

NUVENIO NV HD

User's Guide

Digital Satellite Receiver

Information contained in this manual is subject to change without notice.
No part of this publication may be copied, reproduced, or translated to another language for any purpose.

- Be sure to read the user manual before starting the operation of the receiver.
- Do not open the housing. The receiver contains high-voltage components and parts.
- Even after switching off the receiver still contains high-voltage for a while.
- Do not expose to rain or moisture.
- Do not make objects or fluid enter the housing through the ventilation slot. If any spilt liquid went into to the housing, unplug the power cord and call your local Service provider.
- Do not place close to any heat source.
- Do not press with hard or heavy object.
- To protect possible malfunction by lighting, we recommend you to use power surge unit. Call your local dealer for advice.

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CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment

WARNING

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.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limit of 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:

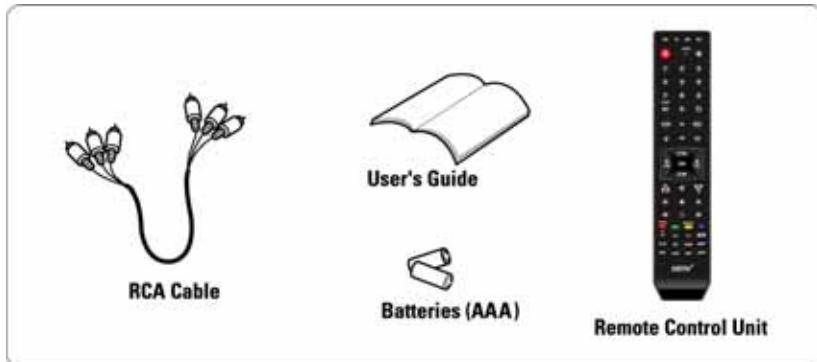
1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help

1.1 Main Features

- . Easy Menu Function
- . TV Guide Function
- . RF Output Function
- . Electronic Program Guide(EPG) for On Screen Channel Information
- . Software Upgrading Function through RS-232C Cable by PC / USB STICK
- . Perfect DiSEqC 1.0, DiSEqC 1.2, USALS for Various Antenna Systems
- . Supports of Ku/C band, SCPC and MCPC
- . Additional Audio Output Function for Connection to Hi-Fi Audio System
- . Other Functions of Remote Controller, Receiving Level Selection, Channel Editing, Menu Language Selection and Audio Selection
- . Digital free-to-air Satellite Receiver
- . NTSC & PAL Output Function
 - Regardless of the TV type, NTSC and PAL channels can be viewed by selection
 - When PAL channel is viewed on NTSC TV, small deletion on up & down sides of the screen may occur and it is normal, as its conversion is managed by software. And darker color on the bottom side of the screen may occur, when NTSC channel is viewed on PAL TV.
- . 1700 Transponders and 5000 Channel Memory Function
- . Teletext Supported
- . Multi Language Function(Menu, Audio)

1.2 Accessories

RCA cable
HDMI cable
User's Guide
Batteries (AAA)
Remote Control Unit



2.1 Front panel



Turn the power on/off.

MENU

Shows the menu application.

OK

Select menu or value on menu item.

VOL

Control volume, change item on menu or input frequency value.

CH

Change channel, move menu, or input frequency value.

2.2 Rear panel



ATSC INPUT

The signal supplied to this connector from a TV antenna will be sent to TV antenna output. Connect a TV antenna to TV ANT IN.

LOOP OUTPUT

It provides Composite video. Connect the TV scart on TV to TV.

S-VIDEO

Separate Video, better picture quality than Composite.

LNB IN

It receives signals from the LNB in the range of 950 ~ 2150MHz. Connect a satellite dish to DIGITAL SATELLITE RECEIVER.

IF OUT

It sends signal to another receiver.

VIDEO

It provides composite video output. Connect the Video on TV to VIDEO with RCA cable.

AUDIO (R,L)

It provides stereo audio output. Connect the audio on TV to AUDIO with RCA cable.

YPbPr

Component analog video signal.

IP Connection

Network interface

USB Connection

It receives data by connecting to USB for software upgrading.

SPDIF

Output for connection to a digital amplifier.

RS-232C

It receives data by connecting to PC for software upgrading. Connect with RS-232C cable a PC and receiver.

ON / OFF

The switch is to turn on or off the main power of the receiver mechanically.

2.3 Remote Control Unit

Open the controller cover on the back and insert two batteries (AAA - 1.5V).



POWER

Turn the power on/off.

MUTE

Deactivate current sound.

Numeric(0~9)

Change channel or input frequency value.

TV/SAT

Select between TV Channels and Satellite channels for RF output.

RECALL

It is to move to previous channel.

GUIDE

Shows EPG [ELECTRONIC PROGRAM GUIDE].

FAV

Add TV or Radio channel to the favorite list on Edit TV(Radio) Channels, or watch favorite channel from your favorite list.

MENU

Shows the menu application.

INFO

Shows the information of current channel.

Click the INFO button twice, EPG mode will be displayed.

EXIT

Exit from the menu.

Volume

Control volume, change item on menu or input frequency value.

Channel

Change channel, move menu, or input frequency value.

OK

Shows channel list, Select menu or value on menu item.

Page UP/DOWN

Move to previous/next page on TV(Radio),

Favorite Channels or Edit TV(Radio) Channels.

TV

Change to TV mode from radio channel.

RADIO

It is for fast change to radio mode from TV channel. Shows the current Radio program list.

ZOOM

2 times zoom in mode. First press, show target area box. Second press, show zoomed screen. Zoom area can be moved with with arrow keys. Exit zoom in mode with "EXIT" remote key.

RECENT

If you hope to show channel list which you watched TV channel list recently, you have to use this function and may show channel list easily.

TEXT

Change to Teletext mode.

LANG

Select the audio language from 2 or more audio language channels available.

SIZE

Select between standard 4:3 and wide 16:9 screen sizes.

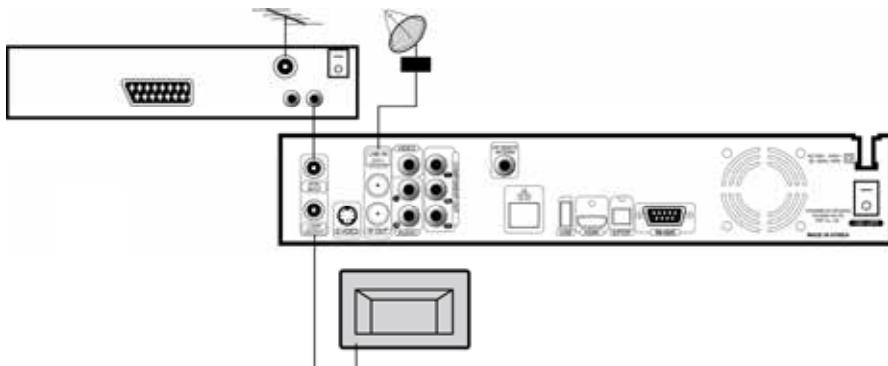
AUDIO

Select Audio mode (Stereo, left or right).

3.1 Connecting to the TV, VCR and Satellite Antenna

It is not necessary to adjust power, as the product is of free - voltage (AC 110~220V)

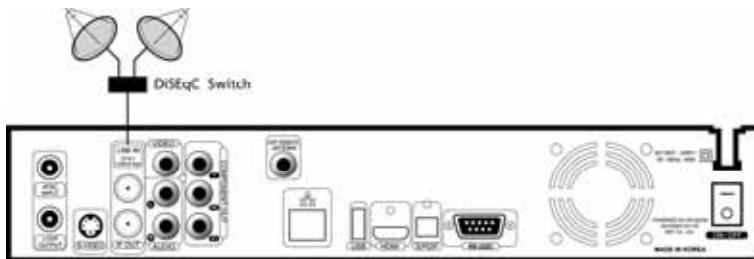
1. Connect another scart cable from the TV on the satellite receiver to scart socket on the TV.
2. Connect the RF cable from the TV OUT on the satellite receiver to a TV. Connect an antenna to the LNB socket on the VCR or other receiver and the RF modulate on the VCR and the TV ANT.IN.
3. Connect a cable of the satellite dish to the DIGITAL on the satellite receiver



3.2 Connecting DiSEqC switch

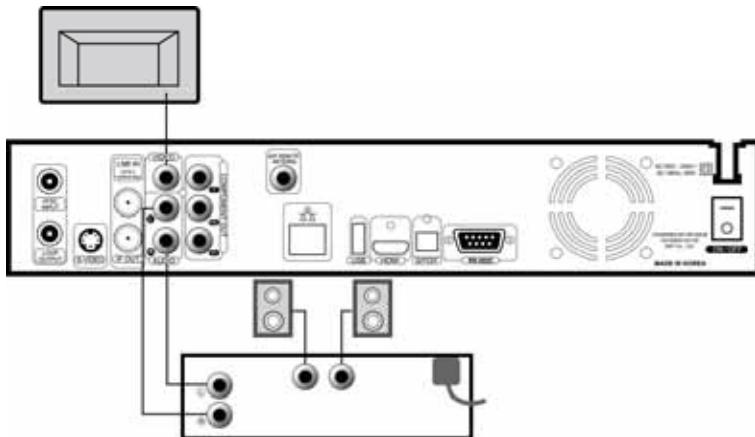
If you have one antenna equipped with many LNBs or two antennas with one LNB on each, you need a DiSEqC switch.

1. Connect the LNBs to a DiSEqC switch at first.
2. Connect the antenna cable to the OUT connector on the DiSEqC switch and connect the end of the cable to the DIGITAL on the satellite receiver.



3.3 Connecting to the TV, HiFi system

1. Connect the RCA cable from the VIDEO INPUT on the TV to the VIDEO on the satellite receiver.
2. Connect a RCA stereo cable from the AUDIO RL on the satellite receiver to the AUDIO RL on the HiFi system.



3.4 Connecting Smart Card module (Optional)

To receive the distributed program of Service Provider you need a Smart card
Insert smart card slot for watching TV programs from Service Provider.

NOTE

Insert smart card into a smart card slot with facing IC upwards

4.1 Antenna Setup

If it is the first time using a receiver, you should set parameters for system configuration. Refer to the following section.

Turn on your TV and Satellite receiver.

Press the MENU button, main menu screen will appear as shown below.



1. Select Installation on the Main Menu.
2. Select "Antenna Setup"



Settings and Operations

3. Select correct name of Satellite. If there is no proper satellite name listed in the item, choose one among USER1 ~ USER 5.



4. If you want to change the LNB, go to LNB in the Antenna Setup.



5. If you want to change the LNB go to LNB TYPE and use **</>** buttons to select the LNB Frequency.



6. If only one antenna is in use, please set DiSEqC mode to disable.
 If more than 1 antenna, you can select DisEqC1.0,DisEqC1.1,DisEqC1.2,USALS.



7. If you have a DiSEqC 1.2 motorized system to control your satellite antenna you have to select DiSEqC 1.2 on DiSEqC mode in Antenna Setup.



8. If you want to search channels, press Color button.

Red : ch all search , Green : TP search , Yellow : Multi sat search.



After successful completion of channel searching, please move to TV Channels or Radio Channels on TV list to select currently received channels.

Then you should select the TV channel or Radio channel which you want. After then you can watch the TV program or listen to the radio.

[Multi Sat. Search]

Move: MAIN menu -> Antenna Setup -> Yellow key(multi sat search) -> Select satellite -> Red button

Press OK to choose the desired satellite

Press the RED button in the RCU to scan the selected satellites.



[Network Search]

Network search function is enable to search new TPs and all channels in all TPs.

* How to go "Network Search" menu :

Main menu -> Installation -> Antenna Setup -> Network Search (select "Yes").



NOTE

Depending on certain TP or satellite, the Network Search function may not work.

[DiSEqC 1.2 Settings]

If you have a DiSEqC 1.2 motorized system to control your satellite antenna you have to make the following setting.

First, you must select DiSEqC 1.2 on the DiSEqC mode in the Antenna Setup.

< Please refer to the Setting section >

1. Press OK on DiSEqC 1.2



2. You should set the East Limit and West Limit of your satellite antenna, if you use the satellite receiver at first. Press OK button on the Change Limit item, set the East/West Limit.



3. Select satellite you want and DiSEqC1.2 Pos. will be set automatically.



DiSEqC1.2 Pos.

DiSEqC1.2 Pos. shows positioner value of the current satellite.

DiSEqC1.2 Command

DiSEqC1.2 Command changes the current mode between Installer and User.

Movement

In User mode this is used to tune the position of the motor. In Installer mode this is used to search for the position of a satellite manually.

Store

Stores the current position of the motor for the selected satellite name.

Goto

Moves the motor to the stored position of the selected satellite name.

4.2 Manage Favorite List

Press the MENU button, main menu screen will appear as shown below.
Select Manage Favorite List On Installation.



NOTE

The default password is "1234"



Rename Favorite Name

1. Press RED button from Favorite List.



2. You can change the character by number button (1~9).
To change characters(big/small letter, number), using **▲▼**
To delete one character, press Green button.



Add Services

1. Press Blue button on Manage Favorite List Menu. Add Services Menu will appear as shown below.



2. You can add channels to Favorite List by Blue button. Then you can see the selected channels on right side.



3. To cancel the selected channel, you should select the Favorite List by Red button. Then press Green Button on channel that you want to cancel.



4.3 Viewing TV(or Radio)

1. Press the Power button.
2. Press the TV(or Radio) button.
3. If you want to see all TV channel list, click the “OK” button and then select the TV Channel (or Radio Channel). TV Channel (or Radio Channel) window will appear.



Press [Yellow] button on RCU, you can see available Satellites.



Edit TV Channels / Edit Radio Channels

Press RED button on TV List(or RADIO List) and you can see similar screen will be shown as below. To enter "Edit", Password is required. The default password is "1234"



Rename channel

1. Press RED button from Edit TV List or Edit Radio List .



2. You can change the character by number button (1~9)

To change characters(big/small letter, number), using ▲▼.

To delete one character, press Green button.



Channel Move

Press Green button and then select channels(Green button). Then you can see the selected channels on right side.

Select your desired position on left side, Press Yellow button.



Channel Delete

Press Yellow button and then select channels (Green button), you can see the selected channel on right side, if You want to confirm to delete channels, Press Yellow button.



Channel Lock

Press Blue button for channel lock.



Viewing favorite list

Press FAV button on 'TV list', you can see the favorite list.

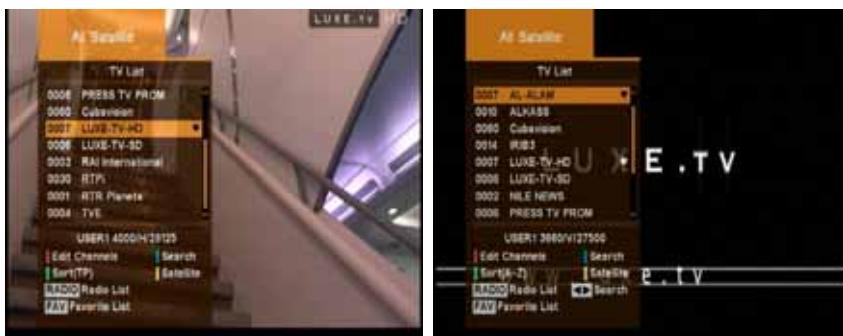


Sort

Press Green button in the "TV List" screen.

You can select the order you want.(A~Z,TP,FTA-CAS)

You can change channel fast by alphabet order using on A~Z order



4.4 System Settings

From these menus you can select "System Setting" on the Main Menu.



Language Setting

Use **CH Up/Down** keys to select the desired language.



Menu Language

For menu language selection, select desired language from Menu Language of system Settings.

Audio language

Only if a current channel contains 2 or more audio language information, set the Audio Language as English or other favorite language.

Subtitle Language

Please select the primary and secondary languages in your area.

AV Output Settings



TV Standard

Except for a few, most countries are using PAL system for TV signal, accordingly set TV. Standard as PAL. To be more flexible for NTSC or PAL signal from different satellites, select MULTI for automatic signal conversion.

TV Aspect Ratio

Press SIZE button when you watch on TV or go to "System Setting" menu.

Select "TV Aspect Ratio" and you can change

You can change 4:3, 4:3Pan, 16:9Full or 16:9Pillar modes.



OSD/Screen Setting



CH to CH Selection

While you are changing the channel, it shows whether the blank screen or not.

OSD Transparency

Adjust Transparency on the OSD(On Screen Display)

OSD Timeout

Set up I-plate Timeout for hidden on / off.

TV List Timeout

Set up the TV channel list timeout for hidden on /off

Subtitle mode

You can select subtitle mode (invisible or visible).

Time Settings

Time Adjustment

To set the receiver time for EPG (Electronic Program Guide), set the time according to GMT (Greenwich Mean Time) by using VOL . If EPG in England is needed to set, adjust as 00:00. In the case of Dubai, adjust as 04:00

Clock : set the local time.

On Timer, On Timer CH : set the timer and the channel.

Off Timer : set the timer.

Sleep Timer : set 10 ~ 240 minutes

Summer Time : set the summer time.

Parental Control

You can protect your installed data and information by locking the menu. Channel lock allows you to lock the channel with the password in order to prevent from accessing of the channel by your children or some unauthorized person. Default password is "9949" for Menu Lock and "1234" for Channel Lock. This can be changes here.



Initialization

You can initialize All Information to factory default.



4.5 Other Functions

Audio Selection

If broadcasting channel is supporting multi language, different language can be selected from Audio Selection.

1. To select different language on current channel, press LANG button on RCU.

2. Press OK button on your favorite language.

According to different audio data on each channel, different audio language types can be selected.



TV Guide

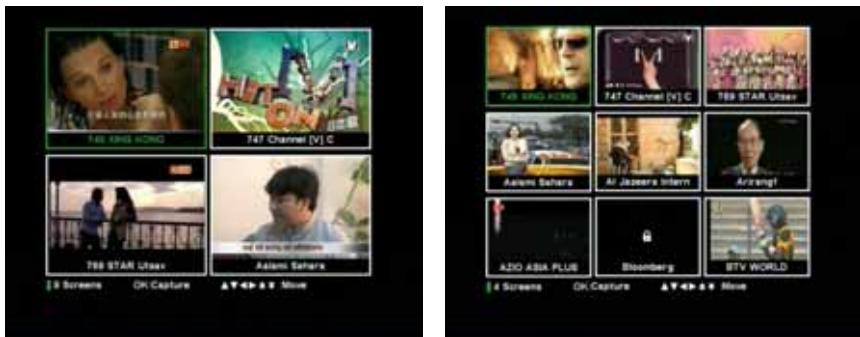
Press GUIDE button of RCU for channel information.



Multi Picture Function

You can check other channels (still picture mode) while you are watching a specific alive channel with this function.

1. In the full screen mode, press "M. PICTURE" button on the Remote Control then you will get 4 divided pictures.
2. By pressing "VOL CH ▲ ▼" button, you can select a frame one by one.
Selected frame will provide you a live picture.
3. Press "OK" button, you can capture the still picture.
4. Press "Exit" button, then the function goes to the full screen mode.
5. If you press "GREEN" button one more time in the No.1 stage above, you will have 9 divided pictures and operations are same as above.



Function of Recent List

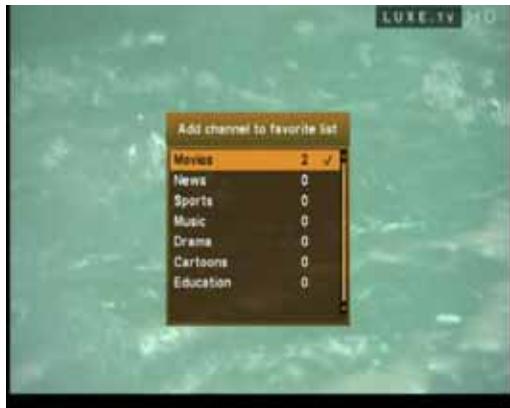
1. If you watch TV/Radio channel over 5minutes, automatically added Recent Channel List.
The latest watching channel is located in high rank. If you watch TV channel in Recent List over 5minutes, it is changed a high rank in Recent List automatically.



2. In Recent Channel List, you can move curser and select channel. If you press Ok button, you can watch the selected channel.
3. Red button: Delete selected channel in Recent Channel List.

Favorite Hot button

If you press Green button when you are watching TV, selected channel is added Favorite Group as below.



4.6 STB Information



STB Information

You can check Boot, S/W Version, Date, Tuner, Flash Memory.

4.7 CA Information(Optional)

CA modules and Smart Cards are licenced to Service Providers.

If you want to watch TV Programs from a Service Provider you must use a CA module(Conditional Access) with a Smart Card

. If no CA module is used you can only watch FREE TO AIR TV Programs.

Press CA Information of "Information menu". Then, the following sub menu will be shown as below.



You will get access to information and menus connected to the Common Interface(CA) Module.

5.1 Troubleshooting

SYMPTOM	SOLUTION
<i>No picture display and no LED channel display</i>	Check the power connection
<i>No picture display with normal LED channel display</i>	1. Check the connection with TV 2. Check the connection between TV outside input and receiver cable
<i>No satellite channel with MAIN MENU screen on</i>	1. Check the LNB, Frequency, Polarization and Symbol Rate from Installation menu 2. Check the connection of receiver or Antenna Angle
<i>No sound with normal screen display</i>	1. Check between sound output connector and TV 2. Check if it is not in MUTE condition
<i>Remote control unit does not work</i>	Check if the batteries in remote control unit are Dead

5.2 Specification

LNB/Tuner	RF input frequency	950 to 2,150MHz
	RF input level	-65 to -25dBm
	LNB control	DiSEqC1.0/1.2, USALS
	LNB power	13V/18V(Max.1000mA)
	LNB tone switch	22KHz±2KHz(0.6 ~ 0.9Vp-p)
MPEG	Video	MPEG-II Main Profile@Main Level
	Audio	MPEG-II layer I&II
VIDEO	Resolution	720x576
	Video output level	1Vp-p into 75
	Aspect ratio	4:3, 16:9
Audio	Frequency range	20Hz to 20KHz
	Sampling frequency	32/44.1/48KHz
	Frequency response	20Hz to 20KHz Hi-Fi Quality Digital stereo
	Audio output level	2V rms into 600
General Data	Supply voltage	(100~240V AC, 50/60Hz)
	Power consumption	45W(Standby 20W)
	Operating temp.	0 ~ 50
	Storage temp.	-40 ~ -65
	Dimensions	340(W)×247(D)×67.5(H)mm
	Weight	3Kg

GENERAL FEATURES

- * Free To Air Channel Reception Only from Satellite and Terrestrial broadcasting
- * IPPVR (Audio & Video recording to remote PC via LAN)

- * Dual Inputs (Satellite & Terrestrial) :
 - Fully Complies with ATSC HDTV (VSB) & DVB-S MPEG 2
 - ATSC Tuner (LG NIM Type) & QPSK (LG NIM Type)
 - Decodes All ATSC HDTV Standard Video Formats Including 576i / 576p / 720p / 1080i
 - Selectable Output Video Format : 1080i / 720p / 480p / 480i
 - Standard Definition/High Definition contents (MPEG2 and support MPEG4 AVC/H.264)
- * USB 2.0 PVR Function Supported : Record & Play with an external HDD
- * High Definition Video Output : HDMI (HDCP) and Component (YPbPr)
- * Audio Decoding : ISO/IEC13818-3(MPEG-2 audio/MUSICAM) Dolby AC-3
- * Full compliant of MPEG-S Digital & DVB broadcasting
- * 950-2150 MHz Input Frequency (IF Loop Throughout)
- * Satellite Scan – Multisat Scan support
- * Flexible reception of SCPC & MCPC from C/Ku-Band satellites
- * Variable input symbol rate
- * Video output resolution : 480p, 720p, 1080i
- * User selectable output resolution
- * Various Aspect Ratio with 4:3, Letter Box, Full Screen & 16:9
- * EPG (Electronic Program Guide) & Channels naming supported
- * Multi language OSD
- * Super fast channel changing speed
- * Over 6000 channels TV & Radio Program
- * Full Colors & User Friendly GUI for Easy Control
- * Timer function & Real Time Clock & PIG (Picture In Graphic) support
- * Zoom In-Out Function for Watching Screen
- * Moving Background for Protection of Plasma Display Panel & LCD TV in Radio CHs
- * Powerful Various Downloading Methods
 - WebLoader downloading using ethernet port
 - USB downloading using USB stick
 - RS-232C cable downloading
 - Set to Set downloading (Main Program & Channel List Data File)
- * Powerful channel editing by
 - Sorting : Alphabetic, Satellite, Parental Lock, CAS, S-ID, TP order, All
 - Move, Delete, Channel Rename, Channel Skip
 - 5 Favorite list & unlimited programs per each list
- * Parental Lock Function using Master PIN Code

- * Manual PID / Satellite & TP / Network Scan
- * DiSEqC 1.0, 1.1, 1.2 & USALS / 22KHz Switching Control Supported
- * Comparable of setting the frequency for SMATV system
- * Super universal remote
- * UHF ready
- * Fast and Smart Scan
- * High LNB power generation

TECHNICAL SPECIFICATION

- * 1 Input Connector : F-type, IEC 169-24
- * IF Input Frequency : 950MHz to 2150MHz
- * IF Loop Throughout : 950MHz to 2150MHz
- * Input Level : -65 dBm~-25 dBm
- * DiSEQqC Control : 1.0, 1.2 & USALS Compatible
- * Band Switch : 22KHz Tone(22 +/- 4KHz. Amplitude : 0.6 +/- 0.2V)
- * Symbol Rate : DVB-S QPSK : 1-45Msps
- * Viterbi Decoding Rate : 1/2, 2/3, 3/4, 5/6 and 7/8
- * Bandwidth : 36MHz
- * LDPC/BCH : Punctured Code. 1/2, 2/3, 3/4, 3/5, 4/5, 5/6, 8/9, 9/10 in DVB-S2
- * Terrestrial Tuner : ATSC A/53 compliant, 8/16VSB and MMDS, 2/4/8VSB receiver, ITU-U, J.83 Annex B/C, SCTE, DVS-031 compliant, 64/256QAM receiver
- * Input Voltage : AC 100~250V, 50/60Hz
- * Power Consumption : Max. 45 Watts
- * LNB Power : 13 /18VDC / 1,000mA Max
- * Power Supply Type : SMPS

MPEG TRANSPORT STREAM A/V DECODING

- * Demultiplex : According to ISO/IEC 13818-1(MPEG-2 system)
- * Input syream : Max. 90Mbit/s
- * Aspect Ratio : 4:3(default), 16:9
- * Video Resolution : 480p or 720p, 1080i
- * Audio Decoding : ISO/IEC13818-3(MPEG2 Audio/MUSICAM), Dolby AC-3
- * Audio Mode : SingleChannel/Dual Channel, Stereo, Joint Stereo
- * Video Output : HDMI/HDCP,RCA

MICROPROCESSOR & MEMORIES

- * Main Processor : STI 7101

- * CPU Clock : 280MIPS
- * Flash Memory : 4 Mbyte + 1Gbyte (Nand flash memory) default
(16Gbyte nand flash memory : Optional)
- * SDRAM : 192 Mbyte
- * EEPROM : 32 Kbit

DATA PORT

- * Connector : 9 Pin D-Sub Type
- * Protocol : RS232 Asynchronous
- * Data Rate : Max. 19.2Kbps 115.2K
- * Ethernet : 10BaseT/100BaseTX

A/V OUTPUT

- * Digital output : HDMI/HDCP, YPbPr
- * Video : CVBS output (RCA)
- * Audio : Stereo L/R output (RCA)
- * S-VHS : S-Video
- * Digital Audio : 1 optical output, S/PDIF

FRONT PANEL

- * Smart Card : 1 Slot
- * 7 keys : Menu, OK, Power, Channel Up/Down, Volume Up/Down
- * Integrated USB 2.0, support to USB memory stick
- * Green VFD display (moving 12 characters in 1 line)

REAR PANEL

- * ATSC Signal INPUT
- * Loopthrough output
- * S-VHS : S-Video
- * IF Input & Out
- * 3RCA : Video, Audio L, Audio R
- * Component output : Y/Pb/Pr
- * UHF Optional Signal In
- * Ethernet port
- * Integrated USB 2.0, support to USB memory stick
- * HDMI Connector : Type A
- * S/PDIF (Optical) for Digital Audio AC-3 Bitstream Output
- * RS232 Serial Port : 9 Pin Connector, D-Sub Type, Twisted Cable
- * Built-in Internal Cooling Fan
- * Power On/Off switch

5.3 Glossary

LNB

Low Noise Block converter. The LNB is an electronic unit mounted on satellite dish to receive signals reflected by the dish and convert to signals.

L.O. frequency

Local Oscillator frequency as a part of LNB. It converts the satellite frequency to usable signals for the receiver.

Polarization

Polarization allows several programs to be fitted into same frequency band.

Symbol Rate

Size of the digital package transmission

Parental Control

The function is to allow parents to lock channels for unsuitable viewers. A locked program can only be unlocked with the password.

DVB

Digital Video Broadcast. International standard for digital TV broadcasting

MPEG

Moving Picture Experts Group, A system for compression of digital data

RF

Radio Frequency

EPG

Electronic Programming Guide. Program information is displayed on the TV screen, depending upon the satellite condition.

MHz

Abbreviation for Megahertz. The prefix mega means million, and Hertz means cycles per second.

DiSEqC

Digital Satellite Equipment Control

NTSC

National Television Standards Committee

PAL

Phase Alternate Line

Ku band

11~18GHz Frequency

Appendix

C band
3~4GHz Frequency

SCPC
Single Channel Per Carrier

MCPC
Multi Channel Per Carrier

PID
Packet Identifier.

TP
Transponder

SCART, RCA
A connector for connection of Satellite receiver, VCR and TV sets.

VCR
Video Cassette Recorder.

MADE IN KOREA
