



Home Entertainment Products



DVBS2-980CA

High Definition Twin Tuner Satellite Receiver
Australian VAST Certified

User Manual



Thank you for purchasing DVBS2 980CA Digital Satellite Receiver.

This manual will help you to install, use and maintain the receiver. Please read this manual carefully before operating your unit and keep it for future reference.

Warning & Note

In this manual, pay special attention to the following marks that indicate hazardous situations.

- ❖ **Warning:** Alert user to the operation which could result in device damage or data loss, and the presence of a hazardous situation which could result in serious injury.
- ❖ **Note:** Remind user of presence of possible problems and information of any importance to help understand, use and maintain the installation.

Note: The information in this user's manual is subject to change without notice. The photos and function explanations in the manual are for reference. If any discrepancy exists, please contact your local dealer for assistance.

Trademark



Manufactured under license from Dolby Laboratories. Dolby , Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories.



The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Other trademarks, product and company names mentioned herein are the property of their respective owners.

Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type.

The battery shall not be exposed to excessive heat such as sunshine, fire or the like.

Environmentally friendly disposal



Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

Safety Instruction

Read following items carefully before operating your new VAST receiver.

Installation

- ❖ This receiver should be installed horizontally. Unbalanced installation may cause damage.
- ❖ Install the receiver in a place with:
 - Good ventilation (leave space not less than 10cm around this receiver)
 - No heat source (radiator, heater, fireplace, amplifier, etc)
 - Low humidity (especially not bathroom, kitchen, etc)
 - No direct sunlight
 - Low vibration

Maintenance

- ❖ Unplug this receiver from power socket before changing connections between this unit and other related equipments.
- ❖ Don't unplug or insert signal, audio and video cables when this receiver is on.
- ❖ To avoid the risk of lightning strike, unplug power adapter of the receiver from power socket in lightning storm.
- ❖ Unplug power adapter from power socket when the unit is not going to be used for a long time or is damaged.
- ❖ When moving this receiver from hot to cold or vice versa, turn the unit off for 1 hour before to prevent moisture build up.
- ❖ To avoid the risk of fire or electric shock, don't expose this receiver to rain, water and don't put object with liquid on this unit.
- ❖ Do not cover vents of this receiver with paper, table cloth, curtains, etc.
- ❖ Don't put heavy objects on this receiver.
- ❖ Unplug power adapter of this receiver from power socket before cleaning. To reduce damage, clean this unit with dry cloth. Do not let liquid spill or spray liquid into this device to avoid serious damage.

Power Socket and Power Adapter

- ❖ Make sure the power pack is not covered as this pack will get warm.
- ❖ Do not insert or pull out power adapter with wet hands to avoid electric shock.
- ❖ Do not use damaged power adapter. If power adapter is damaged, contact your local dealer for replacement to avoid risk of fire or electric shock.

RCU Battery

- ❖ Batteries should be installed in accordance with the polarity markings (+/-) on battery compartment.
- ❖ Remove batteries if RCU is not used for a long period of time.
- ❖ Replace batteries if there is not enough power and dispose of battery waste with the environment in mind.

Accessory

- ❖ Only use accessories specified by the manufacturer, as other unsupported accessories may cause damage to the receiver.

Contents

1. Before Using the Receiver	4
1.1 Main Features	4
1.2 Front Panel	5
1.3 Conditional Access (CA)	5
1.4 Rear Panel	6
1.5 Remote Control Unit (RCU)	7
1.6 Learning Instructions	8
2. Installation	9
2.1 Connect TV	9
2.2 Connect Optional IR Target	12
2.3 Connect other Device	12
2.4 Power on	13
2.5 Search Channel	13
3. Basic Operation	14
3.1 Channel Change	14
3.2 Volume Control	14
3.3 Channel Information Bar	14
3.4 Channel List	15
3.5 Teletext	15
3.6 Closed Caption (Subtitles)	15
3.7 PVR Hotkey Menu	16
4. Personal Video Recording (PVR)	16
4.1 HDD Speed Test	16
4.2 Set Recording Parameter	16
4.3 Quick Recording	17
4.4 Schedule Recording	17
4.5 Operation while Recording	18
4.6 Playback Recorded File	19
4.7 Edit Recorded File	20
4.8 Time Shift	22
5. Multimedia	22
5.1 Video & Music	22
5.2 Digital Photo	23
6. HDD Management	23
6.1 Clean up USB device	23
6.2 Format USB Device	23
7. Electronic Program Guide (EPG)	23
7.1 View EPG Information	23
7.2 Schedule Program	24
7.3 Schedule Booked List	24
8. Channel Search	24
8.1 Signal Finding	24
8.2 Installation	25
8.3 TP Edit	25
9. Settings	26
9.1 Common Setting	26

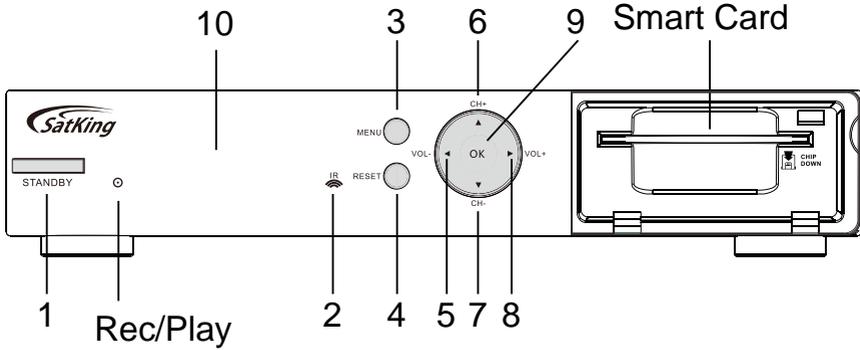
9.2 AV Setting.....	26
9.3 Factory Default.....	27
9.4 Modify System Password.....	27
9.5 Parental Control.....	27
10. USB Upgrade.....	28
11. Over the Air (OTA) Upgrade.....	28
12. Information.....	28
12.1 Smart Card Status.....	28
12.2 Softcell Service Status.....	28
12.3 Loader Status.....	29
12.4 Mail Information.....	29
12.5 Help Information.....	29
13. Freeview Plus.....	30
13.1 Green Key.....	30
13.2 Red Key.....	30
13.3 TV Apps Portal.....	30
14. Network Setup.....	31
14.1 Wired LAN.....	31
14.2 Wireless LAN.....	31
15. Appendix.....	32
15.1 Troubleshooting/Help.....	32
15.2 Specifications.....	35
16. Acronym.....	37

1. Before Using the Receiver

1.1 Main Features

- VAST Certified
- Freeview Certified
- 12V/240V Operation, for Home or RV use
- High Definition MPEG2/4 Compliant
- USB PVR Ready 3 TB Maximum External Drive
- HiSi3796MV200 1.6GHz
- Pause and Rewind Live TV
- Infrared target to place the receiver out of view (optional)
- AVI,MP4,DIVX,MOV,FLV,MKV,MP3 Playback and Photo Browse
- 8 Day Electronic Program Guide
- Subtitles Supported
- Parental Control Function
- Catch Up TV
- Twin Tuner
- Over the Air Secure Software Download
- Standby with Low Power Consumption
- HDMI Output
- Component Output
- CVBS Output
- Dolby Digital Audio
- Coaxial & S/P DIF Digital Audio Outputs
- Stereo Audio Outputs
- USB 2.0 interface
- DiSEqC1.0/1.2 supported
- Irdeto Secure Silicon Conditional Access
- Signal Finder with Beeper Built in
- Large Button Remote with Learning Functions

1.2 Front Panel



Name	Function
1. STANDBY	Switch between operation and standby modes
2.IR	Infrared remote sensor
3. MENU	Display/exit from main menu
4.RESET	Press the reset button in the event the unit freezes
5/8. ◀▶	Adjust volume or move cursor left/right
6/7. ▲▼	Change channels or move cursor up/down
9.OK	Display channel list or confirm operation
10. DISPLAY	Clock when in Standby and Channel number when turned on

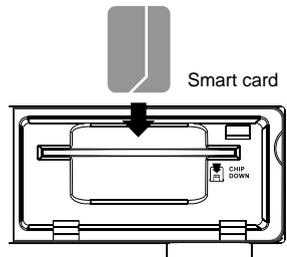
1.3 Conditional Access (CA)

Your VAST receiver requires the smart card to be inserted at all times to enjoy programs.

Note: The VAST smart card is already inserted

Insert Smart Card

1. Open the right-hand cover on front panel.
2. Face the side with electronic chip downwards and insert the smart card into the lower slot horizontally according to arrow direction.

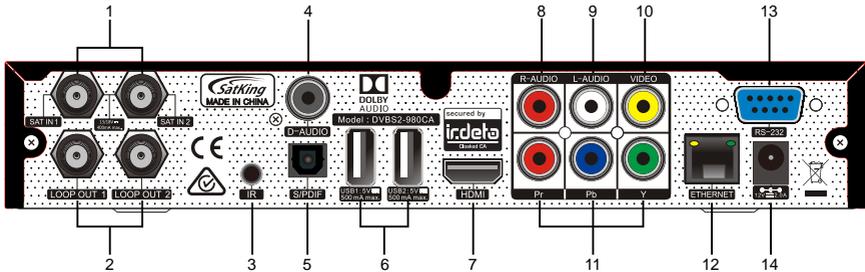


Notes:

- **To display smart card number press help on the remote**
- **Please note the smart card number in case of queries.**
- **Do not bend or damage the smart card.**
- **Do not place the smart card in hot environment or under direct sunlight.**

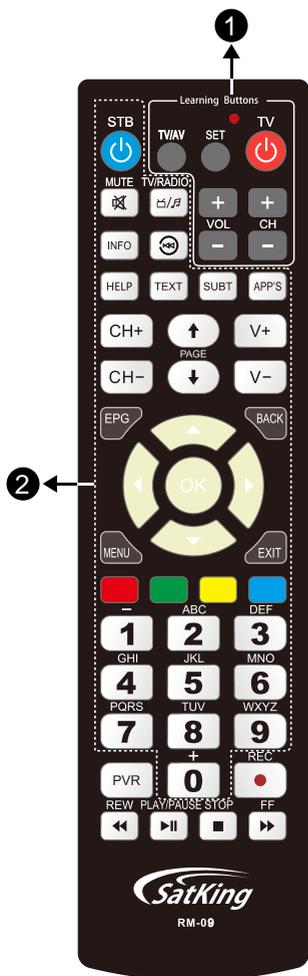
- Use a dry soft cloth too clean the surface of the smart card gently.
- Do not place into liquid or cleaning agent.
- If the smart card does not work properly, please contact your local dealer.

1.4 Rear Panel



Name	Function
1. SAT IN (13/18V \approx 400mA max)	Connect to satellite dish
2. LOOP OUT	Loop out the satellite signal to another receiver
3.IR	Connect to IR extender (optional, contact dealer to purchase)
4. D-AUDIO	Output digital audio signal to amplifier
5.S/PDIF	Output digital audio signal to amplifier
6. USB x2 (5V \approx 500mA max)	For recording, pictures, wifi or upgrading
7.HDMI	Output video and audio signal to TV (support high definition output)
8/9. R/L-AUDIO	Output right/left audio signal to TV or amplifier
10.VIDEO	Output CVBS video signal to TV
11.Y/Pb/Pr	Output Y/Pb/Pr video signal to TV (support high definition output)
12.ETHERNET	Connect to Router
13.RS-232	Serial port used for software upgrade (Authorised personnel only)
14. 12V \approx 2.0A	DC power input port

1.5 Remote Control Unit (RCU)



Name	Function
1. Learning buttons	
SET	To program learning remote function
TV/AV	Change TV source
TV	Turn TV On/Off
VOL+/-	Turn TV volume up/down
CH+/-	Change channel on TV
2. Buttons on the Remote Control Unit	
	Switch between operation and standby modes
MUTE	Mute/restore sound
TV/RADIO	Switch between TV and radio modes
INFO	Display channel information bar
	Jump back to start to start of playback
HELP	Display help information window
TEXT	Display Teletext information (If Available)
SUBT	Display Close Caption (Subtitles)
APP'S	Display TV Apps Portal
CH+/-	Change channels
PAGE	Page up/down
V+/-	Adjust volume
EPG	Display electronic program guide
BACK	Back to previously viewed channel
▲▼	Change channels or move cursor up/down
◀▶	Adjust volume or move cursor left/right
OK	Display channel list or confirm operation
MENU	Display/exit from main menu
EXIT	Back to previous menu or exit from operation
0 ~ 9	Change channels by entering numbers
Colour keys	Functions depend on specific applications



3. Buttons for PVR functions	
INFO	Display playback progress bar or time shift progress bar
◀	Skip backward when playback or T/S
▶	Skip forward when playback or T/S
PVR	Display short cut window
PLAY/PAUSE	Pause playback or pause playing to start time shift
STOP	Stop playback, recording or time shift
REC	Record current program or display recording information
◀◀	Fast backward (x2, x4, x8, x16, x32 speed)
▶▶	Fast forward (x2, x4, x8, x16, x32 speed)

Notes:

- The buttons mentioned in the manual refer to RCU keys.
- Please operate according to instructions on screen.

1.6 Learning Instructions

The RM-09 has learning ability to take over the use of the main TV remote for the basic functions:

- 1) Source
- 2) Volume+/-
- 3) Existing ATV or DTV channel control +/- where available

Instructions:

1. Depress **SET** key of the STB RCU for 3secs, the red light will increase in intensity.
2. Aim TV RCU at the sensor of the STB RCU, then press key on the STB RCU that you want to pair. The light will flash slowly and then press the key on RCU you want to pair. the light will flash fast when pairing and then go solid. Move on to the next key you want to pair.
3. When pairing of the keys is complete press the set key and the red light will go out.

2. Installation

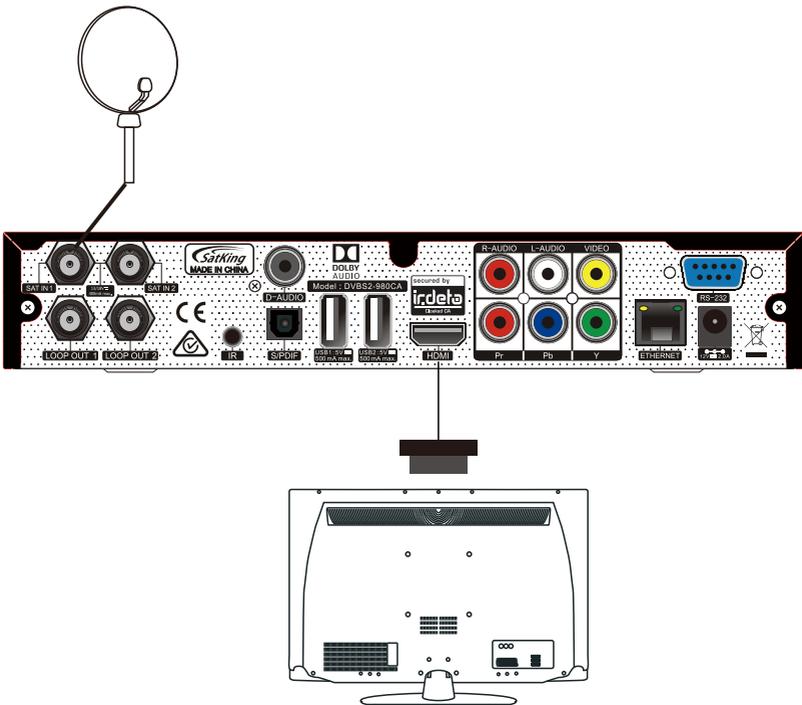
Connect TV and other devices, then you can power on the receiver and search channels.

2.1 Connect TV

Please choose one of following 4 ways to connect TV.

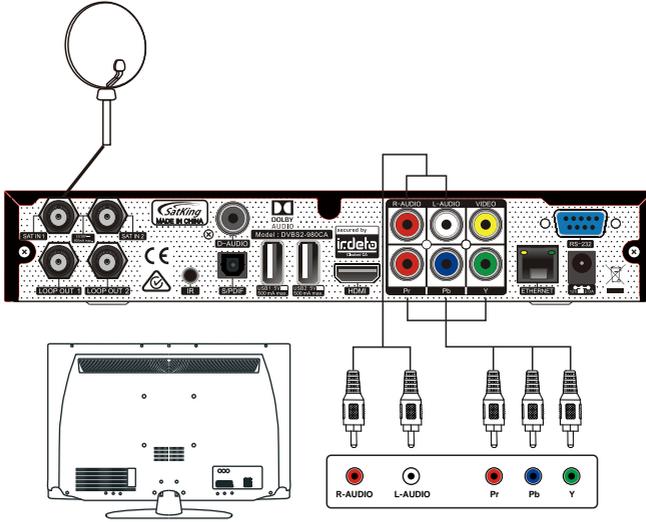
1. Connect TV Using HDMI Cable

1. Connect LNB IN port on the receiver to an aligned satellite dish with an RF cable.
2. Connect HDMI port on the receiver to HDMI port on TV.



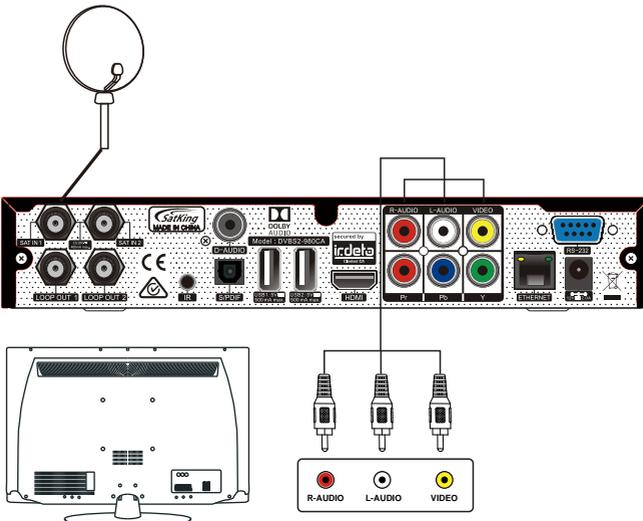
2. Connect TV Using YpbPr Cable (Component)

1. Connect LNB IN port on the receiver to an aligned satellite dish with an RF cable.
2. Connect Y (green)/Pb (blue)/Pr (red) ports on the receiver to Y/Pb/Pr ports on TV.
3. Connect R-AUDIO (red) L-AUDIO (white) ports on the receiver to corresponding ports on TV with an RCA cable.



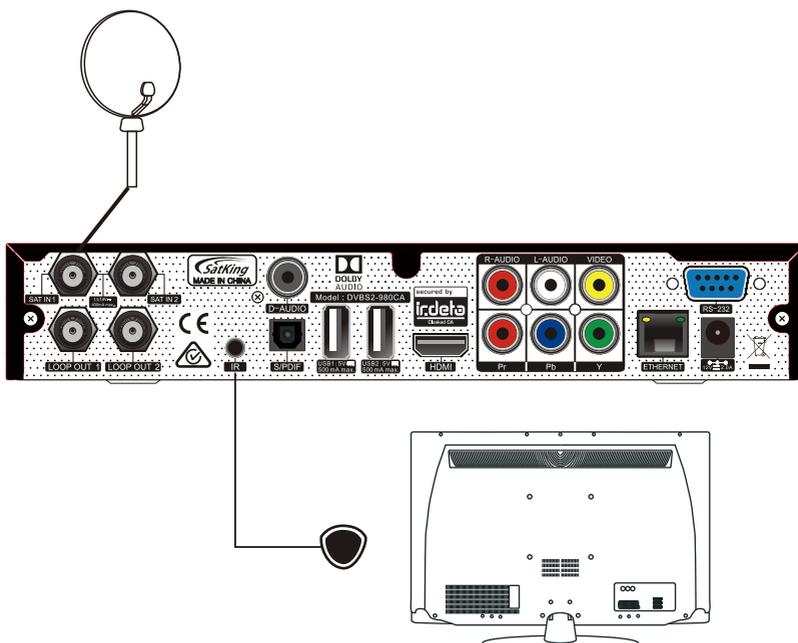
3. Connect TV Using RCA Cable (included in package)

1. Connect LNB IN port on the receiver to an aligned satellite dish with an RF cable.
2. Connect VIDEO (yellow) port on the receiver to corresponding port on TV.
3. Connect R-AUDIO (red)/L-AUDIO (white) ports on the receiver to corresponding ports on TV.



2.2 Connect Optional IR Target

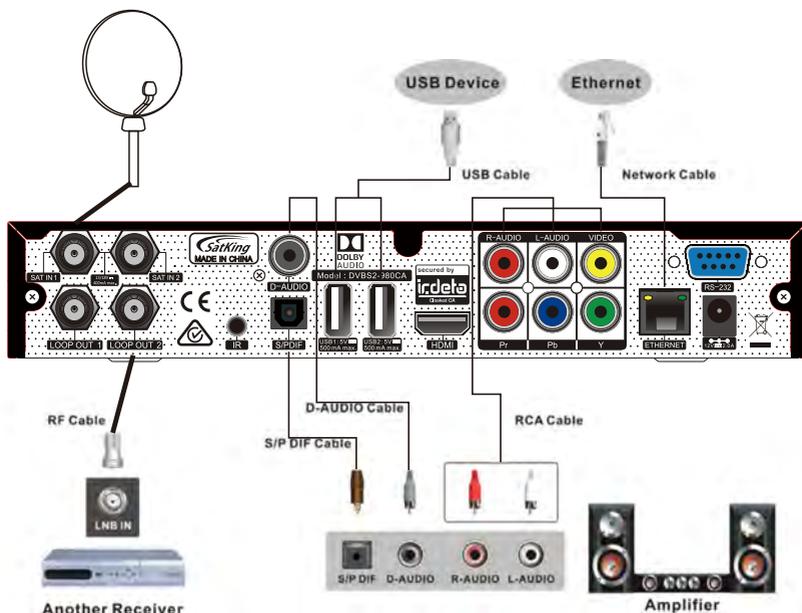
Connect Optional IR Target to IR port and then you can place the receiver out of sight.



2.3 Connection of other Devices

For connection of other devices, please refer to following details:

- ❖ Connect LOOP OUT 2 port on the receiver to LNB IN port on 2nd receiver with an RF cable.
- ❖ Connect D-AUDIO port on the receiver to corresponding port on amplifier with a D-AUDIO cable, or connect S/P DIF port on the receiver to corresponding port on amplifier with an S/P DIF cable, or connect R-AUDIO (red) L-AUDIO (white) ports on the receiver to corresponding ports on amplifier with an RCA cable.
- ❖ Connect USB port on the receiver to USB device with a USB cable
- ❖ Connect ETHERNET port on the receiver to router with a network cable (RJ-45).



Note: If you encounter any problem during the connections, please contact your local Dealer.

2.4 Power on

1. Connect one end of power adapter to power input port on the receiver.
2. Connect the other end of power adapter to the mains power socket.
3. Turn on the power switch on power socket, the receiver will boot up and you will see the receiver go through the scanning process

Note: Please turn on your TV and switch it to corresponding AV mode according to actual connection. For example, if HDMI cable is connected, switch your TV to HDMI mode. When using the supplied RCA cable select AV or Video.

2.5 Search Channel

When the unit is first powered on the receiver will search channels automatically. After searching is complete programs will be displayed. If not read on to complete the initial set up.

Note: For more search details, please refer to 8. Channel Search.

3. Basic Operation

This section describes operations such as channel change, volume control and other basic operations when playing program.

3.1 Channel Change

You can change channels using following methods:

1. Select Next/Previous Channel

Press **▼▲** or **CH+/-** keys to select next/previous channel. Press back button to go to last CH.

2. Select Channel by Channel Number

1. Press number keys to input a channel number.
2. Wait for 3 to 5 seconds for the channel to display.

3. Select Channel in Channel List

For detailed operations, please refer to **3.4 Channel List**.

3.2 Volume Control

Press **◀▶** or **V-/+** keys to adjust volume.
Press **MUTE** key to mute/restore sound.

3.3 Channel Information Bar

Press **INFO** key once or press to display channel information bar.
When channel information bar is displayed on screen, press **INFO** key to display detailed channel information.

Press **EXIT** key to remove the channel information bar.



1. Program Duration Bar
2. Channel number and name
3. TV/Radio mode icon
4. Current and next program information
5. Current audio mode
6. Standard/High Definition

7. Freeview Plus Availability
8. Resolution
9. Current time & Date
10. Signal strength and quality

3.4 Channel List

Channel list is available for you to browse channels easily and quickly. Press **OK** key to display channel list of current service mode.

1. Press **TV/RADIO** key to switch between TV and radio modes.
2. Press **◀▶** keys to switch among different channel lists.
3. Press **PAGE▲/▼** keys to page up/down.
4. Press **▲▼** keys to select a channel.
5. Press **OK** key to play it in full screen.



3.5 Teletext

An electronic newspaper in which you can browse multiple pages of information, such as news and horse racing information

1. Press **TEXT** key to display Teletext information.
2. The first page shows the index. You can operate according to operation help information or key instructions on screen.
3. Press **EXIT** key to hide the Teletext information.

Note: This function needs local operator support, this function may not be available.

3.6 Closed Caption (Subtitles)

Press **SUBT** key to switch on/off CC, this function is used for the hearing impaired.

Note: This function is not available on all programs, local newspapers will highlight CC next to the program in the TV guide.

3.7 PVR Hotkey Menu

This menu provides some hotkey PVR functions. Press **PVR** key to display hotkey key menu.

Notes:

- **Time shift can be started in this menu.**
- **For more details about PVR functions, please refer to 4. Personal Video Recording (PVR).**



4. Personal Video Recording (PVR)

You can record programs on USB device for later playback. This receiver provides PVR functions, such as quick recording, schedule recording, time shift, etc.

Notes:

- **USB device should be connected to USB port on rear panel before operation.**
- **Radio programs can't be recorded.**
- **If space on your USB device is insufficient, recording will stop automatically.**
- **During operation, don't unplug the USB device.**
- **This unit can record 2 channels and watch a third within the 2 Tp's at the same time. You can also record 2 channels and playback or watch Freeview Plus at the same time.**

4.1 HDD Speed Test

If the speed of USB device is not fast enough, it may not work correctly. After connecting the USB device to the receiver, you can test its speed.

Select Main Menu → PVR Function → HDD Speed Test and press **OK** key to enter.

1. Press **OK** key to start testing.
2. The prompt will indicate pass/fail.
3. Press **EXIT** key when finished.



4.2 Set Recording Parameter

Note: If you don't set recording parameters, system will record programs according to default settings. This function is handy if a program starts early or over runs.

Select Main Menu → PVR Function → PVR Setting and press **OK** key to enter.

❖ **Schedule Start Time Offset**

You can set schedule start time offset value.

Press ◀▶ keys to select a time from 0 to -30 minutes. For example, if scheduled start time is "13:00" and offset value is "-5 Min", the real start time is 12:55.

❖ **Schedule Stop Time Offset**

You can set schedule stop time offset value.

Press ◀▶ keys to select a time from 0 to 30 minutes. For example, if scheduled stop time is "13:00" and offset value is "5 Min", the real stop time is 13:05.

❖ **Schedule Reminder**

Set reminder time before starting schedule recording.

Press ◀▶ keys to select 30 Sec, 60 Sec, 90 Sec, 120 Sec or OFF.



❖ Divide Record by EPG Event

You can record programs in several files according to EPG events when you set a record that runs across multiple programs, such as news, movies, sporting events, etc.

Select "OFF" to record programs in one file, or select "ON" to record programs in several files according to EPG events.

❖ PVR Icon Time out

Set on screen duration of PVR icon.

Press ◀▶ keys to select Always, 5 Sec, 10 Sec (default), 30 Sec or 60 Sec. If "Always" is selected, PVR icon is displayed on screen all through the recording.

❖ Default Recording Duration

Set default recording duration of quick recording.

Press ◀▶ keys to select one from 1 to 24 hours.

Note: Near recording end time, system will remind you whether to increase record duration. If you increase duration, recording will continue.

After setting, press **OK** key to save and exit.

4.3 Quick Recording

If you want to record current program instantly, you can use this function.

1. Start Recording

When watching a program, press **REC** button to start recording and "📺" is displayed in top right corner of screen.

To record another program on another channel, change channels while recording and press **REC** key again.

Note: You can only record 2 programs at the same time.

2. Stop Recording

1. After pressing the **STOP** key when recording, a recording list will pop up on screen.

2. Select a recording and press **OK** key to stop.

Note: If you playback a program while recording, press STOP key to stop playback, then press ok on the file you want to stop.



4.4 Schedule Recording

You can schedule to record future programs, and system will start recording automatically. In addition, you can modify schedules and delete unwanted schedules.

Select Main Menu → PVR Function → Schedule and press **OK** key to enter.

Note: You can schedule recording in the EPG directly. For detailed operations, please refer to 7.3 Schedule Program.

1. Add Schedule

1. Press **Green** key to display add schedule window.
2. Set schedule parameters as follows:

WakeUp Mode: Press ►◀ keys to select Rec or Play.

Schedule Start Time/Date: Press arrow key to display date window and select date. To set the time use the remote number keys directly.

Duration: Press number keys to input the length of the timer you want to do.

Type: Press ►◀ keys to select Once, Daily or Weekly.

Channel Name: Highlight channel and press right arrow to display channel list, select a channel with ▼▲ keys and press **OK** key to confirm.



3. Press **Exit** key and then **OK** to save the new schedule

2. Modify Schedule

1. Highlight Schedule Press right arrow key to enter and up/down key to select a schedule.
2. Press **Yellow** key to display modify schedule window. You can modify schedule start time, duration and mode. For detailed operations, please refer to **4.4.1 Add Schedule**.

3. Delete Schedule

1. Press **OK** key to select a schedule
2. **Highlight** the file to delete and press the **Blue** key and press **OK** to confirm. If you want to cancel this delete right arrow to **EXIT**.



Note: You can press **Red** key to delete all schedules and select **EXIT** key to cancel the setting.

4.5 Operation while Recording

1. View/Modify Recording Information

While recording a program, you can view recording information, rename files and modify recording duration if needed.

Select Main Menu → PVR Function → Recording Info and press **OK** key to enter, in PVR hotkey menu select **Modify the Record** and press **OK** key to enter, or press **REC** key to enter directly if you are watching program you are recording.

Index: Press ◀► keys to select R1 or R2.

Mode: Display recording mode (Quick or Schedule).

Channel Name: Display channel name.

File Name: You can rename the file if needed. Press **OK** key to pop up a keyboard. For detailed operations, please refer to **4.7.3 Rename Recorded File**.

Valid Record Time: Display valid recording time.

Past Time: Display past time.

Duration: Press **◀▶** keys to select a recording duration. System will record according to the modified duration.

Select "Pause" and press **OK** key to pause recording. Select "Resume" and press **OK** key to resume valid recording.

Select "OK" and press **OK** key to save the setting.

Select "Cancel" and press **OK** key to cancel the setting.



2. Change Channel

While recording program, you can watch other live programs as the unit is twin tuner. Press **OK** key to display available channel list, unavailable channels are greyed out if you have 2 recordings running. For detailed operations, please refer to **3.4 Channel List**.

3. Playback Program

During recording, you can playback current program. For detailed operations, please refer to **4.8 Time Shift**.

4.6 Playback Recorded File

You can playback recorded files.

Select Main Menu → PVR Function → File List and press **OK** key to enter, or highlight "Start Play Back" in PVR hotkey menu and press **OK** key to enter.

1. Press **▲▼** keys to select a file.
2. Press **OK** key to playback it.



While playback, you can operate as follows:

1. Pause

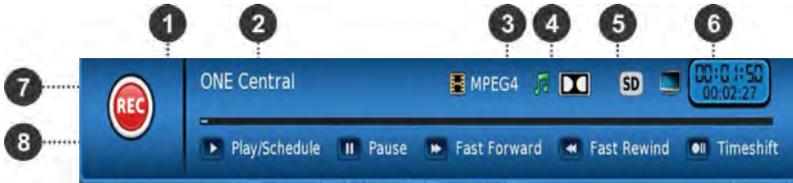
Press **PLAY/PAUSE** key to pause playing, for super slow motion Press Pause and then use Rew/FF. Press **PLAY/PAUSE** key again to resume playing.

2. Fast Forward/Rewind

Press **REW/FF** keys to fast backward/forward maximum speed is 32X. Press **PLAY/PAUSE** key to play at normal speed.

3. Playback Progress Bar

If you press the **INFO** key during playback the progress bar is displayed. It displays current file information, playback progress and operation help information.



- | | |
|----------------|---|
| 1. Info banner | 5. Standard/high definition mode icon |
| 2. File name | 6. Watching point time (hh:mm:ss)/total time (hh:mm:ss) |
| 3. File Type | 7. Playback progress bar |
| 4. Audio Type | 8. Playback functions |

4. Skip Forward/Backward

1. Press **INFO** key to display playback progress bar.
2. Press **Right/Left arrow** keys to jump backward/forward, 3 Mins for Pre-recorded Programs
3. Press **PLAY/PAUSE** key to play at normal speed.

5. View Recorded File Information

1. Press **INFO** key to display playback progress bar.
2. Press **INFO** key again to display detailed information of current file.
3. Press **EXIT** key to remove it.

6. Stop Playback

Press **STOP** key to stop playback manually.

4.7 Edit Recorded File

You can delete, group, rename and lock recorded files.

Select Main Menu → PVR Function → File List and press **OK** key to enter, or highlight "PVR Function" in PVR hotkey menu and press **OK** key to enter..

1. Delete Recorded File

1. Press OK then **▼▲**keys to select a file.
2. Press **Red** key to delete the file and press OK to confirm to cancel press EXIT key.



2. Group Recorded File

1. Press ▲▼ keys to select a file.
2. Press **Green** key to pop up group edit window.
3. Select a group and press **OK** key to add the selected file to this group.
4. Press **EXIT** key to save and exit.

In addition, you can add, delete and rename groups.



❖ Add Group

Press **Green** key to pop up a keyboard. For detailed operations, please refer to **4.7.3 Rename Recorded File**.

❖ Delete Group

1. Press ▲▼ keys to select a group.
2. After pressing **Red** key, a message box pops up for confirmation.
3. Select "OK" and press **OK** key to confirm or select "Cancel" and press **OK** key to cancel the operation.

❖ Rename Group

1. Press ▲▼ keys to select a group.
2. Press **Yellow** key to pop up a keyboard. For detailed operations, please refer to **4.7.3 Rename Recorded File**.

3. Rename Recorded File

1. Press **OK** to enter and ▲▼ keys to select a file.
2. Press **Yellow** key to pop up a keyboard.
3. To Input the file name. Please refer to following:

Select characters on the keyboard with arrow keys and press **OK** key to input.

Press **delete** to delete characters one by one. Select "Caps On/Off" and press **OK** key to switch between lowercase and capital.

You can enter numbers using the remote number keys.



4. Press **Blue** key to save and exit. The new recorded file name appears in file list.

4. Lock Recorded File

1. Press ▲▼ keys to select a file.
2. Press **Blue** key to lock this file, and mark it with "🔒". If you want to cancel this setting, press **Blue** key again.
3. Press **EXIT** key to save and exit.

Note: System password is required to unlock files and view programs of locked files.

4.8 Pause & Rewind Live TV

Press **PAUSE** when you have a HDD connected, or highlight "Start Time Shift" in PVR hotkey menu and press **OK** key. The receiver will pause and be able to FF/Rewind. The pause live TV function will buffer up to 1 hour. When you change channels the time shift will be dumped.

1. Time Shift Operation

You can perform pause/play, fast backward/forward, etc. For detailed operations, please refer to **4.6 Playback Recorded File**.

You can also press **INFO** key to display current channel information, playback progress and operation help information. Once FF/Rewind is used the info bar will be the PVR info bar.

Press the pause key or rewind to start time shifting.

You can then press play when you wish to start watch the time shifted programming. You can then also fast forward or rewind.

If you wish to fast forward in timeshift the maximum speed is 32x.

To skip forward or back the minimum jump is 10 minutes. To use the skip function press FF/REW and then use the right or left arrow keys.

To go back to start of the time shift press the jump back key on the remote.



2. Stop Time Shift

Press **STOP** key or change to another channel to stop the current time shift and return to play live program. Press pause on the new channel to start time shift again.

5. Multimedia

You can play videos, music and browse photos.

Note: USB device should be connected to USB port before use, don't remove when in use.

5.1 Video & Music

Select Main Menu → Multimedia → Select A or B Drive and press **OK**.

1. Press **▼▲** keys to select Music or Video
2. Press **OK** key to play the file, and you can operate as follows:

OK key: Pause/Play to resume playing

Yellow key: Change aspect

Follow the OSD at the bottom of the screen for FF, REW and other file options

3. Press **EXIT** key to exit.



5.2 Digital Photo

Select Main Menu → Multimedia → Select A or B Drive and press **OK**.

1. **Select** Photo key using the up/down arrows
2. Press **▼▲** keys to select a photo file.
3. Press **OK** key to display it in full screen, or press **Blue** key for slide show.
4. Press **EXIT** key to exit.



6. HDD Management

6.1 Clean up USB device

You can view free space of USB device and delete recorded files if necessary.

Press **PVR** key in non-menu mode to display hotkey key window and select "Start Play Back" and press **OK** key to enter.

To delete recorded files select a file and press red key, please refer to corresponding operations in **4.7 Edit Recorded File**.



6.2 Format USB Device

⚠ Warning: This function will format your USB device, and all files will be deleted.

Select Main Menu → PVR Function → HDD Format and press **OK** key to enter.

1. Highlight **"OK"** and press **OK** key, a warning box pops up for confirmation.
2. Select **"OK"** and press **OK** key to confirm or select **"Cancel"** and press **OK** key to cancel the operation.



7. Electronic Program Guide (EPG)

In this guide, you can view program information of current service mode based on date and time. In addition, you can schedule to play or record future programs. **Note: This is not the Freeview Plus EPG, to access the Freeview Plus EPG the green key symbol needs to be displayed on the TV screen.**

7.1 View EPG Information

The EPG simultaneously displays several channels programs for now & next on the one page. Each program is displayed according to its time bounds. By pressing the right arrow key you can check upcoming programs over the coming days. Press **EPG** key to enter directly in non-menu mode.



1. Current date and time
2. Detailed information of the selected program
3. Channel list
4. Time slice bar
5. Program list
6. Operation information

▲▼ keys: Select channel

▶◀ keys: Select program

OK key: Play current program in full screen or schedule future program **Yellow/Green** keys: Switch to next/previous day, **Red Key**: Record, **Blue Key**: Booked list

7.2 Schedule Program

1. Press ▲▼ keys to select a future program.
2. Press **REC** key to pop up EPG schedule window.
3. Set schedule type and mode. For detailed operations, please refer to **4.4.1 Add Schedule**.
4. Highlight "OK" and press **OK** key to save the new schedule. The scheduled program is marked with "📺" (record) or "📺" (play). If you want to cancel this setting, press **OK** key again. If the option for series link is available highlight ok to confirm.
5. Press **EXIT** key to save and exit.

Notes:

- *A small banner will appear when schedule starts*



7.3 Schedule Booked List

All the scheduled programs are displayed in this window. You can cancel or restore schedules.

1. Press **Blue** key to display book list when program list is highlighted.
2. Press ▲▼ keys to select a schedule.
3. Press **OK** key to cancel or restore it.
4. Press **EXIT** key to save and exit.



8. Channel Search

If the STB doesn't scan in automatically you will need to follow the instructions below. When setting up your STB or satellite system start in signal finding below.

8.1 Signal Finding

You can calculate bearing, elevation and LNB skew of satellite dish according to your location, and adjust satellite dish manually. In addition, you can search channels if the signal is locked.

Select Main Menu → Signal Finding and press **OK** key to enter.

1. Press number keys to select your state.



2. Press ►◄▼▲ keys to move the cursor to your location and press **OK** key (Approximate is fine)
3. You are now in the signal detection page, here you can see the technical details for manual positioning of your dish.
4. If you have green solid bars at the bottom of the screen and listed under locked to is Optus C1 you are ready to go. if the bars are not green check your installation. You must have green bars to scan
5. Press **OK** key to search channels and the unit will scan in your channels.
6. Once you land on channel 800 you need to activate your card 1300 993 376.



8.2 Installation

Note: This function is for custom/complex configurations.

Select Main Menu → Installation → Installation and press **OK** key to enter.

1. Set parameters as follows:

LNB Power: This should be set to on to power the, LNB. The default status is "ON".

Note: Do not change this setting unless your LNB is powered on by other satellite receiver.

L.O. (MHz): Press ◀▶ keys to select LNB type according to your LNB (10700 is normally correct)

Low/High Freq: If "LNB Type" is "Custom", you can set LNB frequency according to your LNB type. **Note: Custom is only for very advanced systems.**

22K: Press ◀▶ keys to select ON or OFF according to your system (Normally is off) **Note: If "LNB Type" is set to "9750/10600" or "Custom-Dual", 22K switch will operate automatically.**

DiSEqC: Press ◀▶ keys to select the port according to connection of DiSEqC switch (normally off) **Edit TP** You can also press **Yellow** key to display TP edit window. For more details, please refer to **8.3 TP Edit**.

2. Press **OK** to scan.



8.3 TP Edit

Note: This function in the VAST box is of limited operation as the receiver automatically searches channels for you. This function can be of use in low signal areas of Australia.

Select Main Menu → Installation → Installation and press **OK** key to enter, and press **Yellow** key to display TP edit window.

1. Edit TP

1. Press **Yellow** key to add a TP.
2. Press number keys to change TP and Symbol rate details. As example default is Freq 12567 and Symbol 30000. An alternate freq is 11804 and symbol 30000
3. Press **Red** key to start search or **EXIT** key to save the new TP.

2. Modify TP

1. Press **Yellow** key to move cursor to parameter list.
2. Press **▶◀** and the number keys to set proper values.
3. Press **EXIT** key to save the new TP.

3. TP Search

Search channels according to the selected TP.

1. Press **Red** key to search.
2. Channels will automatically scan in.



9. Settings

9.1 Common Setting

Select Main Menu → Settings → Common Settings and press **OK** key to enter.

1. **Language:** Press left and right arrow keys to change
Menu Transparency: Press left and right keys to change

Region: To select your correct state to control the EPG time.

Time Mode: Satellite by default, Network is for future use.

Auto Power Down: This setting is to save power, set to none is energy saving off. Default with HDD is 3Hrs

Tuner Type: The default is Loop Through for VAST



9.2 AV Setting

Select Main Menu → Settings → AV Settings and press **OK** key to enter.

1. Set parameters as follows:

Aspect Mode: Press **▶◀** keys to select 4:3 or 16:9.

Resolution: Press **▶◀** keys to select a best resolution to suit your TV.

Note: *If your TV does not support the selected resolution, there is no video output on screen. In this case, continue to press **▶◀** keys until the video appears again.*

Audio Setting: Press **▶◀** keys to select Stereo, Left, Right or Mono.

Audio Decode: The receiver can output two types of digital audio signal via S/P DIF port. If your digital amplifier has Dolby digital decoder, set it to "AC-3" to output encoded signal. If not, set it to "PCM" to output decoded signal. You can also pass through.

Note: *If there is no Dolby digital provided in the program, even though you set it to "AC-3", program cannot be played with Dolby sound.*

Preferred Audio: Reserved for future use. **Preferred Subtitle:** reserved for future use.

Audio Description: Reserved for future use.

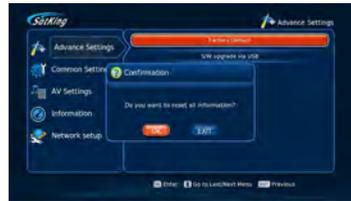
Service Mode: Select between TV/Radio using the left and right arrow keys. This is handy if you have misplaced your remote control. Once you toggle you will jump straight out.



2. Press **EXIT** key to save and exit.

9.3 Factory Default

Warning: This function will restore system settings to factory defaults and erase all schedules. Select Main Menu → Settings → Advance Settings → Factory Default and press **OK** key, a warning box pops up for confirmation. Select “OK” and press **OK** key to confirm or select “EXIT” and press **OK** key to cancel the operation. System will reboot after restoring.



9.4 Modify System Password

System password is required to view the locked recorded file or enter some menus, such as Advance Settings, etc. The default password is “1234”. You can change it if necessary.

Select Main Menu → Parental Control to Modify press **OK** key. Enter current password and then change.



1. Press number keys to input new password.
2. Input new password again for confirmation.
3. Press **EXIT** key to save and exit.

Note: Don't forget the password, if forgotten you will need to contact your local dealer.

9.5 Parental Control

You can set parental level for programs and modify parental control password.

1. Modify PG Password

PG password is required to view programs beyond the set parental level. You can modify it if necessary. Select Main Menu → Parental Control → Modify PG Password and press **OK** key to enter.

1. Press number keys to input new password.
2. Input new password again for confirmation.
3. Press **EXIT** key to save and exit.

Note: Don't forget the password. If the password is lost you will need to contact your local dealer.

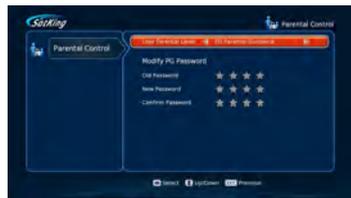


2. User Parental Level

Select Main Menu → Parental Control → Modify PG Password and press **OK** key to enter.

1. Highlight “User Parental Level” and press ◀▶ keys to select a parental control level.
2. After setting, press **EXIT** key to save and exit.

Note: Parental control password is required to view programs beyond the set level.



10. USB Upgrade

Warning: Don't turn off the receiver during Software upgrade.

Notes:

- Before operation, please download new version software to root directory of the USB device.
- USB device should be connected to USB port on rear panel before operation.
- Software upgrade will take 5 to 10 minutes.

You can transfer data by USB port.

1. Select Main Menu → Settings → Advance Settings → USB Upgrade and press **OK** key to display a message box.
2. Select "OK" and press **OK** key to upgrade or select "EXIT" and press **OK** key to cancel the operation.
3. After upgrade, system reboots automatically.



11. Over the Air (OTA) Upgrade

VAST may send new software over the air via satellite from time to time, and you can download it. This software upgrade will occur in the following situations:

- ❖ VAST automatically software upgrades the receiver (you don't need to do anything).
- ❖ If there is no software upgrade available the OTA section will be greyed out.

Notes:

- Don't turn off your receiver during software upgrade.
- During software upgrade, you can't do other operations.
- "Upgrade Software" is activated if new software is found.

Select Main Menu → Settings → Information → OTA Upgrade and press **OK** key, system will reboot and download it. It will take 5 ~ 10 minutes to upgrade software. After upgrade, system reboots automatically.

12. Information

You can view smart card number, status, softcell service status, loader status, etc.

12.1 Smart Card Status

This window displays information about smart card.

Select Main Menu → Settings → Information → Smart Card Status and press **OK** key to enter.

12.2 Softcell Service Status

This window displays information about softcell service.

Select Main Menu → Settings → Information → Softcell Service Status and press **OK** key to enter.



12.3 Loader Status

This window displays information about loader, including Irdeto access loader status and manufacturer loader status in chip ID.

Select Main Menu → Settings → Information → Loader Status and press **OK** key to enter.



12.4 Mail Information

All mails received from VAST are displayed in mail information window. Select Main Menu → Messages and press **OK** key to enter.

Note emergency warning messages override all functions and will be displayed on the main screen.

▲▼ keys: Select mail

OK key: Read mail

Red key: Delete the selected mail

Blue key: Delete all mails

Note: If the receiver receives a new mail, a mail icon appears on screen.



12.5 Help Information

This window displays help information to assist to operate your VAST receiver.

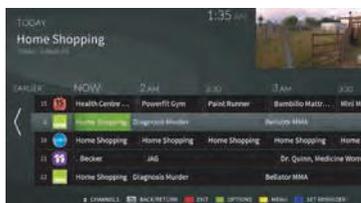
Select Main Menu → Help → Help Info and press **OK** key to enter, or press **HELP** key to enter directly in non-menu mode.

1. The help menu details your card number and a handy built in troubleshooting menu. Use the page **up/down** keys to navigate through the pages.

13 Freeview Plus

This receiver has Freeview Plus enhanced EPG and catch up TV built in. Freeview offers the ability to catch up on missed programs that are shown by Australian TV networks. The enhanced EPG offers detailed program information, program recommendations and search for program functions. Freeview Plus has no subscription charges.

Please note: Freeview Plus services require an internet connection, data charges may apply.



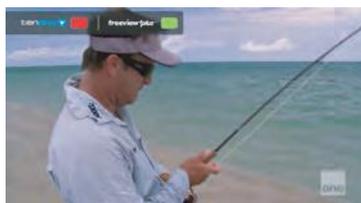
13.1 Green Key

If a channel is carrying the Freeview Plus service, when you land on the channel the green Freeview key will appear in the top left corner. To enter the enhanced Freeview Plus EPG simply press the **Green** key on the remote. Once the enhanced EPG has launched you will be able to take advantage of the program recommend and detailed program information. To change channels when in the enhanced EPG use the **up/down** arrow keys. To hide the EPG press the back button and to exit press the **Red** key.



13.2 Red Key

If a channel is carrying the network catch up TV service, when you land on the channel the red Network key will appear in the top left corner. To enter the enhanced Network catch up TV service simply press the **Red** key on the remote. Once the network catch up TV launches you can navigate through the program catalogues available. You can also access search to look for your favourite programs. To hide the EPG press the back button and to exit press the **Red** key.



13.3 TV Apps Portal

As not all the networks catch up TV services are available automatically (as time goes on they will be). We have placed catch up TV services also in the TV's apps portal. Simply press the TV App's key on the remote and select the service you wish to watch, navigate through the networks program catalogues and look for your favourite programs.

We will also continue to add other apps to the portal to improve your experience check back at times to see what other apps have been added.

Note streaming services other than Freeview Plus may charge subscription fees to access content.



14 Network Setup

Select Main Menu→Settings→Network Setup
 Select your network type **Wired** or **Wireless**

Note for wireless connection you will need the optional SatKing WL-85 wireless dongle.

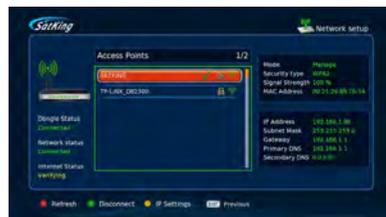
14.1 Wired LAN Connection

1. Connect your router to the ethernet connection on the rear of the receiver.
2. Press **OK** on the wired option, if the LAN cable is not connected or not connected to an active router a prompt message asking you to connect will appear.
3. To confirm that all connections are correct and you are connected to the internet. On the left side of Network Setup page you will see "Connected" next to Cable, Network and Internet.
4. If any of the 3 Network setup status icons say disconnected check your router is connected to the internet and check your cabling.
5. Press **Menu** to return to live TV.



14.2 Wireless LAN Connection

1. Connect the optional wireless dongle WL-85 is connected to one of the USB ports on the rear of the receiver.
2. Press **OK** on the wireless option, the receiver will scan for wireless networks. Select your network and press **OK**.
3. Enter your network password and press the **Blue** key to save. This is the same wireless password that you would enter in your laptop or mobile devices also running off your wireless router. If the receiver fails to connect, check your password and that you are connected to the correct wireless access point.
4. When the 3 network setup status icons on the Network Status page are all "Connected" the setup is complete.
5. Press **Menu** to return to live TV.



15. Appendix

15.1 Troubleshooting/Help

No signal E50-32 or E48-32

-  1. Satellite cable may not be connected. Make sure the satellite cable is connected into the "Sat In 1" port on the rear of the receiver.
-  2. The wrong LNB setting may be being used. Check your LNB type on the LNB sticker. Normally the LNB will be a wideband 10700, if this is the case no need to change this setting and proceed to point 3 below. If the LNB is 11300 you will need to enter signal finding and change this setting under LNB type to 11300. After you have completed your installation we recommend that you contact your local dealer to purchase a wideband 10700 LNB to receive all channels.
-  3. If this is a new installation the dish may not be aligned correctly, if it is an existing installation investigate other issues before moving the dish. Press menu and enter the signal finding menu to complete the setup process. This will give you more details on the alignment settings for the satellite dish. Proceed to the signal detection screen and move the dish very slowly listening to the signal intensity beeper. Make sure the volume on your TV & the receiver is turned up to around half way so you can hear the beeper without doing any speaker damage. Once you have the beeper going move the dish very slowly to get the fastest beeping. Now check the TV screen, if you see green bars on the TV screen if so simply press ok and the receiver will tune the channels for you. Using a separate signal finder/meter out near the dish can also be of great assistance. Further help can be obtained from your local dealer.
-  4. If the receiver is being used in conjunction with a Pay TV decoder there may be a conflict between the two devices if you are using one satellite TV cable. We recommend that you purchase a dual or quad output LNB and run a separate cable to each device. Your local dealer can advise you on the options. (Note a Pay TV dish remains the property of the Pay TV company, please consult them for terms of use).

Card/Service Activation

-  1. If this is the first start up of a new system/installation you need to activate your card but don't this until you can receive and view channel 800 (info channel). To register you will need to go online to www.mysattv.com.au or via fax using the form enclosed. Activating your card prior to being able to receive channel 800 means that the card won't receive the "hit". You can rehit your card at any time once you have been activated by going to www.mysattv.com/register/reactivate and enter your card number that is listed at the start of the help menu. Step 1 you need to have channel 800 running, Step 2 you need to activate your card. If you continue to have trouble activating your service you can call VAST call centre on 1300 993 376.
-  2. If the unit has been switched off at the mains or has lost signal for a period of time the card may have missed some card updates. You can "Re-Hit" the card at www.mysattv.com.au or Phone VAST, have your VAST card number ready.
-  3. E-04, E-05, E06 Smart card is inserted incorrectly or is not making connection properly. Re-Insert the VAST smart card with the chip facing down and in the direction of the arrow into the card slot. If this still doesn't eliminate these error codes remove the card and wipe the gold contacts with a soft cloth. **Important don't use any fluid.** If the card is inserted incorrectly the card can't be activated.

Picture Breaks up

-  1. The satellite dish needs to be aligned more accurately. Heavy clouds or a rain event will make this worse, this is normally short term. If only some channels break up this also means you need to re-align your dish.
-  2. The satellite dish size is too small, consult your local dealer on advice on the correct dish size for your area.
-  3. If your LNB is getting old it may need to be replaced, contact your local dealer to pur-

No sound

-  1. Audio cable is disconnected or incorrectly connected. Connect audio cable correctly.
-  2. The receiver is in mute mode. Press **MUTE** key to restore sound.
-  3. Volume is set to minimum. Increase volume on both your TV and receiver to a proper level.
-  4. If you are using RCA cable make sure the colours are matching, ie white to white and red to red.

RCU Doesn't Work

-  1. If the red light on the remote doesn't flash the batteries are flat or not installed correctly.
-  2. RCU is not aimed at the receiver or IR target (optional). Aim RCU at the receiver.
-  3. Other IR Devices in the room are interfering with the remote, disconnect them.
-  4. If the red light on the remote is flashing continuously a key on the remote is jammed in.

Receiver Doesn't Record Programs

-  1. To record with this device you need to use an external hard disk drive or USB stick these are optional and not included.
-  2. The space on the USB device is not sufficient. Delete unnecessary files and make space for the new recording.
-  3. The speed of the USB device is not fast enough to support record function. Use the HDD speed test to confirm USB device is suitable. If the device is not fast enough use a different USB device.
-  4. To use a hard disk or a USB stick for recording the format needs to be either NTFS or FAT-32. When formatting your drives existing files will be lost. Note: Programs recorded on VAST can only be played back on the receiver that did the recording.
-  5. This receiver has 2 tuners, this means you can record any 2 channels and watch a 3rd from within the 2 recorded networks (transponders) at the same time (available channels are shown when you press "OK"). You can also record 2 channels and watch a pre-recorded program or watch Freeview Plus catch up TV at the same time. If you try to watch/record more than the 2 tuners allow a warning message to stop one of the recordings will appear.

 **Time Shift Doesn't Operate**

-  1. The speed of USB device is not fast enough to support timeshift function.
-  2. The HDD size is less than the size required for the time shift length.

 **No Playback**

-  1. To playback the recorded files of scrambled channels, the VAST card must be inserted.
-  2. The satellite signal became weak during in recording.
-  3. Not enough free space on USB device.

 **No picture**

-  1. Video cable is disconnected or incorrectly connected. Connect video cable correctly, ie yellow to yellow.
-  2. The receiver is in radio mode. Switch it to TV mode.
-  3. If there is a no signal message on your TV that is not in orange (all warnings from the STB are in orange) this is a message from your TV. You need to select the correct source on your TV. Most TV's have multiple source selections and inputs/outputs. Check your connections and settings again.
-  4. The unit could be in standby, make sure if the unit is turned on. Use the blue STB key to turn on.

 **DISPLAY on front panel is off**

-  1. The power adapter is disconnected. Make sure power adapter is plugged into a mains power socket.
-  2. Make sure the power adaptor or optional 12V cable are plugged into the 12V jack on the rear of the unit.

 **Display on the front panel is on bot no sound and no picture**

-  The receiver is in standby mode if the time clock is on the front panel. Press the blue STB key to switch the unit on and channel numbers will appear.

 **Satellite Receiver Freezes**

If the satellite receiver is unresponsive, frozen on one channel or will not respond to the standby button, press the reset button to restart the receiver. This restart will retain existing settings within the receiver and re-scan the channels.

 **No Internet Connection**

For the receiver to connect to the internet you either need to plug in a network cable to the Ethernet port on the rear of the receiver or use the optional SatKing USB dongle WL-85.

Note: you cant use 3rd party dongles. To set up the internet connection enter the "Settings" Menu and then select "Network Setup", you can now select either wired or wireless connection. If you have selected "wired" the receiver will automatically connect to your router. If you are using the optional Satking wireless dongle you will need to select your wifi network from the scanned devices list and then you enter your network password and press the blue key to save. Once the internet status says "connected" everything is ready to go.

Freeview Plus

-  1. To take advantage of the Freeview Plus functions like catch up TV and the enhanced EPG you need to have an internet connection. Data usage charges may apply. We also recommend you have an internet speed of at least 3.5MBPS. You can also watch Freeview Plus catch up services via the SatKing App's Portal, again an internet connection is required.
-  2. When changing channels if the Freeview Plus services are available coloured keys will appear in the top left corner of the screen. Press the red or green coloured key for the service you want to enter.
-  3. When available the green key enters the Freeview Plus enhanced EPG. The red key enters the particular TV networks catch up service. When entering Freeview Plus functions for the first time you will be asked to enter your postcode and agree that data charges may be incurred from your ISP.
-  4. When the green key and the red key are not available (some networks have not added Freeview Plus as yet, you can enter the TV app's portal via the remote control and select the catch up service you wish to watch.

SatKing TV App's Portal

-  1. The app's portal lets you access catch up TV and popular social media sites. It also has a dedicated SatKing channel with handy how to tutorials and videos of new products. To access this page an internet connection is required and data charges may apply.

Auto Power Saving

-  1. The auto power saving function is automatically on when a HDD is connected. But when there is no HDD or USB stick the auto power saving will be set to off. To override the default settings go into the common settings to shift to none or the duration that you would like the STB to go into standby.

Twin Tuner Loop Cable

-  1. The twin tuner loop through cable is fitted by default in the factory. This cable connects tuner 1 (loop out 1) and tuner 2 (Sat in 2) together so 2 different channels can be recorded at the same time. Currently VAST on broadcasts vertical polarity but in the future may also use horizontal polarity in this case the loop cable will not be needed. In the future if this change is made a message will be sent to the receiver.

Note: If you can't solve the problems after referring to this trouble shooting section, please contact your local dealer.

15.2 Specifications

Tuner	
Frequency	950 ~ 2150MHz
Symbol Rates	2~45,000 (DVB-S) 2~45,000 (DVB-S2)
Level	-65 ~ -25dBm
Impedance	75Ω
Connector	IEC 169-24 Female
LNB Supply	13V/18V/OFF, 400mA max.
LNB Switch	22KHz
DiSEqC	1.0,1.1,1.2, USALS Compatible
Channel Decoding	
Standard	DVB-S EN300421 DVB-S2 EN302307
Demodulation	QPSK, 8PSK, 16APSK, 32APSK
FEC Mode	QPSK-1/2,2/3,3/4,5/6,7/8. 8PSK 1/2,2/3,3/4,3/5,4/5,5/6,8/9,9/10.
Processor & Memory	
Processor Speed	1.6GHz
Flash	4MB NOR + 128MB NAND
RAM	1GB DDR2 & DDR3
Demultiplexer	
Standard	ISO/IEC 13818-1
Audio Decoding	
Standard	ISO/IEC 13818-3
Channel	Left, Right, Stereo, Dual Mono
Decoding	MPEG-1 & MPEG-2 layer I and II, MPEG-4-HE-ACC+ V2
Dolby	Dolby Digital
Sampling Frequency	32,44.1,48 KHz
Video	
Standard	ISO/IEC-13818-2
Decoding	MPEG-2 MP@ML, MP@HL HD, MPEG-4 H.264/H.265 HEVC
Resolution	1080P,1080i,720p,576p.576i
TV System	PAL
Aspect	4:3,16:9

Data Output	
IP Data	EN-301 192-7 Supported Via RJ-45
Low Speed Data	Supported Via RS-232
Conditional Access	
System	Irdeto Secure Silicon 3.2 HL
CAS	Version 3
USB	
Version	USB 2.0
Supply	5Volts, 500mA Max
Power Adaptor	
Input Voltage	100-240V~ 50/60Hz
Output Voltage	12V 
Output Current	2.0A
Receiver Power Requirements	
Input Voltage	12VDC  via 2.1mm DC Jack
Input Current	2.0A
Power Consumption	<10W in Operation mode LNB Connected
Connections	
HD Video	HDMI x1, Component x1
SD Video	CVBS x1
Digital Audio	Coaxial x1, S/P DIF (Optical) x1
Analogue Audio	RCA L+R x1
Satellite RF	LNB In F-Type x2, LNB Loop Out F-Type x2 (IEC-169-24)
USB	Rear x2
Infrared Extender	3.5mm Jack x1 (Target Optional)
RS-232	9 Pin Din sub-male x1
Ethernet	RJ-45 x1
Physical Characteristics	
Size	230mm (L) × 163mm (W) × 43mm (H)
Weight	650grams
Operating Temp	0°C ~ 50°C
Optional Extra's	
IR-1.5	1.5M Infrared Target
IR-3	3M Infrared Target
WL-85	Wireless WiFi Dongle

16. Acronym

CC	Closed Caption (Subtitles)
CVBS	Composite Video Broadcast Signal
DVBS-2	Digital Video Broadcasting Satellite MPEG4 H.264
DVB-S	Digital Video Broadcasting Satellite
EPG	Electronic Program Guide
FTA	Free to Air
HDD	Hard Disk Drive
HDMI	High Definition Multimedia Interface
HDTV	High Definition Television
STB	Set top Box
RCU	Remote Control Unit
LNB	Low Noise Block
TV	Television
OSD	On Screen Display
OTA	Over the Air
USB	Universal Serial Bus
PVR	Personal Video Recorder
IR	Infrared
RCA	Radio Corporation of America
HD	High Definition
SD	Standard Definition Television
S/P DIF	Sony/Philips Digital Interface Format
DiSEqC	Digital Satellite Equipment Control
INFO	Information
REC	Record
FF	Fast Forward
Rew	Rewind
TP	Transponder
HbbTV	Freeview Plus

Please note specifications are subject to change without notice, for latest specifications please refer to www.satking.com.au

