

Vistar2000CA
User Manual

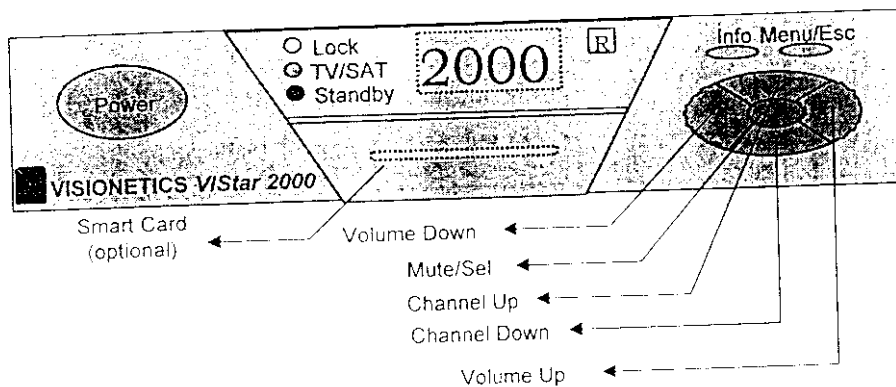
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Table of Contents

1. CONTROLS AND FUNCTIONS	2
1.1 FRONT PANEL	2
1.2 REAR PANEL	4
1.3 REMOTE CONTROLLER	6
2. INITIAL SET UP AND OPERATION	7
2.1 INITIAL SET UP AND BASIC OPERATIONS	7
2.2 MESSAGES	10
2.2.1 SEARCHING	10
2.2.2 NO SIGNAL	10
2.2.3 MENU SETTING	10
3. TROUBLESHOOTING	21
4. SPECIFICATIONS	23
Appendix A: Asiasat 2 at 100.5° E	
Appendix B: PAS 2 Satellite at 169°	
Appendix C: Apstar 1A Satellite at 134°	
Appendix D: User 1 Satellite	
Appendix E: User 2 Satellite	
Appendix F: User 3 Satellite	
Appendix G: Synchronous, parallel transport stream interface	
Appendix H: RS232 interface	

1. Controls and Functions

1.1 Front Panel



1. Standby lamp

When this LED glows red, it indicates the power line is connected and main power does not turn on.

2. TV/Sat lamp

When this LED glows red, the A/V output is receiving satellite programs. Otherwise, TV programs will be received.

3. Lock lamp

When the LED glows yellow, this indicates the selected program signal is locked correctly.

4. Numerical LED

This indicator displays a four digital read-out of the currently received program number. The display is also used to indicate received signal strength of the tuned program. Each digit is displayed by a seven segment LED.

5. Menu button

Press this toggle switch to enter/exit the on-screen menu.

6. Mute/Select button

This button has a dual role. In the Menu mode, the button is used to select items in the on-screen menu. Otherwise, it is used to disable (mute)/enable the sound.

7. Info button

Press this button to present an on-screen display of program information and signal strength for the channel you are currently tuned to.

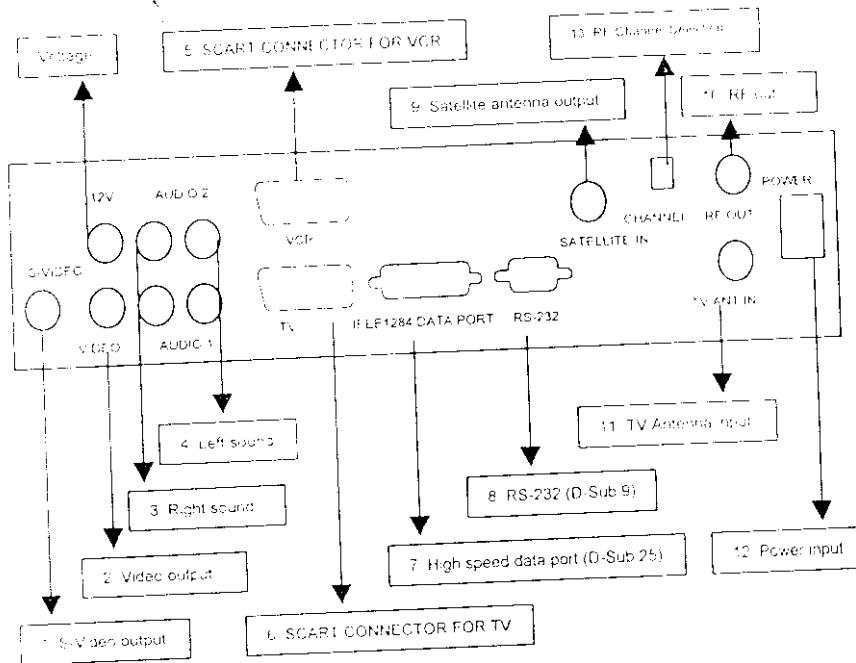
8. Channel up/▲ / down/▼ buttons

These buttons are used to switch between program in the program information and signal strength for the channel you are currently tuned to.

9. Volume up/► , down/◄ buttons

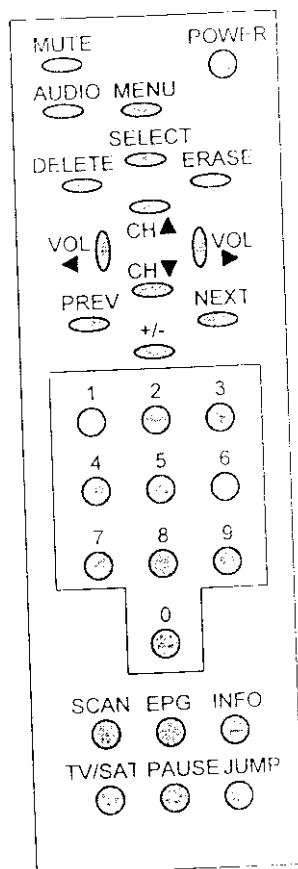
These buttons are used to increase or decrease the volume. However, while in the menu mode, they are used to navigate the on screen menu. Please see section 2.2.3-10 for details.

1.2 Rear Panel



1. **S-Video output (S-Video connector)**
2. **Composite Video output (RCA connector)**
3. **Left sound channel output (RCA connector)**
4. **Right sound channel output (RCA connector)**
5. **SCART CONNECTOR FOR VCR**
6. **SCART CONNECTOR FOR TV**
7. **High Speed Data port (D-Sub 25-pin male connector)**
This terminal is an IEEE 1284 data port and is used for parallel data I/O.
8. **RS-232C (D-Sub 9 male connector)**
This terminal is used for serial data I/O.
9. **Satellite antenna input terminal (F-type connector)**
10. **RF Output (F-type connector)**
This terminal provides TV programs or STB RF signals to a TV set. It can be used to connect to a TV's antenna output.
11. **TV Antenna Input (F-type connector)**
It is used to connect a TV antenna cable. This signal could be bypassed to RF Output by menu control.
12. **Power Input**
Connect the power cord to 110V or 220V AC supply.
13. **RF Channel Selection**
NTSC: 3 or 4; PAL: 5 or 6

1.3 Remote Controller



2. Setting Up and Operation

2.1 Initial Set Up and Basic Operations

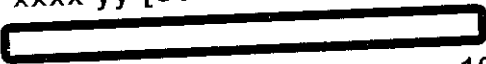
1. Connect the audio and video outputs to a TV and check the connection for the power cable and the antenna cable.
2. Turn on the TV power then press the power button on the remote controller or on the front panel of the STB.
3. The STB will tune to a previously tuned program automatically if any; otherwise, you will need to set up the tuning list from the beginning.
4. The current program number is displayed on the front panel LED.
5. If you press the "MENU" button on the remote controller/front panel, you will see the on-screen menu for the system functions. You can use the scan function to scan all programs when you want to point to another satellite.
6. The Video aspect ratio can be toggled between 4:3 or 16:9 by selecting the "Video" item under the Menu setting.
7. When you tune to a multi-audio broadcast, press the "Audio" button to switch among other accompanying audio channels.

8. When the channel up or down key is pressed, it displays the program number on the lower left hand side of the screen and on the front panel LED.
9. When you turn the volume up or down, the volume level bar is displayed on the lower side of the screen.
10. Numeric keys on the remote controller can be used to change programs.
11. When the "Mute" button is pressed, a "Mute" message is shown on the lower left hand side of the screen and the audio output is turned off. If you press the "Mute" button again, the audio is turned back on and the message "Mute" disappears.
12. When the "Pause" button is pressed, the screen is frozen. If you press it again, the program jumps to the current frame and continues.
13. When the "EPG" button is pressed, a list of the scanned programs is shown for selection:

Lock	#	Content	Format
	1901	DW-TV	A/V
	1902	MCM	A/V
	1903	RAI Intern	A/V
	1904	TVE	A/V
	1905	DW-Asia	A/V
	1906	DW-Ra1	1A
	1907	DW-Ra2&3	1A

Where "**Lock**" indicates program lock status and which channel can be unlocked by entering correct password. The "**#**" is the program number, "**Content**" is the content title. The program format "**A/V**" indicates simultaneous audio and video output, and "**1A**" indicates only the first audio signal is available. You can use the **↑** or **↓** button to highlight a program, and then use the "SELECT" button to tune to selected program.

14. When the "INFO" button is pressed, the information for the currently tuned program is displayed as follows:

xxxx-yy [Service name] Lx
 value

Where xxxx is the program number and yy is the audio status (1S, 1L, 1R, 2S...), and Lx is a favorite channel list number. The signal level ranges from 0 to 100. A signal is defined as poor when its signal level is less than 30.

15. When you tune to an audio only program, it will display a message of the form:

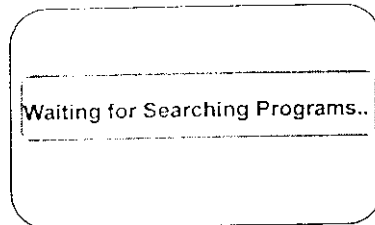
RADIO - # [Content]

16. The "NEXT" button of remote controller can be used to toggle between the NTSC and PAL output modes. This is useful if you discover the STB's video format mis-matches your TV system. In this case, just press the "NEXT" button and power up again. To press front panel "**Menu**" and "**Info**" key simultaneously that also effects the same result as "**Next**" key of IRC.

2.2 Messages

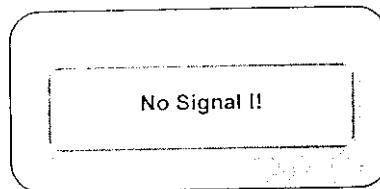
2.2.1 SEARCHING

1. This screen will appear right after the power is turned on or while the unit is scanning the channels.



2.2.2 NO SIGNAL

1. This screen will appear if signal is not available or not successfully received.
2. You may want to enter the menu to set the satellite parameters or to check the antenna.

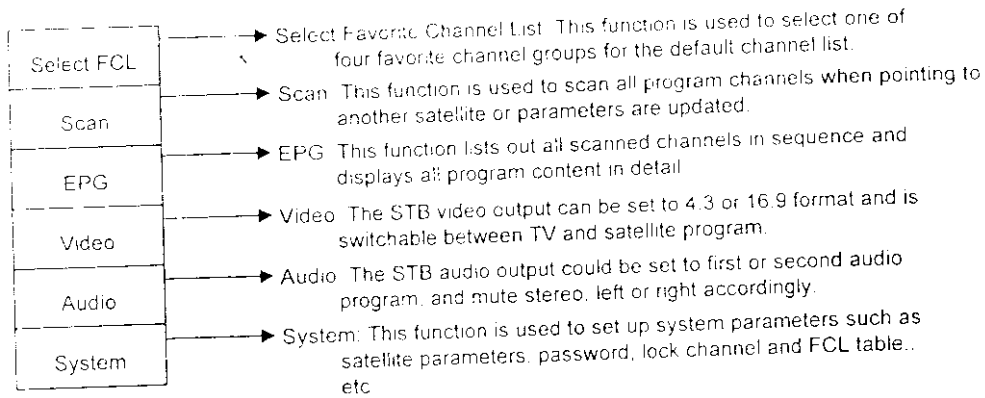


2.2.3 MENU SETTING

The STB's on-screen menu is described as follows:

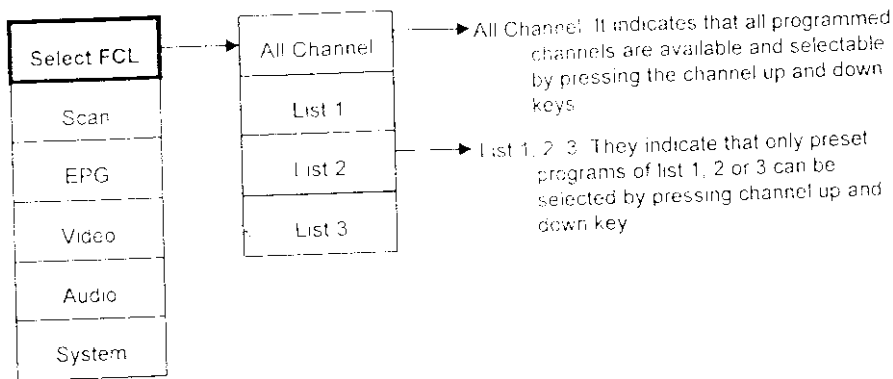
Main Menu:

When the **menu** key is pressed, the following menu will be displayed on the screen.



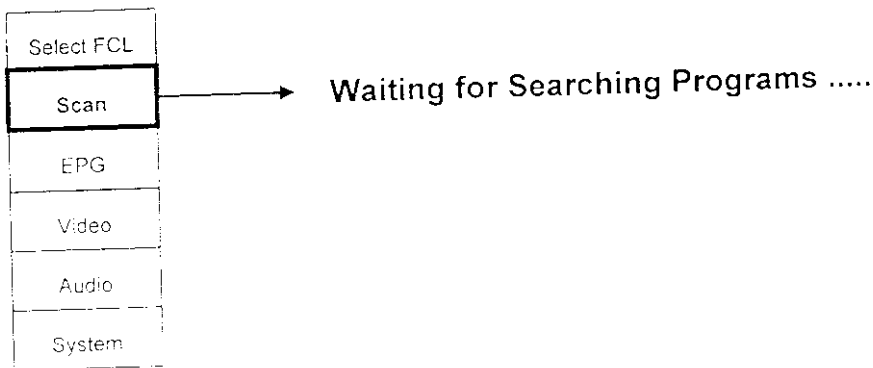
Select FCL:

When the **"Select FCL"** menu item is chosen, the following menu is displayed. Select one of four options to be the default channel operation. Each Favorite Channel List is a group of receiving programs and when one is selected except of "All Channel" then channel up and down operation are constrained within this group of programs. The system defaults classify all scanned program into "All Channel".



Scan:

When the **"Scan"** function is selected and the password is checked the STB will scan all preset channels and create program information on EPG. It is recommended that you re-scan when your antenna has to be re-directed on another satellite or the program parameters have to be updated. The following message is shown up when the scan function is operating:



Note: The STB will not check the password if it set to "0000".

The default password is also to "0000".

Scan setting status of Favorite Channel List (FCL: List 1, List 2 and List 3) will be cleaned after this command.

EPG:

The **EPG** menu is shown as follows:

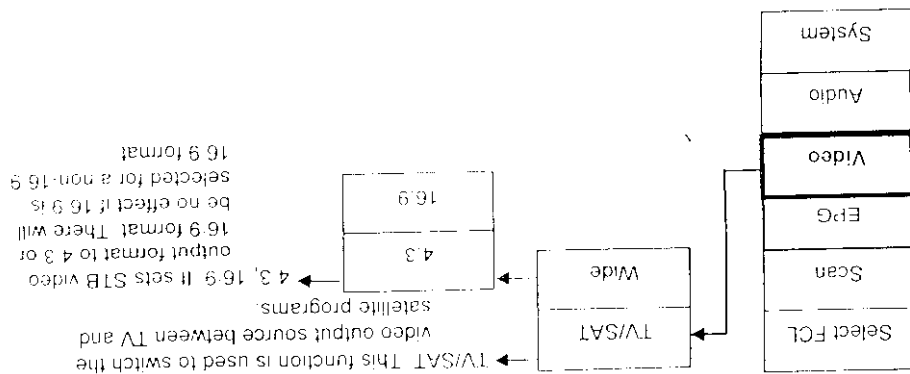
Select FCL	
Scan	
EPG	
Video	
Audio	
System	

Lock	#	Content	Format
	1901	DW-TV	A/V
	1902	MCM	A/V
	1903	RAI Intern	A/V
	1904	TVE	A/V
	1905	DW-Asia	A/V
	1906	DW-Ra1	1A
	1907	DW-Ra2&3	1A
	1908	DW-Ra4&5	1A

Where "**Lock**" indicates program lock status and which channel can be unlocked by entering correct password. The "**#**" is the program number, "**Content**" is the content title. The program format "**A/V**" indicates simultaneous audio and video output, and "**1A**" indicates only the first audio signal is available. You can use the  or  button to highlight a program, and then use the "SELECT" button to tune to selected program.

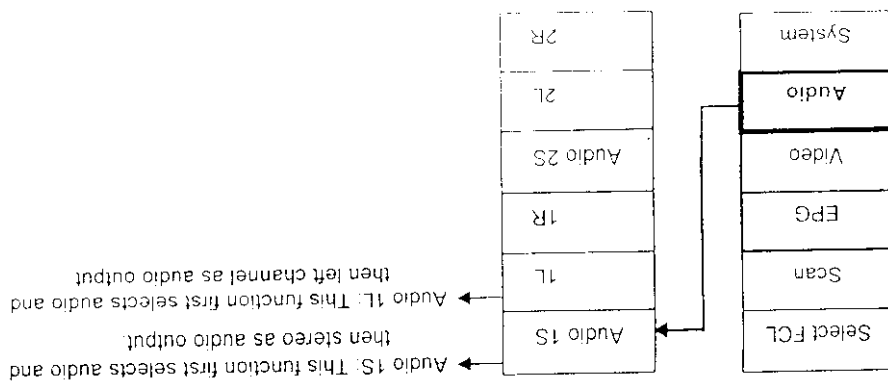
Video:

When the "**Video**" function is selected, the following menu is displayed on the screen:



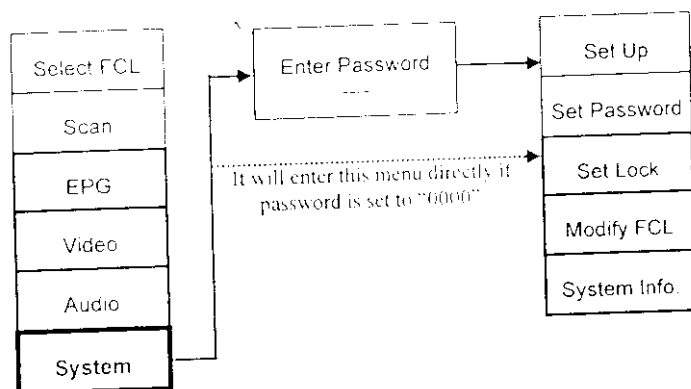
Audio:

Some programs have two audio programs which accompany the video source. The audio function allows you to select and output any one of these audio sources. The STB provides stereo, left only and right only audio output selection. Its menu format is shown as follows:



System:

The "**System**" function is used to set up system parameters such as satellite parameter, password, lock channel and FCL table.. etc. When this function is selected and the password is checked first, and then the menu is displayed as follows:



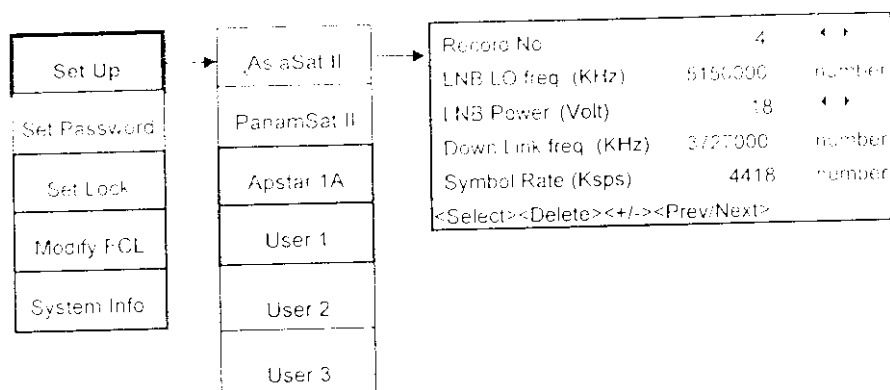
Note: STB will not check the password if it is set to "0000".
The default password is also set to "0000".

Set Up:

The "**Set Up**" menu is used to select the transmitting satellite or update program parameters. The STB has pre-set three sets Digital TV program parameters for AsiaSat II, PanAmSat and Apstar II for easy, and three user defined records for specific application. Each program has an unique record to specify its satellite LNB local frequency, downlink frequency, symbol rate and antenna polarization. All records are saved into an EEPROM and resume play automatically on power up.

If the transmitting satellite is changed or the parameters are updated, STB will re-scan in order to re-configure

Information 7



Programming Note:

1. Record # is the record number of a desired down link channel. The maximum record number is 25 (from 1 to 25).
Use ← (Vol down) or → (Vol up) to refer to the previous or the next record.
2. LNB (Low Noise Block) LO freq. is the local oscillation frequency, in KHz, of the LNB.
The default value is 0KHz.
3. LNB Power is the power, in Volts, supplied to the LNB.
LNB can be set to 0V (disabled), 14V, or 18V with the ← (Vol down) or → (Vol up) keys.
The default value is 0V.

4. Down Link freq. is the channel frequency in KHz, which is to be tuned. The default value is 0KHz. Symbol Rate is the symbol rate of the tuned channel, which value is given in Ksps. The default value is 0Ksps.
5. **Select** tunes to the currently selected record.
6. **Delete** deletes the current record. After deletion, the parameters are reset to their default values.
7. +/- is used to activate/de-activate a record.
8. **Prev / Next** is used to jump to the previous or the next 10 records.
9. On the "*number*" item, there are two ways of entering values:
 - a.) From the remote controller: press button 0~9, you can delete characters at current cursor position by using <Erase> key. The cursor always points to the extreme right of the field.
 - b.) From the keypad: the digital input will be processed from the least significant digit to the most significant digit
 - ← (Means start to key in on this field)
 - ↑ to increase the digital number
 - ↓ to decrease the digital number
 - to key in the next digit
 - ← (Means end to key in on this field)

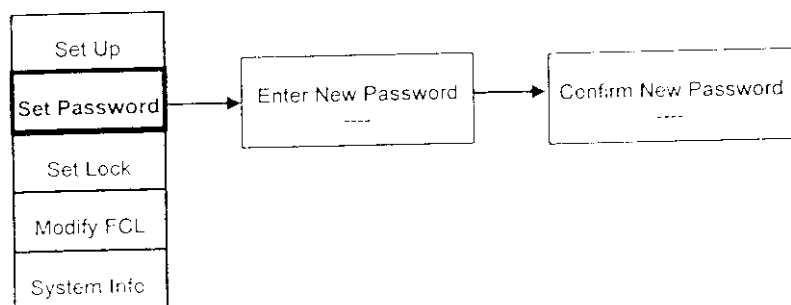
For example, enter the down link frequency 5150000 into field as follows:

We will work our way from the most significant digit to the least significant digit. The table below indicates which key should be pressed (left column) to display the resulting digit (right column).

1. Press the ← key and down link frequency field displays 0.
2. Press the ↑ key five times and down link frequency field displays 5.
3. Press the → key and down link frequency field displays 50.
4. Press the ↑ key once and down link frequency field displays 51.
5. Press the → key and down link frequency field displays 510.
6. Press the ↑ key five times and down link frequency field displays 515.
7. Press the → key four times and down link frequency field displays 5150000.
8. Press the ← key to exit key pad programming mode.
← (Vol down) " and "→ (Vol up) " to select the desired value.

Set Password:

The system password is a four-digit number that can and should be changed for personal security. We recommend that you use a number, which you believe others are unfamiliar with, for your password. Do not use telephone numbers or birthdays. STB will not check the password if it is set to the default "0000" word.



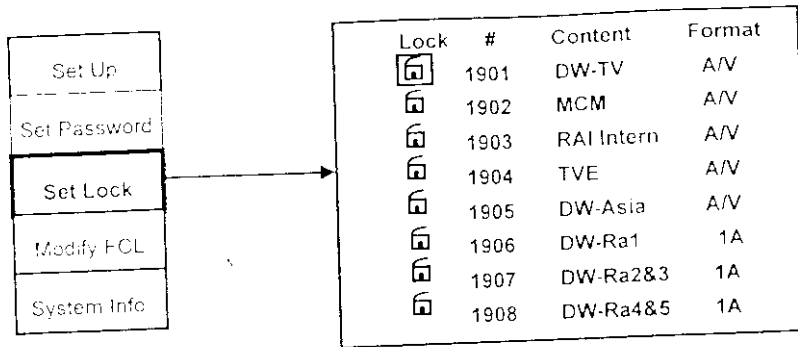
Set Lock:

The "**Set Lock**" function is used to prevent unauthorized access to certain channels that may be of an adult nature or disturbing.

Unlocking: Just enter the correct password to unlock pre-locked program.

Locking: The channel will re-lock automatically when switched to another channel.

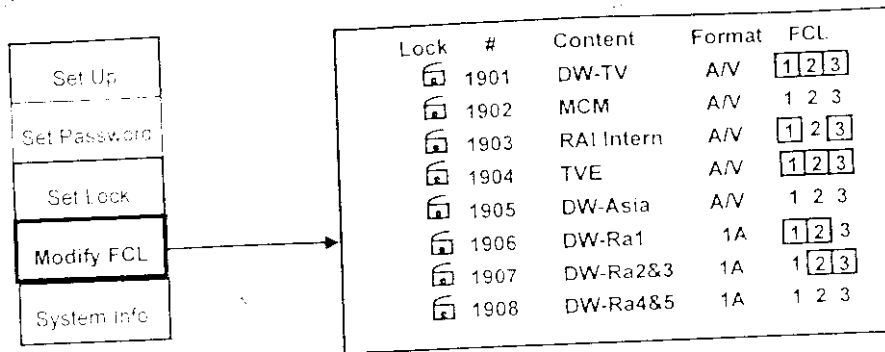
When modifying the **Set Lock** option, the cursor locates at the lock field, and is activated and deactivated by the selection key. Its menu is shown as follows:



Modify FCL:

The "Modify FCL" option is used to create personal favorite channel lists to make viewing more convenient and enjoyable. Parents can easily use this advanced feature to classify channels suitable for their children. STB provides four FCL lists, which are "All Channel", "List 1", "List 2" and "List 3". All scanned programs are classified into "All Channel". Each program could be classified into any of "List 1, 2 or 3". For example, program 1901 is classified into Lists 1, 2 and 3; 1902 only belongs to All Channel; 1903 is in lists 1 and 3 only.

The FCL column can be changed through the "Modify FCL" menu item.



3. Troubleshooting

Should you encounter difficulties in the STB operations, check the following troubleshooting procedures. If the unit still does not work even after checking the troubleshooting list, please contact the sales representative where you purchased this unit or a service center located in your area. For your safety, please do not open the unit cover. There are no customer adjustable parts inside the box.

Symptoms	Reasons	Actions
POWER lamp does not light up after the power cord is connected.	Power cord is not properly connected.	Connect the power cord to the power outlet properly.

No pictures on the screen	Video output terminal is not properly connected to the INPUT terminal of the TV monitor.	Connect both terminals properly.
	Broadcasting satellite antenna is not connected properly.	Connect the antenna cable properly.
No sound from the TV speakers.	Audio output cords are not connected or loose.	Connect the audio cords properly.
	The unit is in pause mode.	Press "PAUSE" button.
	The unit is in mute mode.	Press "MUTE" button.
"LNB Overload" message on the screen	The antenna cable is shorted to ground.	It might be the antenna cable or LNB's problem. Please check the antenna cable assembly or replace it with a new one.

4. Specifications

General Characteristics

Power Input: 90V~260VAC, 47~63 Hz

Dimensions: 335mm(W)x266mm(D)x60mm(H)

Weight: 2.7Kg

Power Consumption: 20W max. (normal operating condition)

Operating Temperature / Humidity:

5°C~45°C/15%~80%RH

Tuner

Input Frequency Range: 950 to 2150MHz

Input Signal Level: -25dbm to -65dbm

Input Connection: 75 ohm F-type female connector

IF Bandwidth: 7.8/27/36 MHz

IF Frequency: 479.5MHz

LNB Power: 14V/18V, 300 mA max.

Cable RF Input Characteristics(Optional)

Frequency Band: 54 MHz to 806 MHz

Modulation Transmission System:

NTSC/M(Channel 3, 4)

PAL(Channel 4, 5)

Parallel DVB TS Output (Optional)

Output Level: LVDS or TTL

Connector Type: D-Sub 25

Impedance: 100 ohm (LVDS)

Video Output

Video Format: PAL/NTSC

Frame Rate: 25/30

Maximum Resolution: 720x576 (PAL), 720x480 (NTSC)

Aspect Ratio: 4:3, 16:9

Output Type: RCA, S-Video, RF.

Audio Output

Mode: Mono, Dual, Joint Stereo, Stereo

Sample Rate: 32KHz, 44.1KHz, 48KHz

Frequency Response: 20~20KHz $\leq \pm 2$ dB, 60~18KHz $\leq \pm 0.5$ dB

Controls

Front Panel Controls:

User Input Keypads

User Message Display

LED Status Display

Default Keypad:

Power/Standby

Menu/Esc

Mute/Select

Info

Channel Up/↑

Channel Down/↓

Volume Up/→

Volume Down/←

List of Parameters:

LNB Frequency and Polarization

Satellite Frequency

Symbol Rate

OSD Functions:

Channel Info Display

EPG Info Display

Appendix A: Asiasat 2 at 100.5° E

TP	Channel	Format	Video
3.700 V C Band	Star TV	A/V	MPEG 2, Digistar SR28100, FEC 3/4
	Star Chinese Channel	A/V	V0200 - A0280
	Star Movies Southeast Asia	A/V	V0201 - A0284
	Viva Cinema	A/V	V0202 - A0288
	Sky News	A/V	V0203 - A028C
	CNBC	A/V	V0204 - A0290
	NBC	A/V	V0205 - A0294
	ESPN Contribution Feeds	A/V	V0207 - A029C
	Racing Channel		
3.706 H C Band	Henan TV(河南)	A/V	MPEG 2 SR4418, FEC 3/4
3.713 H C Band	Qinghai TV(青海)	A/V	MPEG 2 SR4418, FEC 3/4
3.720 H C Band	Fujian TV(福建)	A/V	MPEG 2 SR4418, FEC 3/4
3.727 H C Band	Jiangxi TV(江西)	A/V	MPEG 2 SR4418, FEC 3/4
3.734 H C Band	Liaoning TV(辽宁)	A/V	MPEG 2 SR4418, FEC 3/4
3.766 V C Band	Myawady TV (Myanmar)	A/V	MPEG 2 SR5080, FEC 7/8

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3,786 H C Band	WTN Asia feeds	A/V	MPEG 2 SR5632, FEC 3/4
3,800 H C Band	APTV	A/V	MPEG 2 SR5632, FEC 3/4
3,806 V C Band	GXTV(廣東)	A/V	MPEG 2 SR4418, FEC 3/4
3,813 V C Band	Shaanxi TV(陝西)	A/V	MPEG 2 SR4418, FEC 3/4
3,820 V C Band	AHTV(安徽)	A/V	MPEG 2 SR4418, FEC 3/4
3,827 H C Band	Mongolian package(蒙古)	A/V	MPEG 2 SR4418, FEC 3/4
	Inner Mongolia TV	A/V	V00FF - A0100
	National Mongolia TV	A/V	V01FF - A0200
3,834 V C Band	Hei Long Jiang TV(黑龍江)	A/V	MPEG 2 SR4418, FEC 3/4
3,840 H C Band	GDTV 1(Guangdong)(廣東)	A/V	MPEG 2 SR4418, FEC 3/4
3,847 H C Band	HNTV 1 (Hunan)(湖南)	A/V	MPEG 2 SR4418, FEC 3/4
3,854 H C Band	HBTV (Hubei)(湖北)	A/V	MPEG 2, SR4418, FEC 3/4
3,900V C Band	Star TV	A/V	MPEG 2, Digistar SR28100, FEC 3/4
	Star Plus Japan	A/V	V0200 - A0280
	Star Movies Japan	A/V	V0201 - A0284

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3,940 H C Band	Channel V	A/V	V0202 - A0288
	(sports feeds)	A/V	V0203 - A028C
	Sky News	A/V	V0205 - A0294
	ZakSat	A/V	MPEG 2
			SR26650, FEC 2/3
4,000 H C Band	Hallmark	A/V	V0020 - A0021
	[KIBC-TV test card]	A/V	V0023 - A0024
	European Bouquet	A/V	MPEG 2
			SR28125, FEC 3/4
	MCM Asia	A/V	V0200 - A0280
	RAI International	A/V	V0201 - A0284
	TVE International	A/V	V0202 - A0288
	TV 5 Asie	A/V	V0203 - A028C
	Deutsche Welle TV	A/V	V0202 - A0288
	Deutsche Welle 1	A	
	Deutsche Welle 2	A	
	Deutsche Welle 3	A	
	Deutsche Welle 4	A	
	Deutsche Welle 5	A	
	Radio Finland	A	
	RCI - Radio Canada Int.	A	
	SRI - Swiss Radio Int.	A	
	WRN 1	A	
	REE - Radio Exterior	A	
	RFI - Radio France Int. 1	A	
	RFI - Radio France Int. 2	A	

RAI	4.006 V	EM TV	AN	MPEG 2	SR5632, FEC 3/4
	C Band				
	4.143 V	Lao TV Channel 3	AN	MPEG 2	SR2889, FEC 2/3
	C Band				

Appendix B: PAS 2 Satellite at 169°

TP	Channel	Format	Video
12.295H Ku Band		A/V	MPEG 2 SR6103, FEC ?
12.305H Ku Band	(Panamsat tests)	A/V	MPEG 2 SR6620, FEC 2/3
12.513H Ku Band	Formosa TV	A/V	MPEG 2 SR12500, FEC 2/3
12.605H Ku Band	MTV	A/V	MPEG 2 SR22500, FEC 3/4
	MTV Asia	A/V	V00A1 - A0054
	[colour bars]	A/V	V00A2 - A0058
	[colour bars]	A/V	V00A3 - A005C

Appendix C: Apstar 1A Satellite at 134°

TP	Channel	Format	Video
4.120H C Band	XinJiang TV (新疆)	A/V	MPEG 2 SR27500,FEC3/4

Appendix D: User 1 Satellite

TP	Channel	Format	Video

Appendix E: User 2 Satellite

TP	Channel	Format	Video

Appendix F: User 3 Satellite

TP	Channel	Format	Video

Appendix G: Synchronous, parallel transport stream interface (TS Parallel LVDS)

Pin Assignment



Pin	Signal	Description
1	CLOCK A	Clock for data word
2	GND	Ground
3	DATA 7 A	Data bit 7 (MSB)
4	DATA 6 A	Data bit 6
5	DATA 5 A	Data bit 5
6	DATA 4 A	Data bit 4
7	DATA 3 A	Data bit 3
8	DATA 2 A	Data bit 2
9	DATA 1 A	Data bit 1
10	DATA 0 A	Data bit 0 (LSB)
11	DVALID A	Data word Valid
12	PSYNC A	Packet sync
13	GND	Ground

Pin	Signal	Description
14	CLOCK B	Clock for data word Inverted
15	GND	Ground
16	DATA 7 B	Data bit 7 Inverted (MSB)
17	DATA 6 B	Data bit 6 Inverted
18	DATA 5 B	Data bit 5 Inverted
19	DATA 4 B	Data bit 4 Inverted
20	DATA 3 B	Data bit 3 Inverted
21	DATA 2 B	Data bit 2 Inverted
22	DATA 1 B	Data bit 1 Inverted
23	DATA 0 B	Data bit 0 Inverted (LSB)
24	DVALID B	Data word Valid Inverted
25	PSYNC B	Packet sync Inverted

Appendix H: RS232 interface

Pin Assignmnet



	Signal	Description		Pin	Signal	Description
1	NC		6	NC		
2	TX	Transmit data	7	CTS	Clear to send	
3	RX	Receive data	8	RTS	Request to send	
4	+5V	+ 5 Volt	9	NC		
5	GND	Ground				