUP button, you can choose channel list group.
- 7 If you press RED button, timer menu will be displayed. <Figure 6-23>

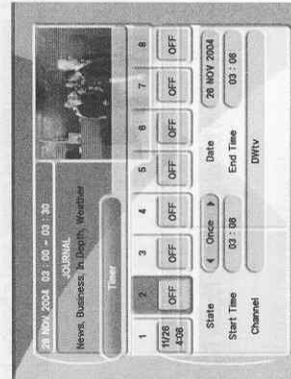


&lt;Figure 6-22&gt;

## 2) Timer

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

- 1 If you press **RED** button in guide menu, timer menu will be displayed. <Figure 6-23>
- 2 Press the / to move to other items.
- 3 Press the / to change the parameter.
  - Timer No. : Select the timer that you want to modify.(1 ~ 8)
  - State : Select the timer cycle of action.(off / once / daily / weekly)
  - Date : Select the date using . Calendar pop-up will be displayed.
  - Start Time : Input the time using **NUMERIC** button for your receiver power-on.
  - End Time : Input the time using **NUMERIC** button for your receiver power-off.
  - Channel : Select the channel using . Channel list pop-up will be displayed.

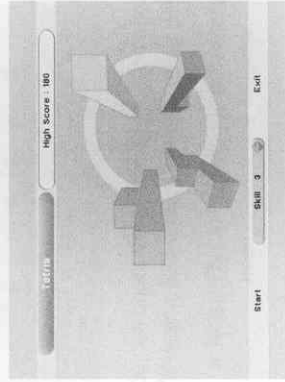


&lt;Figure 6-23&gt;

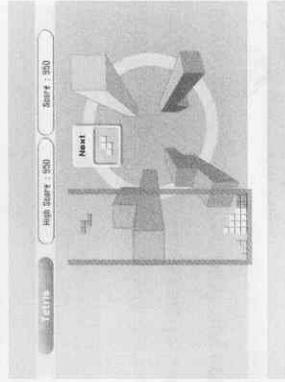
## 6.5 Games

### 1) Tetris

- 1 Press the on the "Tetris". The following menu will be displayed. <Figure 6-24>
- 2 You can select skill using / .
- 3 Press the to start game <Figure 6-25>, or press the **EXIT** button to return previous menu.
- 4 Press the to rotate the block.
- 5 Press / to move the block.
- 6 Press **DOWN** button to drop the block.
- 7 In the right top small window, you can see next block.
- 8 Press **EXIT** button to quit the game.



&lt;Figure 6-24&gt;



&lt;Figure 6-25&gt;



### 2) Sokoban

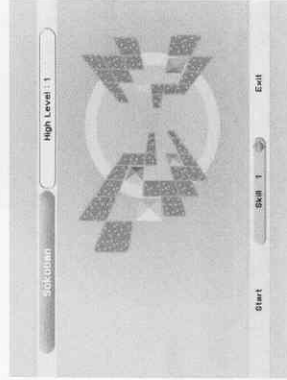
To play the sokoban, you have to push the balls to their correct positions. The balls can only be pushed, never pulled, so you have to be careful not to push them into a corner where you can't get them out again.  
You can only push one ball at a time.

- 1 Press the on the "Sokoban". The following menu will be displayed. <Figure 6-26>
- 2 You can select skill using / .
- 3 Press the to start game <Figure 6-27>, or press the **EXIT** button to return previous menu.

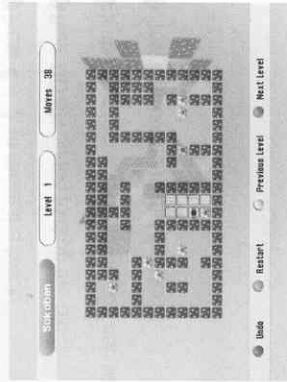


## 6.5 Games

- ④ Press the  /  to move.
- ⑤ Press RED button to undo previous move. You can undo only one step.
- ⑥ Press GREEN button to restart.
- ⑦ Press YELLOW/BLUE button to jump previous/next level. You can jump between completed level.
- ⑧ Press EXIT button to quit the game.









<Figure 6-26>

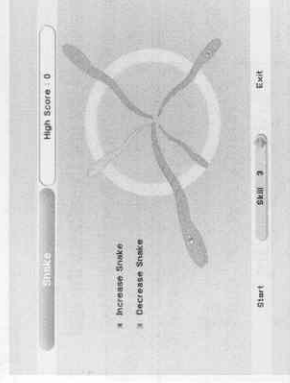


<Figure 6-27>

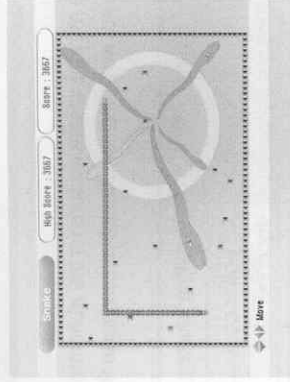
### 3) Snake

- ① Press the  on the "Snake". The following menu will be displayed. <Figure 6-28>
- ② You can select skill using  / .
- ③ Press the  to start game <Figure 6-29>, or press the EXIT button to return previous menu.
- ④ Press the  /  to move.
- ⑤ If the snake is passed through the BLUE icon, the length will be increased.
- ⑥ If the snake is passed through the RED icon, the length will be decreased.
- ⑦ If the snake is passed through the GRAY icon(block), the game end.
- ⑧ Press EXIT button to quit the game.

## 6.5 Games



<Figure 6-28>

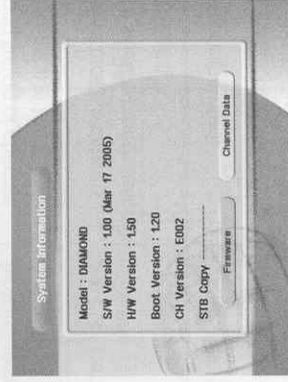


<Figure 6-29>

## 6.6 System Information

You can check the current information about your receiver such as receiver model name, S/W version, H/W version, manufacturing date, etc. <Figure 6-30>

**\* Note :** *This information is necessary when you download new software or you need to repair the receiver.*



<Figure 6-30>

## 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 disconnected.	Connect power cord properly into the power socket.
No Picture or sound.	Wrong connection of the video/audio output to TV input terminal.	Connect two terminals correctly with RCA or RF cable.
	Wrong connection of satellite antenna cable.	Connect the antenna cable correctly.
	Wrong direction of satellite antenna.	Adjust the direction of antenna.
	No signal or weak signal.	Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna.
Black-and-white screen or V-Hold.	Wrong setting of channel information in MENU screen.	Type the setting value correctly.
	Your TV mode is different from satellite broadcasting mode.	Use TV of same mode.
The remote controller is not working.	Battery exhausted.	Change the batteries.
	Fluorescent light interfering with the remote controller.	Switch off the light.
	Remote controller is incorrectly aimed.	Aim the remote control at the receiver.

## Specifications

System capabilities	Fully DVB compliant
LNB/Tuner input	Connector IEC 169-24, female
	Frequency range 950MHz ~ 2150MHz
	Signal level -65dBm ~ -25dBm
	LNB supply 14/18V, max 400mA
	LNB switch control 22KHz
Demodulator	DiSEqC Ver 1.0/1.1/1.2/USALS Compatible
	Front end QPSK
	Symbol rate 2Msps ~ 45Msps
	SCPC and MCPC Capable
	Spectral inversion Auto conversion
System resource	Processor 32bit processor (80MHz)
	SDRAM 8Mbyte
	FLASH 2Mbyte
	EEPROM 32Kbyte
Video decoder	MPEG 2 Main Profile @Main Level
	Data Rate up to 15M bits/s
	Resolution 720 X 576, 720 X 480
	Video format NTSC
	Aspec Ratio 4:3, 16:9
Teletext	DVB compliant
MPEG Audio	MPEG 1 layer 1 & 2
	Type Mono, Dual 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

Power supply	Power consumption	max 20W
	Supply voltage	90V ~ 250V
	Supply frequency	50Hz ~ 60Hz
Rear Panel connectors	Video out	2 X RCA cinch
	Audio L/R	4 X RCA cinch
	S-VIDEO	Mini-DIN
	Serial data	9pin D-sub
	Digital tuner input	IEC 169 - 24
	Loop-through Digital tuner	IEC 169 - 24
	Terrestrial ant input	IEC 169 - 24
	RF modulator output	IEC 169 - 24

RF modulator	Connector	IEC 169-24, Female
	Frequency	CH 3 : 61.25MHz CH 4 : 67.25MHz
	Output channel	CH3 / CH4
	TV Standard	NTSC-M
Physical Specification	Size (W X H X D)	260 X 54 X 232(mm)
	Weight (Net)	1.8 Kg

### 1) Features

This project will be programmed and support TV, VCR, DVD, SAB 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

#### ① 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 blink twice

Step 3. Press three Digit Codes Number

■ LAMP LED will blink

■ If the Digit Codes Number is not pressed in the course of 10 seconds, this function is canceled.

Step 4. LAMP LED will blink twice.

■ The current setting code is right

■ If LAMP LED blink in 1 seconds, code is wrong.

#### ② 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 blink twice

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 10 seconds, this function is canceled.

If your DEVICE is turned off

Step 4. Press OK key

■ 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 is not listed in Set-Up Code Tables.

### 3) Special Function

#### ① Code No. Check. If you want to know which Code No. was set,

Step 1. Press OK Key and press DEVICE Key in 2 seconds at the same time

■ LED will blink twice

Step 2. Press Display key

If the Display key is not pressed in the course of 10 seconds, this function is canceled.

Step 3. LED will blink twice

Step 4. After 2 seconds, LED will blink.

■ LED will blink according to first, second and third digit for the current setup code.

■ case of digit 0, the LED blinks 10 times.

\*\* At RESET, DEVICE default code is 000.

### 5) Brand list

## 1 TV

AOC	005	003			
Admiral	041	031			
Aiko	014				
Aiko	005				
Akai	026				
Alaron	024				
Ambassador	027				
America Action	043				
Ampro	027	047	048	049	
Anam	030	027	014	034	
Audiovox	027				
Baysonic	003				
Belcor	019	001			
Bell&Howell	027				
Bradford	003				
Brookwood	028	031			
Broksonic	027				
CXC	005	011			
Candle	005				
Carnivale	010				
Carver	050				
Celebrity	030	014			
Cineral	012	005	011	006	014
Citizen	011				
Concerto	027				
Contec	027				
Craig	010				
Crosley	027	006			
Crown	007	010	019	008	030
Curtis Mathes	041	012	005	016	011
	001	006	022	032	038
	040				
Daewoo	030	003	006	014	034
	035				
Daytron	003				
Denon	016				
Dumont	002	003			
Dwin	044	036			
Electroband	050				
Emerson	019	028	031	027	029
	025	003	026	006	024
	034	035			
Envision	005				
Fisher	019				
Fujitsu	026				
Funai	027	026	023		
Futuretech	027				
GE	007	008	030	041	029
	025	004	015	038	040
Gibralter	002	005	003		
Goldstar	005	025	003	011	
Gradiente	009	011			
Grunpy	027	026			
Hallmark	025				
Harley Davidson	026				
Harman/Kardon	010				

... 36 ...

Havard	027						
Hitachi	016	011	018				
Infinity	010						
Inteq	002						
JBL	010						
JCB	050						
JVC	009	046					
KEC	027						
KTV	027	005	006				
Kenwood	005	003					
LG	011						
LXI	007	010	019	020	025		
Logik	001						
Luxman	011						
MGA	017	005	025	003			
MTC	012	005	003	011			
Magnavox	010	005	026				
Majestic	001						
Marantz	010	005					
Mitsushita	042						
Magatron	025	016					
Memorex	019	042	031	017	025		
	011	025					
Midland	007	002	008	006	015		
Minut	004						
Mitsubishi	041	017	025	003			
Motorola	041						
Multitech	027						
NAD	020	025	022				
NEC	005	003	011				
NTC	014						
Nikko	005	025	014				
Onwa	027						
Optimus	019	042	022				
Optonica	041	021					
Orion	028	031	026				
Panasonic	008	042					
Penney	007	020	008	012	005		
	025	004	003	011	006		
	015	040					
Pilco	010	031	005	016	003		
Philips	010						
Pilot	005	003	006				
Pioneer	022						
Portland	003	006	014				
Prism	008						
Proscan	007						
Proton	025	032					
Pulsar	002	003					
Quasar	008	042	021				
RCA	007	008	041	003	013		
	015	037	038	039	040		
Radio Shack	007	019	021	027	005		
	025	003	011	006			
Realistic	019	021	027	005	025		
	003	011	006				
Runco	002	005	033				

SSS	027	003					
Sampo	005	006					
Samsung	012	005	025	003			011
	045						
Samsux	006						
Sansei	030						
Sansui	031						
Sanyo	019						
Scimitsu	003						
Scotch	025						
Scott	028	027	025	003	020		026
Sears	007	010	019	020			025
	026	011	023				
Semivox	027						
Semp	020						
Sharp	041	021	006				
Shogun	003						
Signature	001						
Sony	050						
Soundesign	027	025	026				
Squareview	023						
Starlite	027						
Supreme	050						
Sylvania	010	005					
Symphonic	023						
TMK	025	011	024				
Tandy	041						
Technics	008	042					
Technol Ace	026						
Techwood	008	011					
Teknika	010	027	017	012	006		003
	026	011	001				014
Telefunken	011						
Toshiba	019	020	012				
Totevision	006						
Vector Research	005						
Victor	009						
Vidikron	010						
Vidtech	025	003					
Wards	010	021	005	025	001		004
	003	026	011				
White							
Westinghouse	031	034	035				
Yamaha	005	003					
Zenith	002	031	011			014	

Symphonic	000								
TMK	023								
Tatung	026								
Teac	000	026							
Technics	004	028							
Teknika	004	005	000						
Thomas	000								
Toshiba	010	009							
Totevision	005	023							
Unitech	023								
Vector	010								
Vector Research	006								
Video Concepts	010								
Videosonic	023								
Wards	013	004	027	012	016				
	023	000	008	015	019				
White									
Westinghouse	021	025							
XR-100	004	000	015						
Yamaha	006								
Zenith	007	000	021	003					
America High	004	(TV use 008)							
Brocksonic	001								
Colt	015	(TV use 008)							
Curtis Mathes	004								
Daewoo	025								
Emerson	001								
Funai	000								
GE	004	(TV use 008)							
	013	(TV use 007)							
	027	(TV use 041)		023					
Hitachi	004	(TV use 008)		000					
HQ	000								
Lloyds	000								
MGA	023								
Megavox	016	(TV use 010)							
	004	(TV use 008)		000					
Magnin	023								
Memorex	005	028	(TV use 042)						
Mitsubishi	027	(TV use 041)							
Orion	001								
Panasonic	004	(TV use 008)							
	028	(TV use 042)							
Penney	004	(TV use 008)		023					
	028	(TV use 042)							
Quasar	004	(TV use 008)							
	028	(TV use 042)							
RCA	013	(TV use 007)							
	004	(TV use 008)							
	027	(TV use 041)							
Sansui	000								
Sanyo	023								
Sear	000	005							
Sharp	027	(TV use 041)							
Sony	002	(TV use 050)							
Symphonic	000								
Zenith	000								

Apex	015				
China DVD	018				
Harman/Kardon	009				
JVC	008				
Kenwood	005				
Mitsubishi	001				
Panasonic	013				
Philips	006	006			
Pioneer	003	014			
Proscan	002				
RCA	002				
Samsung	017				
Sherwood	000	012	011		016
Sony	004				
Technics	013				
Theta Digital	014				
Yamaha	013	007			
Zenith	010				