

IMPORTANT SAFETY INSTRUCTIONS



All the safety and operating instructions should be read before operating this product.

The safety and operating instructions should be retained for future reference.

All warnings on the product and in the operating instructions should be adhered to.

All operating and usage instructions should be followed.

Unplug this product from the wall outlet before cleaning.

Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning and place the receiver in well ventilated and no-heat environment.

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Do not use this product near water for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near swimming pool, and the like.

Do not place this product on an unstable cart, stand, tripod, bracket, or table.

The product may fall, causing serious injury to a child or an adult and serious damage to the product. Use only with a cart, stand tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacture's instructions, and should use a mounting accessory recommended by the manufacturer.



CONTENTS



1. Introduction

- 1-1 Main Features
- 1-2 Accessories



2. Controls & Features

- 2-1 Front Panel
- 2-2 Rear Panel
- 2-3 Remote Control Unit(RCU)
- 2-4 How to set the Universal RCU



3. Connection Diagram of the Receiver

- 3-1 Connecting to a TV
- 3-2 Connecting to a TV and VCR / DVD-WR
- 3-3 Connecting to a HiFi system



4. Firmware upgrade using USB flash drive



5. Function Guide

- 5-1 Channel Information
- 5-2 Changing Channels
- 5-3 Volume Control
- 5-4 Channel List for TV/Radio/Favorite
- 5-5 Language
- 5-6 Teletext
- 5-7 Subtitles
- 5-8 ZOOM



6. Main Menu

- 6-1 Installation
- 6-2 System Setting
- 6-3 User Preference
- 6-4 Games
- 6-5 Blind Scanning menu



7. Troubleshooting



8. Technical Specifications



1. Introduction

1-1 Main Features

120 programmable satellites / 6,000 programmable channels
950~2150 Mhz IF range
MCPC/SCPC, C/KU reception
Fully MPEG 2 / DVB compliant
1 LNB input, IF loop through for 2nd receiver
Variable input symbol rate 1 ~ 45Mps
Oscilloscope / spectrum analyzer function for easy signal detection
Easy auto satellite program searching
Manual PID scan function
Picture-In-Graphics function
Multi-Picture(4,9,10,13 or 16 pictures) function
Multi language menu
Electronic Program Guide
8 favorite channel group selection / parental lock
Auto NTSC / PAL switching
Teletext supported by OSD and VBI
RS 232 downloading
USB downloading
Data transfer / receiver-to-receiver and / or PC-to-receiver
DiSEqC version 1.2/1.3 supported
14/18V LNB switching / 22KHz on/off
1 S-VIDEO, 8 RCA (CVBS, Componenet, 4 Audio L/R , L2/R2)
PLL RF Modulator VHF Ch.314(NTSCM)
Input power : 100~250V ~50 / 60Hz Max.25W
Dimensions : 280 X 214.5 X 47mm

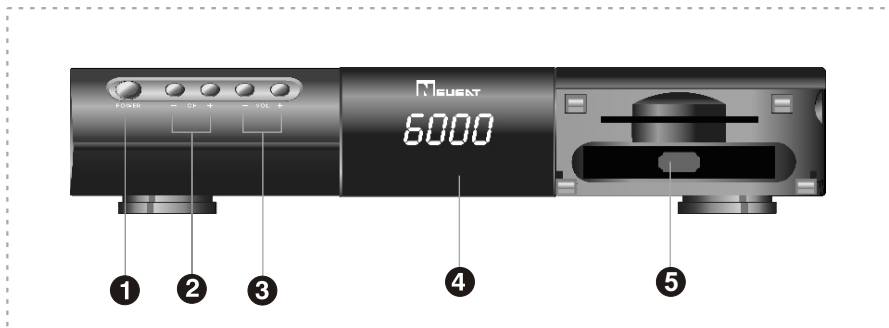
1-2 Accessories

User's manual : 1
Remote control unit : 1
Batteries (AAA Type) : 2 pieces



2. Controls & Features

2-1 Front Panel

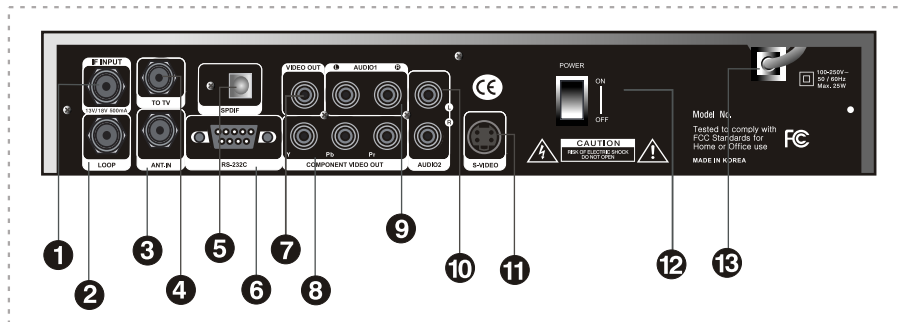


- ❶ **Power (⏻)**
To put the receiver in and out of standby mode.
- ❷ **CH. +, -**
Channel up & down.
- ❸ **VOL. +, -**
Volume up & down.
- ❹ **Display**
Shows channel number, error message, remote control commands and time in standby mode
- ❺ **USB**

2. Controls & Features



2-2 Rear Panel

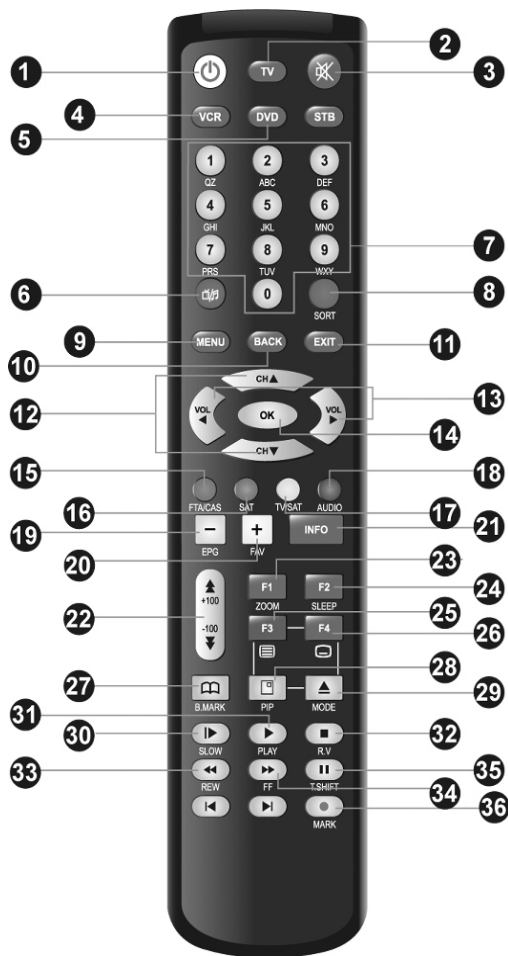


- 1 IF input**
Satellite dish input (F-connector)
- 2 Loop**
IF loop-through output to second receiver
- 3 To TV**
For connecting an RF cable to the aerial input of a TV
- 4 ANT.IN**
For a terrestrial (conventional) TV aerial
- 5 SPDIF**
- 6 RS-232C serial port**
To read and load data information
- 7 VIDEO OUT**
- 8 Component Video Out (Y,Pb,Pr / Y,Cb,Cr)**
- 9 Audio L1/R1 RCA JACK connectors**
- 10 Audio L2/R2 RCA JACK connectors**
- 11 S-Video Out**
- 12 POWER ON/OFF Switch**
- 13 Mains lead (100-250V~50/60Hz Max 25W)**



2. Controls & Features

2-3 Remote Control Unit (RCU)

















2. Controls & Features

2-3 Remote Control Unit (RCU)

- ❶ **⏻ (Power) Key** : The power key turns the receiver on and off.
- ❷ **TV Key** : Using when you change the function to TV
- ❸ **🔇 (Mute) Key** : This key switches the sound on and off.
- ❹ **VCR Key** : using when you change the function to VCR
- ❺ **DVD Key** : Using when you change the function to DVD
- ❻ **📺/📻 Key** : Selects TV or Radio channels.
- ❼ **Numeric Key(0~9)** : Numeric keys enable direct channel selection.
A~Z Keys : Use these keys in the channel list to find channels alphabetically.
- ❽ **⌂ SORT Key** : Using when you sort the channel list into Alphabet, Satellite, or Service ID
- ❾ **Menu Key** : used to display the main menu.
- ❿ **BACK Key** : this key returns you to the previous mode or menu.
- ⓫ **EXIT Key** : Use this key return to the viewing mode from any menu function.
- ⓬ **▲▼ CH. Keys** : Used to move the highlight bar, change channel up/down.
- ⓭ **◀▶ VOL. Key** : Used to move the highlight bar, change parameters, volume up/down.
- ⓮ **OK Key** : The OK Key is used to select a program, highlighted line or parameter value.
It is also used to show the TV/Radio channel list while watching TV or listening to the Radio.
- ⓯ **FTA/CAS Key** : Selects FTA/CAS channels
- ⓰ **SAT Key** : Selects a satellite.
- ⓱ **TV/SAT Key** : Selects TV/SAT mode.
- ⓲ **AUDIO Key** : Selects audio mode (stereo, mono, language) and video.
RED, GREEN, YELLOW, BLUE keys: These color keys are used to select functions such as Delete, Move, Rename, Sort also used for slot machine game.
- ⓴ **(-) EPG Key** : This key shows program information about the selected channel.
- ⓵ **(+) FAV Key** : Change to last favorite channels or selects the favorite channels in the channel list.
- ⓶ **INFO Key** : This key is used to display channel information.
- ⓷ **⬆️ (+100), ⬇️ (-100) (Page up/down) Keys** : Used to move the highlight bar one page at a time on menus. It is also used to change the channel up & down 100 channels.



2. Controls & Features

- 23 F1 Key : Zoom function in the viewing mode.
- 24 F2 Key : Sleep function in the viewing mode.
- 25  F3 Key : Multipicture function in the viewing mode.
- 26  F4 Key
- 27  B.MARK : Bookmark function under view mode Go to the bookmarked position.
- 28  PIP Key : Used to convert to PIP mode.
- 29  MODE Key : Used to convert to playback mode under viewing mode and also used to convert the PIP function under PIP mode.
- 30  SLOW Key : Video will play slow under saved program.
- 31  PLAY Key : Used to playing files.
- 32  R.V Key : Sleep function in the viewing mode.3.
- 33  REW Key : Rewind video play speed to 2X4X8
- 34  FF Key : Play speed by 2X4X8
- 35  T.SHIFT: Press this button when you want to pause playing video.
- 36  MARK Key : By pressing this will start recoding until pressing stop into a HDD
make a bookmark while playback.



2. Controls & Features

2-4 How to set the Universal RCU

TV setting

- 1) Toward remote sensor in TV, press TV key and OK key on the universal RCU at the same time until LED of Power button on the universal RCU lights in red.
- 2) Slowly press CH up key or Ch down key until the power of TV goes out.
- 3) Press TV key on the universal RCU, and then the Power button of the universal RCU is blinking at 4 times.
- 4) Press the Power button of universal RCU, and the power of TV goes on.
- 5) The setting of universal RCU is changed to TV from STB
- 6) In case that the performance is not working smoothly, please repeat the above steps.

VCR setting

- 1) Toward remote sensor in VCR, press TV key and OK key on the universal RCU at the same time until LED of Power button on the universal RCU lights in red.
- 2) Slowly press CH Up key or Ch Down key until the power of VCR goes out.
- 3) Press VCR key on the universal RCU, and then the Power button of the universal RCU is blinking at 4 times.
- 4) Press the Power button on the universal RCU, and the power of VCR goes on.
- 5) The setting of universal RCU is changed to VCR from STB
- 6) In case that the performance is not working smoothly, please repeat the above steps.

DVD setting

- 1) Toward remote sensor in DVD, press TV key and OK key on the universal RCU at the same time until LED of Power button on the universal RCU lights in red.
- 2) Slowly press CH up key or Ch down key until the power of TV goes out.
- 3) Press DVD key on the universal RUC, and then the Power button of universal RCU is blinking at 4 times.
- 4) Press the Power button on the universal RCU, and the power of DVD goes on.
- 5) The setting of universal RCU is changed to TV from STB
- 6) In case that the performance is not working smoothly, please repeat the above steps.

*After the setting is done, you can use the appliances after pressing the key of the appliance you want to use.

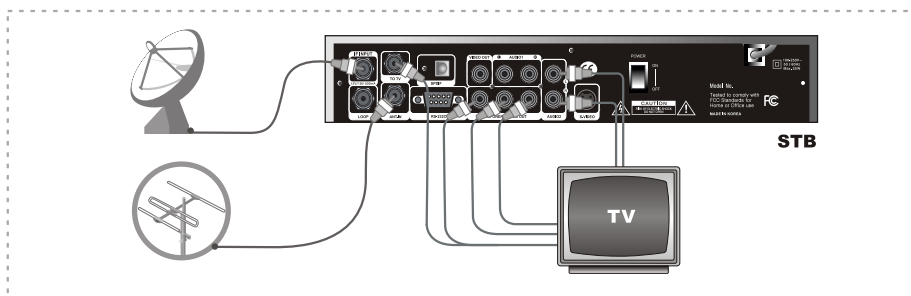
Ex) While you are using STB, if you want to make volume up in TV, press TV key on the universal RCU and then Volume up key.



3. Connection Diagram of the Receiver

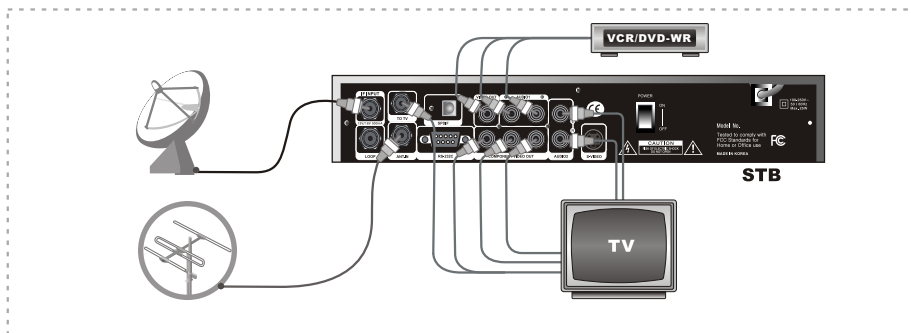
3-1 Connecting to a TV

- Connect the component(Y,Pb,Pr / Y,Cb,Cr) output socket to the receiver to the input sockets on the TV
- Connect an RF lead from the To TV output on the receiver to the RF input socket on the TV.
- Connect Audio 2 output socket to Audio input sockets on the TV.
- Connect the TV aerial to the ANT.IN input socket on the receiver
- Connect the coaxial cable from the LNB to the IF INPUT socket on the STB.



3-2 Connecting to a TV and VCR/DVD-WR

- Connect the component (Y,/Pb, Pr/Y, Cb, Cr) output socket on the receiver to the input sockets on the TV
- Connect Video and Audio (L1,R1) to VCR or Recorder DVD
- Connect an RF lead from the To TV output on the receiver to the RF input socket on the TV
- Connect Audio 2 output socket to the Audio input socket on the TV
- Connect the TV aerial to the ANT.IN input socket on the receiver
- Connect the coaxial cable from the LNB to the IF INPUT socket on the STB..

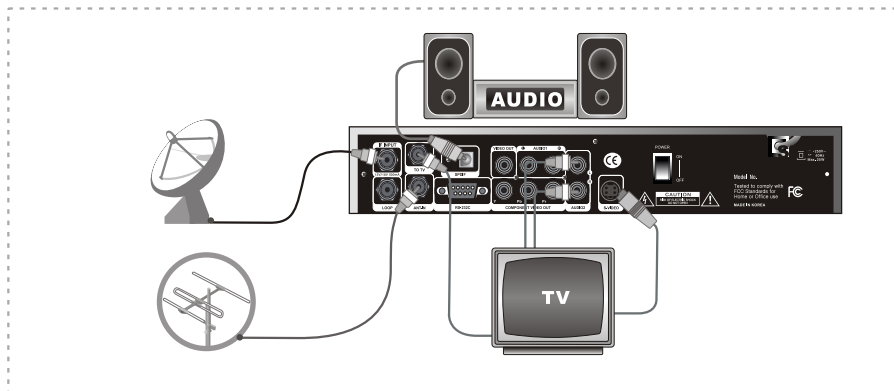


3. Connection Diagram of the Receiver



3-3 Connecting to a HiFi System

- Connect the S-Video input socket to the S-Video input socket on the TV.
- Connect the Audio 2 output socket to the Audio input socket on the TV .
- Connect the SPDIF output socket to the socket on the external Audio System.
- Connect an RF lead from the To TV output on the receiver to the RF input socket on the TV
- Connect the TV aerial to the ANT.IN input socket on the receiver
- Connect the coaxial cable from the LNB to the IF INPUT socket on the STB.





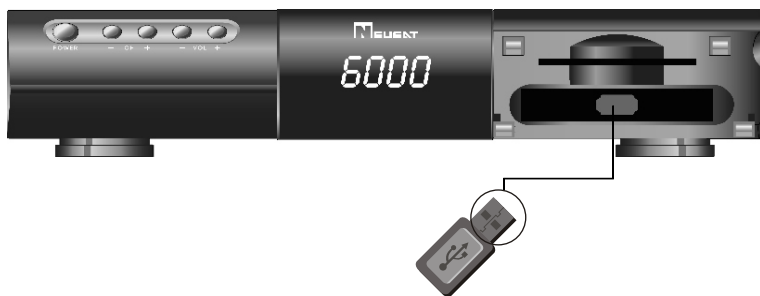
4. Firmware upgrade using USB flash drive

Firmware upgrade using USB flash drive



- 1) Copy the latest firmware upgrade file to a USB flash drive.
- 2) Connect the USB flash drive to the USB port in receiver, and a window will be appeared in the TV Monitor.
- 3) Select the firmware upgrade file and press OK key on your RCU, and then the selected data are transferred to the receiver and upgrade gets started. When the upgrade is completed, the receiver will be automatically rebooted.

- 4) The upgradeable firmware is Program file and Channel data file



7. Troubleshooting



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

Problem	Possible causes	What to do
The display on the front panel does not light up.	Main cable is not connected.	Check that the main cable is plugged into the power socket.
No sound or picture.	Wrong connection of the video/audio output to the TV input terminal. Wrong connection of satellite antenna cable. Wrong direction of satellite antenna.	Connect two terminals correctly with a SCART cable or RCA or RF cable. Connect the antenna cable correctly. Adjust the direction of antenna.
Black-and-White screen or V-Hold problem	No signal or weak signal. Wrong setting of channel information in System Installation Menu. Your TV mode is different from satellite broadcasting mode.	Check the cable connections LNB and other equipment connected between the LNB and the receiver or adjust the antenna. Type the setting value correctly. Use TV of same mode. Use a NTSC/PAL converter connected to the receiver TV.
The RCU is not working	Battery exhausted. Fluorescent light interfering with the remote controller. RCU is incorrectly aimed	Change the batteries. Switch off the light. Aim the RCU at the receiver.



8. Technical Specifications

Tuner & Channel

Input Connector : F-type, IEC 169-24, Female

Frequency Range : 950MHz to 2150Mhz

Input Impedance : 75Ω . Unbalanced

Signal Level : -25 to -65dBm

LNB Power & Polarization : Vertical - +13V
Horizontal - +18V

Current : 500mA Max overload Protection

22Khz Tone : Frequency - 22KHz \pm 4KHz

Amplitude : 0.6V \pm 0.2V

DiSEqC Control : Version 1.0/1.2/1.3 compatible

Demodulation : QPSK

Input Symbol Rate : 1-45 Ms/s

FEC Decoder : Convolutional Code Rate 1/2, 2/3, 3/4, 5/6 and 7/8 with constraint Length
K=7

MPEG Transport Stream A/V Decoding

Transport Stream : MPEG-2 ISO/IEC 13818

Transport Stream : Specification

Profile Level : MPEG-2 MP@ML

Input Rate : 60 Mbit/s Max

Aspect Ratio : 4:3, 16:9

Video Resolution : 720 \times 576 (PAL)
720 \times 480 (NTSC)

Audio Decoding : MPEG / MusiCam Layer I & II

Audio Mode : Single channel / Dual channel joint stereo / Stereo

Sampling : 32, 44.1 and 48KHz

Memory

Main Processor : NEC UPD61115 (32bit @ 200MHz)

Flash Memory : 2 Mbyte

Program DRAM : 16 Mbyte



8. Technical Specifications

A/V & Data In / Out

VIDEO OUT : 1 x RCA
 3 x RCA YCbCr component
 1 x S-Video 4 pin DIM female
AUDIO OUT : 2 x 2 RCA
 1 x SPDIF Optical
RS232C : Transfer rate 115,200 bps / 9 pin D-sub Type

Power Supply

Input Voltage : 100-250V ~ 50 / 60Hz Max. 25W
Type : SMPS
Power consumption : Max. 25W
Standby Power : 8W
Protection : Separate internal fuse.
 The input should have lightning Protection

Physical Specification

Size (W × D × H) : 340 × 240 × 60mm
Weight (Net) : Approximately 2 Kg
Operating Temp : 0°C to + 45°C
Storage Temp : -10°C to + 70°C
Storage Humidity : 5% ~ 95% RH (Non-Condensing)

RF Modulator

Connector : F-type, IEC 169-24, Female
Frequency : 54MHz~806 Mhz
Output Channel : CH3~4
TV Standard : NTSC-M
Pre-set Channel : Channel 3