Digital Satellite Receiver

MERCURY User's Manual

FORTEC STAR

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SAFETEY PRECAUTIONS

This Set Top Box (STB) has been manufactured to meet international safety standards, including those set by the FCC and Underwriters Laboratories (cUL). Please read the following safety precautions carefully before handling the STB.

POWER REQUIRED	North American models - Use only 100 -120V AC 60Hz. Europe / Middle East models - Use only 90 - 240V AC 50 / 60Hz
CABLE	Use standard certified cables to prevent any malfunction of the STB.
LOCATION	Locate the STB indoors. Locate STB away from potential hazards such as excessive moisture. STB should not be subjected to direct sunlight, excessive heat or power surges.
CLEANING	1. Always disconnect the STB power cord from the wall socket before cleaning it. 2. Use a lightly dampened cloth to clean the exterior of the STB. (Use no solvents.)
OVERLOADING	Do not overload wall outlets, extension cords or adapters. This can cause a fire or electrical shock.
VENTILATION	1. NEVER block ventilation slots of the receiver. 2. NEVER stand the STB on soft furnishings or carpets. 3. Ensure that a free airflow is maintained around the STB. 4. Do not use or store the STB where it is exposed to direct sunlight or near a heater. 5. NEVER stack other electronic equipment on top of the STB.
LIQUIDS	Keep liquids away from the STB.
SMALL OBJECTS	Coins or other small objects must be kept away from the STB. They can fall through ventilation slots of the STB and cause serious damage.
ATTACHMENTS	Do not use any attachments that are not recommended. These may cause hazards or damage the equipment.
LIGHTNING	The STB must remain connected at all times to the main power supply. However, Manufacturer's instructions for safeguarding other equipment connected to the STB, TV set, etc., should be followed during lightning storms.
SERVICING	1. Do not attempt to service this product yourself. 2. Refer all servicing to qualified service representatives.

Information to the user

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION : Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1. INTRODUCTION

1.1. ABOUT THIS MANUAL

This manual describes how to setup and operate your Fortec Star STB. Only qualified personnel should handle any problems beyond this manual.

1.2. GENERAL DESCRIPTION

The STB is a high-performance digital satellite receiver, which is fully compliant with MPEG2, based on DVB transmission standards for in-home reception of digital satellite services such as digital television and radio channels.

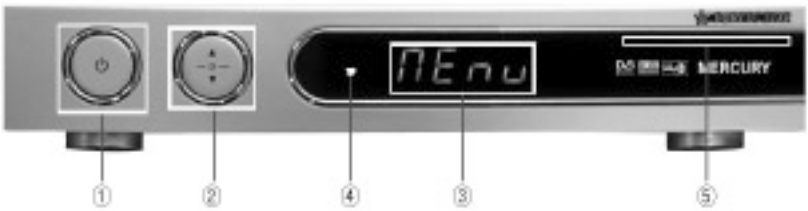
1.3. MAIN FEATURES

Features equipped in STB are as follows:

- POWER Scan (blind search) with complete parameter control
- One-button quick start Power Scan on the remote
- One-button jump to Channel Edit function
- True **Dolby Digital 5.1** audio pass-through (optical)
- 150 programmable satellites and 6,000 programmable channels
- Timer function for Sleep / Wake Up / VCR Record and Channel Reminder
- Fully MPEG 2 / DVB compliant, MCPC/SCPC, C/KU reception
- 1 LNB input with IF loop through for 2nd receiver
- Variable input symbol rate 2 ~ 45Msps
- Manual PID scan function
- DiSEqC 1.2 and USALS supported
- Picture-In-Graphics function
- Multi-Picture (4,9, or 16 pictures) function
- ZOOM In/Out
- Electronic Program Guide
- Teletext supported by OSD and VBI
- Multi language menu
- 7 favorite channel group selection and parental lock
- Close Caption Supported
- Data transfer: receiver-to-receiver or PC-to-receiver
- 13V/18V LNB switching / 22KHz on/off
- 4 RCA connections (1 Video, 2 Audio L/R, 0/12V)
- Dimensions: 260 x 210 x 45mm

2. HARDWARE DESCRIPTION

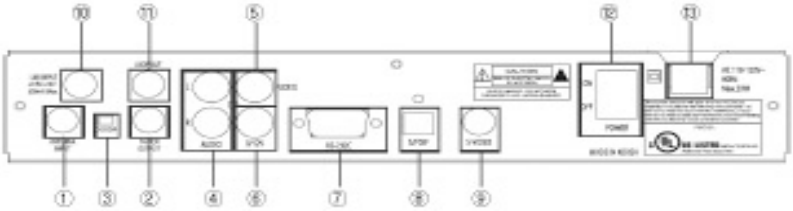
2.1. FRONT PANEL CONFIGURATION



1. **STAND BY**: This key allows you to turn your STB on or off (stand by).
2. **CHANNEL UP & DOWN**: These keys are used to change the channels.
3. **LED DISPLAY**: This LED display will show the current channel number or current time. While the receiver is in stand by mode, the display will show the current time.
4. **REMOTE SENSOR**: This sensor receives the infrared signal from the Remote Control Unit and operates your receiver. Do not block the view of the sensor.
5. **SMART CARD INTERFACE (for Embedded CAS models only)**

To watch scrambled channels, you should insert a smart card, which has been issued by the service provider, into the Smart Card Interface slot. You can watch only a specific range of channels with entitlements in the smart card. The smart card includes information to decipher parameters necessary for descrambling the program.

2.2. REAR PANEL CONFIGURATION

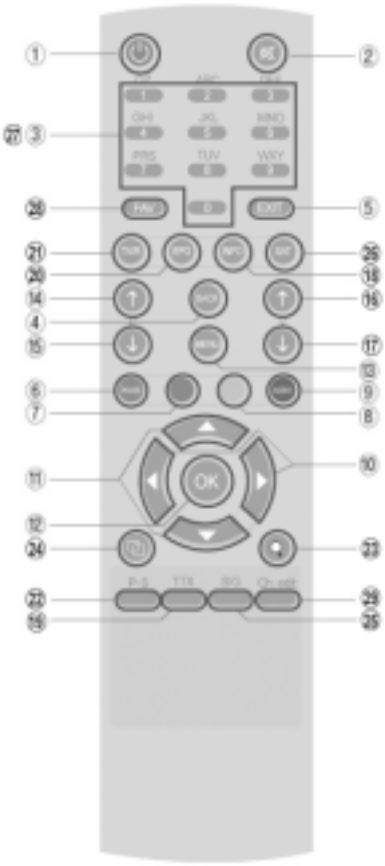


1. **ANT. IN**: For a terrestrial (conventional) TV aerial, or cable signal.
2. **TO TV**: For connecting an RF cable to the aerial input of a TV.
3. **CH 3 - 4**: Select Channel (for North American model.) Modulator type may vary in European or Middle Eastern models.
4. **Audio R/L RCA Connectors**: Connect these terminals to the audio L/R input terminals of a TV, VCR or audio system.
   SCART Connectors: For TV/VCR for Europe and Middle East models.
5. **Video RCA Connector**: Connect this terminal to the corresponding video input terminal of TV or VCR.
6. **0/12V**: 0V, 12V output.
7. **RS-232C Serial Port**: A customer service representative can use this port to re-load preprogrammed channel information to the STB. This port can also be used for upgrading software.

RS 232C Connection Configuration			
Pin No	Satellite Receiver	PC	Pin No
2	Rx →	→ Tx	3
3	Tx →	→ Rx	2
5	Gnd →	→ Gnd	5

8. **S/PDIF Output**: Digital Audio Output (Dolby Digital 5.1 pass -through).
9. **S-VIDEO**: Super Video Output.
10. **LNBF Input**: Satellite dish input (F-connector).
11. **Loop Through Out**: Used for a connection to another STB.
12. **Power Switch**: Power On, Off.
13. **Power Cord**: Connect to power outlet.

2.3. REMOTE CONTROL UNIT



1. **STAND BY**: Turns the receiver On/Off.
2. **MUTE**: Mutes audio output.
3. **NUMERIC KEY (0-9)**: Controls the numerical operation and changes the program channels directly.
4. **BACK**: This key returns you to the previous mode or menu. In TV View mode, it returns you to the last viewed channel.
5. **EXIT**: Use this key to return to the viewing mode from any menu function.

6. **PAUSE (Red key)**: To pause the video while viewing a program, but the audio remains active.
7. **UHF (Green key)**: This button is not used in NTSC models. (Varies by region)
8. **TV/SAT (Yellow key)**: Switch to antenna/cable bypass input signal.
9. **AUDIO (Blue key)**: Selects audio mode (stereo, mono, language) and alternative audio track.
   NOTE: Red, Green, Yellow, and Blue Keys: These colored keys are used for additional functions while in the Menu, or while playing video games.
10. **CH UP/DOWN (▲,▼)**: Changes channels in Non-menu state. Moves the curser position up/down while in the Menu state.
11. **VOL UP/DOWN (◄,►)**: Changes the volume level in the Non-menu state. Changes settings in the Menu state. Moves to next or previous step.
12. **OK**: The OK key is used to select a program, highlighted line or parameter value. It is also used to show the TV/Radio Channel List while watching TV or listening to the Radio.
13. **MENU**: Shows the Main Menu on the screen.
14. **PAGE UP (P)**: Used to move the highlight bar upwards one page at a time in menus, or will scroll the INFO bar up while viewing a channel.
15. **PAGE DOWN (P)**: Used to move the highlight bar downwards one page at a time in menus, or will scroll the INFO bar down while viewing a channel.
16. **Volume (V)**: Volume up. Controls volume in select menu screens.
17. **Volume (V)**: Volume down. Controls volume in select menu screens.
18. **INFO**: Shows the program information on the screen.
19. **TTX**: This key shows teletext information about the channel (if available).
20. **EPG**: This key shows program information about the channel (if available).
21. **TV/RADIO**: Selects TV or Radio mode.
22. **P.S.**: POWER Scan (blind search) quick start button.
23. **ZOOM**: Zoom function in the viewing mode.
24. **MULTI CH**: Multi Channel function in the viewing mode.
25. **SIGNAL**: Signal function in the viewing mode.
26. **SAT**: Selects a satellite.
27. **A~Z**: Use these keys in the Channel List view to find channels alphabetically.
28. **FAV**: Selects the favorite channels list. Can be used while viewing a TV channel or the TV Channel List.
29. **Ch. edit**: Channel Edit quick start button while viewing a channel.

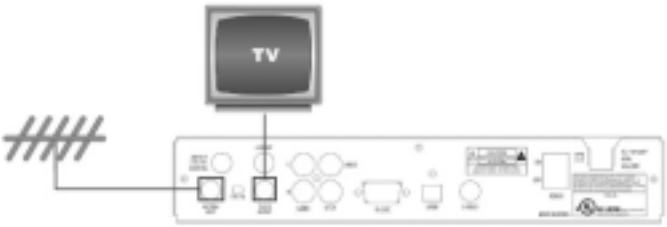
3. CONNECTION DIAGRAM

3.1. CONNECTION DIAGRAM (without a satellite dish)

3.1.1. Receiver to TV with RF

Connect the TV antenna to the ANT IN socket on the receiver.
Connect the TV out on the receiver to the RF / Cable INPUT of the TV set.

North American model: Select VHF Channel 3 or 4 on the TV set.
Select the same channel number on the Rear Panel of the receiver.

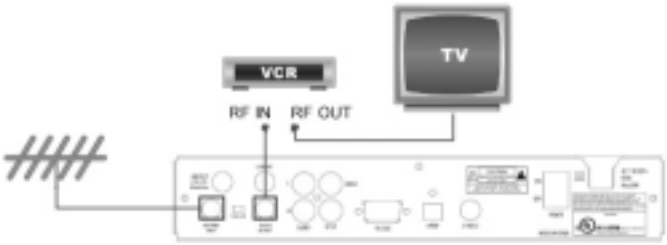


European and Middle East models: Search on the TV set for UHF Channel 38.
Channel 38 is set at factory.

3.1.2. Receiver to VCR and then to TV with RF

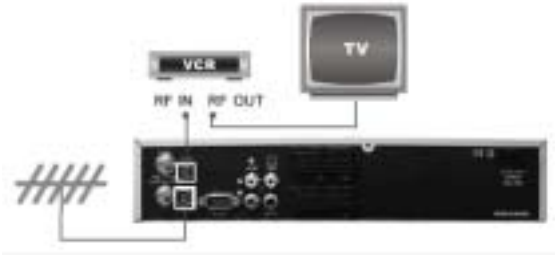
Connect the TV antenna to the ANT IN socket on the receiver.
Connect the TV out on the receiver to the RF / Cable IN of the VCR.
Connect the RF output on the VCR to the RF / Cable IN on the TV set.

North American model: Select VHF channel 3 or 4 on the TV set and the VCR.



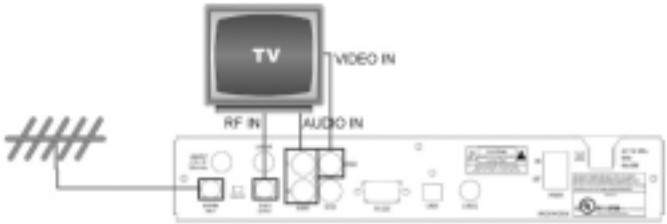
European and Middle East models: Search on the TV set and the VCR for UHF channel 38.

Note: USE different UHF channels for VCR and receiver.

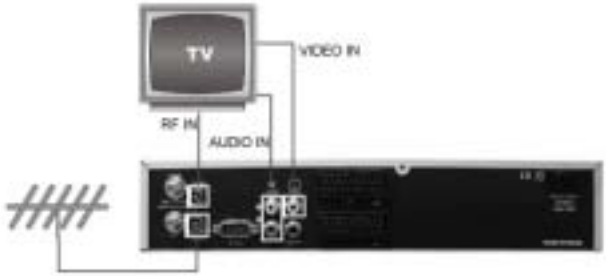


3.1.3. Receiver to TV with Audio/Video cables or SCART cables

Connect the TV antenna to the ANT IN socket on the receiver.
Connect the Video and Audio output on the receiver to the Video and Audio inputs of the TV set.
North American model:

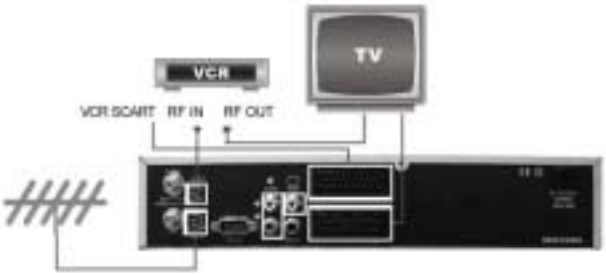


European and Middle East models:



For European and Middle East models, SCART cables can be used

Connect the SCART cable from the TV SCART of the receiver to the SCART of the TV set. Connect the SCART cable from the VCR SCART of the receiver to the SCART of the VCR.

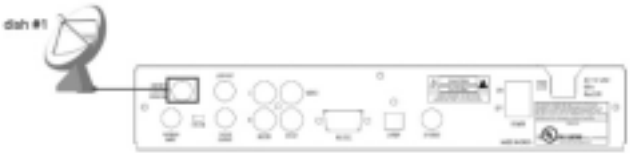


3.2. CONNECTION DIAGRAM (with a satellite dish)

3.2.1 . One Dish

Connect the cable from the satellite dish to the LNB Input socket on the receiver.

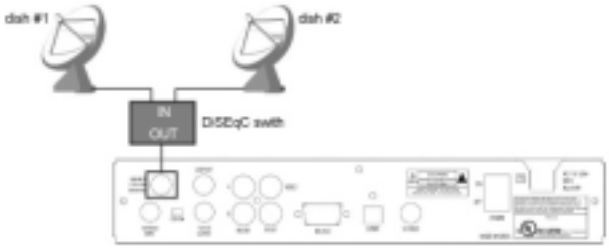
Connect the TV out socket on the receiver to the RF / Cable IN of the TV set. For improved picture quality, connect the Video and Audio output on the receiver to the Video and Audio inputs of the TV set (RCA jacks). For the best picture quality, connect the S-Video from the receiver to your TV, or use the SCART connections when supplies - connectors vary by region.



3.2.2. Two Dishes with a DiSEqC Switch

If you want to watch programs from more than one satellite (for example, from Intelsat America 5 and from AMC 4) it can be done using two fixed dishes (fixed, meaning permanently pointed at one satellite) and a DiSEqC switch. Connect the two cables from the satellite dishes to a DiSEqC switch. From the switch, connect a cable to the LNB Input socket on the receiver.

If you need to install a more complicated configuration of multiple dishes and receivers, please consult with a professional satellite installer.



4. VIEWING GENERAL INFORMATION

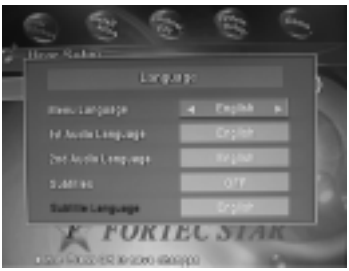
Main menu shows the following information

User Setup	Allows you to set up OSD Languages, TV Screen Format, Format of Audio/Video Output, Menu Style, Time Adjustment, Timer Setting, OSD Setting, and User Name Setup.
Installation	Allows you to set up Antenna Configuration, Transponder set up, PID Edit, search channels Automatically/Manually, and set up the Antenna Positioner.
Channel Edit	Edit TV/Radio Programs (Sort / Rename / Move / Delete / Lock / Hide / Favorite Channels).
System Setup	Allows you to set up Parental Control, Data Reset, S/W Transfer and System Information.
Game	Play the games Tetris and Othello.

4.1. USER SETUP

From here you can access the Language, Aspect Ratio, TV Type, Time Setting, Timer Setting, OSD Setting, and User Name.

4.1.1. Languages



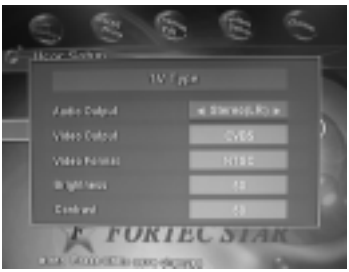
Select the desired menu language simply by using the ◄,►keys. Use the OK key to confirm the language you selected and return to the User Preferences menu.

- **BACK Key**: cancel your selected language and return to the User Preferences menu.
- **EXIT Key**: return to the Channel Viewing mode.
- ◄,►**Keys**: change the setting for the selected item.

4.1.2. Aspect Ratio

Select the type of television Screen Format you have, either 4:3 or 16:9. Select the Display Format to change transmissions that don't match your TV format. Full Screen will stretch the image to fill up the screen. Letterbox will give you a normal picture, but leaves black areas at the edges (top & bottom or left & right depending on the TV format on your TV). If the transmission matches your TV set's screen format, it will be displayed as a complete picture.

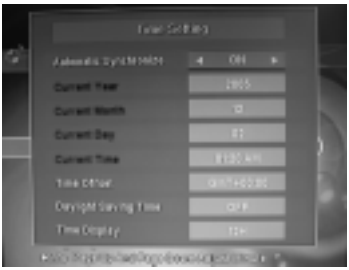
4.1.3. TV Type



Audio: You can select one of various stereo outputs or mono sound.
Video: The values are preset depending on the model you have (NTSC models for North America and PAL for Europe and North America.)
Screen Controls: Adjusts the Menu brightness and contrast.

For European and Middle East model, you can also make adjustments for the RF modulator. Channel 38 is the default factory setting. Your TV must be set to this channel in order to view the output of your receiver. If this channel is currently being used as a broadcast channel or if you are getting interference on this channel, you may change the channel to an unused number. Then change your TV to that channel in order to view the output. If you get picture but no sound, the RF Audio Type might be wrong. Select B.G. (5.5MHz) if the receiver is used in Europe. If it is used elsewhere, you may need to change it to the type used by your television set.

4.1.4. Time Setting



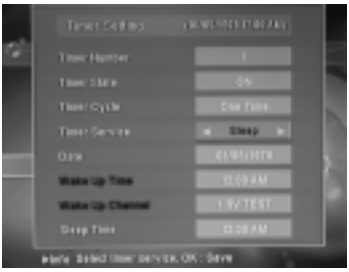
Automatic Synchronize ON: Current time is based on the TDT (Time Description Table) in the satellite signal for the current program. To set the current time, input the Offset value by using the standardized information of your current service area. The time setting will be used as the standardized time for the TV Guide, Wake up and Sleep time.

If the satellite signal of current service doesn't contain the TDT, the current time cannot be set up using the Automatic Synchronize. In this case, adjust the time manually by turning the Automatic Synchronize OFF. The adjustment step size is 30 minutes by using the ◄,► keys, and one minute by using the Page Up/Down button.

Daylight Saving Time: When turned on, the clock will adjust for daylight saving time.

Time Display: Time can be displayed as a 12-hour or 24-hour (metric) clock.

4.1.5. Timer Setting



Timer Number: Eight timer events can be programmed at one time.

Timer State: Each timer event can be turned off or on.

Timer Cycle: Each timer event can be programmed to occur at various time intervals.

Timer Service: There are four timer event options, Sleep, Wake Up, VCR record, and Channel Reminder setting.

Sleep time: Enter the time for the receiver to automatically switch OFF and go to standby mode.

Wake up time: Enter the time for the receiver to automatically power ON.

VCR Record: Set the timer to power on and off for a VCR Recording.

CH Reminder: Set a program reminder so your receiver will pop-up a message five minutes before the program start time, and will automatically change to the selected channel at the time set.

4.1.6. OSD Setting

You can choose which OSD Setting best suits your tastes.

Transparency: If you turn the transparency feature on, the menus will be transparent, enabling you to see the program video through the menu.

Radio Image: The Radio Still Image can either be set to on or off. When set to on, a still image will be displayed when you have selected a radio channel, rather than a TV channel. When set to off, only a black screen will be displayed when you have selected a radio channel.

Channel List PIG: Activates the picture-in-guide (PIG) while viewing the Channel List screen.

OSD Info Timer: Controls the amount of time the INFO bar will be displayed when changing changes. While the INFO bar is displayed, the front panel of the receiver will also display the channel number. The current time will return to the front panel display after the INFO bar disappears.

Channel Change Mode: It supports three types of Channel Change Modes, Blank, Freeze, and Fade in/out.

Remote Control Beep: When turning on remote control beep, it sounds whenever you press a remote key, and can be adjusted to a volume between 10 and 100.

Installation Assistance: Turning on the Remote Control Beep can also help with installing the dish. When viewing the signal meter in the Advanced Scan menu, the receiver will start to beep when a signal is received from the satellite dish.

4.1.7. User Name

When selecting "On" for the User Name, you will see the name on the initial screen as the receiver turns ON.

When you press OK on the User Name, you have the option to change the name.

4.2. EDIT CHANNELS

You can edit the TV & Radio channels or the Favorite channel lists in this menu.

You can edit the channel list by adding, deleting, renaming, hiding, locking and arranging the channels.

You can also create 7 favorite channel lists. By creating your own favorite list, you can make channel organizing more convenient. Once you have created your favorite channel lists, you can then edit each independently.

4.2.0. TV Channels

4.2.1. How to Sort the Channels

- Press OK after selecting Sort mode.
- Sub mode will appear as follows:
  - SAT Select
  - TP Order
  - Alphabetical
  - Type
- Select the mode among the 4 kinds of modes that you want to sort, and then press OK.
- Press BACK to return to the main Channel EXIT menu, or EXIT to go directly to viewing the TV channel.

4.2.2. How to Move the Channels

- Press OK after selecting Move mode.
- Select the channel you want to move using the ▲,▼ keys.
- Press the ► key to select the Move mode. The right side of the highlighted channel will change to indicate Move mode has been selected. Deselect a channel the same way. More than one channel can be selected by marking each channel to be moved using the ► key.
- Press ▲,▼ keys again to move to the location where you want the selected channels to be positioned.
- When the channel is in the desired position, press OK to confirm the move. The moved channels will be in the same order as you selected them in.
- While in the Move menu, you can also add channels to any of your favorite lists by pressing any number 1 through 7 for each corresponding favorite list FAV 1 through FAV 7.

4.2.3. How to Delete the Channels

- Press OK after selecting Delete mode.
- Select the channel you wish to delete using the ▲,▼ keys.
- Select Delete mode by pressing the ► key. Deselect a channel the same way. More than one channel can be selected by marking each channel to be deleted using the ► key.
- Confirm the deletion by pressing the OK key, or else press the BACK or EXIT key if you wish to cancel the operation.
- While in the Delete menu, you can also add channels to any of your favorite lists by pressing any number 1 through 7 for each corresponding favorite list FAV 1 through FAV 7.

4.2.4. How to Rename the channels

- Press OK after selecting Rename mode.
- Select the channel you want to rename.
- Enter the characters (A~Z, 0~9) one-by-one using the ▲,▼,◄,► keys to move to the correct character, and pressing OK to select it.
- Select the OK key (bottom right position in the character pad) to save the new name.
- Press BACK to return to the main Channel EXIT menu, or EXIT to go directly to viewing the TV channel.
- While in the Rename menu, you can also add channels to any of your favorite lists by pressing any number 1 through 7 for each corresponding favorite list FAV 1 through FAV 7.

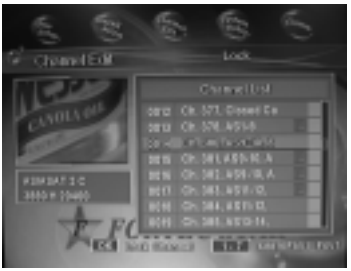
4.2.5. How to Add Channels to a Favorite List

- Press OK after selecting Favorite mode.
- Select the Favorite list you want to build from FAV 1 through FAV 7.
- Select the channel that you want to add to that Favorite list and press OK.
- That channel will be added to the Favorite list you selected in step 2 above, and will be marked with the letter "F".
- You can also add channels to any of the other favorite lists by pressing any number 1 through 7 for each corresponding favorite list FAV 1 through FAV 7.
- Press BACK to return to the main Channel EXIT menu, or EXIT to go directly to viewing the TV channel.
- For information on editing the channels in any of the Favorite Lists, see section **4.2.8** FAVORITE LISTS.
  Note: You can lock Favorite List 7 (FAV7) by enabling the lock feature found in the Parent Control menu (section **4.4.1**).

4.2.6. How to Hide Channels

- Press OK after selecting Hide mode.
- Select the channel you want to hide.
- Press OK. The channel will be marked with the letter "H".
- Channels can be deselected the same way.
- While this channel will be hidden from view in the channel list, it is not deleted and can still be seen in the Channel Edit menu.
- Press BACK to return to the main Channel EXIT menu, or EXIT to go directly to viewing the TV channel.
- While in the Hide menu, you can also add channels to any of your favorite lists by pressing any number 1 through 7 for each corresponding favorite list FAV 1 through FAV 7.

4.2.7. How to Lock the channels



- Press OK after selecting Lock mode.
- Select the channel that you want to lock and press OK.
- This channel is now locked and the lock symbol (P) will appear indicating that it is a locked channel.
- You can unlock (deselect) the channel if you press OK again.
- Press BACK to return to the main Channel EXIT menu, or EXIT to go directly to viewing the TV channel.
- Once a locked channel is selected while watching TV, a parental control password is requested.
- Picture and sound appears after the correct password is given by pressing the numeric keypad.

Radio Channels are edited the same way as TV Channels but by using the RADIO CHANNELS edit menu.

4.2.8. Favorite Lists

Channels in your Favorite Lists can be moved, deleted, hidden or parental locked from within this menu. The name of each Favorite List can also be changed to better suit your needs, for example, you can rename them Movies, News, Children, etc.

Using the Channel Edit menu, you can add channels to a Favorite list. Use the TV Channel edit menu to add TV channels and the Radio Channel Edit menu to add radio channels to the same favorite list, or to a different list.

Remember, while viewing a TV channel directly or while viewing the Channel List, Favorite Lists can be accessed by press the FAV button.

Channels in the favorite lists are edited in a similar way to that used in the Channel Edit menu. There are, however, a few differences that are explained in section **4.2.9.**

4.2.9. Moving and Deleting Favorite List Channels

- From the Channel Edit Menu, select Favorite Lists.
- Favorite 1 is shown by default, but you can select another Favorite List by highlighting FAV and pressing OK. Select from the seven favorite lists that can be created. Or, you can immediately display any Favorite List by using the numeric keypad (1~7) for each of the seven Favorite lists.
- The MOVE / DELETE functions operate the same way as explained in the Channel Edit section of this manual. For every Favorite list that you have created, you can arrange the order of the channels anyway you like. Deleting channels from the Favorite List does not delete them from the main channel list, so they can always be added again.

4.2.10. Hiding and Locking Favorite List Channels

- From the Channel Edit Menu, select Favorite Lists.
- Favorite 1 is shown by default, but you can select another Favorite List by highlighting FAV and pressing OK. Select from the seven favorite lists that can be created. Or, you can immediately display any Favorite List by using the numeric keypad (1~7) for each of the seven Favorite lists.
- The HIDE / LOCK functions operate the same way as explained in the Channel Edit section of this manual. When you HIDE or LOCK a channel in a Favorite List, it will also be hidden or locked in the main channel list. As such, unhiding or unlocking a channel, can be done from the Favorite List menu, or from the main Channel Edit menu.

4.2.11. Renaming a Favorite List

- You can change the name of the Favorite List with the Rename FAV menu. Press OK, and edit the name. This can be done for all seven Favorite lists. You cannot use this menu to change the channel names. This must be done in the TV Channel edit menu.

Note: You can lock Favorite List 7 (FAV7) by enabling the lock feature found in the Parent Control menu (section **4.4.1**).

4.3. INSTALLATION

If it is first time using the receiver, you will need to set the correct parameters for the system configuration. The installation menu is used to set all the parameters for the equipment you are using, i.e., preferred satellite, dish/LNB, DiSEqC switches or dish motors. In this section you will also learn how to use the various scan options available, and how to edit transponder (TP) and satellite (SAT) information.

4.3.1. Antenna Setup

The Antenna Setup menu controls all the parameters for your installation. Ensure that your satellite receiver is correctly connected to your television and dish, and that your satellite signal is of good quality by checking the Signal Quality meter. (If you are not sure about this, then ask your installer to check your installation or satellite signal).

4.3.2. Satellite Name

- Select the satellite you want to program. Scroll through the various satellites using the ▲▼keys (or Page Up/Down keys), and select the appropriate satellite by pressing OK.
- When you select the satellite by pressing OK, the satellite will be selected and that satellite's default parameters will appear in the sub-menu.
- From the satellite's sub-menu, you can adjust the LNB type, LNB Frequency, DiSEqC switch, 22kHz switch, LNB power, TP, and Positioner Setting, and search mode. The displayed information can be adjusted for each selected satellite. When you want to change the satellite, press OK on the Satellite item cursor and the satellite list will be displayed again. When channels have been downloaded into the receiver for a particular satellite, a check mark will appear next to the satellite name. At any time you can press BACK to go to the previous menu.

4.3.3. LNB Frequency

- To scan channels, you must select the correct LNB type that you have on your dish. The default value is for the Fortec Star Universal LNB. You can change the LNB Type by using the Left/Right button. Other common LNB types used in North America are 5150 for C-band LNBs, 10750 for Standard LNBs and 11250 for Circular LNBs.
- Select the proper LNB type using the ◄►keys according to the LNB type you are using. All settings for the LNB type are shown below:
  - o Universal (975MHz & 10600 MHz)
  - o Standard C-band (5150MHz)
  - o Standard Ku-band (10750MHz)
  - o Standard Ku-band (11250MHz)
  - o Manual entry field (Enter Value) where you can input the L.O. frequency you need using the numeric keys.

  22KHz control is set to OFF for each LNB type, but can be turned ON. For the Universal LNB type, it defaults to AUTO, and cannot be changed.

4.3.4. DiSEqC Switch

- If a DiSEqC switch is used, select the port number that corresponds to the output of the DiSEqC switch.

4.3.5. 0/12 V Switch

- By turning this function On or Off, the receiver will either supply or not supply 12V from this terminal using ◄►keys.

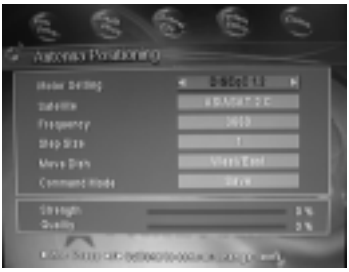
4.3.6. LNB Power

- Set the LNB power On/Off by using ◄►keys.

4.3.7. TP Frequency

- Select a specific transponder by using the ◄►keys, or by pressing the OK button to view the drop-down list. When the dish is positioned properly to receive the satellite signal, the Quality bar meter will indicate a signal in a green color when an active TP is selected. You can add a new TP to the end of the list by selecting "New TP".

4.3.8. Positioner Setup (DiSEqC1.2)



This mode will allow you to set the antenna position for each satellite. In order to use antenna positioner you must use a motor controlled by DiSEqC 1.2 commands.

To move the antenna, select the desired satellite, transponder, and step size. Then select Move Dish and press the ◄►keys to move the antenna West or East. If you selected Continuous for the step size, the antenna will move continuously until you press another Key. Once the antenna is positioned properly (maximum level in the quality meter), select Command Mode and choose save. Press OK to save the position. The position number will then be displayed next to the satellite name. When you want to move the antenna to a saved satellite position, select the satellite, choose Go To Position from the Command Mode and press OK. To clear a saved satellite position, select satellite, then choose Reset from the Command Mode and press OK.

Setting and enabling East and West limits that the dish can move to is done by pressing the Blue key for LIMIT SETTING.

East Limit Set:

Move the dish to the most eastern position and press OK to store it.

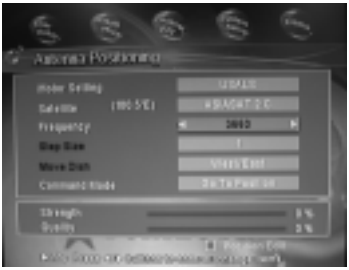
West Limit Set:

Move the dish to the most western position and press OK to store it.

The East and West Limits are only active if you enable the limits. They are not active if your Disable the limits.

Note: Limits do not need to be set if you have no obstacles or barriers preventing your dish from moving the full range of the motor.

4.3.9. Antenna Positioning (USALS)



This mode will allow you to use a DiSEqC 1.3/2.3 motor controlled by USALS (Universal Satellite Automatic Location System).

The first time you select USALS, you will be asked to enter your location (Longitude and Latitude). You can always edit this information by pressing the Blue key to select Position Edit. From the Position edit menu you can also edit the satellite's position. This will be necessary if you add a new satellite because it will be set to zero by default.

Select "Go To Position" and press "OK" in the Command Mode to move the dish to the satellite position. "Step Size" and "Move Dish" commands are not used in the USALS menu.
Select "Go To 0" and press "OK" in Command Mode to move the dish to the "0 Position" which if your motor is installed correctly, will point your dish directly south.

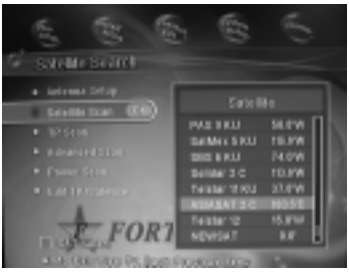
Note: When scrolling through the satellite list in the Antenna Setup menu, the dish will start to move when you highlight a satellite that has the Positioner Setting set to DiSEqC 1.2 or USALS (assuming that a DiSEqC 1.2 or USALS motor is connected to your dish). You can avoid this by returning the Positioner Setting to the OFF state.

4.3.10. Search Mode

- From the Search Mode, press OK to begin the scan process.
- Press the ◄►keys to change the search mode. It is not necessary to change it from the Normal Scan in most cases, but it can be advantageous to use the NIT Scan since it will scan for updated information provided by the satellite's Network Index Table.
- When you press OK to start the scan process, you will be given four options in the search criteria: search for TV channels, radio channels, Free-to-air channels, and Scrambled channels. You can select or deselect any of the

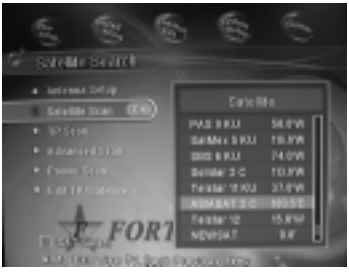
options, however, all but Scrambled channels are selected as the default.

4.3.11. Satellite Scan



- Satellites can be scanned directly from the Satellite Scan menu. Select Satellite Scan and press OK.
- Scroll through the satellite dropdown list, and select a satellite by pressing OK. Or press the SAT Select (Red) key to place a check mark next to the satellites you wish to search. Pressing the SAT Select key a second time will clear the check mark.
- Using the SAT Select key, you can select more than one satellite. Once you have selected the desired satellites, press the OK key to start searching those satellites. The receiver will search all satellites selected with the SAT Select key, as well as the satellite that is currently highlighted.
- If you are using a DiSEqC and you have not specified a DiSEqC switch port when searching more than one satellite, the receiver will auto-detect the correct DiSEqC settings.
- If using an HH motor, indicate the correct motor setting in the antenna Setup menu for each satellite to be searched. During the Satellite Scan, the dish will automatically move before the scan starts for each satellite.

4.3.12. TP Scan



- Individual transponders (TP) can be scanned with TP Scan.
- To do so, select TP Scan and press OK.
- Select the satellite to be scanned.
- Highlight the TP to be scanned and press OK.
- More than one TP can be selected by using the Select TP (Red) key.

4.3.13. Advanced Scan

- The channel search procedure can be performed in different ways. If there are predefined transponders, you can make an Automatic or Manual search. If there are no predefined transponders, you can make a Manual or Advanced Search.
- **Advanced Search**:
  Start by selecting the satellite to be searched in the Advanced Scan menu. The frequency can be entered manually by using the numeric keys, or selected from the dropdown list that appears when you press OK while highlighting the Frequency field. After entering frequency, symbol rate and polarity, move the highlight bar to TP Search and press OK to start searching for channels.
- *Installation Assistance*: Turning on the Remote Control Beep (see **section 4.1.6 OSD Setting**) can also help with installing the dish. When viewing the signal meter in the Advanced Scan menu, the receiver will start to beep when a signal is received from the satellite dish.

PID Edit

Use this in case of a specific Transponder which has non-DVB standard channels and which can only be found when you have entered the necessary settings. You can also add or delete channels from a specific TP.

Video PID: Enter PID for the video signal.
Audio PID: Enter PID for the audio signal.
PCR PID: Enter the PID (Packet Identifier) for the PCR (Program clock Reference).

4.3.14. POWER Scan

- The POWER Scan is the most powerful scanning tool for finding ALL available satellite channels on a satellite in your viewing area using your dish (dish size can vary results). POWER Scan is very popular among hobbyists who are interested in finding new channels and 'wild feeds' that contain temporary programs.
- Press OK on the POWER Scan menu to begin using this powerful tool.
- Select a satellite to be scanned.
- When a full POWER Scan is performed (in other words, no change is made to the search parameters), the receiver will first search the satellite for all available transponders. New transponders that are found will be added to the bottom of the list of transponders stored in the receiver. Once the POWER Scan is completed, the receiver will then start the channel download process. Any of the search parameters may be modified for the POWER Scan.
  - Mode: Choose between FTA (free-to-air) channels, Scrambled channels or ALL channels (FTA and scrambled channels).
  - Type: Choose between Horizontal and Vertical polarity; or Horizontal only; or Vertical only.
  - Start/Stop Freq: Allows changing the frequency search range. For example, for a Universal LNB, the values can be changed to any range between 10700-12750. For a C-band LNB, the values can be changed to any range between 3400-4200. For a circular LNB with an L.O. frequency of 11250, the values can be changed to any range between 12200-12750. For all other LNBs, the values can be changed to any range between 11700-12200. The default values are set to the most common search range.
  - Freq. Step: Allows changing the step value. For example, instead of the search moving in increments of 6 MHz, it can be changed to 12 MHz. It will be faster to complete the search with a higher value, but a lower value may be more precise in finding transponders especially at low symbol rates.
- Highlight Start Scan and press OK to begin the POWER Scan.

4.3.15. Edit TP / Satellite

- Over time, you may want to add or modify satellites or TPs.
- Check the Web site www.lyngsat.com or www.satcodx.com for a complete list of available satellites. These sites also indicate all the TP and PID information for each satellite
- **Rename SAT:**
  To rename a satellite, select Rename SAT, then select the satellite to be renamed. Enter the new name. Finish entering the new name by selecting OK in the character keypad.

- **Add SAT:**
  Select ADD Sat if you want to add a new satellite to the receiver. Enter the new satellite's name. Finish entering the new satellite's name by selecting OK in the character keypad. The new satellite will be added to the bottom of your list of satellites.

  Note: If you are using a dish motor, be sure to add the orbital position of the new satellite in the Positioner Setup menu found in the Antenna Setup. Select Motor Setting, and choose USALS. The default satellite position will be 0. The position for the new satellite should then be entered.

- **Delete SAT:**
  Select Delete Sat, and then choose the satellite you want to delete. Press OK. You will be asked to confirm that you want to delete the satellite before it is deleted. Press OK to delete.

- **Manage TP**:
  TP information can also be changed. Select Manage TP, and press OK. Then choose the satellite for the TP.
  You can then add, delete, or modify an existing TP.
  To **add a TP**, enter the following information.
  Transponder Frequency: Specify the frequency in MHz.
  Symbol Rate: Enter with the numeric keys.
  Polarization: Select Horizontal or Vertical.
  FEC: Select the FEC (Forward Error correction) value or leave as Auto.

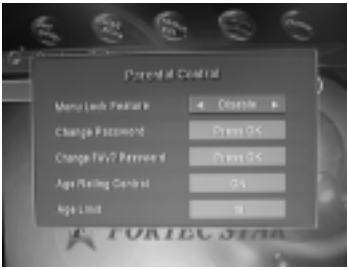
To **delete a TP**, scroll through the TP list and press OK on the highlighted TP you want to delete. Use the ◄► keys to change the satellite if you want to delete TPs on other satellites.

To **modify a TP**, press OK on the Modify TP menu.
Scroll through the TP list and press OK on the highlighted TP you want to modify, or use the ◄► keys to change the satellite if you want to modify TPs on other satellites.

4.4. SYSTEM SETUP

From here you can access the Parental Control, S/W Transfer, Data Reset, System Information.

4.4.1. Parental Control



In the Parental Control menu, you can set the censorship classification or change the PIN code. From the factory, the default access PIN code is set to 0000. The following settings can be altered from this menu.

- Menu Lock: When the menu lock is enabled, you need to enter the PIN code to access any menu screens

where values can be changed. This can prevent users from accidentally changing the settings.

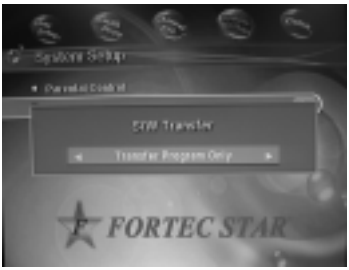
- Change Password: The default PIN code is 0000, but you can change it by following the on-screen instructions in this menu. DO NOT FORGET YOUR PIN. Without it, you do not have access to any of the functions where the code is required.

- FAV7 Lock Feature: By enabling this feature, you can lock all the channels in FAV7 Channel List. For the Middle East model, this feature is always enabled and cannot be disabled.
- Change FAV 7 Password: You can assign a PIN code to FAV 7 (favorite list), which will restrict access to this entire favorite list.
  Note: For North America and Europe, the default PIN is set to 0-0-0-0 and Disabled by default. For the Middle East, the default PIN for FAV 7 is set to 8-8-8-8 and is set to Enabled by default.
- Age Rating Control: If you want everyone to have access to all available types of programs, select OFF. If you select ON, you may block programs unsuitable for children. Select an Age Limit between 4-18 years.

4.4.2. Data Transfer for Updating Software

Warning: Transferring software to a Fortec Star receiver will void the manufacturer warranty on the receiver. This is true both for software transferred to the receiver from another receiver, and from a PC through the RS 232 port on the back panel of the receiver. Please do so knowing it is your own responsibility.

Never transfer software or data from a different model receiver. If transferring software to the receiver using your PC, be sure to use the correct file. Software for most Fortec Star receivers can be found on Fortec's Web site at www.fortecstar.com.

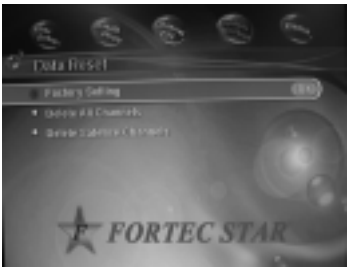


The firmware program in the master receiver can be transferred to another (slave) receiver using this function.

- Connect the null modem serial cable between the two receivers.
- Enter the Transfer Program menu on the Master receiver.
- Power on the Slave Receiver.
- Once the transfer is completed, a message will appear informing you that the transfer was successful. If an error message appears, you will need to start the transfer process over again.

Note: Channel information can be transferred to other receivers by using the Channel Edit software found on Fortec's website www.fortecstar.com

4.4.3. Data Reset



In the Data Reset mode, you will be asked to confirm your desire to clear all settings to the factory default or not.

- Factory Setting: All satellite and transponder lists will be set to the factory default, as will the user preference settings. When you are ready to confirm setting the system to the factory default, press the OK key. If you press the EXIT key, the function will be cancelled and return to the System Setup Menu.
- Delete All Channels: All channels, for all satellites will be deleted.
- Delete Satellite Channels: Deletes only the channels for a specified satellite.

4.4.4. System Information

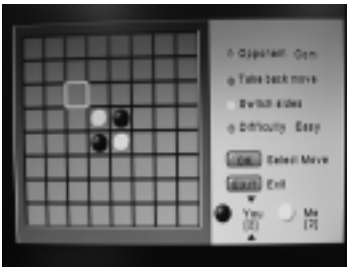
This displays general information about which hardware and software version your receiver is running on.

4.4.5 Adult filter (Available on Middle East model)

When you select this menu, adult channels will be automatically be moved to FAV7 after searching channels.

4.5. GAMES

4.5.1. Othello Game



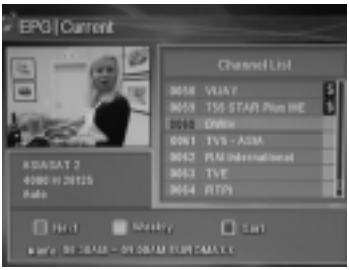
Receiver has a built-in Othello game for your enjoyment. Use the color keys to change options and right/left/up/down keys to move. When finished, press Exit to return to the channel-viewing mode.

4.5.2. Tetris Game

Receiver has a built-in Tetris game. Use the color keys to change options and right/left/up/down keys to move. When finished, press Exit to return to the channel-viewing mode.

4.6. OTHER FUNCTIONS

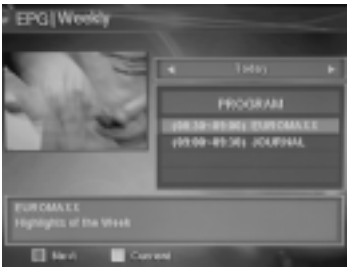
4.6.1. Current Program Guide



This mode consists of the program name, event name, event start time, end time and Picture-in-Graphics (PIG) display for preview.

NOTE: EPG data is only displayed when available.

4.6.2. Weekly Program Guide



This mode displays all the events for the day. Select the desired channel using the ▲,▼ keys and the desired day of the week using the ▲,▼ keys. Then press the OK key to display the events for that selected item. There will be a short delay while the program information is retrieved. Once the program information is displayed, use the ▲,▼ keys to highlight the event time for the program you wish to view information about.

4.6.3. Channel Information

Every time you change channels, program information will be displayed for a few seconds. The amount of time displayed is controlled by the OSD setting in the User Setup menu. The default OSD INFO Timer is 5 seconds.

The information may include:

- Current time.
- Current channel number & name.
- Satellite name & TP information.
- Symbols for Parental lock and Age limit information.
- The start and end time of the current/next program (if information is available).
- The info bar will display each time the channel is changed displayed.
- While viewing a channel, the Page Up/Down button will also display the INFO bar. You can scroll the INFO bar up or down through the channels while continuing to view the same channel on the screen. After scrolling the INFO bar through the channels, you can press OK, and the receiver will change to that channel. If you do not press OK to select the channel, the INFO bar will disappear and you can continue to watch the same channel.

4.6.4. Changing Channels

You may change the channel by simply entering the channel number using your Remote Control Unit's 0~9 keys. Alternately, you may use the ▲,▼ keys on the remote and/or the front panel of the receiver.

You can also change channels by first pressing Page Up/Down several times until you see the channel you want in the INFO bar, and then press OK. The receiver will then change to that channel.

4.6.5. Volume Control

To control the volume, use the ◄► keys on the remote. The volume indicator will show for a few seconds before automatically disappearing.

4.6.6. Channel List for TV/Radio/Favorite Lists

- When you press the OK key, you can see the Channel List. You can view the channel in the Picture-in-guide (PIG) by moving the highlighted bar to the Channel of your choice using ▲,▼ keys and then pressing the OK key. Press OK again to select that channel.
- You can select the TV or Radio Channel List by using the TV/Radio key.
- Use the FAV key for selecting the Favorite Channel List while in the Channel List screen. Continuing to press the FAV button will cycle through all the Favorite Channel Lists.

4.6.7. Channel Sort

- To help you quickly find a channel you may be looking for, you can sort the channels in the Channel List by TP Order, Alphabetical Order or by Type (FTA and Scrambled channels).
- If you have more than one satellite downloaded into your receiver, you can also select to view individual

satellites or all satellites.

- TP Order will sort channels by numeric order according to the TP frequency from lowest to highest.
- Alphabetical sort shows channels in Alphabetical order.
- Sorting by Type will organize all FTA channels together and scrambled together.

Note: Sorting channel in the Channel List does not save the channel order. This sort method is only used to help find a channel. To permanently sort or re-arrange the channel order, use the Channel Edit menu.

4.6.8. Zoom / Multi-screen

You can use the ZOOM or Multi-screen function in the TV mode.

- Press the ZOOM key and use Red/Green keys to Zoom In/Out the size of the window box. Use ▲,▼,◄,► keys to reposition the picture.
- For Multi-screen viewing, press the Multi-screen key, and then select 4, 9, or 16 channels. Only the current channel will be live action. The other channels displayed in this mode are still pictures that follow the active channels in the channel list. Use the ▲,▼,◄,► keys to select a different channel to be live action.

4.6.9. Close Caption (North America)

The display of Close Captioning is based on transmitted data.
Select the Closed Captioning option from the Close Captioning menu on your TV.

4.6.10 Teletext (Europe and the Middle East)

The display of Teletext is based on transmitted data using the EBU Teletext specification and DVB Bitmap and can only be viewed on a TV that supports Teletext.
Press the TTX button on the remote control unit. You can get the Main Menu. Each menu shows short information at the bottom of the screen.

5. TROUBLE SHOOTING

Problem	Possible causes	What to do
The display on the front panel does not light up.	Main cable is not connected.	Check that the main cable is plugged into the power socket.
No sound or picture.	Wrong connection of the video/audio output to the TV input terminal.	Connect RCA or RF cable.
	Wrong connection of satellite antenna cable.	Connect the antenna cable correctly.
	Wrong direction of satellite antenna. Adjust the direction of antenna.	Adjust the direction of antenna.
Black-and-White screen or VHold problem.	No signal or weak signal.	Check the cable connections LNB and other equipment connected between the LNB and the receiver or adjusts the antenna.
	Wrong setting of channel information in System Installation Menu.	Type the setting value correctly.
	Your TV mode is different from satellite broadcasting mode.	Use TV of same mode. Use a NTSC/PAL converter connected to the receiver TV.
The RCU is not working.	Battery exhausted.	Change the batteries.
	Fluorescent light interfering with the remote controller.	Switch off the light.
	RCU is incorrectly aimed.	Aim the RCU at the receiver.

6. TECHNICAL SPECIFICATIONS

IF / Tuner	
1. Input Frequency	950 MHz to 2150 MHz
2. Input Signal Level	-25 to -65dBm
3. Input Impedance	75 ohm nominal
4. Input Connector	F-type, IEC 109-24, Female
5. FEC Decoder	Convolutional Code Rate I/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7
6. Demodulation	QPSK
7. Symbol rate	2-45 Ms/s
8. IF Frequency / Bandwidth	480MHz / 30MHz Type
9. LNB Power & Polarization	V13 / H18, 600mA MAX. over current protection
10. DiSEqC Control	Ver. 1.0 / 1.2 Compatible
Audio / Video Decoding	
1. Video Decoder	MPEG-2 MP@ML (ISO/IEC 13818-2)
2. Input Rate	60Mbit/s Max
3. Video Resolution	720 x 480(NTSC)
4. Aspect Ratio	4:3, 16:9
5. Audio Decoder	MPEG-1 (ISO/IEC 11172-3)
6. Audio Mode	Mono L/R, Joint Stereo, Stereo
7. Audio Sampling Frequency	32, 44.1, 48 KHz
Audio / Video Output	
1. RCA Jack	Video, Audio L/R, 0/12V CVBS (PAL models)
2. SCART	TV / VCR (Europe & Middle East)
3. S/PDIF	Digital Audio Output, DOLBY DIGITAL 5.1 Pass-through
Serial Data Interface	
1. Connector Type	9 Pin D-Sub (male)
2. Signal	RS-232C, Max. 115200Bps

Power Supply	
1. Supply Voltage	100VAC ~ 120VAC 60Hz(SMPS) North America 90VAC- 240VAC 50 Hz in Middle East / Europe
2. Power Consumption	Max. 40W
General	
1. Weight	Approx. 2.5Kg
2. Dimensions	260(W) x 210(D) x 45(H)mm

Fortec Communications Inc.
Mississauga, ON
Canada L4W 5A7
www.fortecstar.com

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