

USER'S MANUAL

REVOLUTION 500 Plus

Digital Satellite PVR Receiver



**WITH SMART CARD READER
USB2.0 INTERFACE**

Table of contents

1. General Information	2
1.1 Important Safety Instructions	2
1.2 Markings on the Rear Panel	2
2. Control and Functions	3
2.1 Remote Control Unit	3
2.2 Front Panel	4
2.3 Rear Panel	4
2.4 Installation of receiver	5
3. Installation	6
3.1 Antenna Setting	6
3.2 Automatic Search	6
3.3 Manual Search	6
3.4 Blind Search	7
3.5 Motor Setting	7
3.6 Factory Default	7
4. Channel Manager	8
4.1 Channel Manager	8
4.2 Set Favourites	8
5. Preference	9
5.1 System Options	9
5.2 AV Setting	9
5.3 Video Adjust	9
5.4 Time Settings	9
5.5 Timer	9
5.6 Parental Control	10
5.7 About Receiver	10
6. Game	10
7. General Viewing Function	10
7.1 Program Information	10
7.2 Channel List	11
7.3 EPG (Electronic Program Guide)	11
7.4 Satellite List	11
7.5 Favourite List	11
7.6 Multi Video Type	11
7.7 Zoom Function	11
7.8 Audio	11
7.9 TV/Radio	11
7.10 TV/SAT mode(Optional)	11
7.11 Recall	11
8. USB Function	12
9. Technical Specification	13
10. Trouble Shooting	13

1. General Information

1.1 Important Safety Instructions

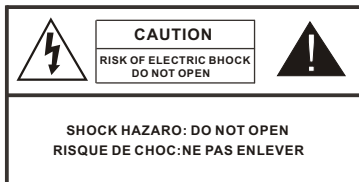
- Read this user manual before starting your operation.
- Never open the cover.
- If you don't use this unit for long time, please pull the power plug out form the outlet. Do not use a damaged power cord.
- Do not touch the power with wet hands.
- Install the dish with correct direction and angle.
- Install the unit in place with:
 - Good Ventilation
 - Suitable Temperature
 - No Direct Sunrays
 - Low Humidity
- Do not put heavy objects on the unit.

1.2 Marks on the Rear Panel

General:

The marks appear on the rear panel of the receiver.

Part 1



CAUTION:
To reduce the risk of electric shock, do not remove the rear panel. Equipment service and maintenance should be undertaken only by trained technician.



Part 2

This symbol indicates that electric shock may happen due to improper operation.



The symbol indicates that serious danger may happen due to improper operation.

2. Control and Functions

2.1 Remote Control Unit



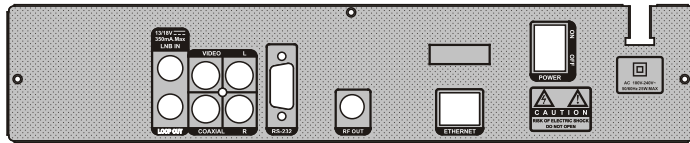
POWER	Turn on/off the STB
TV/SAT	Switch among TV/AV VCR mode
MENU	Show the main menu or exit back to previous menu
MUTE	Enable or disable the audio output
0-9	Select channels or enter programming
EXIT	Escape from present menu and save the settings
OK	Confirm the selected item or show the channel list
CH+/CH-(▲)(▼)	Channel change or move cursor up or down
VOL+/VOL-(◀)(▶)	Volume Control or move cursor left or right
SAT	Display the searched satellite list
EPG	Display the TV/Radio Program Guide
FAV	Display the favourite list
AUDIO	To set the output direction for speaker and change the Audio Language
TV/RADIO	Switch between TV and Radio mode
INFO	To display channel status or various program information for current channel
RECALL	Switch to the previous viewed channel
POS	Display position bar on the screen to adjust the antenna or for manual search
P/N	PAL/NTSC selection
MP	Multi-picture function
ZOOM	Zoom in the selected picture
TTX	Switch to teletext mode
SUB.T	Switch to subtitle mode
PAUSE	Pause the ongoing video and audio
REC	To record current channel
▶	Play or resume
■	Stop Play
▶▶	Fast forward
◀◀	Fast backward
T/S	Time shift
•••VOL•••	Increase or Decrease the volume
•••PAGE•••	Page up or page down

2.2 Front Panel



KEY	FUNCTION
	Turn on/off receiver
MENU	Shows the main menu or back to previous menu
OK	Confirm the selection, or jump back to last menu
CH+/CH-	Channel change(Up/Down)
VOL+/VOL-	Volume Control(Up/Down)

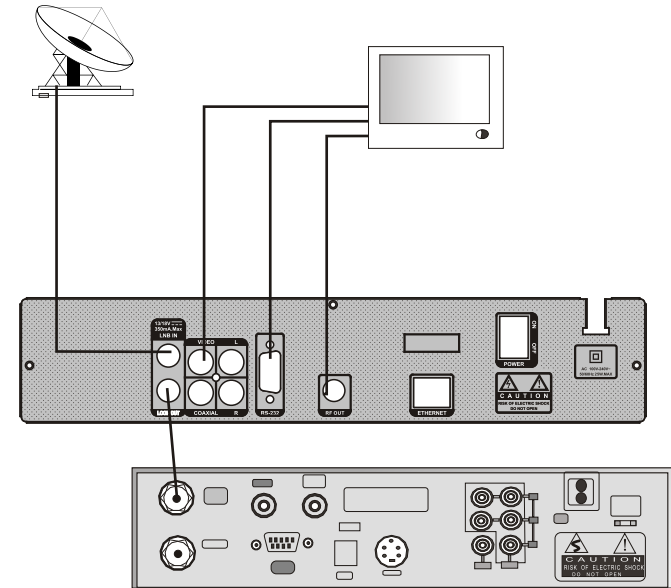
2.3 Rear Panel



CONNECTOR	FUNCTION
LNB IN	Connect to satellite antenna cable
LOOP OUT	Connect to another receiver(IF loop through output from digital tuner)
RS232	Connect to PC for software upgrade
VIDEO	Connect to TV's video port
AUDIO R/L	Connect to TV'S audio port
ETHERNET	Connect the Ethernet port
RF OUT	UHF RF output to TV
COAXIAL	Connect to digital audio amplifier
POWER ON/OFF	Power On/Off

2.4 Installation of receiver

Please refer to the right way for installation as following picture.



3. Installation

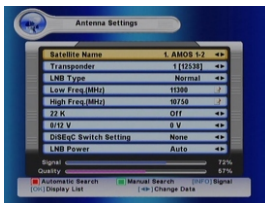
This menu consists of sub-menus as shown below:

- Antenna Setting
- Automatic Search
- Manual Search
- Blind Scan
- Motor Setting
- Factory Default



3.1 Antenna Setting

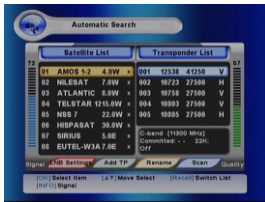
- Under the **Antenna Setting** menu, you can edit satellite data and LNB information.
- Press **Red** key to enter **Automatic Search** menu.
- Press **Green** key to enter **Manual Search** menu.
- Satellite Name:** Select the satellite needs to search.
- Transponder:** To show or edit transponder information under current satellite.
- LNB Type:** Select the type of your LNB. If you have universal LNB, select universal.
- LNB Freq (Low/High Freq):** Enter the proper LNB frequency via RCU or use the keypad displayed by pressing **OK** key.
- Switches (22k, DiSeqC Switch Setting):** To configure the antenna.
- LNB Power:** Select the LNB Power to Auto, Off, 14V or 18V.



3.2 Automatic Search

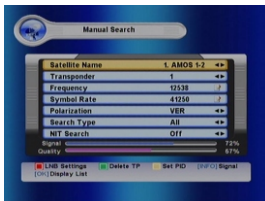
Automatic Search function is a convenient tool to search all preset satellites at the same time.

- Press **Up/Down** key to choose desired satellite then press **OK** key to confirm, a tickle will appear to indicate the selected satellite.
- Add TP:** Press **Green** key to add TP into default TP list, which is shown in the right of screen.
- Rename:** Press **Yellow** key to rename the satellite.
- Scan:** After selecting the desired satellite, press **Blue** key to start channel search through various search modes.



3.3 Manual Search

- Satellite Name:** Select the satellite needs to search.
- Transponder:** Press **Left/Right** key to select your desired transponder. Press **OK** key to activate TP list.
- Frequency & Symbol Rate:** Press **Left/Right** key to select the appropriate item or use the numeric key of RCU to input the required value.
- Polarization:** Press **Left/Right** keys to select the polarization of

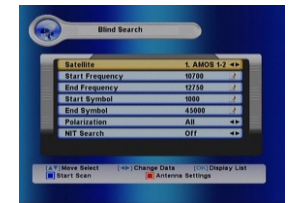


transponder between HOR and VER.

- **Search Type:** FTA means only free to air channels can be searched. CAS means only scrambled channels can be searched. Select All to search all channels.
- **NIT Search:** Please **Left/Right** key to select On or Off.
- **Delete TP:** Press **Green** key to delete the current transponder.
- **Set PID:** Press **Yellow** key to set the PID and input the Video PID, Audio PID and PCR PID to search.

3.4 Blind Search

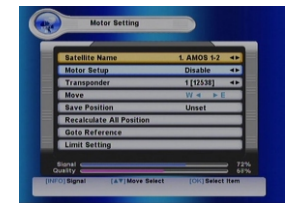
- **Satellite Name:** Select the satellite needs to be search.
- **Start Frequency:** Edit the start frequency.
- **End Frequency:** Edit the end frequency.
- **Start Symbol:** Edit the start symbol rate.
- **End Symbol:** Edit the end symbol rate.
- **Polarization:** Select the polarization type as HOR, VER or ALL.
- **NIT Search:** Select NIT search as On or Off.



3.5 Motor Setting

If you connect a DiSeqC1.2 motor, select the Motor Setup type to DiSeqC1.2.

- **Satellite Name:** Select the satellite that needs to move.
- **Motor Setup:** Press **Left/Right** key to select DiSeqC1.2.
- **Transponder:** Select the transponder to check the signal level.
- **Move:** Select this item and then keep pressing **Left/Right** keys to move your antenna east or west. Use the signal strength and signal quality bars at the bottom of the screen to judge the best position of the antenna.
- **Store Position:** Press **OK** key to save the current position.
- **Recalculate All Position:** Press **OK** key to recalculate all satellite position.
- **Goto Reference:** Press **OK** key to move the motor to the reference position.
- **Limit Setting:** Press **OK** key to set West or East limit.



If you connect a USALS positioner, first get to know your local longitude and latitude, then select the Motor Setup type as USALS.

- **Satellite Name:** Select the satellite that needs to move.
- **Motor Setup:** Press **Left/Right** key to select USALS.
- **Transponder:** Select the transponder to check its signal level.
- **Local Longitude:** Input the local longitude through numeric keys.
- **Local latitude:** Input the local latitude through numeric keys.

3.6 Factory Default

- Factory default allows user to restore the factory-reset values.
- When you press **OK** key, the Warning window will appear, if you select Yes, the system setup will be reset to the default values.

Warning: All previously set data and information will be lost after factory default.



4. Channel Manager

4.1 Channel Manager

This menu allows you delete channels, lock channels, move channels, rename channels, and sort channels etc.

- **Delete:** Move up or down and press **OK** key to select desired channels to delete. Press the color keys to delete all, delete TP and delete SAT channels.

Note: The deleted channel cannot be watched unless re-searched.

- **Lock:** Move up or down and press **OK** key to select desired channels to lock. Password is needed to see locked channels.

- **Move:** Move up or down and press **OK** key to select desired channels to move. Press **RED** and **Up/Down** keys or input numeric keys to move the selected channel for new location.

- **Sort:** Press **OK** key to enter sort type menu. Select the sort order through **Up/Down** key and press **OK** key to confirm.

Alphabet: All the channels will be sorted in alphabetical order.

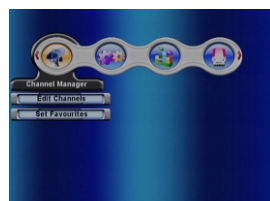
Satellite: All the channels will be sorted in satellite order.

FTA->CAS: FTA channels will be listed ahead of the scrambled channels.

CAS->FTA: Scrambled channels will be listed ahead of the FTA channels.

FAV: Favourite channels will be listed ahead of the others.

- **Rename:** First select the channel needs to rename, then select Rename icon and press **OK** key to confirm. A keypad dialog consisting of a title bar, an alphabet and function keys will appear on the screen. Use the direction key of RCU to select the required character and press **OK** key to confirm. Then the selected character will be shown in the title bar. After finishing the input, use direction key of RCU to select **OK**.



4.2 Set Favourites

- This menu allows user to set channel through 8 favourite types.
- Press **Up/Down** key to select your favourite channel, and press **OK** Key to confirm.
- Press **OK** key again to remove desired channel from favorite list.
- Press **Red** key to modify name of the favorite group.



5. Preference

- This menu consists of sub-menus as follows:

System Options

AV Setting

Video Adjust

Time Settings

Timer

Parental Control

About Receiver

5.1 System Options

- **OSD Language:** Press **Left/Right** key to select your desired language.
- **OSD Transparence:** Press **Left/Right** key to select the transparency level of the MENU window.
- **OSD Timeout:** Set the delay time for information banner to disappear.
- **Audio Language:** Select the first language to listen if this language is supported by current program. This depends on the TV content provider.

5.2 AV Setting

- **Screen Ratio:** Select the TV Screen format 4:3 or 16:9.
- **Screen Mode:** Select the Screen Mode letter Box or Pan Scan.
- **Black Freeze:** Select the back freeze No or Yes.
- **Monitor Type:** Select the TV mode AUTO, PAL, NTSC or SECAM.

5.3 Video Adjust

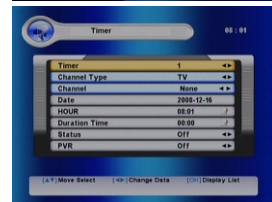
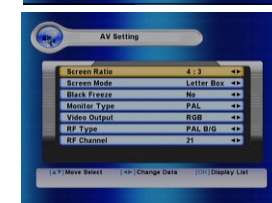
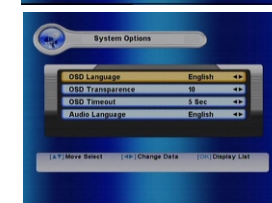
- This function allows user to adjust the screen brightness, contrast, saturation and hue.

5.4 Time Settings

- Set user's local time.
- Select GMT of users' local area, and set the current date and time.
- The unit will get time information automatically from the satellite.
- **Summer Time:** Select whether to use daylight saving for Local time.

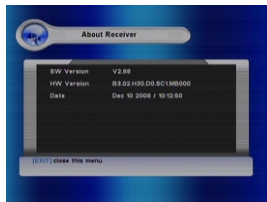
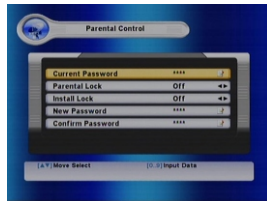
5.5 Timer

- 10 timers could be set with various statuses such as Off, Once, Daily and Weekly.
- Use the numeric of RCU to input the Hour and Duration Time.



5.6 Parental Control

- Default password is "0000"
- **Parental Lock:** Parental Lock menu is controlled by a password.
- **Install Lock:** Installation menu in main menu is controlled.
- To change the password as following steps:
 1. Select Parental Lock.
 2. Select the Current Password and input "0000"
 3. Select the New Password and input a new PIN.
 4. Select the Confirm Password and input the same new PIN.



Note: Do not forget the password. For further assistance, call your local distributor.

5.7 About Receiver

- This menu displays Software Version, Hardware Version and Date information.

6. Game

- This menu consists of Teris, Gobang, Canvas and Boxman games.
- Press **OK** key to enter the corresponding sub-menu. User can play the game via remote control.



7. General Viewing Function

7.1 Program Information

- Press Info key to check program information included in the current channel program.
- Note:** Program information is not always sent with the channel program.

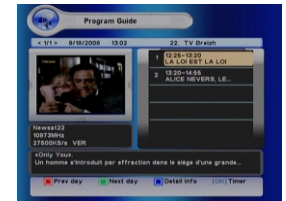
7.2 Channel List

- In full screen play mode, press **OK** key to display the channel list.
- Press **Up/Down** and **OK** key to enter the desired channel.
- Press **RED** key to enter the advanced channel list.
- In advanced channel list, user can check all channels in different sort type such as Alphabet/Satelite/FAV/CAS.



7.3 EPG (Electronic Program Guide)

- Press EPG key to show Program Guide menu.
- **Navigate EVENT:** Press **Red** or **Green** key to navigate the information in 7 days.
- **Detail Info:** Press **Blue** key to display the detail information.
- **Timer:** Press **OK** key to set the Timer.



7.4 Satellite List

- Press **SAT** key to display satellite list, and press **Up/Down** and **OK** keys to enter channel list under the selected satellite.

7.5 Favourite List

- Press **FAV** key to enter favourite channel list, press **FAV** key again to choose favourite type.

7.6 Multi Video Type

- Press **MP** key to enter Multi Video Type menu for 9, 12 or 16 options.

7.7 Zoom Function

- Press **Zoom** key then press **OK** key, the selected picture within the frame will be enlarged.

7.8 Audio

Volume

- Press **Left/Right** key to adjust the volume.
- Press **Mute** key to mute volume and press **Mute** key again to resume the volume.
- Press **Left/Right** key also to resume the mute function.

Audio Control

- Press **Audio** and **Left/Right** keys to choose audio channel(Left, Right and Stereo).
- Press **Audio** and **Up/Down** keys to choose audio language.

7.9 TV/Radio

While watching a TV channel, press **TV/Radio** key to switch between TV and Radio mode.

7.10 TV/SAT mode (Optional)

The **TV/SAT** key lets user change the mode from satellite to TV or VCR.

Press once to move to TV mode.

Press twice to move to VCR mode

Press three times to change back to satellite mode.

7.11 Recall

Press **Recall** key to switch to the previous channel.

8. USB Function

The unit with built-in USB port supports the following devices:

- **USB portable hard disc**
- **USB memory**

USB function as listed below:

- PVR(Personal Video Record)
- Timeshift record
- Audio/Video file display
- Photo display
- Software Upgrade
- Format disk
- Delete/Rename disk file
- Device Info display



USB Browser

There are two parts under this menu: disk partition list and file list. User can switch between two lists with **left /Right** keys. While the cursor in partition list, press **OK** key to choose disk partition. While the cursor in file list, press **OK** key to enter directory or start to play current file.

Green key to play the current file. **Blue** key to stop playing. **Yellow** key to enter volume adjust menu. **Red** key to enter USB functions list and detailed direction as follows:

Delete -- Delete current file

Rename -- Change the current file name

Show MP3 -- Switch to the mode which only display MP3 file.

Show PVR -- Switch to the mode which only display PVR record file.

Show Jpeg -- Switch to the mode which only display JPEG file.

Show BIN -- Switch to the mode which only display .bin file.

Show All Files -- Switch to the mode which display all supported files.

Format Disk -- Formatting the disk

Show Disk Information -- Display current disk partition information, such as: Capacity, File system type, Used space and Free space.

Set Record Path -- Place all recorded files into a folder by set record file path.

Switch to Order(Random) Play -- Set order or random play.

Switch to Auto(Manual) Play -- Set auto or manual play.

PVR Function

User can record any audio and video data to hard disk and watch these programs afterwards. There are two record modes which is manually recorded or recorded by timer. For the manual record, you can record another program under the current TP while watching the current program. Under the mode of manual record, there will appear the channel list for recording as the right picture for user to choose what to record.

Record and Play menu:

Time shown in the left tells the timer duration of playing and right time tells the total recorded time.



9. Technical Specification

TRANSMISSION STANDARDS

DVB-S, MPEG-2

SATELLITE INPUT/DEMODULATION

Connector Type	2XF Type(1 Input/1 Loop Through)
Input Frequency	950 to 2150 MHz
Signal Input Level	- 65 to 25 dBm
Band Switch Control	22KHz
LNB Supply	13.0 +0.5V/16V +0.7V, Max 500Ma
Demodulation Type	QPSK/FRC Coding(DVB prETS 300 421)
Symbol Rate	2<Rs<45 Mband(SCPC/MCPC)

AUDIO/VIDEO PROCESSING

Audio Decompression	MPEG-1 layer I and II / Musicamr
Audio Outputs	Stereo Channel/Dual Mono/Joint Stereo/ Mono
Video Decompression	MPEG-2 Main Profile @ Main Levels With Lette
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 @720x480
Video Format	4:3, 16:9

POWER SUPPLY

Main input voltage	100 - 240V AC @ 50Hz/60Hz±5%
Power consumption	Max. 30W

REAL PANEL

Connections	1 RF Input / 1 RF Loop through output RF OUT / RF IN 2 x Audio L/R (RCA) 1 x Video Signal (RCA) 1 x RS-232 (9-pin D-sub male) 1 x Y/Pb/Pr Video Signal (3RCA) 1 x ETHERNET
-------------	--

10. Trouble Shooting

Problem	Possible Causes	What To Do
No display light up on front panel	Power Cord is not well plugged	Check whether power cord has been plugged properly into power socket.
No sound 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
Bad picture/Blocking Error	No signal or weak signal	Check the cable connections. LNB and other equipment connected between the LNB and the receiver and adjust the dish.
	The satellite dish in 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
No picture(Video)	LNB noise factor too high.	Change to an LNB with lower noise factor
	The LNB is faulty.	Change the LNB
There is interference on your digital satellite channel.	The system is connected by SCART cable and TV is not in AV/EXT mode.	Check the UHF channel fixed in your system and tune the UHF properly.
The RCU is not working.	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 or connect the system using SCART cable.
	Out of battery RCU is aimed at wrong direction	Change the battery 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.