

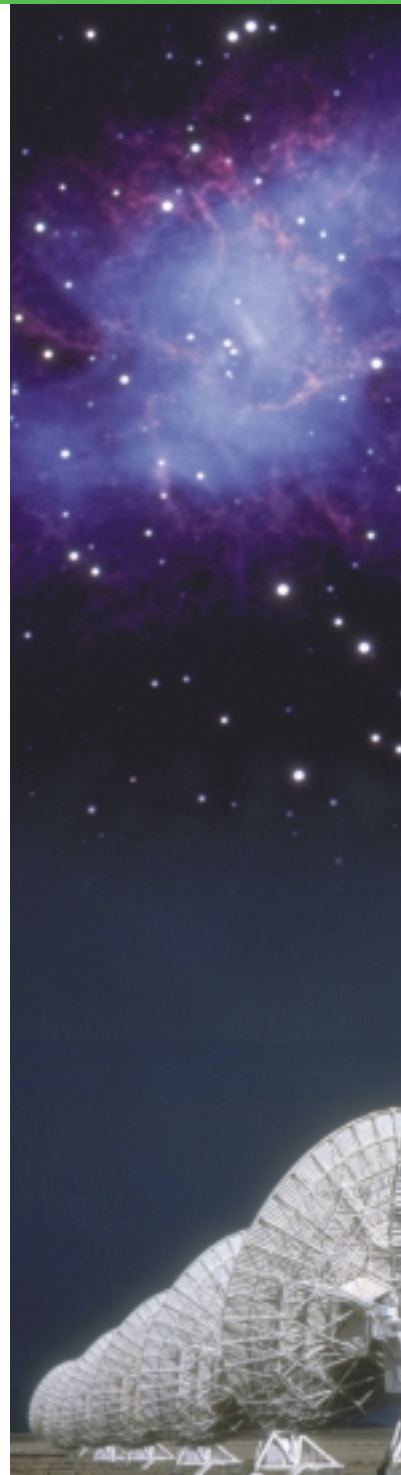
VACI-5350

Digital Set-Top Box
for *Viaccess Embedded*
& Common Interface Standard

HUMAX

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Safety

This STB has been manufactured to satisfy the international safety standards. Please read the following safety precautions carefully.

MAINS SUPPLY : 190 - 250V AC 50/60Hz

OVERLOADING : Do not overload a wall outlet, extension cord or adapter as this may result in fire electric shock.

LIQUIDS : Do not expose the STB to rain or moisture.

CLEANING : Disconnect the STB from the wall outlet before cleaning.
Use a light damp cloth(no solvents) to dust the STB.

VENTILATION : The slots on top of the STB must be left uncovered to allow proper airflow to the unit.
Do not stand the STB on soft furnishings or carpets.
Do not expose the STB to direct sunlight or do not place it near a heater.
Do not stack electronic equipments on top of the STB.

ATTACHMENTS : Do not use any unrecommended attachments as these may cause hazard or damage the STB.

CONNECTION TO THE SATELLITE DISH LNB

: Disconnect the STB from the mains before connecting or disconnecting the cable from the satellite dish.
FAILURE TO DO SO CAN DAMAGE THE LNB.

CONNECTION TO THE TV

: Disconnect the STB from the mains before connecting or disconnecting the cable from the satellite dish.
FAILURE TO DO SO CAN DAMAGE THE TV.

EARTHING : The LNB cable MUST BE EARTHED to the system earth for the satellite dish. The earthing system must comply with SABS 061.

LOCATION : Place the STB indoor in order not to expose to lightening, rain or sunlight.



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

Warning!

Please do not insert metal or alien substance into the slots for the Modules and Smart Cards.
In doing so can cause damage to the STB and reduce its life span.

Copyright & Glossary

Copyright

- VIACCESS™ is a trademark of France Telecom.
- CryptoWorks(TM) is a trademark of Philips Electronics N.V.
- Irdeto is a trademark of Mindport BV.
- Nagravision is a registered trademark of KUNDELSKI S.A.
- Conax is a trademark of Telenor Conax AS.
- “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

Warning

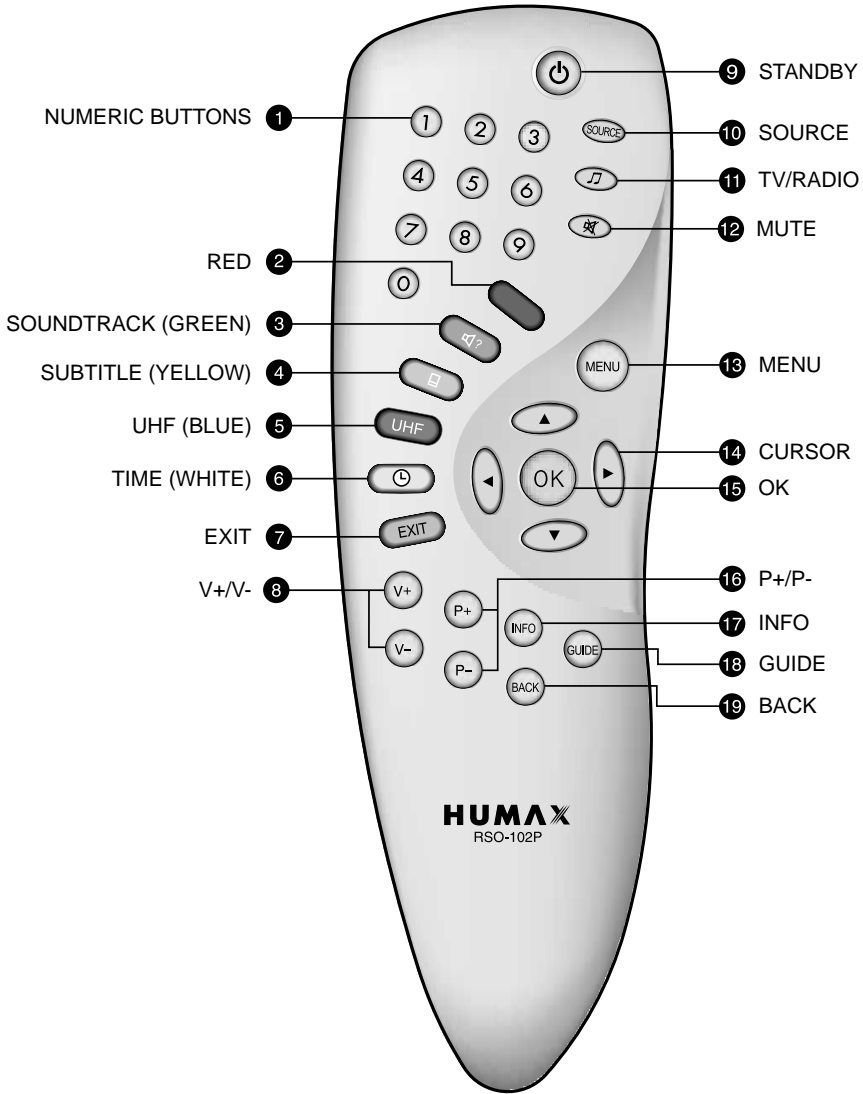
HUMAX cannot be held responsible for any kind of problems caused by the use of unofficial software. The use of software versions other than HUMAX official software will void the manufacture’s warranty.

It is advised that only the formal software released from HUMAX should be used in all HUMAX product range.

Glossary

- **Antenna**
A device that collects and radiates electromagnetic waves. Includes a satellite dish and broadband antenna.
- **Forward Error Correction(FEC)**
A system of error control for data transmission.
- **Frequency**
The number of cycles or events per one second, which is expressed in the unit of Hertz(Hz).
- **Intermediate Frequency (IF)**
A frequency to which a carrier frequency is shifted as an intermediate step in transmission or reception.
- **Low Noise Block (LNB) Downconverter**
A low noise microwave amplifier and converter which downconverts a range of frequencies to IF range.
- **Packet Identifier (PID)**
A set of numbers that identifies transport stream packets containing data from a single data stream.
- **Polarisation**
Characteristic of an electromagnetic wave determined by the orientation of the electricfield vector.
- **Quaternary Phase Shift Keying (QPSK)**
Phase-shift keying in which four different phase angles are used.
- **Service**
A channel to which a decoder or TV is tuned.
- **Transponder**
An automatic device that receives, amplifies and retransmits a signal on a different frequency.

Remote Control Unit



1 NUMERIC BUTTONS

Press to select a service, enter your PIN Code or numeric on the menu.

2 RED

This button has functions same as the RED button on the menus and for OPEN TV applications.

3 SOUNDTRACK (GREEN)

Press to display the soundtrack list for the current service. And this button functions same as the GREEN button on the menus and for OPEN TV applications.

4 SUBTITLE (YELLOW)

Press to display the subtitle language list for the current service. And this button functions same as the YELLOW button on the menus and for OPEN TV applications.

5 UHF (BLUE)

Press to set the UHF menu.
This button functions same as the BLUE button on the menus and for OPEN TV applications.

6 TIME (WHITE)

Press to display the current time on the screen.
Press to reserve services in the EPG.

7 EXIT

Press to return to the previous menu and screen.

8 V+/V-

Volume up/down buttons.
Press to increase or decrease the volume.

9 STANDBY

Press to switch between Operation and Standby modes.

10 SOURCE

Press to select the TV/SAT mode.

11 TV/RADIO

Press to switch between TV and Radio modes.

12 MUTE

Press to temporarily cut off the sound.

13 MENU

Press to display the Main Menu on the screen or return to the screen from a sub menu screen.

14 CURSOR

Press to move the highlight bar for selecting options on the menus.
And this button is used to change services (up/down) and increase or decrease the audio volume.

15 OK

Press to display the service list.
This button is used to select the item on the menus.

16 P+/P-

Programme up/down buttons.
Press to tune to the next or previous service.
Press to move up or down pages on the menus.

17 INFO

Press to display the programme information box on the screen.

18 GUIDE

Electronic Programme Guide button displays the TV/Radio programme guide.

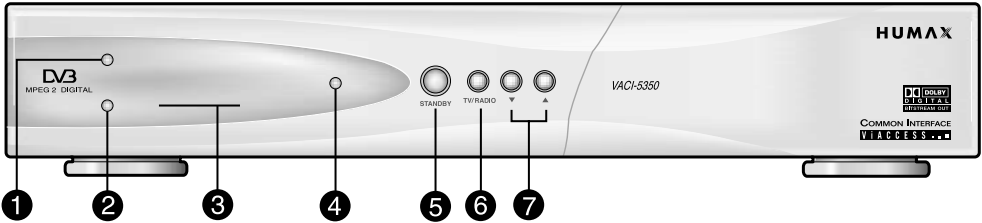
19 BACK

Press to select the service that was previously viewed.

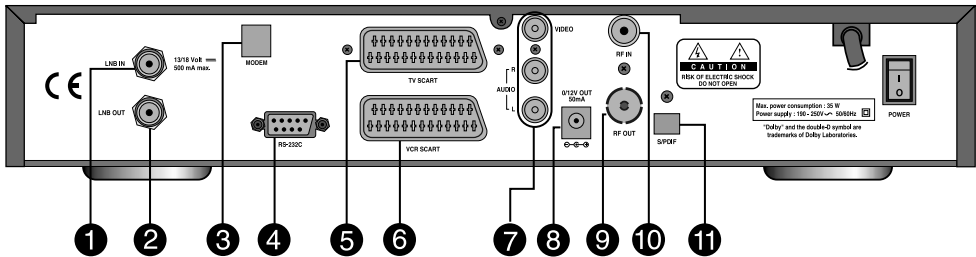
• **Please note** : The design of Remote Control Unit may be changed without notice in advance.

STB Connection

FRONT & REAR PANEL

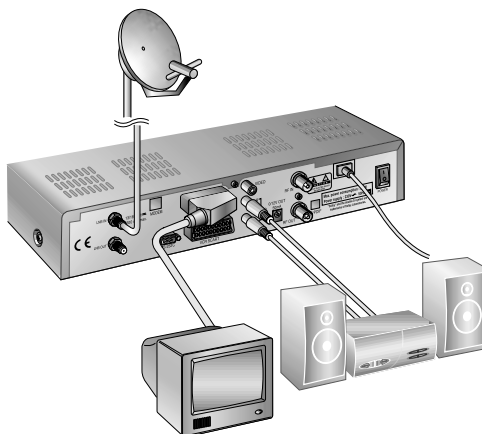


- 1 TV LED(AMBER)**
The LED lights on in TV mode.
- 2 RADIO LED(GREEN)**
The LED lights on in RADIO mode.
- 3 DISPLAY**
Shows service number, error messages, RCU commands and time in Standby mode.
- 4 STANDBY LED(RED)**
Indicates that the STB is under standby.
- 5 STANDBY**
Press to switch between Operation and Standby modes.
- 6 TV/RADIO**
Press to switch between TV and Radio modes.
- 7 ▼, ▲**
Use to change services down/up.



- 1 LNB IN**
Use to connect an antenna.
- 2 LNB OUT**
Use it when connecting to another STB.
- 3 MODEM**
Use to connect telephon line.
- 4 RS-232C**
Use it when connecting to your PC.
- 5 TV SCART**
For the audio/video input of the TV.
- 6 VCR SCART**
For the VCR.
- 7 AUDIO/VIDEO OUTPUT**
Audio/video signal from your STB to VCR or TV.
- 8 0/12V OUT**
For an external LNB switch.
- 9 RF OUTPUT**
Use to connect a RF signal from your STB to RF(ANT) input jack on your TV.
- 10 RF INPUT**
Use to connect a general Aerial Antenna and CABLE jacks to a RF input jack on the STB.
- 11 S/PDIF**
Output for connection to a digital amplifier.

There are several ways of connecting the STB to your existing Audio/TV system. We recommend using one of the following set-up for best results:



TV only

1. Connect one end of a 21-pin SCART cable to the TV SCART connector on the STB and the other end to a SCART socket on your TV.
2. Connect one end of a RF lead to the RF OUT connector on the STB and the other end to the RF IN connector on your TV.
3. Connect your TV antenna to the RF IN connector on the STB for receiving terrestrial channels.
4. Connect the coaxial cable from the LNB to the LNB IN socket on the STB.

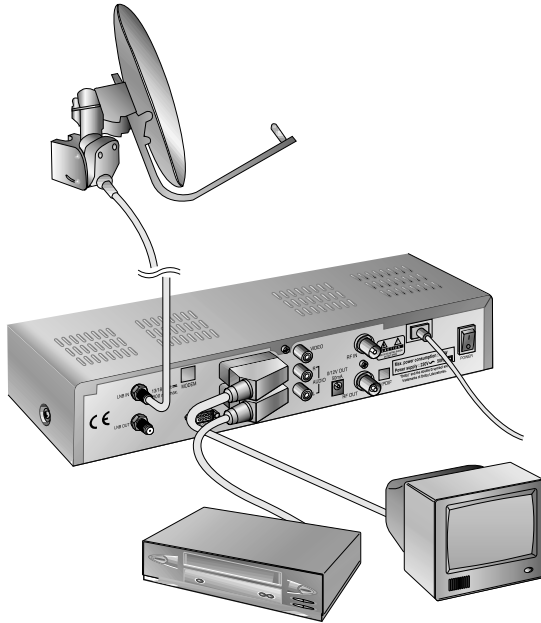
TV with VCR

1. Connect one end of a 21-pin SCART cable to the TV SCART connector on the STB and the other end to a SCART socket on your TV.
2. Connect one end of a 21-pin SCART cable to the VCR SCART connector on the STB and the other end to a SCART socket on your VCR.
3. Connect one end of a RF lead to the RF OUT connector on the STB and the other end to the RF IN connector on your VCR.
4. Connect one end of a RF lead to the RF OUT connector on your VCR and the other end to the RF IN connector on your TV.
5. Connect your TV antenna to the RF IN connector on the STB for receiving terrestrial channels.
6. Connect the coaxial cable from the LNB to the LNB IN socket on the STB.

With Hi-Fi System

1. Connect an RCA/Cinch stereo cable from the AUDIO L,R sockets on the back of the STB to the LINE, AUX, SPARE OR EXTRA input sockets on your Hi-Fi system.

STB Connection



TV with VCR and Motorised System (DiSEqC 1.2)

1. Connect one end of a 21-pin SCART cable to the TV SCART connector on the STB and the other end to a SCART socket on your TV.
2. Connect one end of a 21-pin SCART cable to the VCR SCART connector on the STB and the other end to a SCART socket on your VCR.
3. Connect one end of a RF lead to the RF OUT connector on your VCR and the other end to the RF IN connector on your TV.
4. Connect one end of a RF lead to the RF IN connector on your VCR and the other end to the RF OUT connector on the STB.
5. Connect the coaxial cable from the LNB of your motorised system to the LNB IN socket on the STB.
6. Connect your TV antenna to the RF IN connector on the STB for receiving terrestrial channels.
7. Connect the coaxial cable from the LNB to the LNB connector on the DiSEqC 1.2 motor.

Reference

1. Connect DiSEqC 1.0

All our receivers are designed to be DiSEqC 1.0 compatible. This allows multiple antennas to be connected to the STB simultaneously.

If you have two or more fixed antennas or LNBs, you can use a DiSEqC 1.0 switch.

1. Connect the coaxial cable from the first LNB to the LNB 1 or LNB A input connector of the DiSEqC switch.
2. Connect the coaxial cable from the second LNB to the LNB 2 or LNB B input connector of the DiSEqC switch.
3. Do the same for other LNBs.
4. Connect one end of a Coaxial cable to the RF output connector of the DiSEqC switch and the other end to the LNB IN socket on the STB.

2. Connect DiSEqC 1.2

Please refer to page 23.

3. Connect a Satellite antenna

To the digital receiver, you can connect either a single satellite antenna directly or through converter box several antennas or LNB of multi-feed equipment.

You can connect a further Sat-receiver (for example analog), with the receiver of common antenna equipment that has satellite signals.

• Connect an antenna cable through converter boxes

1. When you assemble several antenna or a multi-feed equipment that has several LNB (or LNB with several exits), connect each cable from the antenna to a converter box.
2. Connect the output of converter box to "LNB IN", as in example displayed.
3. When you use a converter box of 0/12V-steerage, connect it to the output "0/12V" additionally.
For converter boxes of 22KHz- or DiSEqC-steerage, you can skip this point because the steerage signal occurs through the antenna cable.

4. Loop Through

If you have another analogue or digital STB and you wish to use the same LNB then you can connect it via the loop through. Connect one end of a Coaxial cable to the LNB OUT on the STB and connect the other end to the LNB IN on your second STB.

Reference

5. Connect a S/PDIF Fiber-Optic cable

If you are watching a programme with a Dolby Digital soundtrack (see page 11) you can enjoy the higher quality sound of the Dolby Digital audio by connecting the STB to an external Dolby Digital television or amplifier. Do this by connecting the optical S/PDIF output of the STB to the optical S/PDIF input of the external Dolby Digital product (television, amplifier,.....).

6. Software Upgrade

Humax digital set-top box is a highly sophisticated product - incorporating one of the best software applications.

Whenever a problem is found with this software or, in fact, extra functions or enhanced applications are added, the software in the equipment has to be upgraded.

In order to maintain proper performance of the product, it is essential to have the most up to date software.

There are three methods to upgrade the software :

- (a) set-top box to set-top box download (copies the software of the main unit into slave unit);
- (b) pc to set-top box download (downloads the software directly from pc to the model requiring upgrade);
- (c) OTA over-the-air (downloads the software where the manufacturer reserves the right to decide when and where to release through satellite system).

Over The Air (OTA) is simply another alternative for downloading software versions. However, the manufacturer reserves the right to decide when and where this software upgrade can take place by "beaming" latest software versions over the air via satellite systems. Note that OTA is only limited to certain geographical regions mainly due to different satellites having different footprints (area where the signal can be received).

SUSS (TM) is an official trademark and logo for Humax loader software to perform OTA.

The software upgrade via satellite system will only occur under the following circumstances :

- 1) the equipment should have appropriate loader software;
- 2) the manufacturer decides to release software downloading via a designated satellite system;
- 3) the equipment must be "tuned" properly to the same satellite that the manufacturer uses.

Guide of Function

Information Box (I-Plate)

Displays the current or following programme information.

1. When changing service parameters (the Service Number, Service Name, Current Time, Subtitle, Teletext, Scramble Service Symbol and Dolby Digital icons), appeared at the lower bar on the screen.

In Cast of Subtitle, Teletext, Scramble Service Symbol and Dolby Digital Symbol, these are automatically displayed when the broadcasting station provides appropriate information.

2. When the "Detailed Information" about the current service is provided by the broadcaster, press the **(INFO)** button again on the I-Plate, then the Event Name, Event Duration Time and Description Text of Event appeared on the screen.
3. "VIASAT" in I-Plate is meaning to provide broadcaster application such as programme provider EPG.
4. Press the **(EXIT)** or **(INFO)** button to cancel the Detail Information mode.

Changing Services & Selecting Services

To change services, do in the following sequence:

- You can directly change services by entering full four-digit numbers. When you select a service by using the Numeric buttons (0~9) on the remote control unit, the selected service will be displayed on both screen and Front LEDs.
- Press the **(P+)**/**(P-)** buttons.
Also if you press the Back(**(BACK)**), Service-List(**(OK)**), Guide(**(GUIDE)**) mode button, services are changed.
- To watch the service that is locked by Parental Rating, enter the user PIN Code in the PIN Code window that is displayed on the screen.

Service List







- To watch the Service List, press the **(OK)** button on the remote control unit.
When you press Yellow(**(YELLOW)**) button, the TV service list, the TV favourite service list, the Radio service list and the Radio favourite service list will be shown sequentially.
When you press Blue(**(BLUE)**) button, the above lists will be shown to the constant direction.
- To watch the service you prefer:
 - Use the **(▲)**/**(▼)** buttons to select the service you prefer and press the **(OK)** button. Or use the **(P+)**/**(P-)** buttons to select the service you prefer.
 - If the service is locked by a PIN Code, enter the appropriate PIN Code.



Guide of Function






The colour button corresponds the following.


- Red ()button - Displays in a sequence Service No.
- Green ()button - Displays in a sequence alphabetical Service Name
- Yellow ()button - Displays Service List
- Blue ()button - Displays Service List
-  button - Page Down
-  button - Page Up

Volume Control


To adjust the Volume level, use the  buttons.

To temporarily stop the Volume, press the Mute()button.

To cancel Mute, press the Mute()button again or press the  buttons.

Press the  button to cancel volume mode.

Soundtrack

When you want to change the Audio Language of current service, press the Soundtrack()button.

The on-screen menu is displayed on the screen.

To change the Audio Language:



◀/▶ buttons : Use to select the Audio on the left, right.

▲/▼ buttons : Use to select the Audio Language you want.


You can select a Audio Language in Setup menu.

Soundtracks broadcast in Dolby Digital are indicated by Dolby Digital symbols either side of the respective language selection in the menu.



By selecting such a soundtrack the Dolby Digital audio will be output by the optical S/PDIF on the STB. This can be decoded by an external Dolby Digital television or amplifier, for example.



Press the  or  button to cancel the Soundtrack mode.

Subtitle

When the current broadcasting programme provides subtitle, press the Subtitle()button to see the current subtitle language list and Subtitle page number.

To change the subtitle language:

1. Use the  buttons to select a Subtitle language you want.
2. Press the  button and the selected language is highlighted and then the Subtitle Language you want is displayed on the screen.

Press the  or  button to cancel the Subtitle mode.

Teletext

Use your TV remote control unit to control the Teletext service.

The teletext button doesn't exist on the STB remote control unit.

Guide of Main Menu

1. GUIDE (Electronic Programme Guide)

This is programme provider EPG which is provided by broadcaster. You can view EPG as pressing Guide(GUIDE) button on the Remote Control Unit in case of supported by VIASAT application. If do not provided this application, then Manufacturer's EPG available. The TV Guide supplies information such as programme listings and start and end times for all available channels. Also, detailed information about the programme is often available in the EPG(the availability and amount of these programme details will vary, depending on the particular broadcaster).

Manufacturer's EPG

NOW mode

Show the informations of the programmes that are played now. This mode consists of the service name, event name, event duration time, current time and display window.

To watch a programme you want through the display window :

- Use the ▲/▼ buttons to select a programme you want. And then press the (OK) button on the remote control unit. The selected service will appear on the right display window. Service no. and service name are displayed at left of the display window.
- At the bottom of the screen, the detail information about the selected event will be shown when available.



The colour button corresponds the following.

- Red () button - Now mode
- Green() button - Weekly mode
- Yellow() button - Reserved mode

Weekly mode

Shows the information of programmes that will be played for a week. Select a day you want using the ◀/▶ buttons. You can view all services of the programme.

To reserve a programme you want :

- Select a programme you want by using the ▲/▼ buttons. And then press the White() button.



Reserved mode

Shows the programme lists that you have already reserved on the TV Guide. Maximum 16 programmes can be reserved. This programme list includes service name, date, duration time, reservation mode and event name.

To cancel the Reserved service, select a programme you want to cancel using the ▲/▼ buttons and then press the Yellow() button.



Guide of Main Menu

2. MENU


The Installation mode allows you to have the information of setting services and newly set services (language, time, organise, search,..) Furthermore, you can recognize the states of hardware, software versions and signals level from your STB.

2-1. Parameters

The Parameters Setting mode supports the STB internal settings according to the connection of the receiver and external units. This mode includes Language Setting, Time Setting, OSD Setting, Parental Control, AV Output and UHF Tuning.

Language Setting

Select the language for Menu, Audio or Subtitle.

1. Use the ▲/▼ buttons in the Setup mode to select the highlighted parameters. And then press the ► button to move to the submenu.
2. Use the ▲/▼ buttons to select the Language Setting mode and press the  button.
3. Select the Menu, Audio or Subtitle Language and press the ▲/▼ buttons.
4. Use the ◀/▶ buttons to select the language you prefer.

Menu Language

Select a language for the menu or banner OSD in this mode.

You can choose the language from a selection of Danish, English, Finnish, German, Norwegian or Swedish.

When a broadcasting information(event) is transmitted, the selected menu language will be applied.

Audio Language

Select the default language for audio when changing services.

If you change the current service, your STB will initially select the previously memorized Audio Language. If the Audio Language of current service is not provided, at this time, you should reselect a language on the Audio Language menu.

Languages provided: Danish, Deutsch, English, Finnish, French, German, Italian, Norwegian, Spanish, Swedish and so on.

If no language is provided, then the default language of current service will be automatically selected.

Subtitle Language

Select the default language for Subtitle when changing services.

Language provided: Danish, Deutsch, English, Finnish, French, German, Italian, Norwegian, Spanish, Swedish and so on.

If you select "Disabled" mode, then subtitle is not working on display in spite of the existence in Subtitle Data on broadcasting stream.



Time Setting

You can set the Current Time and Wakeup/Sleep Time in this mode. Furthermore, the service in the Wakeup Time mode can be set. When a VCR is connected, recording can be automatically done according to Wakeup/Sleep Time Setting.

Current Time

To set the Current Time, enter the Offset value using the standardised information of current service area. The time setting will be used as the standardised time for the I-Plate, TV Guide, Wakeup and Sleep timer.

Time Offset

Current time is based on TDT (Time and Data Table) at the stream of the current service. Adjust the current local time in one hour step using the ◀/▶ buttons.

Wakeup Time

Select the time so that STB is turned on automatically. Use the Numeric buttons(0~9) on the remote control unit to enter your Wakeup Time. If you do not want Wakeup Time, then select "Disabled" mode using the ◀/▶ buttons.

Wakeup SVC No.

Use the ◀/▶ buttons to set the service you want for the set Wakeup Time. The Service Name that has been determined by the Wakeup Service No. will be shown.

Sleep Time

Depending on time setting, select the time when STB is turned off. Use the Numeric buttons(0~9) on the remote control unit to enter your Sleep Time. If you do not want Sleep Time, then select "Disabled" mode using the ◀/▶ buttons.



Guide of Main Menu

OSD Setting

Select the OSD transparency for information box and the display time.

OSD Transparency

Select the OSD transparent type. It affects Information Box, Service List and Setup menu.

Use the ◀/▶ buttons to 0%, 25%, 50%, 75% and 100%.

Info.Box Display Time

Set the display duration of Information Box displayed on the screen after changing services. The time ranges from 0 to 20 seconds.

Parental Control

You can set a parental guidance rating to each programme in this mode.

1. When the (OK) button is pressed after selecting the highlighted parental control mode on the initial menu screen, a display window for entering the PIN Code will appear on the centre of screen.
2. Enter the PIN Code " **0000** " on the display window and press the (OK) button.
The manufacturer default PIN Code is **0000** .
(If any problem occurs when entering a PIN Code, you cannot switch to the next mode.)
3. Set the parental guidance rating of highlighted Censorship.
The parental level is given as age-based numbers :
No block, All block, 6, 10, 14 and 18.
Enter the PIN Code to unlock or lock programmes.
4. To change your PIN Code:
 - Enter a New PIN Code in the highlighted New PIN Code using the ▲/▼ buttons. And then press the (OK) button.
 - To verify the New PIN Code, re-enter a New PIN Code in the highlighted Verify PIN Code and press the (OK) button.
5. When the entered PIN Code is correct, then all settings are completed.



AV Output Setting

Video Output (CVBS/S-Video/RGB)

Set the Video mode for the TV SCART output.

Audio Output

Set the Audio mode which is output from the TV SCART and RCA/Cinch Jack. (Stereo/Mono)

Dolby Digital

If Dolby Digital option is ON and the broadcaster provides the Dolby Digital stream, the Dolby Digital audio language is firstly selected when changing the service.

Screen Mode

Select the aspect ratio of TV which is connected to STB (4:3 or 16:9).

Display Format

Select the format which the video is to be displayed on screen. When your TV set is 4:3 and video source is 16:9, STB will display in Letter-Box or Centre mode as selected. When your TV set is 16:9 and video source is 4:3, STB will display in the Pillar-Box or Full mode as selected.

UHF Tuning

You select the STB output by using the UHF channel.

UHF Channel

Select an UHF channel. The range of channels and frequency value are different for each PAL standard:
PAL I/G for Europe : CH21 ~ CH69

PAL

Select a PAL I or PAL G according to the above range of channels.

Offset

Adjust the Fine Tuning value. The Offset ranges from -4 to +4 and each Offset represents 1MHz.



Guide of Main Menu

2-2. Service Organising


The Service Organising menu allows the user to organise the Service Lists.

** The Manufacturer Default PIN Code is **0000** .


Organising Service List

Use ▲/▼ buttons to select any service bouquet list you want or organise and press ► button.


To delete Services :


Use the ▲/▼ buttons to select the service you want to delete and press the Red()button.


When the press the Exit()button, the message “Save the change?” appears on the screen.

Press the  button to delete the Service.


When the cursor is positioned on the Service list, the colour buttons function as follows:

Red ()button - Deletes Services

Yellow ()button - Delete all (delete all services)


Blue ()button - Locks services


Adding services to a favourite service list

Use ▲/▼ buttons to select the service you want to add to the favourite service list and press Red()button.


Then, two list box will appear on the screen.


When the cursor is positioned on the left list box, the colour button function as follows:

Green ()button - Adds a selected service to the service list.

Blue ()button - Adds all services in the left list box to the service list.

When the cursor is positioned on the right list box, the colour button function as follows:

Red ()button - Deletes a selected service from the favourite service list.

Yellow ()button - Deletes all services in the favourite service list.



2-3. Service Search

Antenna Setting

Selects the Antenna and LNB settings for Service search. As you can change the settings for 22KHz Tone, 0/12V and DiSEqC switch, there are 32 possible Antenna Setting for use. The values that are set in this menu will be available for selection in other service searching menus.

Antenna Alternative

There are 32 antenna alternatives, each one can have different combinations of settings for 22KHz Tone, 0/12V, DiSEqC switch and Motorised System.

Satellite Name

Selects the Satellite Name that corresponds to the value of the Antenna Alternative.

1. Use the ◀/▶ buttons to select the satellite name you prefer.
 - The selected Satellite Name can help you select the Antenna Alternative in the searching menu, but it is only possible to change or select the Satellite Name in the Antenna Setting menu.

LNB Frequency

1. Select the LNB Frequency that is set to antenna.
2. Use the ◀/▶ buttons to select the LNB frequency (Universal, 5150, 9750, 10600, 10750, 11475MHz or 0, 1,, 9).
3. If the required LNB Frequency is not available, then select "0" and enter the frequency manually using the Numeric buttons(0~9).
4. When you select Universal, both 9750 and 10600MHz are supported at the same time.
The 22KHz Tone setting is unnecessary. (Disabled)

22KHz Tone

When you use a Dual LNB or two antennas connected to a 22KHz Tone switch box, make 22KHz Tone switch Enable or Disable to select LNB or antenna.

0/12Volt Switch

When you use two LNBs or antennas to switch 0/12V, select Enable or Disable. 0/12V terminal is located on the rear of STB.

DiSEqC Input

According to the option and position of DiSEqC switch, select Disabled, Tone Burst A to B and DiSEqC A to D.



Guide of Main Menu

Motorised System

The Motorised System is used to set the DiSEqC 1.2 motor by Eutelsat specification.
If you wish to use this system, please refer to page 23.

Manual Search

Set the Search Parameters(Frequency, Symbol Rate, etc.) to manually find the services that you have selected in the transponder. The bars on bottom of the submenu show the signal level and quality of the entered parameters.

Antenna Alternative

Select the target antenna for manual search.
This antenna alternative number is already set in Antenna Setting menu.

Frequency

Use the Numeric buttons(0~9) on the remote control unit.

Symbol Rate

Inputs the Symbol Rate of the transponder you want to find.
Use the ◀/▶ buttons or Numeric buttons on the remote control unit.

Polarisation

Use the ◀/▶ buttons to select the Polarization of the transponder.
(Auto, Horizontal, Vertical)

- Horizontal : 18 V are output through LNB line
- Vertical : 13.5 V are output through LNB line

FEC(Forward Error Correction)

Use the ◀/▶ buttons to select the Forward Error Correction of the transponder. You can select the value of Auto, 1/2, 2/3, 3/4, 5/6 and 7/8.

Search Type

1. You can select a type of two different ones (Simple, Network).
2. After selecting the type you prefer, press the **OK** button to start searching.
The Scramble icon shows the scramble services.
 - Network : A group of transponders.

Signal Level (AGC)

It shows the strenght of broadcasting signal from the setellite.

Signal Quality (BER)

It shows the quality of broadcasting signal from the setellite.



Automatic Search

When you enter the Satellite Name that is set in Antenna Setting menu, search all services of the selected satellite without inputting the extra frequency.


Antenna Alternative

Select the target antenna for Automatic Service Search. The attribute of this antenna alternative number is already set in Antenna Setting menu and the satellite name is helpful in the selection of the antenna, in this menu you can change the satellite name.

Search Type

- You can select one of two modes (Quick or Detail).
- When you select Quick mode, it searches the service by search parameters that is preset.
- When you select Detail mode, it searches the service through all field of tuner(950 - 2150MHz).

Detail Mode

To use detail mode of search type, you should put Symbol Rate using the Numeric buttons(0~9) by pressing Red()button. You can add maximum five Symbol Rates.

VIASAT Search

It helps tuning VIASAT broadcasting easily and quickly. After entering the information of Home transponder such as antenna and frequency parameters, it might be search all services of VIASAT automatically.

Canal Digital Search

It helps tuning Canal Digital broadcasting easily and quickly. After entering the information of Home transponder such as antenna and frequency parameters, it might be search all services of Canal Digital automatically.

2-4. Common Interface

Users can enjoy not only scrambled services using the Conditional Access Modules (CAM), but also Free-To-Air services. This STB currently supports six kinds of CAM (VIACCESS™, Nagravision, CONAX, CryptoWorks(TM), Irdeto or Mediaguard.). Common Interface module and smart card depend on the service provider. If you need CAM, contact your service provider or distributor.



Guide of Main Menu

2-5. Conditional Access(for Viaccess Embedded)

This menu allows the user to view the information of Viaccess conditional access system such as general Smart Card Information, Service List, Change Maturity Rating and Change PIN Code.

Smart Card Informations

You can see the Unique Address, Current Maturity Rating of the Smart Card.

Consulations

Service or Bouquets are encrypted by Viaccess and operators name like VASAT, are displayed on the TV screen. To get more detailed information of viewing rights of services or Bouquets, press **OK** button.

Authorizations

Change Maturity Rating

The STB is required by Viaccess to include a parental control facility for the viewing of restricted services. This can be set for ages ranging from 3 to 18 in steps of one. The correct PIN Code is required to change this option.

Change PIN Code

When you buy a new Smart Card, the initial PIN Code is set to "NULL". Therefore, it is recommended that this PIN Code should be changed.



2-6. Informations

STB Status

Displays the information of OpenTV Version, Manufacture, Manufacture Version, Manufacture ID, H/W Version, Usage ID, S/W Version and Loader Version of STB.

Signal Detection

Shows the Signal Level(AGC level) and Signal Quality(BER) of the current service and is help to the initial antenna setting.

Software Upgrade

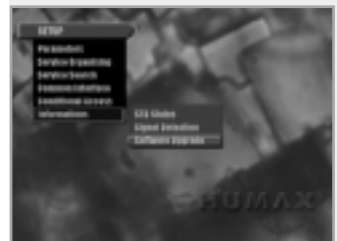
You can download and upgrade the software of this STB via SIRIUS satellite when the software of new version is released. Do not turn off the STB during downloading.

Notify New Software

- You can select one of two modes.
(Enabled or Disabled, by pressing the ◀/▶ buttons.)
- The Enable mode makes your STB show the S/W upgrade message when your STB detects the new software.
- In the Disabled mode your STB shows no message though your STB detects the new software.

Upgrade New Software

You can upgrade your software if there is a new software. Press the (OK) button and then your STB will search any software upgrade available.



Motorised system

DiSEqC 1.2 User Instructions

If you have a DiSEqC 1.2 Motorised System, then you can use the DiSEqC 1.2 functions available. The following instruction describes how to use the DiSEqC 1.2 functions to store the positions of the satellites and to search for the channels (STAB Rotor Sat motor recommended).

A. Antenna Setting your Receiver for DiSEqC 1.2



1. Press the **(MENU)** button, to display Main Menu.
2. Select Service Search option and press **(OK)** button, to move submenu.
3. Select Antenna Setting option and press **(OK)** button, to display the Antenna Setting menu.
4. You must set up a separate antenna alternative for each satellite position required.
5. Select the correct LNB frequency for the LNB you are using.
6. Set the Motorised System to Enable using the **◀/▶** buttons. Then, Satellite name is changed to "Reference".
* The option DiSEqC Input will be disabled.
This option is used for DiSEqC 1.0, and cannot be used in conjunction with DiSEqC 1.2.
7. Select the satellite name you want using the **◀/▶** buttons, and press **(OK)** button, to display Manual Search menu.

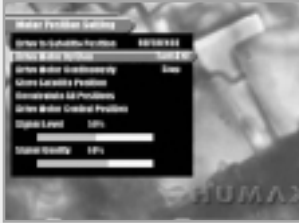
B. Manual Search



- * This is required when you first set your receiver up to use DiSEqC 1.2, and sets the positions of all pre-programmed satellites.
1. Make sure your motor is installed correctly with the calibrations adjusted for the region you are situated. (Please consult the user manual for your motor.)
 2. Make sure your receiver is set up to use DiSEqC 1.2. (see section A above)
 3. Select Manual Search option and press **(OK)** button, to display the Manual Search menu.
 4. Enter the Frequency, Polarisation, Symbol Rate and FEC of a transponder on the satellite you wish to find. This transponder information should be unique to this satellite.
 5. Press Red(**○**) button, to display Motor Position Setting menu. (see section C below)

C. Moving to the initial position of satellite manually

In this menu, you can change the value to the satellite you wish to find initial position.



1. Highlight the Drive to Satellite Position and appear satellite name you selected.
2. Highlight the Drive Motor Continuously option and use the ◀/▶ buttons to drive motor. ◀ button drives to west and ▶ button drives to east. In this movement option, the motor is moved continuously until ◀ or ▶ buttons are pressed again.
3. Highlight the Drive Motor by step option and use the ◀/▶ buttons to drive motor. ◀ button drives to west and ▶ button drives to east. In this movement option, the motor is moved by step whenever ◀ or ▶ buttons are pressed.
4. If you find the position of satellite that signal level and quality is the highest, then highlight the Store Satellite Position option and press (OK) button.
5. Highlight the Recalculate All Position option and press (OK) button to pre-set satellite's positions.
6. Press Red () button, to display Motor Limit Setting menu. (see section D below)
7. Press Green () button, to search services in this transponder of satellite.
* Highlight the Drive Motor Central Position option and (OK) button, to drive to the central position of motor at one time.

D. Motor Limit Setting



1. Highlight the Limit Setting option and use the ◀/▶ buttons to change the value to Disable to set up the limitation of motor.
2. Highlight the Drive Motor East/West option and use the ◀/▶ buttons to drive motor. ◀ button drives to west and ▶ button drives to east.
3. If you finished driving east limitation of motor, highlight the Store Limit East option and press (OK) button, to reset new east limitation of motor.
4. If you finished driving west limitation of motor, highlight the Store Limit West option and press (OK) button, to reset new west limitation of motor.

E. Manual Search for another services on your selected satellite



1. Press the (MENU) button, to display Main Menu.
2. Select Service Search option and press (OK) button, to move submenu.
3. Select Manual Search option and press (OK) button, to display the Manual Search menu.
4. Enter the Frequency, Polarisation, Symbol Rate and FEC of a transponder on the satellite you wish to find. This transponder information should be unique to this satellite.
5. If there are the signal level and quality as these values, press (OK) button to search services in this transponder of satellite.

Motorised system

F. Automatic Search on your selected satellite



1. Select Automatic Search option and press **OK** button, to display the Automatic Search menu after setting from A to E.
2. Highlight the Antenna Alternative option and use the **◀/▶** buttons to change the value to REFERENCE.
3. Highlight the Satellite Position and use the **◀/▶** buttons to select the satellite you want to search on. Press **OK** button to search services on this satellite.

* Now that you have stored all the positions of the satellites and searched for all the services you want, you can now use your receiver as normal. When you change to a service that is being transmitted from a different satellite, you will have to wait a few seconds to allow the motor to move into position to receive the new channel.

G. To set another satellite.

1. First of all, you must change Antenna Alternative number in order to separate Antenna Alternative number of setted satellite.
2. Next sequence is same as setting method from A to E.

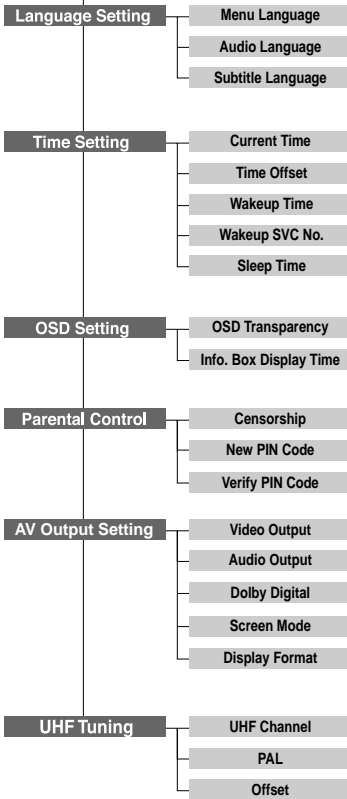
Troubleshooting Guide

| Problem | Solution |
|--|---|
| About STB | |
| Does not display any message on the front panel or STB has no power. | Check the main power cable and check that it is plugged into a suitable power outlet. Check you have switched the STB main power switch ON at the rear of the STB. Check whether STB is in Standby mode. |
| No Picture | Ensure that the STB is switched on (see above). Check the video output port (SCART & RCA Jack) is firmly connected to the TV or VCR. If you are using the RF Output, check that the RF Lead is connected firmly to the STB and TV/VCR. Check that you have selected the correct channel or Video Output on your TV. If you are using the RF Output, check that you have correctly tuned the UHF channel of the STB or TV. Check the brightness level of the TV. |
| Poor picture quality | See "No Picture" above. Check the signal level, if this is low then try adjusting the alignment of your dish. |
| No Sound | See "No Picture" above. Check the volume level of the TV and STB. Check the Mute status of the TV and STB. |
| Remote Control does not operate | Point remote control directly towards the STB. Check and replace batteries. |
| On-Screen Error Messages | |
| No or Bad Signal | Check the LNB - replace LNB if necessary. Check the cable from the LNB. Check the position of the dish - realign dish if necessary. If you are using a DiSEqC 1.0 switch, check that you have connected the LNBs to the correct connections on the switch. Check the "Signal Strength" and the "Signal Quality" in the Signal Status menu. |
| Service is not running or scrambled / No access to the service slot. | Check whether the Common Interface module and Smart card are correctly inserted. Check whether the Common Interface module and Smart card is appropriate for the selected service. |
| Please check the card / No right for this service / No smart card in slot and please insert your card (when using the CAM) | Check that the Smart card is inserted correctly. Check the Smart card is appropriate for the selected service. Check the subscription rights of the Smart card. |
| Time Display | |
| The front panel does not display the time. | Make sure you have switched on the STB. Switch the STB on and tune to a service to allow the STB to receive the time sent with the signal by the service provider. Front panel will only display the time in Standby mode. |
| Time displayed on the front panel is in correct. | Adjust the time in the Time Settings menu. |
| Service Search | |
| "No Signal" in Manual Search | Check the "Signal Strength" and the "Signal Quality" in the Signal Status menu. Check the LNB - replace LNB if necessary. Check the cable from the LNB. Check the position of the dish - realign dish if necessary. DiSEqC 1.0 Check that you have connected the LNBs to the correct connections on the switch. Check that you have set the correct settings in the Antenna Setting menu. DiSEqC 1.2 Check that you have selected this in the Antenna Setting menu. Check that the dish is aimed at the correct satellite. |
| Front Panel Error Messages | |
| E - dE : Incorrect data block(CRC-16) | Try switching STB power Off and On. |
| E - 1d E - rd : Invalid system ID | Check whether the system ID is different for Software and STB. |
| E - Ue : UART RX/TX time out | Try switching STB power Off and On. |

Menu Map

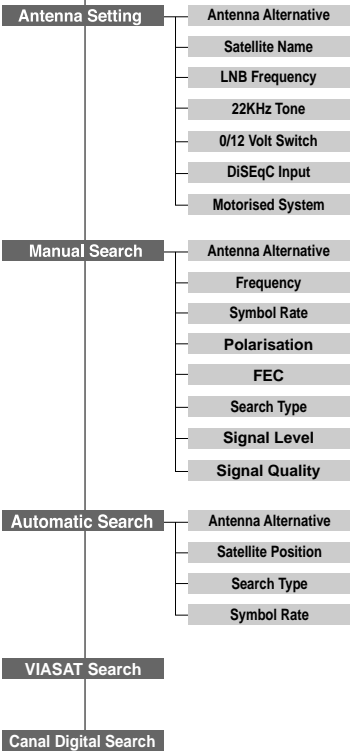
MENU

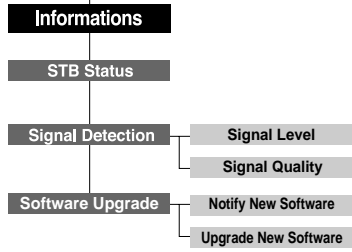
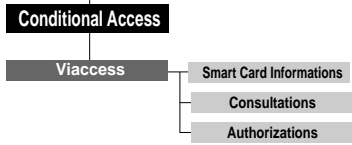
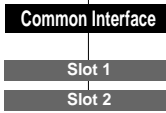
Parameters



Service Organising

Service Search





Specification

Conditional Access Interface

| | |
|-------------------|-------------------------|
| PCMCIA | 2 Slot Common Interface |
| Viaccess Embedded | 1 Slot Smart card |

Tuner & Channel

| | |
|--------------------------|--|
| Input Connector | F-type, IEC 169-24, Female |
| Frequency Range | 950 - 2150 MHz |
| Input Impedance | 75Ω unbalanced |
| Signal Level | -25 to -65dBm |
| IF | 480 MHz |
| IF Band width | 36 MHz |
| LNB Power & Polarisation | Vertical : +13.5V Horizontal : +18V Current : 500mA Max. Overload Protection |
| 22 KHz Tone | Frequency : 22 ± 4KHz Amplitude : 0.6 ± 0.2V |
| 0/12V DC Output | Current Max. 50mA |
| DiSEqC Control | Version 1.0/1.2 Compatible |
| Demodulation | QPSK |
| Input Symbol Rate | 2-31 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 x 576 |
| 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 | TMIPS R3930(81MHz) |
| Flash Memory | 3Mbyte |
| System DRAM | 8Mbyte |
| Graphic(MPEG) DRAM | 4Mbyte |

Modem

| | |
|-----------|-----------------|
| Connector | RJ 11 |
| Speed | V.22 (2400 bps) |

A/V & Data In/Out

| | |
|-----------|--|
| TV SCART | Video Output(CVBS, S-Video, RGB) Audio Output (Resolution : 20 bits DAC, Max. 2 Vrms) |
| VCR SCART | Video Output(CVBS) Video Input(CVBS, S-Video, RGB) Audio Output(Resolution : 20 bits DAC, Max. 1 Vrms) |
| VIDEO | RCA/Cinch, Video Output(CVBS) |
| AUDIO R/L | RCA/Cinch Volume and Mute Control (Resolution : 20 bits DAC, Max. 2 Vrms) |
| S/PDIF | Digital Audio Output, Fiber-Optic(Resolution : 20 bits) |
| RS-232C | Transfer rate 115,200 bps, 9pin D-sub Type |

RF-Modulator

| | |
|----------------|---|
| RF-Connector | 75Ω, IEC 169-2, Male / Female |
| Frequency | 470 - 860 MHz |
| Output Channel | CH21-69, CH28-69 or CH13-62 for the Remodulator |
| TV Standard | PAL I/G selectable by Menu setting |
| Preset Channel | CH36 (or TBD). Software changable by Menu |

Power Supply

| | |
|-------------------|---|
| Input Voltage | 190 - 250V AC, 50/60 Hz |
| Type | SMPS |
| Power Consumption | Max. 35W |
| Standby Power | ≤11W |
| Protection | Separate internal fuse. The input shall have lightning Protection |

Physical Specification

| | |
|------------------|---|
| Size (W x H x D) | 370 x 60 x 280 mm (Excluding the Foot) Foot height is 8 mm |
| Weight (Net) | Around 2.8 kg |
| Operating Temp | 0°C to + 45°C |
| Storage Temp | -10°C to + 70°C |
| Storage Humidity | 5% ~ 95% RH (Non-Condensing) |

• **Please note** : The specification of the STB may be changed without notice in advance.

You can use a special antenna switch with DiSEqC commands.

When changing ASTRA1 to EUTELSAT for example, a DiSEqC command is sent with the 22KHz tone through the antenna cable. The antenna switch will change ASTRA1 to EUTELSAT. The concept of DiSEqC is a protective trademark of EUTELSAT.

Data rate decides the picture quality of digital TV programmes.

Data rate of about 5-6 Mbit/s coincides with the picture quality of a analog TV programme.

HOVACI5350.600