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User Instructions

I. Safety Precautions

Before using this device, please read the following carefully.

The apparatus shall not be exposed to dripping or splashing.

No objects filled with liquids, such as vases, shall be placed on the apparatus.

Power Requirements: AC 100 - 240V ~, 47/63Hz

Disassemble! Do not attempt to disassemble the product since opening the cabinet may cause a malfunction or electric shock.

Overloading: Do not place anything heavy on the ventilation openings, connection cord and power adapter to prevent electric shocks and fire hazards.

Humidity: Do not install the equipment in an overly humid place.

Liquids: Keep liquids away from the DSR

Small Object: Coin or the small object must be kept away from the DSR as they can fall into the ventilation opening of the DSR and cause serious damage

Ventilation: Do not block the DSR's ventilation openings to protect it from overheating, which may cause malfunction. Install the equipment on a firm and flat surface. Avoid extreme heat and direct sunlight.

Location: Locate the DSR on a firm and flat surface. Avoid extreme heat and direct sunlight
Do not install this equipment in a confined space such as a bookcase or similar unit.

Replacement Parts: Do not use parts and accessories that have not been provided by the manufacturer. Unauthorized substitutes may cause electrical damage to the DSR.



		This Symbol indicates "dangerous voltage" inside the product that present a risk of electric shock or personal injury.
		This symbol indicates important instructions accompanying the product.
		Double Insulator Power ON Power OFF

II. Before Start

1. Preface

A Digital Satellite Receiver (DSR) is a convenient product that allows users to view a variety of programs provided through satellite. This user's manual covers the installation of the DSR and the necessary steps to implement various features. This also explains special features available only in this DSR in detail, which will allow users to make full use of these features. To install the DSR or before using it after installation, be sure to read this user's manual and keep it handy for future reference.

◆ User's Manual Contents

Before start	Please read through these instructions thoroughly.
Installation	Explains the installation of the DSR to VCR and TV.
Getting started	Explains the basic concept of how to use this DSR.
Menu	Description of solutions to common problems.
Trouble shootings	Detailed explanation of the DSR's extensive feature list.
Specifications	

2. Product Characteristics

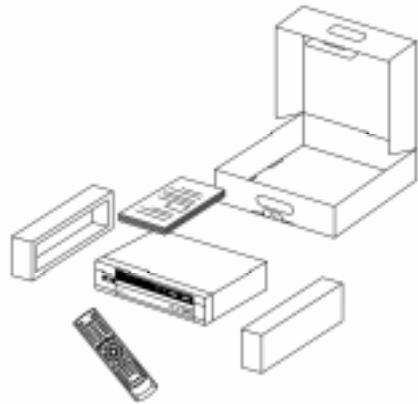
- 4000 Programmable channels can be stored
- DVB, MPEG-2 Compliant
- SCPC/MCPC reception
- DISEqC 1.2 USALS compliant
- PAL/NTSC modulator
- Software can be upgraded by RS-232C
- Data transfer between units
- Parental lock and Receiver lock
- Auto power back on
- Auto voltage (AC 100-240V)

User Instructions

3. Unpacking

After purchasing the DSR, unpack it and check to make sure that all of the following items are included in the packaging.

- 1 x Remote Control Unit (RCU)
- 2 x AAA Batteries
- 1 x RCA Cable
- 1 x User Manual
- 1 x Digital Satellite Receiver



User Instructions

4. Remote Control Unit Key Function Description

To use various features of DSR, use remote control unit for faster and more convenient usage.

- Remote Control Unit
- RCU Key and their Function



Key	Function
①	To turn the DSR into/out of standby mode.
MENU	To run main menu screen or return to previous menu.
EXIT	To exit from the menu screen.
▲ / ▼	To move page up or down in channel list. To move each favorite channel in a certain favorite group.
OK	To execute the selected item in the menu screen. To show the program list menu while watching.
▲CH▼	To change a channel or to move up or down in the menu.
◀VOL▶	To adjust the volume or to move the left or right in the menu.
①~⑨	To enter number of the required menu item or select a channel.
FUNC	To change the name of satellites in the 'Antenna/Satellite' field.
RECALL	To switch back to the previous channel.
TV / AV	To switch between TV or SAT mode.
TV / Radio	To switch between TV/RADIO Mode.
PAUSE	To pause screen when watching.
EPG	To call up the EPG (Electronic Program Guide).
TXT	To switch to the Teletext mode.
INFO	To show information of the current channel.
🔇	To select the different audio modes.
LANG	To switch the Audio and subtitle Languages.
🔇	To turn the sound on/off.
A-Z(Red)	To see the channel list alphabetically while watching program
LIST(Green)	To see the normal channel list while watching program
FAV.(Yellow)	To see the Favorite Group while watching program
SAT(Blue)	To see the current satellite list and channels per each satellite.
▶	To play in your VCR
■	To stop in your VCR
11	To pause in your VCR
▶▶ / ◀◀	To fast forward or rewind in your VCR
●	To record in your VCR

User Instructions

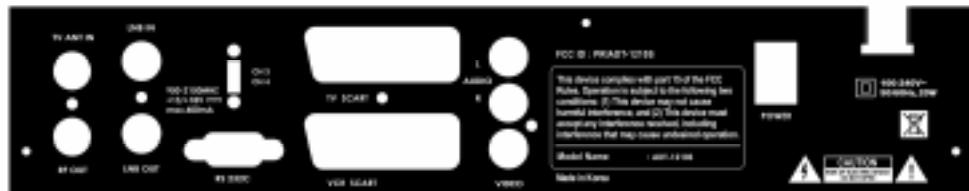
5. Front Panel



Item	Function
⊕/	Switches between operation and standby modes.
CH ▲	Changes to the next channel, or in the menu, moves to the item above.
CH ▼	Changes to the previous channel, or in the menu, moves to the item below.
◀VOL	Decreases volume, or in the menu, moves to the item to the left.
VOL▶	Increases volume, or in the menu, moves to the item to the right.
MENU	Accesses the main menu, or returns to the previous menu.
OK	Executes the selected item in a menu, or displays the program list while watching.

User Instructions

6. Rear Panel



Name	Function
TV ANT IN	Connect the receiver to the TV antenna input and/or CATV cable.
RF OUT	Connect the receiver to a TV or VCR.
AUDIO L	Connect the AUDIO L output jack to the TV AUDIO L input or the AUDIO L input of an audio amplifier.
AUDIO R	Connect the AUDIO R output jack to the TV AUDIO R input or the AUDIO R input of an audio amplifier.
VIDEO	Connect to the external VIDEO input of the TV.
TV SCART	Connect the receiver to a TV using a SCART cable.
VIDEO SCART	Connect the receiver to a VCR using a SCART cable.
RS-232C	Connect to PC or another DSR for software upgrades.
LNB IN	Connect to satellite antenna.
LNB OUT	Connect to other digital or analog satellite units.
CH 3 / CH 4	CH 3 / CH 4 Select
POWER	Power On / Off Select

III. Getting Started

1. No Channel

In case of there is no channel data, user can choose Main Menu, Quick Setup Guide or Antenna/Satellite.



2. Quick Setup Guide

'Quick Setup Guide' is designed for a user to make an easy installation.

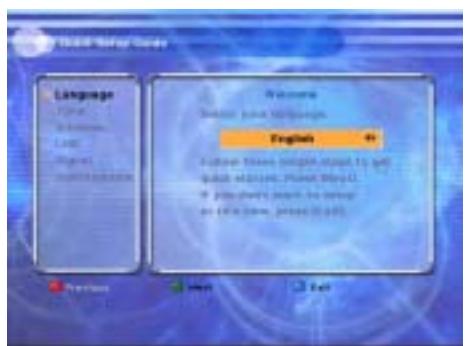
Color Keys on the RCU for the setting.

Red key(A-Z) : Previous

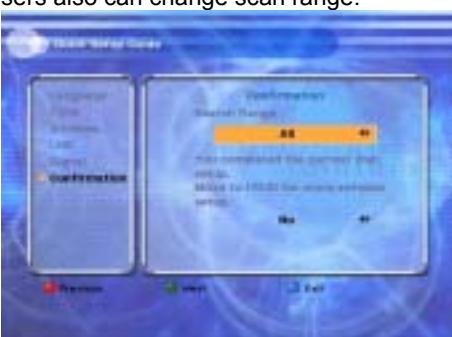
Green key(LIST) : Next

Blue key(SAT) : Exit

<Language>



User Instructions

<p><Time> Users can adjust time.</p> 	<p><Antenna> Users can check and adjust antenna/satellite.</p> 
<p><LNB> Users can check and adjust LNB Frequency. Users also can adjust DiSEqC and 22KHz.</p> 	<p><Signal> Users can check signal strength and quality.</p> 
<p><Confirmation> To save changes, confirm it. Users also can change scan range.</p> 	<p><Channel searching after Confirmation></p> 

User Instructions

3. TV/RADIO Channel

Press the **TV/RADIO** key to select TV or Audio mode.

4. Audio

Press the  key repeatedly to select one of three possible settings (Left, Right and Stereo).

5. How to use “TV/RADIO Channel” List

When watching channels, users can easily select TV/RADIO channels through 'OK' key or 'A-Z' Key, 'List' key, 'FAV' Key, 'SAT' Key. This list shows the TV/RADIO channels.



User Instructions

5. How to use “TV/RADIO Channel” List (Continued)



User Instructions

HOW TO USE “A-Z”, “LIST”, “FAV” AND “SAT” IN CHANNEL LIST WHILE WATCHING.

Press “A-Z”, “LIST”, “FAV” or “SAT” key on the RCU.

Keys for the setting are below.

OK Key: Move to the channel list

A-Z Key: This function sorts each channel by its alphabet order.

- Once this function is selected, there is a list from A to Z. User can select a certain group and move to other group by pressing Left/Right key.

LIST Key: This function sorts channels by groups of FTA, SCRAMBLED and ALL (FTA + SCRAMBLED).

- Once this function is selected, there are groups of channel type. User can select each group then use Left/Right keys to move another group.

FAV Key: This function sorts channels according to user's channel editing in Menu.

- Once this function is selected, there are groups of favorite types the user chose. User can select each group and also move to other groups by using Left/Right keys on the RCU.

SAT Key: This function sorts channels by each satellite.

- Once this function is selected, there are satellites that user has been searching. User can select each satellite group then move to other satellites by using Left/Right keys on the RCU.

6. TELETEXT Function

Press the **TXT** key of the RCU. If the channel has TELETEXT service.

The TELETEXT service will be displayed.

Press **TXT** key one more time, and then the TELETEXT service will be stopped.



User Instructions

When Function Key is pressed
Red Key: Move to the previous page
Green Key: Move to 100 page
Yellow Key: Transparency Function
Blue Key: Screen Zoom Function



7. Previous Channel Recall

If users want to go back to the previous channel, press **RECALL** key during watching.

8. RF Tuning Function

Users can watch Satellite channels and Terrestrial Broadcasting channels using the RF Modulator.

1. Connecting to a TV which has direct RF channel '21' to '69' ('14' to '83'-USA Channel) selection.
 - 1) Connect users' TV RF input to the TV/VCR terminal of the DSR. Connect the terrestrial antenna cable to the ANT terminal of the DSR's RF Modulator.
 - 2) Tune the RF channel of users' TV to channel '40'. (The factory default RF channel is '40').
2. Connecting to a TV which does not support direct RF selection.
 - 1) Follow the steps outlined in "1- 1)."
 - 2) Try to find the channel by using the Channel Search tuning function of the TV.

9. Screen Pause

If users want to have still picture on the screen press **PAUSE** key once during watching.

Press **PAUSE** key one more time to watch the channel again.

User Instructions

10. Channel Info

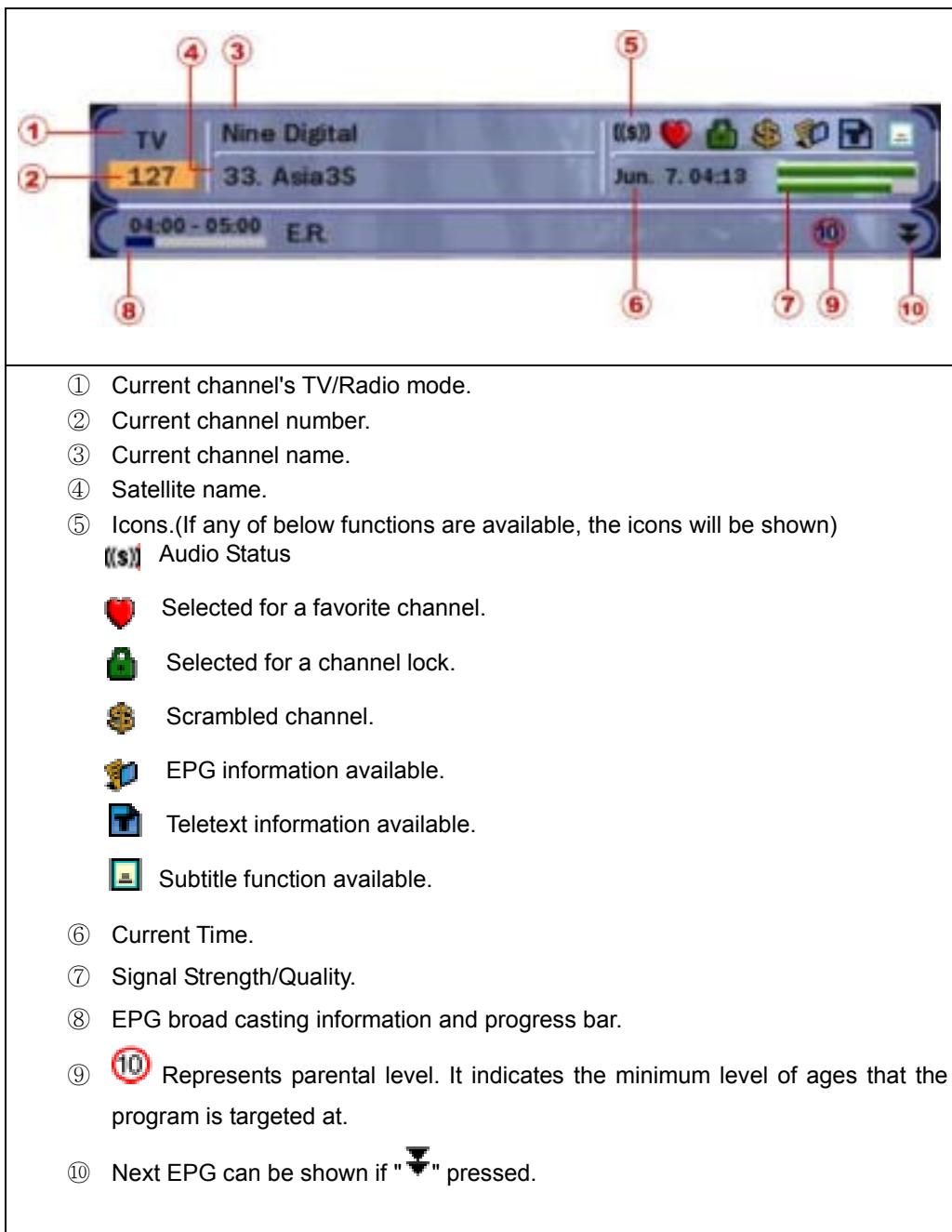
When user press **INFO** key, the information bar shows as follows.

- SAT Name / TP information / Scrambled type

<p>On Channel Info, transparency can be adjusted by pressing "Function" Key on the RCU.</p>	
<p>On Channel Info with EPG information, additional EPG information box comes up by pressing "INFO" key.</p>	

User Instructions

Information Box



User Instructions

11. DiSEqC 1.2 function

Users can use both DiSEqC 1.0 and DiSEqC 1.2 function only if users have DiSEqC 1.2 "Motorized System"



12. LANG

In case that program has multi audio language, audio language can be selected by 'ALT' key. Volume Level can be selected in Low, Normal, and High. Audio Status can be selected in Left, Right, and Stereo.

Keys for the setting

Up/Down Key: Audio Language Select Left/right Key: Volume Level Select

Key: Left, Right and Stereo Select

13. PAL/NTSC

Please set TV type up to your equipment. There are PAL/NTSC/SECAM supported. "AUTO" will allow the box to control TV type automatically.

User Instructions

14. Direct Access to Alphabetical Channel List (A-Z KEY)

When users press **A-Z** key while watching programs, all channel lists can be seen alphabetically.

15. Direct Access to Normal Channel List (LIST KEY)

When users press **LIST** key or **OK** key while watching programs, normal channel list is shown.

16. Direct Access to FAV List (FAV KEY)

When users press **FAV** key while watching programs, the FAV group list and each channel list can be shown.

Users can move the channels only into same FAV group by Up/Down key.

17. Direct Access to Each Satellite (SAT KEY)

When users press **SAT** key while watching programs, the satellite list searched into this receiver is shown and each channel per each satellite can be checked.

Users can move the channels only into same satellite by Up/down key.

User Instructions

IV. Menu

If there are no channels, you can select Main Menu, Quick Setup Guide, Antenna/Satellite in the pop-up window.

1. Main Menu

1. When watching TV, press MENU Key on the RCU. The main menu will appear on the screen.
2. Select on item on the menu and press the OK key or Right key to execute.
3. Press the Exit key to exit from the OSD menu. If users want to return to the previous menu step by step, press the Exit Key.



2. Channels Editing

Channel Manager consists of TV channel and Radio channel. Channel editing function can be performed in the channel Edition. Favorite, Move, Lock, Rename, Delete and Sort are possible.



User Instructions

2. Channels Editing (Continued)

1. Before using channel editing

The TV or Radio channel list is empty before searching channels. Be sure to search channels automatically or manually before users use Channel Editing.

2. Before selection 'lock'

If users want to lock channels, please set Parental Lock "ON" first.

3. How to move channels

If users want to move channels to other position, select the channel and press '3' and move to the desired new position (on new channel number) and press 'OK' key.

4. How to delete many channels at the same time

If users want to delete more one channel at once, select the channels to delete and press '4'. Users can find all the selected channels highlighted and those channels will be deleted simultaneously by pressing 'OK' key.

5. How to rename channels

If users want to rename channels, please select the name of channel users want to change and press '6' to call up the alphabet table.

6. How to sort channel list

If users want to make a sorting for channel list per a certain category, press '5' to see the sorting categories.

If users want to cancel the sorting, please choose 'UNDO' on the sorting category.

Red Key: Use Numeric Keys to move to channels directly.

Green Key: Delete all checked key.

Yellow Key: Erase all checked key.

User Instructions

3. Program Guide

To select the Program Guide and there is Detail EPG.

The DSR receives and stores the current TV and Radio channel information. This channel information includes detailed information on the next scheduled program. The EPG is an easy-to-use function to see this information on screen. EPG information is made up of Channel No, Program Name, Channel Name, Date and Broadcasting Time (start and end time). To see detail EPG, go to detail EPG and press OK key.

Keys for the setting

Red Key: Channel Up key

Green Key: Channel Down key

Yellow Key: Reminder key

Blue Key: Diary key

※ For checking correct EPG time

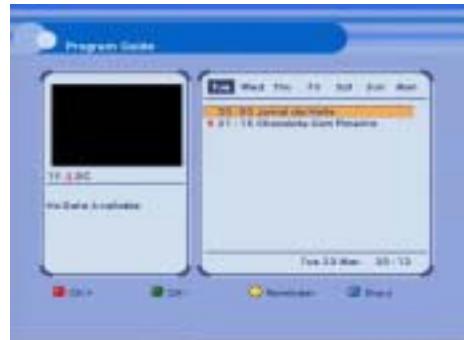
For correct EPG time, please set users' local time with reference to the GMT.

The time of the receiver is derived from the currently selected channel, so it sometimes may not be correct on particular channels.

<Regular Weekly EPG>

User can select channels by using Reminder (Yellow) Key on the RCU.

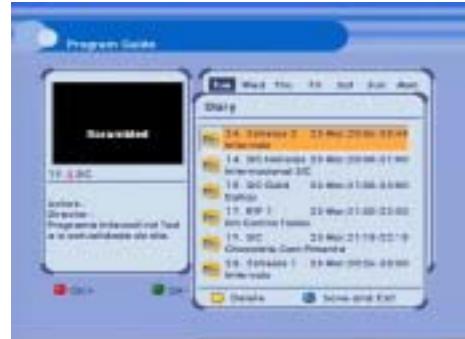
If a channel is selected, there will be red-colored "R" by the channel. Only 20 selections are available.



User Instructions

<Reminder Diary>

There is a list of selected channels after channel was selected by reminder key. Only 20 channels on the list.



4. Installation

4-1. Quick Setup

Please refer to page 8.

4-2. Antenna/Satellite

Users can assign satellites, LNBs and switches to 64 antennas in this "Antenna Setup" menu.

Whenever users enter this menu, password is required. Default Password is '0000'.

If users want to make users own password, please make a password setting of 'Parental Lock' function in user setup menu.



User Instructions

For exact installation

- In the case of using switch, please keep in mind the combination of antenna and each switch ports.
- In the case of selecting 14/18V switch, all of the polarization of transponders in a satellite will be fixed as Vertical (14V) and Horizontal (18V).

Press Left/Right key to move to the other menu.

If OK key is pressed, the focus will be passed to the sub menu automatically.

Press Up/Down or Page Up/Down key to move to other contents.

Color Keys for the setting

Red Key: Manual Search

Green Key: Automatic Search

Yellow Key: save

Blue Key: Exit Only

4-3. Automatic Search

All of the channels can be searched and supposed that the selected satellite is properly assigned to antenna in the "Antenna Setup" menu.

- **Search Range:** There are three options (FTA / Scrambled / FTA + Scrambled).
- **Search Option:** NIT(Network Information Table) On: Receiver searches all existing TPs of each satellite.
- **Multi-SAT Search:** Please set all parameters for each satellite and select every satellite users want to search at one time by 'OK' key.

You can see the selected antenna in the active window. Press Left key to move to active window and if OK is selected it will be out from the selection. To search the antenna in the active window, press red key.

User Instructions



The number of transponders can be bigger than the preprogrammed, because this DSR utilizes the NIT information transmitted by satellite to add up channels automatically without searching.

Keys for the setting

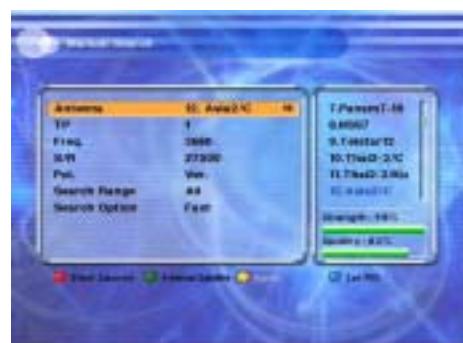
Red Key: Start Search

Green Key: Move to Antenna/Satellite Menu

Blue Key: Exit Only

4-4. Manual Search

If users miss some channels during auto searching, or if these are some new TPs, users can get them using this Manual Searching Function. Users can also put PID value for Manual Search.



Press Left/Right key to move to the other menu.

If OK key is pressed, the focus will be passed to the sub menu automatically.

Press Up/Down or Page Up/Down key to move to other contents.

User Instructions

Keys for the setting

Red Key: Start Search

Yellow Key: Save

Green Key: Move to Antenna/Satellite

Blue Key: Exit Only

4-5. Factory Default

This function will reset all of the parameters to the factory defaulted values.

If users select and press **OK** key on the "Factory Default", the following warning will be displayed:

- All channels will be deleted.
- All TP data will be initialized to the default values.



4-6. Information

S/W, H/W and ROM version information are available.

There is also company information for users.

User Instructions

5. User Setup

Users can adjust languages, TV, STB, time, timer, lock and censorship.

5-1. Language Setup

Select users language on OSD, 1st & 2nd Audio and Subtitling.

The following OSD languages are available.

- English / Arabic / Persian / Russian / French / Turkish / Italian / Spanish / Portuguese / German



Press Left/Right key to move to the other menu.

If OK key is pressed, the focus will be passed to the sub menu automatically.

Press Up/Down or Page Up/Down key to move up or down.

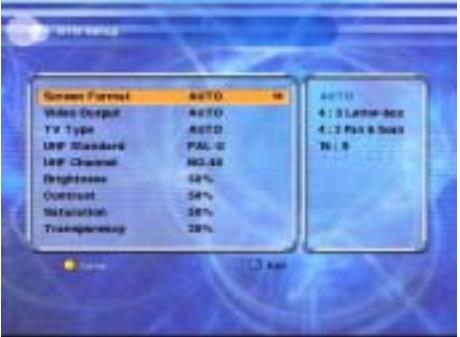
Keys for the setting

Yellow Key: Save

Blue Key: Exit

User Instructions

5-2. STB Setup

<p>This menu allows the users to customize the TV setting.</p> <ul style="list-style-type: none">Screen Format: Screen Ratio can be changed in ratio; 4:3,16:9 Letter Box, 4:3, 16:9 Pan & Scan, Auto.Video Output: There are three types of output, CVBS, RGB and Auto.TV Type: Three TV types are supported "PAL" & "NTSC" & "PAL&NTSC"Brightness, contrast, saturation	
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Press Left/Right key to move to the other menu.

If OK key is pressed, the focus will be passed to the sub menu automatically.

Press Up/Down or Page Up/Down key to move up or down.

Keys for the setting

Yellow Key: Save

Blue Key: Exit

5-3. Time Setup

	
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User Instructions

Select Time Zone, Summer Time On/Off, Category of timer (Daily, Weekly).

- In case of Daily, The timer will work everyday.
- In case of Weekly, The timer will work on a selected day. Press 'OK' Key in 'Day' field to select.

NOTE1 Two VCR timer events can be programmed by following method.



NOTE2 Each timer should be selected only one mode. (Turn ON or Turn OFF)

NOTE3 After local time set up, the receiver should be operated about 1 minute at live time showing channel program.

Keys for the setting

Red Key: Use Numeric Keys to move to channels directly only if the timer was turned on.

Yellow Key: Save Blue Key: Exit

5-4. Lock Functions

<ol style="list-style-type: none">1. If the Channel Lock is on, users must input the password in order to entering the specific channel that is locked.2. Users can set the Installation Lock to prevent anyone entering the installation on the menu.3. If the Receiver Lock is on, users need to input the password whenever the receiver is turned on.4. If users want to restrict someone under certain age watching specific channel, they can set the Parental Lock on that channel. Therefore, the only person who knows the password can watch the locked channel. <p>The Password is made up of 4 digits, which are not shown on the screen. Only asterisks appear as users press keys in the password.</p>	
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User Instructions

※ For reference

Users need to enter the correct password again for every time to enter the locked channel.

Press Left/Right key to move to the other menu.

If OK key is pressed, the focus will be passed to the sub menu automatically.

Press Up/Down or Page Up/Down key to move up and down.

Keys for the setting

Yellow Key: Save

Blue Key: Exit

V. Troubleshooting

If users run into problems with the DSR, please use the following table to troubleshoot the problem before requesting technical support.

Symptom	Check points
No power	Make sure the power cord is connected correctly to the main supply.
Video is on, but no audio	Make sure the A/V cables are connected securely. Make sure Mute is not on. Increase volume.
No satellite TV channels	Check if the direction of the antenna is correct. Check if the antenna cable is connected securely. Make sure channel searching has been done correctly and there are channels in the channel list.
Poor video or audio	Check if the signal level is strong enough. Check if the satellite antenna is damaged. Adjust the position of the antenna.
Remote control unit does not work	Make sure the batteries are inserted correctly and not empty. Make sure the remote sensor is not blocked.

VI. Specification

- **System capabilities**
Fully DVB compliant
- **Demodulator**
Waveform ----- QPSK
Symbol rate ----- 1-45Msp
Code rate ----- 1/2, 2/3, 3/4, 5/6, 7/8, AUTO
- **Video decoder**
MPEG-2 Main Profile @ Main Level
Data Rates ----- up to 15Mbits/s
Video formats ----- 4:3, 16:9
- **LCD in the front panel**
Display (4 digit seven segment)
7 Keys (power/menu/ok/volume up/volume down/channel up/channel down)
Indicator Dual Color input Infra Red Receiver
- **Audio decoder**
MPEG-1 layer I & II (Musicam Audio)
Mono, Dual, Stereo, Joint stereo
- **Application system resources**
Processor ----- STi 5518
SDRAM memory ----- 64 Mb
Flash memory ----- 2 Mb
Graphic display ----- 720 x 576 (PAL)
720 x 480 (NTSC)
- **Connector summary**
1 x LNB input (F-type)
1 x LNB output (F-type): Loop Out
3 x RCA jacks (VIDEO, AUDIO L/R)
2 x Scart ports (TV, VIDEO)
1 x RS232 (9-pin D-sub)
1 x NTSC Modulator (IEC 169-2)
- **TV Scart**
RGB, CVBS, Audio L/R
- **VCR Scart**
CVBS IN/OUT, Audio L/R IN/OUT

User Instructions

- **RF Modulator**
Input Connector ----- IEC 169-2 Female
Output Connector ----- IEC 169-2 Male
CCIR Channel ----- 21 to 69
USA Channel ----- 14 to 83
RF Signal ----- PAL B/G, I, D/K, NTSC M
- **Composite video output**
Connector ----- 1 x RCA
- **Hi-Fi quality audio output**
Connector ----- 2 x RCA (L/R)
- **Serial data interface**
Connector ----- 9-pin D-sub
Signals ----- RS232 max. 19.2K baud
- **LNB /Tuner input**
Connector ----- 2 x F-type
Input frequency ----- 950 - 2150MHz
LNB Supply ----- 13/18V, Max.400mA
Band switch control ----- 22KHz
SCPC & MCPC capable
C & KU band capable
- **Input voltage** ----- AC 100 - 242V~
● **Power consumption** ----- max 20 W
● **Dimension (W x D x H)** ----- 300 x 225 x 58 mm
● **Weight** ----- 1.6kg

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

The socket-outlet shall be installed near the equipment and shall be easily accessible.

User Instructions

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.

Modifications not expressly approved by the manufacturer could void the user's authority to operated the equipment under FCC rules.