

PALCOM

Digital Satellite Receiver

DSL-160 CI



Keep this manual for future reference.

IMPORTANT SAFETY INSTRUCTIONS

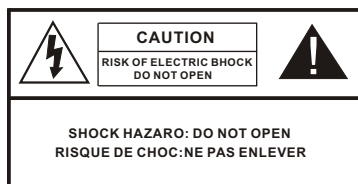
Thank you for choosing our product. Before installation, we would like to remind you of some notes, which is very important for operating safely and properly, as follows:

1. Be sure to read this user manual before starting your operation.
2. Never open the cover. It is very dangerous to touch the inside stuff of the unit due to possible electric shock.
3. If you don't use this unit for long time, please pull the power plug out from the outlet. Do not use a damaged power cord.
4. Do not touch the power with wet hands. If there is liquid flow into the unit, pull out the power cord immediately because it may cause fire or electric shock.
5. Place the unit in a well ventilated and no heat environment.
6. You must install the dish with correct direction and angle. If the dish is not working properly, contact your local dealer.
7. Install the unit horizontally. Unbalanced installation may cause the unit to be damaged by itself
8. When the unit is suddenly moved to a hot area from a cold area, it may cause some problems. In that case, turn off the power, and turn on again after 1-2 hours.
9. Install the unit in a place with:
 - good ventilation
 - suitable temperature
 - no direct sunrays
 - low humidity
 - low vibration influence
10. Do not put heavy objects on the unit.

PART I

This mark consists of two Graphical Symbols and warning message. The detailed specifications are as follows:

CAUTION: To reduce the risk of electric shock, don't remove cover (or back). Equipment service and maintenance should be undertaken only by trained personnel.



Packing Accessory List

Please check that whether all of following items are included in the package.

- ◆ DSL-160CI
- ◆ Remote Control Unit
- ◆ Two AAA Size Batteries(for remote control)
- ◆ AV Line
- ◆ Use's manual

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1. General Information

The Digital Set Top Box allows you to view digital satellite programmes. This User's Manual covers the installation of the STB and the necessary steps to operate various features. It also explains special features available only in this STB in details, which will help you to take full advantage of these features.

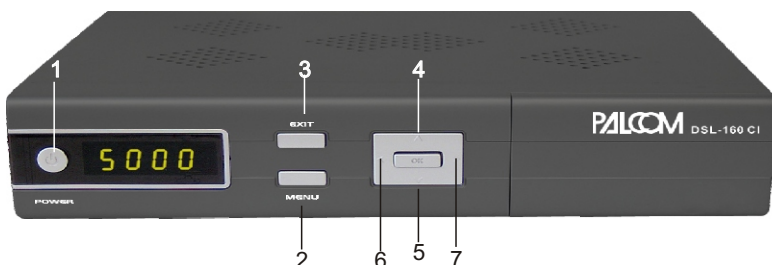
1.1 Main Features

- Multi Picture Preview
- Digital Audio with AC-3 support by SPDIF (Optional)
- PIG (Picture In Graphic) support
 - DiSEqC1.2 positioner for multi-satellites (63 satellites)
- C/Ku band control for each antenna
- Various channel editing functions (fav, move, lock ,delete and sort)
- User programmable various satellite & transponder information
- Automatic search for newly added transponder (Network Auto Search), stores up to 5000 channels
- Easy and fast software upgrade through RS-232 port
- Timer function, automatically turns On/Off by setting function (daily, weekly, one time)
- Automatic reserved channel moving system
- Electronic Program Guide (EPG)
- OSD Teletext (ETS 300 706) and Subtitle function support
- VBI teletext support
- Antenna positioning help feature
- Multi video output CVBS, RGB
- Various switch types, LNB types and NTSC/PAL/SECAM monitor type
- SCPC/MCPC receivable from C/Ku band satellite
- Multi LNB controlled by DiSEqC 1.0/1.1/1.2 and 22KHz switching
- 256 color On-Screen-Display
- Automatic PAL/NTSC/SECAM conversion
- Automatic last channel saving

1.2 For Your Safety

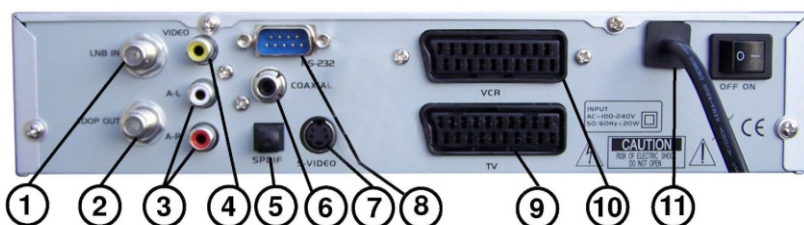
- Keep STB placed in clean space with sufficient ventilation
- Do not cover the STB with or place it on a unit that emits heat
- Clean the case by a soft cloth with a little washing liquid
- Do not connect or modify cables when the STB is plugged on
- Do not remove the cover
- Do not let the unit exposed to extreme heat, cold or humid conditions
- No liquids or any other materials to come inside of the unit

1.3 Front Panel



- (1) **【POWER】** Power switch
- (2) **【MENU】** Menu key TV
- (3) **【ENTER】** Confirm user's selection or display the program list on TV screen
- (4) **【 CHANNEL▲】** Channel Up
- (5) **【 CHANNEL▼】** Channel Down
- (6) **【 VOLUME ◀】** Volume Down
- (7) **【 VOLUME ▶】** Volume Up

1.4 Rear Panel



- (1) **【LNB IN】** LNB signals input
- (2) **【LOOP OUT】** LNB signals loop out
- (3) **【AUDIO-L】** Connect to the left audio channel for TV
- (4) **【AUDIO-R】** Connect to the right audio channel for TV
- (5) **【VIDEO】** Connect to the video channel for TV
- (6) **【SPDIF】** SPDIF audio output(coaxial) (**Caution:** the item is fixed)
- (7) **【COAXIAL】** Spdif audio output (coaxial)
- (8) **【S-Video】** S-Video signal for TV
- (9) **【RS-232】** Upgrade software, connect to PC or another STB
- (10) **【TV】** SCART output for TV
- (11) **【VCR】** SCART output for VCR
- (11) **【100V-240V 50/60Hz】** Connect to 100-240V voltage 50Hz range AC power

1.5 RCU

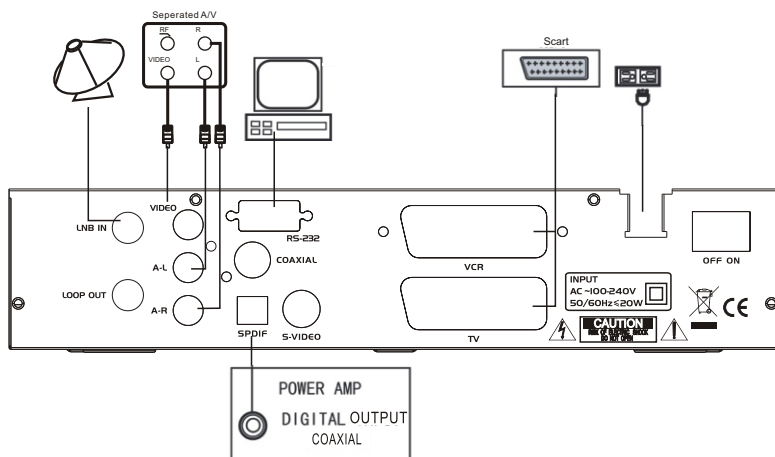


KEY	FUNCTION
	Power ON/OFF the STB
	When watching a channel ,mutes the sound
0-9	Keys to enter the channel's no.
MENU	Show main menu on screen, or jump back to previous menu in sub-menu setting conditions
EXIT	Escape from present menu and save the settings
CH ▲▼	Channel change, or move cursor down/up
VOL ◀▶	Volume control, or more cursor left/right
OK	Confirm the selected item in the menu screen or show the Channel list
SAT	Display the satellite list which has been searched
FAV	Display the favorite channel list
EPG	Show EPG(Electronic Program Guide)
	Switch between TV and Radio mode
TV/AV	Reservation
	Pause the ongoing Video and Audio
	To jump back to the previous channel you've viewed
INFO	Shows current channel's information
AUDIO	Select the Audio language (Caution: only for multi audio channel type chosen)
AUDIO R/L	Select Audio output type (L, R, L+R, SWAP)
	Show Teletext (in current program)
P+ P-	Turn page forward or backward
PAL/NTSC	Shift TV Mode PAL, NTS or AUTO
POSITION	Reservation
UHF	Reservation

2. Installation of STB

Please find relevant reference of installation described as below. When connecting new equipment to the STB, be sure checking first related instructions for the proper way of installation.

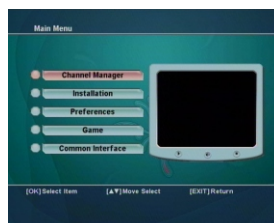
2.1 Connecting to Antenna and TV



3. Menu Information

After installing the STB and power on, the main menu will be displayed, which consists of 4 menu items as shown below.

- Channel Manager
- Installation
- Preferences
- Game
- Common Interface



During the installation the **OK** Key Confirms A selection and **▲▼** key shows the list Box. You can also use the numeric keys on the RCU to enter a numeric value for watching TV.

Use the **▲▼** keys to move up or down from one line to another line. Use the **▲▼** keys to move the cursor up or down in the sub-menu. To escape the menu system at anytime, press **EXIT** key on the RCU

4. System Installation

This menu consists of 5 sub-menus as shown below.

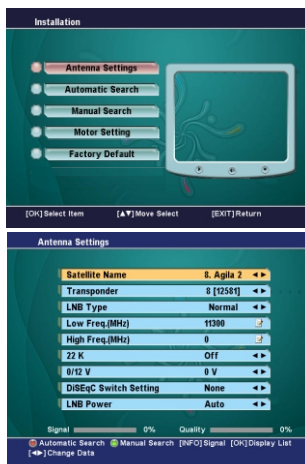
- Antenna Setting
- Automatic Search
- Channel Search
- Motor Setting
- Factory Default

Press ▲▼ key to move focus and OK key to confirm selection.

4.1 Antenna Settings

1. Satellite Name: Choose the satellite you want to view
2. Transponder: Choose the TP to search
3. LNB Type: Choose the type of your LNB. If you have universal LNB, select Universal.
4. LNB Freq (Low /High Freq) : Enter the proper LNB frequency via RCU or use the KEY PAD displayed by pressing OK key.
5. Switches (22K, DiSEqC Switch Setting, 0/12V optoinal): To configure the Antenna with those switches

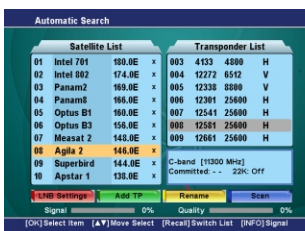
After fix the above settings, you can press Red key to enter Automatic Search function, or press Green key to enter Manual Search



4.2 Automatic Search

Automatic Search function is convenient tool to search mul-Satellite in one time.

Press ▲▼ move to the wanted satellite, press **OK** This satellite will be chosen if you see a tickle appears in the end of the line.



Green fution key to add TP into default TP list, which is shown in the right part of screen.

Yellow fution key allows user to re-name the satellite

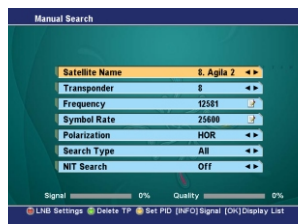
Blue fution key to begin the automatic channel scan

This STB allows to choose and scan several satellites one time, in one page 's operation. After all wanted satellites has been chosen, Simply press Blue key to scan all chosen satellites one by one.

4.3 Manual Search

Satellite Name: Choose the satellite you want to see.

Transponder: Use ◀▶ To view different TP details and Select the desired Transponder. Press OK to active TP list. Press ▶ for page up / down.



Frequency & Symbol Rate: Edit the frequency and symbol rate.

Polarization: Select HOR or VER, the right Polarization of the transponder Search Type.

1.Search FTA: only search free to air channels

2.Search CAS: only search conditional access channels.

3.Search All: search all FTA and CAS channels.

NIT Search: Choose On or Off.

Press OK to start channel scan.

Red function key to enter LNB settings menu.

Green function key to delete unwanted transponders.

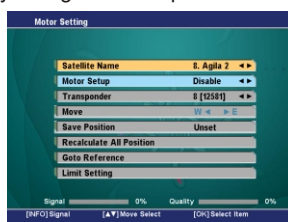
Yellow functoin key to access **Set PID** function.. The user can input the fixed PID value, move to **OK** in the dialogue box by using ▲▼ then press OK.

4.4. Motor Setting

Satellite Name: choose the wanted satellite first.

Motor Setup: choose between

Disable or **Enable** using ◀▶ keys. Move: W◀, E ▶ stands for the West and East limitation point for motor. After Setting, goes down to Limit Setting and change correspond item to **Set** Save Position:

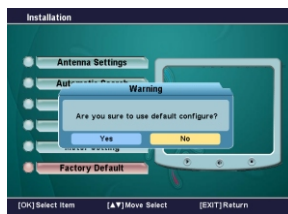


4.5 Factory Default

If you want to bring STB back to the factory default condition, select Factory Default and press the **OK** key.

Then a warning message will be displayed. To confirm, select **OK**.

Warning: On selecting factory default you will lose all of data and information, which was previously installed.

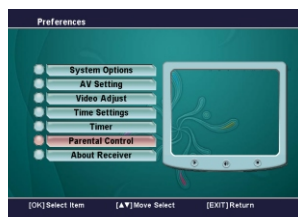


5. Preferences

Preferences consists of 7 sub-menus, as follows:

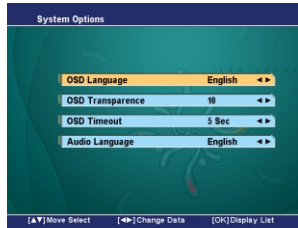
5.1 System Options

Press **OK** to enter



5.1.1. OSD Language

To Choose language with **◀▶** keys, or Press **OK** to active the OSD language list and choose the one you need.



5.1.2 OSD transparence

To Choose transparency with **◀▶** keys, or Press **OK** to active the OSD transparency list and choose the one you need.

5.1.3 OSD Timeout

To choose the duration of OSD will stay in screen. Same operations as above.

5.2 AV Setting

Screen Ratio: 4:3 or 16:9

Screen Mode: PanScan or Letter Box

Monitor Type: Auto/PAL/NTSC/SECAM

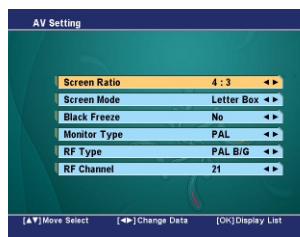
(**Caution:** please adjusting the Monitor Type according to the source program video type.)

Video Output CVBS/YC/RGB

(**Caution:** YC/RGB type is unavailable in KSDS800 series.)

RF Type: PAL B/G, PAL I, PAL D/K, NTSCM

RF Channel: Fix the number of RF channel



5.3 Video Adjust

To adjust Brightness, Contrast, Saturation and Hue, then move to **OK** in the dialogue box, press OK to confirm.

(**Caution:** HUE only for NTSC type.)



5.4 Time Setting

Choose GMT of your local area, and fix other items like **Year**、**Month**、**Date**, the STB will get time information automatically from the satellite.

5.5 Timer

There ten timer in STB, you can choose TV or RADIO in Channel Type and detail channel what you want to watch, and set up the Date, Hour, Duration Time, at last, set up the Status, include Once, Daily, Weekly or Off. In order to let the timer work normal, you should left the Main MENU before the timer's time is up. The time is over, the receiver will work on standby.

5.6 Parental Control

This function allows you to lock the channel with a password in order to prevent children from accessing certain channels

Note: Default password is "0000"

How to change the Password

1. Enter the current password.
2. Select **ON** of Parental Lock.
3. Enter new password.

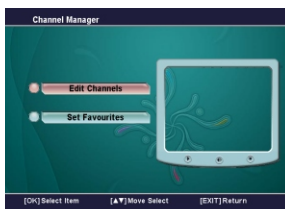
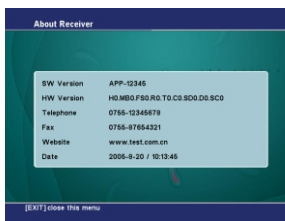
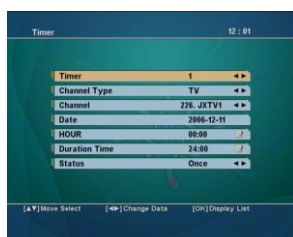
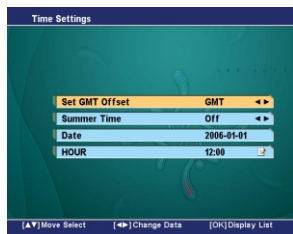
Confirm your new password entering new password again. Warning: Please remember the new passwords after setting.

5.7 About Receiver

You can find STB information like software and hardware information under this menu.

6. Channel Manager

This STB provides strong channel managing functions

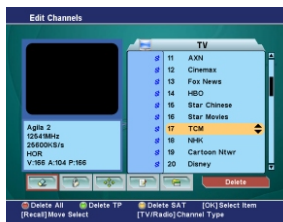


6.1 Edit Channels

Press ◀▶ Key, to choose **.Delete. Lock .**

Move. Rename.Sort functions.

To manage the existing channels.



Delete: To delete chosen channels from channel list. Press OK to choose and Second press to cancel selection. A X symbol will be shown in the front of Channel name, which is selected to be deleted. If you decide to delete the selected Channel, press EXIT, the system will give you notice "Do you want to delete" Choose **Yes** or **No** to execute or cancel the deletion.

Note: The deleted channel cannot be recovered unless you search again.

Lock: Lock the channel to be access by password. The Parental Lock must be set up in advance before using this function.

Move: Press **Move**, select a channel by pressing OK key, move the cursor to the place where you want to move the selected channel. Press OK again.

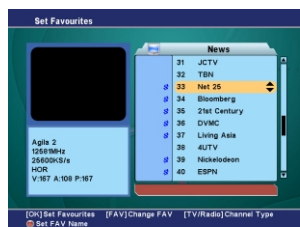
Rename: Under rename condition, **choose the channel you want to rename**, press **OK** to confirm. A keyboard will show in the screen. Use ▲▼◀▶ to edit the new name. Choose **OK** to confirm.

Sort: You can sort the channels by Alphabet, Satellite, FTA/CAS Channels or Favorite channels.

Press FAV key to change between TV and Radio channels. Radio channels managing has the same operation as TV channels. There are some quick function keys provided:

6.2 Set Favorites

Choose favorite channels in the list, and confirm by OK key. ❤️ will be marked before the selected channels. Press EXIT to save and use FAV key to check if favorite channels have been set.



Red function Key: To set a name of Favorite channel group. The name can be entered through the Keyboard shown in the screen after pressing the Red key.

7、General Viewing Function

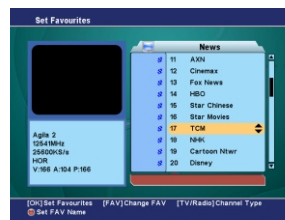
The following describes the basic functions of your STB while watching satellite TV or listening to satellite radio.

While watching, the current channel information will be shown on the bottom of the screen if you press the **INFO (i)** button on the RCU.

7.1 Channel List

In channel display condition, press **OK** key to view the channel list. List of Existing channels will be shown. **RED** function **Key** to check all channels in different sort type. (Alphabet, Satellite, FAV, CAS).

User EPG KEY to choose move focus and FAV Key to change between TV/Radio channels



7.2 Select Channel

If you want to select channel, use **CH (▲▼)** key on the front panel or **▲▼** key on the RCU or numeric keys.

In addition to the above normal function, STB provides more convenient channel change function.

While watching, press **OK** key on the RCU. A channel list will be displayed on the right side of the screen. If you press **EXIT** key, the channel list will disappear.

To select a channel, go up or down this channel list and place the cursor on a desired channel. Then, press **OK** key to watch the selected channel. If you press **◀▶** key on the RCU, the channel list will scroll page by page.

7.3 Recall

Press Recall on the RCU to move to the previous channel you watched.

7.4 TV/Radio Mode

While Viewing a TV channel, press The TV/Radio key on the RCU to toggle between TV and Radio modes.

7.5 Channel Information

Every time you change channels, you will receive program information for a few seconds.

While watching the channel you can see the current channel information at anytime by pressing the **(i)INFO** key on the RCU.

Note: Channel information will be displayed for 6 seconds by default and will disappear. You can adjust the display time interval from 1 to 10 seconds. .

7.6 Favorite List

To create a favorite group list press **FAV** key on the RCU.

You can access the next favorite group when you press **FAV** key again.

7.7 Volume additional Control

1. Volume Control

To increase or decrease volume, use **VOL+/-** Key on the RCU or on the front panel.

Note: STB has 33 volume levels and this can be controlled from the Volume level of your TV.

2. Mute

To mute the sound, press **◀▶** button on the RCU. To bring back the normal sound, press **✕** his key once again.

3. Audio Control

Press the **AUDIO R/L** key repeatedly to select one of four possible Audio settings (Left, Right , L+R or SWAP)

(**Caution:** SWAP type only for RF modulator type)

The current audio setting will be displayed in the channel information

4. Language Selection

Press the **LANG** key on the RCU repeatedly to select audio-language.

This is dependent on the transmission of audio signal.

7.8 Sat

If you searched channels from more than one satellite and want to have a channel list for each satellite, press **SAT** key on the RCU, a satellite list will be displayed.

Select one satellite you want, press **OK** key on the RCU then you will have a channel list of your choice.

7.9 ZOOM function

Zoom function enable you to enlarge the picture. Press **OK**, you will see one frame on the screen. Press **OK**, the chosen picture within the frame will be enlarged.



7.10 PIG (Picture In Graphic)

This STB offers you 2, 4, 6, 9, 12, or 16 pictures in picture functions. User can easily view what other channels doing in same time.

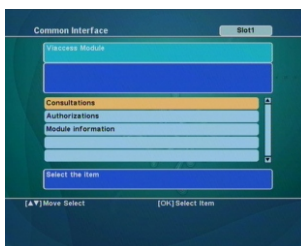
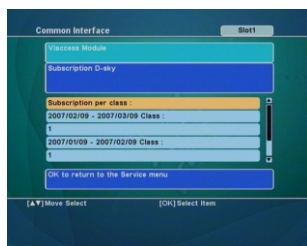
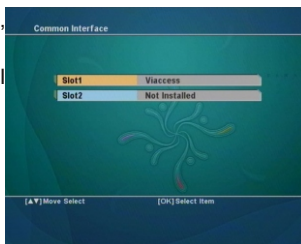
To press **▲▼** Key, choose 2, 4, 6, 9, 12, or 16 option, then press **OK** to view the picture.



8.Common Interface

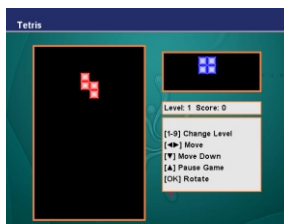
There are two Cis in STB , supports Viaccess, Irdeti, Nagra , Seca, Conax, Cryptowork etc.

The detail information according to your CI module display as bellow.



9. Game

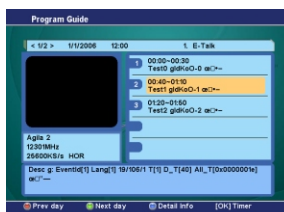
There are several games attached in the STB
Can be played via remote control.



10. EPG (Electronic Program Guide)

STB provides EPG function for you to get access to the TV Guide (or RadioGuide if you are listening to radio channels) that will show the titles and other information of the current and next programmes on different channels.

(Caution: The information is only available from the network to which the channel you are watching.)



11. Technical Specification

TRANSMISSION STANDARDS	
INPUT/ DEMODULATION	
Connector Type	2X F Type, 3/8-32UNEF-2A (1 input/1 loop through)
Input Frequency	950 to 2150 MHz
Signal Input level	-65 to -25 dBm
Band Switch control	22 KHz
LNB Supply	13.0 + 0.5 V / 18V + 0.7 V, max 400 mA
Demodulation Type	QPSK / FEC Coding (prETS 300 421)
Symbol Rate	$2 < R_s < 45 \text{ M baud (SCPC/MCPC)}$
Video output	CVBS/75 unbalanced
Audio output	"Left, Right"/600 unbalanced
Level	1.0V rms \pm 2dB into 10k
Audio output	"Left, Right"/10k unbalanced
Level	1.0V rms \pm 2dB into 10k
AUDIO/ VIDEO PROCESSING	
Audio Decompression	layer I and II / Musicam
Audio Outputs	Stereo Channel/Dual Mono/Joint Stereo/ Mono
Video Decompression	Main Profile @ Main Levels With Letter
Video buffer	64 Mbits of SDRAM is provided
Data rate	up to 15Mbits/s (Max. burst rate: 228 Mbits/s)
Video output	PAL-25 frame @720 x 576 NTSC-30 frame @720 x 480

DATA SERVICE PORT	
Connector	9-pin D-sub female
Data protocol	RS232C interface. The -DSR is seen as the Data Communication Equipment (DCE) and the PC (or other terminal) is seen as the Data Terminal Equipment (DTE).
POWER SUPPLY	
Type	Switching mode
Main input voltage	100 - 240V AC 50Hz/60Hz±5%
Nominal powerconsumption	20W
SAFETY	
Insulation resistance	more than 10M Ω at 500Vdc Ambient conditions of 28±2% & 70%RH
Withstand Voltage (Hi-Pot)	I/p To O/p:3kV(1 Min)
Temperature Rise	<75 on winding & core; <50 on casting At 264Vac @ 50Hz
Safety Standard	Designed to meet IEC 9
MICROPROCESSOR	
Microprocessor	CONEXANT
Clock frequency	130MHz
SDRAM Memory	8Mbyte
Flash memory	1M/2Mbyte
PHYSICAL CHARACTERSTICS	
Front Panel Keys	7 Keys
Indicators	Power on/off
Remote control input	Infra-red receiver
Display	4Digit (7Segment)
CI port	Two Common Interfaces
Rear Panel	
Connectors	1 LNB Input / 1 Loop through output (2F-type) 2 x Audio L/R(RCA) 1 x Video SIGNAL (RCA) 1 x RS-232 (9-pin D-sub male) 1 x S/P DIF or 0/12V (Optional) 1 SCART
Dimensions(L*W*H)	280 x 190 x 40mm(Receiver)
Weight	1.5kg (Receiver) 80g (RCU)

12. Trouble Shooting

Problem	Possible Causes	CausesWhat To Do
No display light up on front panel	Power cord is not well plugged	Check to make sure power cord is plugged properly into power socket.
No soun or picture, but the front panel red light is ON.	The unit is in standby mode.	Press the standby button.
No sound or picture.	The satellite dish is not pointing at the satellite	Adjust the dish. Check the Signal Level in the Antenna Setup menu.
	No signal or weak signal.	Check the cable connections, LNB and other equipment connected between the LNB and the receiver, and/or adjust the dish.
Bad picture/Blocking error.	The satellite dish is not pointing at the satellite	Adjust the dish.
	Signal is too strong.	Connect a signal attenuator to the LNB input.
	Satellite dish is too small.	Change to a larger dish.
	LNB noise factor too high.	Change to an LNB with lower noise factor.
	The LNB is faulty.	Change the LNB.
No picture (Video)	TV is not in AV/EXIT mode.	Check the UHF channel fixed in your system and tune the UHF channel properly.
There is interference on your digital satellite channel.	The system is connected using RF cable and the output channel of the receiver interferes with an existing terrestrial channel or Video signal.	Change the receiver output channel to a more suitable channel.
The RCU is not working.	Out of battery	Change the battery.
	RCU is aimed at wrong direction.	Aim the RCU at the unit, and make sure no blocks between the front panel and RCU.

Note: If you still cannot resolve the problem with above reference, please contact the local dealer or their after-sales service center.

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