WARRANTY

Satpros warrantees all of its products to be free from defects in the workmanship or materials for a period of TWELVE Months, from the date of purchase by the consumer. If, at any time during the warranty period, the product has a defect in workmanship or material, Satpros shall repair or replace it within a reasonable period of time.

Satpros's liability under this warranty is limited to servicing or adjusting equipment returned to Satpros, authorized service centers with prepaid freight.

This warranty does not cover defects or malfunctions caused as a result of software transfers, misuse, abusive operation, tampering, negligence, improper use, insufficient care or any act beyond the control of Satpros.

The opinion of Satpros with respect to this matter shall be final.

DSR-500

DIGITAL SATELLITE RECEIVER

USER'S MANUAL

Satpros

136W Olive Ave, Monrovia, CA 91016
Tel: 626-599-2222, Fax: 626-303-8771

CONTENTS

NOTE ;

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

Change or modification not expressly approved by the party responsible for Compliance could void the user's authority to operate the equipment

1. Introduction

1-1 Overview

This Receiver is your "Window to the World" giving you the opportunity to enjoy both Free-To-Air and encrypted programs. Enjoy the rich choice of more than 4,000 different channels, broadcasting a large range of culture, sports, cinema, news, events, etc and the advanced functions of channel editing as your pleasure.
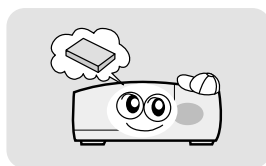
1-2 Main Features

- Xcrypt CAS Embedded
- Closed-Caption Support
- S/PDIF (Digital AC-3 Audio) Output
- Universal Remote Control – Infrared (IR) 4 component
- Fully compliant with MPEG-2 and DVB standards
- User friendly operating Menu and On-Screen Graphic Menu
- 4000 channels, 40 satellite programmable
- Multi Languages (Menu) : English, French, German, etc
- Easy to use EPG(Electronic Program Guide) on screen
- Extended EPG and Program reservation through EPG
- Name Changeable 5 Favorite groups
- Fast Channel Change
- Each Channel Volume Saving Function
- 4 Color buttons for rapid selection and convenience
- Age protection lock function
- Tele-text encoding
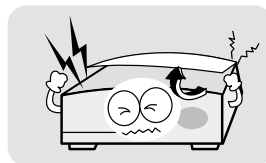- Manual PID control
- DiSEqC 1.0 &1.2 compatible
- Zoom Function

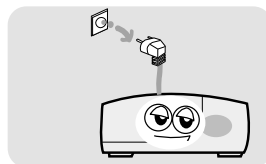# 2. Safety & Precaution

2-1   Safety

Be sure read the user's manual before starting the operation of the unit.
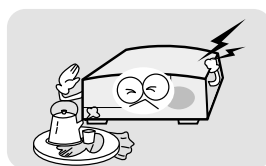
Do not touch the cord with wet hands as it may cause electric shock.   The STB shall not be exposed to dripping or splashing and that no objects filled with liquids, such as base, shall be placed on the apparatus.

Never open the cover. It is very dangerous to touch the inside of the unit due to possible electric shock.

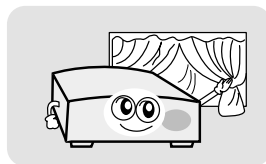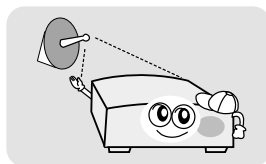Place the unit a well ventilated and no-heat enviroment.

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.

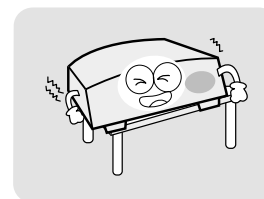A professional installation is required.
If reception is interrupted, contact your local service centre.

2-2   Precaution

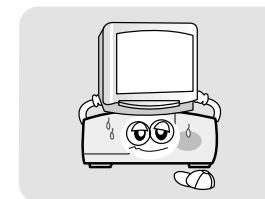**When installing the unit** ···

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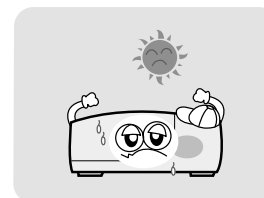
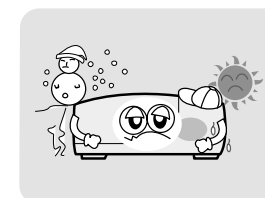Do not put heavy items such as a TV on the unit. That may cause the unit to be damaged.

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.

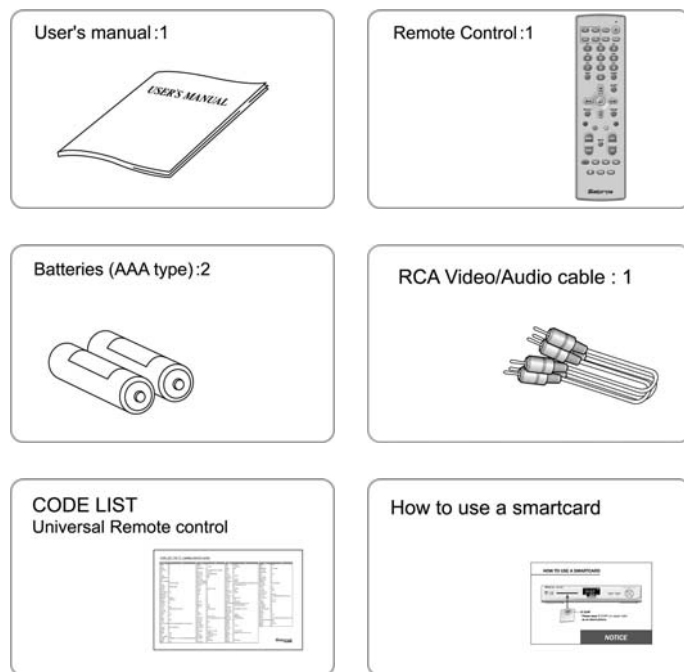Moving the unit to a hot area from a cold one will cause condensation.
Do not operate the unit for one or two hours or until it has dried completely.

3. Check Points before Use

3-1. Accessories

Accessories of this are as below ···

User's manual : 1

USER'S MANUAL

Remote Control : 1

Batteries (AAA type) : 2

RCA Video/Audio cable : 1

CODE LIST
Universal Remote control

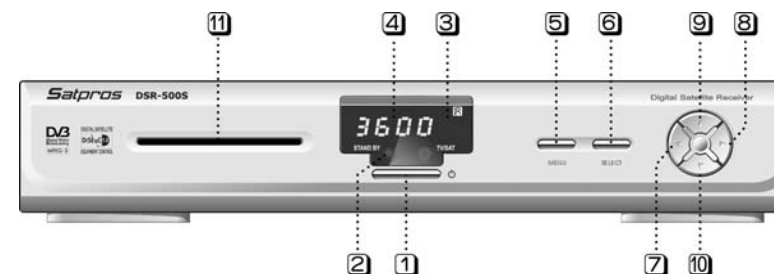How to use a smartcard

NOTICE

3-2   The Satellite Dish

Your dish should be properly installed.
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.

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4. Controls / Functions

4-1   Front Panel

① **Power**
   To switch the receiver in "standby" mode or in power on mode.

② **Standby/Power On Indication LED**
   Turns on Red LED while in the "standby" mode and turns off the Red
   while in the 'Power On' mode.

③ **Remote Sensor**
   Receives the infrared signal from the remote control unit.

④ **Channel Display (4Digit)**
   - On 'Standby' mode, displays current time.
   - On 'Operation' mode , displays the channel number.
    (after scanning & setting channels)

⑤ **Menu**   To launch or terminate the menu application.

⑥ **Select**
   To activate a highlighted item or go to the next level on hypertext menu
   or confirm the user's action.

⑦~⑧ **Vol.** (◄/►)
   To adjust the volume level or change the value of an item according to
   the preprogrammed values. The key **Vol.** ◄VOL can be used as a
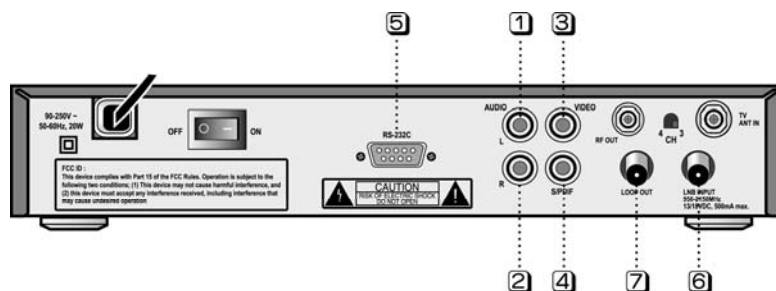   backspace to cancel the numerical input.

⑨~⑩ **CH.** (▲/▼)
   To change channel or cursor position on the application screen.

⑪ **Smart Card Slot**
   Smart Card : provided by a broadcaster for watching scrambled programs.

4-2 Rear Panel

NO	Name	Connector	Function
1	AUDIO L	RCA cinch	Left audio output.
2	AUDIO R	RCA cinch	Right audio output.
3	VIDEO	RCA cinch	Composite video output.
4	S/PDIF	RCA cinch	Digital audio output
5	RS-232C	DB-9	serial port.
6	LNB INPUT	IEC 169-24 female	IF input from LNB to digital tuner.
7	LOOP OUT	IEC 169-24 female	IF loop-through output from Digital tuner.

4-3 Remote Control
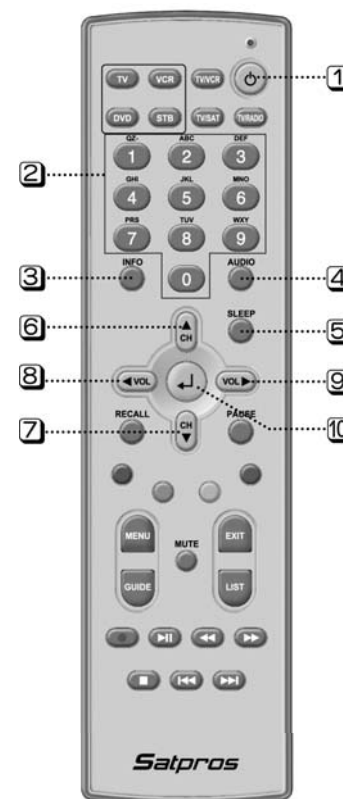
1 POWER
To switch between 'standby' and 'power on' mode.

2 Numeric Buttons(0-9)
To select channels and enter the channel information and PIN code.

3 INFO
To display the current channel information in the OSG mode.

4 AUDIO
To change the audio track, stereo-mono mode.

5 SLEEP
To select a preset time interval for Automatic switch off.

6~7 CH. ▲ & CH. ▼
To change program in the display mode.
To move the location of cursor up and down in menu.

8~9 VOL. ◀VOL & VOL. VOL▶
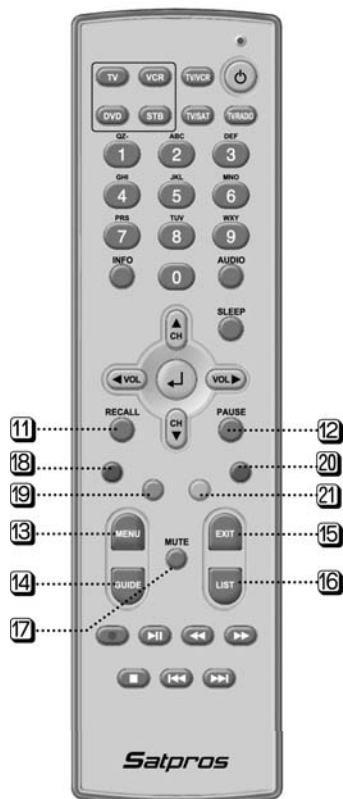To increase or decrease the volume level.
To move the cursor right and left in the menu.
To change the value of the selected item in the menu.

10 Enter
To select an item or confirm in the menu.
To watch the channel list in the live mode.

⑪ **RECALL**

To go back to previous channel.

⑫ **PAUSE**

Still (Pause) function in display Mode.

⑬ **MENU :** To enter the main menu.

⑭ **GUIDE**

(EPG:Electronic Program Guide)

To watch program guidance.

⑮ **EXIT**

To return to previous status or exit from the main menu.

⑯ **LIST**

This function is not available for this model.

⑰ **MUTE**

To turn the sound on/off.

⑱ **RED**

To enter the satellite scan menu.

To reserve timer in the EPG Menu.

To enter the satellite scan menu in istall mode.

⑲ **GREEN**

To sort channel in the Channel List menu.

To show current/next program information in the EPG menu.

⑳ **BLUE**

To see variant channel lists for user's convenience in the Channel List menu.

To show extended program information in the EPG menu.

㉑ **YELLOW**

To enter the zoom function in the live mode.

To edit channel in the Channel List menu.

To show program schedule information in the EPG menu.

4-4   Universal Function

1.   The First Set-up
- DEVICE DEFAULT : TV

2.   DEVICE KEY
Device Key (TV, VCR, DVD, STB) has Device Select Function.

3.   TO SET-UP

1) The way that used Three Digit Code

① Presses [DEVICE + ENTER]Key at the same time for two seconds.
→ LED ON (SET-UP MODE)
- Setting MODE is released while becoming LED OFF if there is not other input in setting MODE for 20 seconds.
- Setting MODE is released while becoming LED OFF if presses [ENTER]KEY.

② Inputs Three DIGIT CODE one after another. (One time of LED twinkles whenever presses NUMBER KEY.)
- If Three DIGIT CODE input is finished, it waits with LED ON state after output with POWER CODE corresponding to the Three DIGIT CODE setting number.
- Presses POWER KEY of a remote controller and confirms operation of SET. (It inputs the following number if SET does not operate.)
- LED waits with ON state after 1.5seconds OFF if it input the setting number that is not effective.
- LED waits with ON state without any change when it inputs BOTTON except DEVICE, ENTER, NUMBER,(0~9), CH+/- KEY.

③ Press [ENTER]KEY --- Setting completion. (It blows out after two times of DEVICE LED twinkled.)

2) To way that used AUTO SEARCH(UP/DOWN)
  ① Presses [DEVICE + ENTER]Key at the same time for two seconds.
    → DEVICE LED ON (SET-UP MODE)
    - Setting MODE is released while becoming LED OFF if there is not other input in setting MODE for 20 seconds
    - Setting MODE is released while becoming LED OFF if presses [ENTER]KEY.
  ② Presses [UP] or [DOWN] KEY --- Setting completion. (It blows out after two times of DEVICE LED twinkled.)
    - Waits with LED ON state if it presses [CH+] or [CH-]KEY after currently POWER CODE of the setting number and the subsequent setting number is displayed.
    - LED waits with ON state without any change when it inputs BOTTON except DEVICE, ENTER, NUMBER,(0~9), CH+/- KEY.
  ③ Press [ENTER]KEY --- Setting completion. (It blows out after two times of DEVICE LED twinkled.)

4. **Setting number confirmation (Number call)**
  ① Presses [DEVICE + ENTER]Key at the same time.
    → DEVICE LED ON (SET-UP MODE)
    - Setting MODE is released while becoming LED OFF if there is not other input in setting MODE for 20 seconds.
    - Setting MODE is released while becoming LED OFF if presses [ENTER] or [EXIT]KEY.
  ② Presses [INFO]KEY --- The number to have been set up twinkles with expressed in 100, 10, 1 order. (Ten times of 0 twinkles.)
    - Since a setting number indication, setting MODE is released automatically.
      ex) If Number of 023 are set up, ten times of DEVICE twinkles in two times, three times and blow out.

5. Getting Started

When you plug in AC power, RED & GREEN LED flick for a while, then RED LED (Stand-by) will be lighting on the front.

Initial Language Selection
① When you press POWER on the RCU, Language selection menu will be displayed automatically as follows, if you turn on the Receiver for the first time or after executing factory default,

Screen

② Select your preferred Language with ⊞ or ⊞ and Press ↵.

5-1. Basic Functions

1) **Help Message**
   If you want to know how to use current part in the menu, use 'help' function by pressing **INFO** button. *on OSG mode (Main menu, CH.List, EPG).*

2) **Channel Selection**
   You can change the current channel to any other channel you want.
   ● If you do not know the channel name or you want to select a channel randomly, you can navigate between channels with ⊞ or ⊞ until you find the channel you want.
   ● If you know the channel number, enter the number directly.
   ● If you know the channel name, press **LIST** button and select the channel you want with ⊞ or ⊞ and press ↵.

Screen

3) Volume Control / Mute
While you are watching a program, press ◄VOL or VOL► to control volume of the current channel on Full-Screen Mode.
► When necessary, press **MUTE** button to remove the sound temporarily.

4) Subtitle/Audio
You can adjust the subtitle and audio condition/status of the current channel.
① Press **AUDIO** button, then Audio window will pop-up.
② Select the Item you want to adjust with ▲CH or CH▼ and change the parameters with ◄VOL or VOL►.
※ *Note : These subtitle and audio parameters are work only when the receiving channel supports these functions.*

Subtitle	Select **Yes** to activate the function, or **No** not to do
Subtitle Track	(Subtitle language #) of (all subtitle language available in this program
Audio Track	(Audio track #) of (all tracks available in this program) [spoken language in this program]
Audio Mode	Stereo → Mono-Left → Mono-Right
Compressed or Non-compressed (Dig. Output)	

5) Previous Channel.
If you want to watch previous channel, press **RECALL** button.

6) Still(Pause) picture
If you want to pause picture while you watching TV, press **PAUSE** button

7) Cursor movement
In most case of OSG menu, the arrow buttons(◄VOL / VOL►, ▲CH / CH▼) are used to move the cursor. For faster movement in **the Ch-List mode,** you can use ◄VOL or VOL►. The cursor will move to every 8th channel.

5-2. System Parameters Set-up
Press **MENU** button and select **System → Parameters** and press ↵.

Screen

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

1) **Language :** Select your preferred Language with ◄VOL or VOL►.
2) **Banner Timeout :** from 1~5 second
3) **OSG Color :** 4 colors choice (Blue, Violet, Gray, Green)
4) **OSG Trans :** from 1~50% OSG transparency
5) **TV Type** : Multi, PAL, NTSC
   ※ *Note : If the satellite signal and your TV type are mismatched, the TV picture may be distorted. Even in this case, MENU will be displayed as normal.*
6) **Screen**

P/S	When you set screen display boundary from Pan/Scan data of Satellite input signal.(For signal for 16×9 program)
L.Box	You can watch 16×9 ratio screen by reducing original size vertically and horizontally.

7) DL Saving(Summer Time)

Yes	Set for daylight saving function activated The current time automatically moves one hour ahead
No	Set for daylight saving function deactivated

※ *Note : Without current local time setting, this menu cannot be processed.*

6. Installation – Automatic Channel Search

Now, Let's start channel search and store the searched channels in the Receiver.   Since the receiver has the basic data of most satellites and channels, you can receive programs just by plugging in. But, according to the status of your antenna setup, you may have to modify the basic data of preprogramed satellites and /or channels.

6-1. Satellite Collection

As the first step, you have to select your preferred Satellites among pre-programmed Satellite list.

① Press **MENU** button and Select **Install**→**Satellite Collection** and press (↵).
② Enter 4-digit password. (*The default password is '0000')*
③ Locate the cursor to the satellite you want to add with (CH▲) or (CH▼) and press (◄VOL) or (VOL►) for selection, and then press(↵) after confirmation message.

screen

※ *Note : To delete any satellite you added, press (◄VOL) or (VOL►).again.*

> *i* When necessary, you can change a satellite name as you wish. press (↵) then the cursor will move to the selected satellite in the right section. You can enter alphabetic characters with numeric buttons of your RCU.

6-2. LNB Configuration

You can set LNB by pressing **Green** button directly or selecting **LNB Configuration** in the main menu.

① Press **Green** button at the **Satellite Collection** mode to enter the **LNB Configuration** mode.
② Select Satellite that need to be changed or reset its values and press (↵), the cursor will move to right section.
③ Select item to be edited with (CH▲) or (CH▼) and change its parameters.
  - LNB Type : Select the proper LNB type of the Satellite with (◄VOL) or (VOL►).
  - High L.O. / Low L.O. : Enter LNB oscillator frequency with numeric buttons.
  - Power : Set LNB power ON or OFF with (◄VOL) or (VOL►).
  - 0/22KHz : Set the path of 0/22KHz switch box with (◄VOL) or (VOL►).
  - Angle : Enter satellite angle with numeric keys.
  - DiSEqC : Press (↵) and Set the path of DiSEqC box with (◄VOL) or (VOL►) and Press **Exit** button.

| Committed	In case of using 2 or 4 LNB input DiSEqC box
Uncommitted	In case of using 16 LNB input DiSEqC box
Repeat	If your DiSEqC box doesn't work properly, increase Repeat value and try again

Tuner	Lock
FEC	1/2,2/3,3/4,5/6 or 7/8
Level	over 30%
Qual.	over 10%

6-3. Mortor Setup (DiSEqC 1.2)

If you are using DiSEqC1.2 positioner motor, You need to position your antenna correctly for reception of the best signal.

① Connect your DiSEqC motor and the Receiver with proper cable.

② Press **Green** button on the **LNB configuration** mode.

③ Select a satellite you want with 🔼 or 🔽.

④ Press ↵ to move to TP section and select any TP you want with ◄VOL or VOL►.

⑤ DiSEqC 1.2 Positioner Setting.

- Motor/Goto 0

Determine the kind of Motor & whether or not controlling it by using ◄VOL or VOL►.

On	Using DiSEqC Motor.
Off	Not using DiSEqC Motor.
STAB	Using the specific Motor supplied by Stab company.

If you press ↵, DiSEqc Motor will move toward Zero Equator.

- Move / Save : Select West/East direction with ◄VOL or VOL►.

- Set Limit : of your antenna movement to east/west direction and press ↵.
to protect your antenna from any possible collision between your antenna and certain obstacles nearby it.

- My longitude / My latitude

You can use this item when STAB is set on 'Motor/Goto 0'. Determine your longitude & latitude at present. 'East/West' is changed by using ◄VOL or VOL►.

6-4. Satellite Scan

After finishing **Motor Setup** or **LNB configuration**, you can do channel search.

① Press **Yellow** button, or Select **Scan** with 🔼 or 🔽 and press ↵.

② Pressing **RED** button**. Then **Satellite Scan** mode will be pop-up.
Screen

③ Select **Free only** or **Free+Scrambled** in the **Option** with ◄VOL or VOL►.

④ Select NIT YES or NO.

When NIT YES, the RECEIVER will scan all Transponders in NIT information which the Selected Satellite has.

⑤ Move the cursor to **satellite** with 🔽 and select the satellite you want to scan with ◄VOL or VOL►.

⑥ Press ↵, and then the channels of selected satellite(s) will be scanned.

⑦ After the scanning process, the first channel of the last scanned TP will be displayed on the back screen.

⑧ Press ↵ to finish the process and select a channel.

Press ↵ to watch a program, or press **MENU** or **EXIT** button.

※ *Note : Now, you have completed all steps needed for watching programs. If you could not see the program after finishing these procedures, please contact your engineer or representative.*

7. Channel Edit

After satellite scan, you may need to edit the TV or Radio channels as your pleasure. In this mode of **TV Ch.List**, by pressing **LIST** button simply, you can find channels you want to watch and you can edit searched channels at your disposal. This mode consist of **Channel-Sorting**, **Channel-Editing, Favorite Mode.**

7-1. Sorting Channels

Press **Green** button. You can sort the Free only or Free+Scrambled channels by satellite or Alphabet.
- Satellite order : Satellite 1, Satellite 2,……, All satellite
- Alphabet : A~Z, all

1) Satellite

① Press **GREEN** button and Select **Free only** or **Free+Scrambled** in the **Option** with ◄VOL or VOL►.

② Press 🔽 to move to **Satellite** column.

③ Press ↵, then you can see the sorted channel list according to Satellite selection and option.

2) Alphabet

By using this function, you can sort the channel list according to the Alphabetical order.

For example, if you want to see the Free+Scrambled channel list which starts its channel name with **'D'**.

① Press **GREEN** button and select **Free+Scrambled** in **Option**.

② Select D in the **Alphabet** with ◀VOL or VOL▶.

Screen

③ Press ↵.

④ You can see the channel list that has initial **'D'**.

> ※ *Note : Alphabet mode consists of ;*
> - *A - Z : Array scanned all channel list in an alphabetical order(A~Z).*
> - *A ~ Z : Sort channels which start its channel name with "A".*
> - *0 ~ 9 : Sort channels which start its channel name with Arabic numbers.*
> - *ETC : Sort channels which start its channel name with other language.*

7-2. Editing Channels

Press **Yellow** button to edit scanned channels as your pleasure.
Using this function, you can execute belows,
- Favorite : Sets your 5 favorite groups (Favorite 1~5)
- LOCK : Locks the channels
- MOVE : Moves specific channel to desired position.
- DEL. : Deletes channels
- ADD : Add/Modify channels.
- RENAME : Modify channel name

1) Favorite Channel

You can make 5 favorite channel groups and possible to change each favorite group name as your convenience.

① Press **Yellow** button.

② Select **Favorite** and select **Favorite 1** with ◀VOL or VOL▶ and Press ↵.

③ Select **a special** channel with ▲CH or CH▼ and Press ↵ to save in Favorite Group 1.

Screen

> ℹ️ In the mode of selecting Favorite channels, "🖢" mark with favorite number inside is marking on the right side of selected channel name and "●" is flickering on the upper place showing Favorite mode is on now.

2) Lock Channels

This function enables you to prevent children from viewing programs unsuitable for their age.
If locked, password requiring message will pop-up for the channel.

① Press **Yellow** button and Select **LOCK** with ▲CH or CH▼ and then press ↵.

② Select any channel you want to lock, for example **7 DW-tv**, and press ↵.
"●" is flickering on the upper place showing Lock mode is on now.
If selected, "🔒" will be marked on the right side of it channel name.

③ If you want to cancel, select the locked channel and press ↵ again.

Screen

3) Move Channels

You can organize the number or sequence of any or all channels.

① Press **Yellow** button**.**

② Select **MOVE** with [CH▲] or [CH▼] and press [↵].

③ "⟳" is flickering on the upper place showing Move mode is on now.
Select any channel you want to move, and press [↵].

④ Move the selected channel with [CH▲] or [CH▼] to the position you want
and press [↵].

4) Delete Channel

You can delete channels from the channel list.

① Press **Yellow** button.

② Select **DEL.** with [CH▲] or [CH▼] and press [↵].

③ Select the channel you want to delete with [CH▲] or [CH▼] and Press [↵].

④ If you definitely want to delete, press [↵]. If not, press **EXIT**.

5) Add Channel (PID Scan)

Using this function, you can add new channel by inputting its proper PID value.

① Press **Yellow** button.

② Select **ADD** with [CH▲] or [CH▼] and press [↵].

③ Select a satellite in which you want to add a new channel with [◄VOL] or [VOL►].

④ **TP Frequency** : inputting frequency with numeric buttons by pressing [↵].

⑤ **Polarization :** select Horizontal or Vertical with [◄VOL] or [VOL►].

⑥ **Symbol Rate**

⑦ **CH.Name :** if you want to enter **SAT-1**
⑦⑦⑦⑦ [VOL►] ②② [VOL►] ⑧⑧ [VOL►] ①①①① [VOL►] ①
※ *Note : Press ⓪⓪ to delete a character.*

⑧ Move to **VIDEO PID** with [CH▼] and enter the proper value

⑨ Move to **AUDIO PID** with [CH▼] and enter the value

⑩ Move to **PCR PID** with [CH▼] and enter the value between 0000~8192
※ *Note : The above mentioned Information, please get professional*

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advice where available. You cannot setup VIDEO PID for RADIO channels.

⑪ After all set-up, press EXIT button for saving data.
You can see the added channel in the last line of TV Ch.List.

6) Rename Channel

① Press **Yellow** button in the channel list mode.

② Select **RENAME** with [CH▲] or [CH▼] and press [↵].

③ Select the channel you want to rename with [CH▲] or [CH▼] and Press [↵].

④ Enter the alphabetic characters with numeric buttons.

⑤ Press EXIT button for saving data.

7-3. Favorite Mode

In this mode, you can display variant channels that may enable you to edit and select channels more conveniently.

1) All Channels

If you want to display all scanned channel list of satellites, select **All Channels** and press [↵].
※ *Note : The satellite should be selected first at the Sorting mode.*

2) Favorite 1~5

After making favorite channel groups(Please refer to page 22)
you can display each favorite group by selecting at this **Display Mode.**
To see favorite channels, select the favorite group you want with [CH▲] or [CH▼]
and press [↵].

Screen

8. System

In this menu, you can set various parameters and control general function of the receiver.

- Parameters : To set the general system parameters of the receiver.
- Factory Set : To reset the receiver as factory default status.
- Local Time/Timer : Set the local time and 14 Timers.
- Parental Control : To various lock functions and change password.

8-1. Parameters

This mode is to set your system in the best condition. Please refer to page 17

8-2. Factory Set

This is to return all the stored parameters and information installed by yourself to the manufactured default status. Since all the stored and installed data will be deleted, you must be careful in using this function.

① Press **MENU** button

② Select **System → Factory Set** with $\boxed{\text{CH}\blacktriangle}$ or $\boxed{\text{CH}\blacktriangledown}$ and press $\boxed{\hookleftarrow}$.

③ If you want Factory default, Press $\boxed{\hookleftarrow}$.

④ You will see the confirmation message pop-up. Press $\boxed{\hookleftarrow}$ again if you really want factory set. Press **EXIT** to cancel.

> 🛈 In this menu, you can also check the basic information of the receiver, which will be useful when you need to upgrade the receiver

8-3. Local Time/Timer (Automatic power On/Off)

You can enter the current date and your local time into your receiver to allow you to set the Timer for watching or VCR recording or SLEEP TIMER, etc.

1) Local Time Setting

① Press **MENU** button.

② Select **System → Local Time/Timer**. and Press $\boxed{\hookleftarrow}$.

 ※ *Note : Without prior Local time setting, the 'TIMER' function does not work.*

③ Set the current date and your local time in sequence.

 ※ *For example :*1st December in the year of 2001, 1:56 PM
   Enter ⓪①①②②⓪⓪①①③⑤⑥ using your RCU.

④ Press $\boxed{\hookleftarrow}$ to confirm and set Timers.

2) Timer Setting

In this mode, you can do pre-set 14 different Timers simultaneously.

- CH. Type : TV or Radio
- CH. Number : Channel number
- CH. Name : Channel name
- Start Time : Turn on time when standby mode, or channel changing time during watching other channel.
- Stop Time : Turn off time.
- Status : Inactive mode (No)/ Active mode(Once, Daily, Weekly)

① Press $\boxed{\text{CH}\blacktriangledown}$ to select **Timer #(number)** and press $\boxed{\hookleftarrow}$.

② Determine **CH. Type** by selecting **TV** or **RADIO** with $\boxed{\blacktriangleleft\text{VOL}}$ or $\boxed{\text{VOL}\blacktriangleright}$.

③ Move to **CH. Number** with $\boxed{\text{CH}\blacktriangledown}$ and enter channel number.

④ Move to **Start Time** with $\boxed{\text{CH}\blacktriangledown}$ and enter the time to power-on or switch on with Numeric buttons.

⑤ Move to **Stop Time** with $\boxed{\text{CH}\blacktriangledown}$ and enter the time with numeric buttons.

⑥ Move to **Status** with $\boxed{\text{CH}\blacktriangledown}$ and set **No,Once,Daily** or **Weekly** with $\boxed{\blacktriangleleft\text{VOL}}or\boxed{\text{VOL}\blacktriangleright}$.

 ※ *Note : 1. Without Status being activated, Timer does not work.*
   2. If prior time is entered than current, Timer does not work.
   3. You can pre-set 14 Timers simultaneously. Regardless of number of Timer, Timer will work in sequence of time sequence.
   4. While Timer is working, The RCU will not operate except power button. If you want to operate RCU, simply press POWER just one time, then the RCU will be activated.

8-4. Parental Control

There are various locking mode in this Receiver. You can lock the receiver itself or some specific parts in order to protect your preference.
You can also change the password in this menu.

1)　Age Limit

This sub-menu allows you to set the age limitation for parental locking and protect children from viewing programs unsuitable for their age.

● Select **System → Parental control** with ⌃ or ⌄ in the main menu and press ↵.

● Select **Age Limit** and Press ◀VOL or VOL▶ to select age restriction.

※ *Note : Age limit can be applicable only for the signal which carries age limit information.*

2)　Lock Receiver

Select **Lock Receiver** with ⌃ or ⌄ and select **YES** or **No.**

If **Yes**, you may have to enter password when you power on the receiver.

3)　Lock Favorite Group

You can lock a certain Favorite group you edited in order not to access.

Select **Lock Favorite Group** with ⌃ or ⌄ and select a certain favorite group you want to lock, and press ↵.

4)　Lock Channel Editing : You can lock the channel editing menu.

Select **Lock Channel Editing** with ⌃ or ⌄ and select **YES** or **No.**

If **Yes**, it will be impossible to use channel editing menu without password

5)　Lock Installation : You can lock the installation menu.

Select **Lock Installation** with ⌃ or ⌄ and select **YES** or **No.**

If **Yes**, it will be impossible to use **install** menu without password.

6)　New Password : You can change 4-digit password

7)　Verify Password

9. Transponder

In this menu, you can Edit(add or modify) and delete certain transponders.

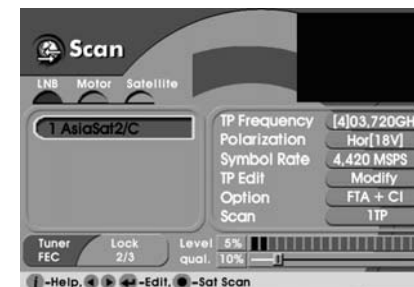After add or modify TP, you can also scan channels of the edited TP.

9-1. TP Add/Modify

① After executing **LNB Configuration** or **Motor Setup** procedure in the **Install** mode, press **Yellow** button to enter **Scan** mode.

Screen

② Select any Satellite first you want to edit its TP and press ↵, Then the cursor will move to right section.

③ Select **TP Frequency** and select the **TP** value you want to edit with ◀VOL or VOL▶.

● If you want to add a new TP, enter the TP frequency with numeric buttons after pressing ↵.

● If you want to modify a specific TP, move to the TP with ◀VOL or VOL▶ and enter new frequency with numeric buttons.

④ Move to **Polarization** with ⌄ and the set the proper value.

⑤ Move to **Symbol Rate** with ⌄ and enter the proper symbol rate value.

⑥ Move to **TP Edit** with ⌄ and select **Add** if you want to add, or select **Modify** if you want to modify with ◀VOL or VOL▶.

⑦ If you want to scan channels of the edited TP, Refer to 9.3 Manual TP Scan.

9-2. TP Delete

① Do the same procedure as above ①→②.

② Move to **TP Edit** with ⊟, and select **Delete** with ◁VOL or VOL▷ and Press ↵.

9-3. Manual TP Scan
You can Scan only 1 TP of a certain satellite.
① After proceeding above TP Edit, move to **Option** and select **FTA** only or **FTA+CI**
② Move to **Scan** with ⊟ and press ↵. As a result, you can get the following message. If you want to stop scanning, press **EXIT Screen**

③ After scanning process, the first channel of scanned **TP** will be displayed.
  ※ *Note : You can also do manual TP Scan without TP edit. Select any TP of any satellite you want to scan and follow above process.*

10. EPG (Electronic Program Guide)
You can check the channel and Program information on the channels.
This Receiver supports current/Next and program schedule information of a certain channel and extended information of programs.

10-1. Current / Next Information
① Press **GUIDE** button, then **Program Guide** menu will be displayed.
  ※ *Note : 1. If you didn't set local time under 'System Parameters' section, the GUIDE function may not work properly.*
       2. EPG information is delivered by satellite from service providers. If the channel does not carry any signal on the guide data, this function may not work properly.
② Select **Channel** with ⊟ or ⊟.

Then you can see current or next program information of the selected channel.
③ Press **GREEN** button, then current or next program information will be converted to next or current program information respectively.

10-2. Schedule Information
① Press **YELLOW** button, then you can see program schedule list of the selected channel.
② In the right section, you can also find more detail information of a certain program.

10-3. Extended Information
Press **BLUE** button, If you want to see more extended information of the selected program.

10-4. Program Reservation
Using this function, you can set up automatic power on-off (Timer) of a certain program.

① In the **Schedule** mode by pressing **Yellow** button, select a program you want to reserve with ⊟ or ⊟ and Press **RED** button. Then, **Reservation** window will pop up.
② Select between **No**, **Once, Daily** or **Weekly** in **Status** with ◁VOL or VOL▷.
③ Press ↵ to save the new **Timer** setting.
④ Press **EXIT** button to finish **GUIDE** menu.

> ⓘ If reserved, TV Channel will be automatically turn to the reserved Channel(program) when the set time comes.

11. Other Functions

1) TV / SAT switching

This function is used for receiving a signal through the RF modulator.

① Press **TV/SAT**. The signal reception path will change to RF modulator and **TV/SAT** LED on front panel will be lighted.

② The signal output through the RF modulator will be as follows :

TV/SAT LED	Power ON	Power OFF
ON	TV/ANT IN signal will be out	
OFF	Decoded signal will be out through RF.	TV ANT IN signal will be out.

2) TV / RADIO switching

Press TV/RADIO.

3) Sleep Timer : automatically power-off when the time you set

※ *Note : 1. You can set SLEEP Timer in 30 minute steps up to 150 minutes in Full-Screen Mode with SLEEP butoon.*

4) Channel / Information : Press INFO button

Brief information is displayed, such as current channel type, name, local start/end time, guide information, current time, fav/normal mode, Audio mode and Audio ID.

5) Zoom : Press YELLOW button in the live mode

Screen

To enlarge Specific-Area to 2/9/16 times. Please press YELLOW button in the live mode, then a small Zoom-Square displays in right-bottom side. For Zoom-ratio, please use the color-keys ; White:2, Black:9, Pink:16. For movement of Zoom-Area, pls use direction keys.(⬆CH / ⬇CH , ◀VOL / VOL▶)

13. 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 or S-VHS 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.
	Wrong setting of channel information in MENU screen.	Type the setting value correctly.
Black-and-white screen or V-Hold	Your TV mode is different from satellite broadcasting mode.	Use TV of same mode. Use the NTSC/PAL converter con-nected to the receiver and TV.
The remote controller is not working	Battery exhausted.	Change the batteries.
	An indoor Fluorescent light interferes the operation of a remote controller	Switch off the light.
	It dosen't work in TV,VCR,DVD mode but OK in STB mode.	Change the batteries.
	Remote controller is incorrectly aimed.	Aim the remote controller at the receiver.

14. Specifications

System capabilities	Fully DVB compliant	
LNB/Tuner input	Connector	F-type, female
	Frequency range	950MHz ~2150MHz
	LNB supply	14/18V, max. 500mA
	DiSEqC	Ver 1.2 & Ver 1.0 Compatible
Demodulator	Front end	QPSK
	Symbol rate	2MSps - 45MSps
	FEC Modes Rate	1/2,2/3,3/4,5/6,7/8 and auto
System resource	Processor	32bit processor (80MHz)
	SDRAM	8Mbyte
	FLASH	2Mbyte
	EEPROM	256byte
Video Decoder	MPEG 2	Main Profile @ Main Level
	Data Rate	Max 90M bits/s
	Resolution	720 × 480
	Video format	NTSC
	Aspect Ratio	4:3, 16:9
Teletext	DVB compliant	
MPEG Audio	MPEG 1 layer 1 & 2	
	Type	Mono, Left, Right, Stereo
	Sampling rates	32, 44.1 and 48 KHz
Serial port	Connector	9pin D-sub male, max. 115K bps

Remote control	Code format	NEC-IR
	Control Device	TV, VCR, DVD
Power supply	Power consumption	Max. 20W
	Supply voltage	90V ~250V
	Supply frequency	50Hz ~60Hz
Rear Panel connectors	Video out	1 × RCA cinch (Composite)
	Audio L/R	2 × RCA cinch
	S/P DIF or 0/12V	1 × RCA cinch
	Serial port	9pin D-sub male
	Digital tuner input	F-type, female
	Loop-through Digital tuner	F-type, female
	Terrestrial ant input	F-Type, female
	RF modulator output	F-Type, female
RF modulator	Connector	F-Type, female
	TV Standard	NTSC
	Output channel number	Ch3, Ch4
Physical Specification	Case Size (W × H × D)	260 × 44.5 × 221(mm)
	Weight (Net)	1.9Kg