## Digital Satellite Receiver

# **MERCURY** User's Manual





#### IMPORTANT SAFETY INSTRUCTIONS

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacture's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs convenience receptacles and the point where they exit from the apparatus.
- 11. Only use attachments / accessories specified by the manufacturer.
- 12. Use only with the cart stand tripod bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used use caution when moving the cart / apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged liquid has been spilled or objects have fallen into the apparatus the apparatus has been exposed to rain or moisture does not operate normally or has been dropped.

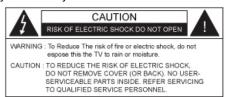
#### IMPORTANT SAFEGUARDS

- 1. Read all of these instructions.
- 2. Save these instructions for later use.
- 3. Unplug this Product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- **4.** Do not use attachments not recommended by the Product manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
- 5. Do not use this Product near water for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, or the like.
- Do not place this Product on an unstable cart, stand, tripod, bracket, or table.
- 7. Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation on the product and to protect it from overheating, and these openings must be blocked or covered. The openings should never be blocked by placing the Product on a bed, sofa, rug, or other similar surface. This Product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.
- 8. This Product should be operated only from the type of power source indicated on the marking label. if you not sure of the type of power supplied to your home, consult your Product dealer or local power company. For product designed to operate from battery power, refer to the operating instructions.
- 9. This Product is equipped with a polarized alternating-current line plug(a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- **10.** Do not allow anything to reset on the power cord. Do not locate this Product where the cord will be abused by persons walking on it.
- 11. Follow all warnings and instructions marked on the Product.
- **12.** For added protection for this Product during a lightening storm, or when it is left unattended and unused for long periods of time, unplug it from the wall prevent damage to the receiver due to lightening and power-line

- surges.
- 13. An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.
- Do not overload wall outlets and extension cords as this can result in fire or electric shock.
- 15. Never push objects of any kind into this Product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of ant kind on the Product
- 16. Do not attempt to service this Product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 17. Unplug this Product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power cord or plug damaged.
  - b) If liquid has been spilled into the Product.
  - c) If the Product has been exposed to rain or water.
  - d) If the Product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the Product to normal operation.
  - e) If the Product has been dropped or the cabinet has been damaged.
  - f) When the Product exhibits a distinct change in performance this indicates a need for service.
- 18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or injury to persons.
- 19. Upon completion of any service or repairs to this Product, ask the service technician to perform routine safety checks to determine that the Product is in safe operating condition.



## **Explanation of Safety Related Symbols**





This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

#### WARNING:

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

The main socket-outlet for connecting mains plug shall be accessible and close to this apparatus.

## **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	North American models - Use only 100 -120V AC 60Hz.		
REQUIRED	Europe / Middle East models - Use 90 - 240V AC 50 / 60Hz		
CABLE	Use standard certified cables to prevent any malfunction of the		
CABLE	STB.		
	Locate the STB indoors. Locate STB away from potential hazards		
LOCATION	such as excessive moisture. STB should not be subjected to		
	direct sunlight, excessive heat or power surges.		
	Always disconnect the STB power cord from the wall socket		
CLEANING	before cleaning it.		
CLEANING	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		
OVERLOADING	can cause a fire or electrical shock.		
	NEVER block ventilation slots of the receiver.		
	NEVER stand the STB on soft furnishings or carpets.		
VENTILATION	3. Ensure that a free airflow is maintained around the STB.		
VENTILATION	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	Coins or other small objects must be kept away from the STB.		
OBJECTS	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	Do not attempt to service this product yourself.		
	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.

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## 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
- DiSEgC 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)

## 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.
- 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.
- 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

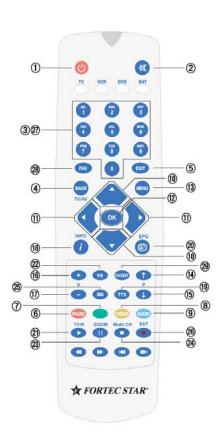


- 1. **ANT. IN**: For a terrestrial (conventional) TV aerial, or cable signal.
- 2. **TO TV**: For connecting an RF cable to the aerial input of a TV.
- 3. CH 3 4: Select RF Channel in User Setup of OSD MENU.
- Audio R/L RCA Connectors: Connect these terminals to the audio L/R input terminals of a TV, VCR or audio system.
  - **SCART Connectors**: For TV/VCR for Europe and Middle East models.
- Video RCA Connector: Connect this terminal to the corresponding video input terminal of TV or VCR.
- 6. **0/12V**: 0V, 12V output.
- 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	n Configuratio	n
Pin No	Satellite Receiver	PC	Pin No
2	$Rx \rightarrow$	$\rightarrow$ Tx	3
3	$Tx \rightarrow$	$\rightarrow Rx$	2
5	Gnd →	ightarrow 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



- 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.

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.
- 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.
- VOL UP/DOWN (◄,►): Changes the volume level in the Non-menu state.
   Changes settings in the Menu state. Moves to next or previous step.
- 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. The 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.
- 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

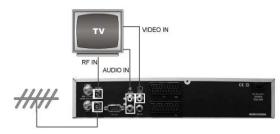
Connect the TV antenna to the ANT IN socket on the receiver.

Connect the Video and Audio output on the receiver to the Video and Audio inputs of the TV set.

North American model:

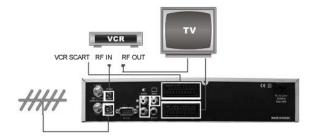


European and Middle East models:



# 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 TV set.

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 supplied - connectors vary by region.



## 3.2.2. Two Dishes with a DiSEgC 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 Setting



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.



number.

For European and Middle East model, you can also make adjustments for the RF modulator. Channel 3 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

## 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

Channel List screen.



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

**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.

<u>Installation Assistance</u>: 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) oneby-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



Channel

- 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

#### 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:
  - Universal (975MHz & 10600 MHz)
  - Standard C-band (5150MHz)
  - Standard Ku-band (10750MHz)
  - Standard Ku-band (11250MHz)
  - 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 <u>www.lyngsat.com</u> or <u>www.satcodx.com</u> 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.

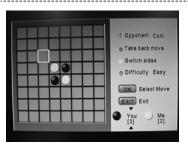
## 4.4.5 Adult filter (Available on Middle East model)



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  $\blacktriangle$ ,  $\blacktriangledown$  keys and the desired day of the week using the  $\blacktriangle$ ,  $\blacktriangledown$  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  $\blacktriangle$ ,  $\blacktriangledown$  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
  - $\blacktriangle$ ,  $\blacktriangledown$ ,  $\blacktriangleleft$ ,  $\blacktriangleright$  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  $\blacktriangle, \blacktriangledown, \blacktriangleleft, \blacktriangleright$  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	Main cable is not	Check that the main cable is
front panel does not	connected.	plugged into the power
light up.		socket.
	Wrong connection of the	Connect RCA or RF cable.
	video/audio output to the TV	
	input terminal.	
No sound or picture.	Wrong connection of satellite	Connect the antenna cable
No sound of picture.	antenna cable.	correctly.
	Wrong direction of	Adjust the direction of
	satellite antenna. Adjust the	antenna.
	direction of antenna.	
	No signal or weak signal.	Check the cable connections
		LNB and other equipment
		connected between the LNB
		and the receiver or adjusts
Black-and-White		the antenna.
screen or VHold	Wrong setting of channel	Type the setting value
problem.	information in System	correctly.
problem.	Installation Menu.	
	Your TV mode is different	Use TV of same mode. Use
	from satellite broadcasting	a NTSC/PAL converter
	mode.	connected to the receiver
		TV.
	Battery exhausted.	Change the batteries.
The RCU is not	Fluorescent light interfering	Switch off the light.
working.	with the remote controller.	
working.	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), 720 x 576 (PAL)
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	110VAC ~ 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

## 7. PROGRAMING THE REMOTE CONTROL

# 7.1. Programming The Remote Control

There are two ways to program the remote control; Automatic Code Search or Direct Entry.

# 7.2. Using Automatic Code Search

- Press the MENU Key and the OK Key for 2 seconds until the SAT LED begins flashing.
- 2. Select TV, VCR, or DVD mode.
- Continue pressing and releasing the UP Arrow Key until the componet turns off.
- 4. When the conponent turns off, press the Down Arrow Key and press the OK Key to Select the MODE (TV, VCR or DVD).

## 7.3. Using Direct Entry Method

- Press the MENU Key and the OK Key for 2 seconds until the SAT LED begins flashing.
- 2. Enter the 3-digit code from the code list.
- 3. Them the LED will blink twice.
- 4. If you get no response, repeat these steps using the nex code listed for your brand.

# 7.4. Changing Volume Lock

- 1. If you want to change the SAT volume, press the SAT key and the Mute key for 2 seconds.
- If you want to change TV volume, press the TV key and the Mute key for 2 seconds.

DEVICE	BRAND			N	EW COD	Σ	
DVD	Apex Digital	271	319				
DVD	Denon	270					
DVD	Denon	312					
DVD	DVD-Video	247					
DVD	ECA	396					
DVD	GE	175	392	396	400		
DVD	Gradiente	051	371				
DVD	Harman/Kardon	038	354				
DVD	Hitachi	032					
DVD	JVC	174	236				
DVD	Kenwood	321					
DVD	KLH	349	350				
DVD	LG	029	083	171	174	347	
DVD	Magnavox (Philips)	020	086	380			
DVD	Marantz	191					
DVD	MINTEK	047					
DVD	Mitsubishi	134	310				
DVD	NAD	034					
DVD	0nkyo	037	357				
DVD	Panasonic	159	173	187	330	333	
DVD	Philips (Magnavox)	086					
DVD	Pioneer	160	292	389			
DVD	Proceed	101					
DVD	ReplayTV	222					
DVD	Samsung	103	320	386			
DVD	Sharp	208	345	356	359		
DVD	Sony	064	105	135	138		
DVD	Sylvania	095					
DVD	Thomson	324	396				
DVD	Tivo	110					
DVD	Toshiba	206	218	325	357		
DVD	Yamaha	159	178	333			
DVD	Zenith	029	083		171		

DEVICE	BRAND			N	EW COD	E		
TV	Admiral	046	082	100	382			
TV	Advent	062	141					
TV	Adventura	090						
TV	Aiwa	096						
TV	Akai	340	343					
TV	Amark	012	054					
TV	Amstrad	394						
TV	Anam	084	098	296	317	318	323	384
TV	Aoc	343						
TV	APEX	041	070					
TV	Apex	152						
TV	Audio Vox	318						
TV	Belcor	183						
TV	Bell & Howell	082	382					
TV	Broksonic	045	391					
TV	Brokwood	183						
TV	Candle	132	246					
TV	Centurion	268	294	300				
TV	Citizen	082	132	246	322	382		
TV	Concerto	183	268					
TV	Contec	385						
TV	Coronado	012						
TV	Craig	317						
TV	Crown	012						
TV	Curtis Mathes	001	082	100	294	300	382	
TV	Daewoo	031	052	053	121	132	136	144
TV	Daewoo	145	146	148	183	190	252	268
TV	Daewoo	291	293	295	311	370		
TV	Daytron	183	268	294	300			
TV	Dell	057						
TV	Dumont	183						
TV	Electro Home	183	268					
TV	Elektra	016						
TV	Emerson	001	012	015	031	148	045	080

TV	Emerson	085	093	099	107	186	258	327
TV	Emerson	328	334	343	391	397	399	
TV	Envision	183	268					
TV	ESA	055						
TV	Fisher	028	283					
TV	Fujitsu	238						
TV	Funai	088	090	327	382	394		
TV	Gateway	153						
TV	GE	013	014	060	075	079	092	100
TV	GE	102	104	108	132	183	186	213
TV	GE	219	234	244	250	261	268	281
TV	Gibralta	012	088	132	183	234	268	288
TV	Gibralta	294	300	322	343			
TV	Go Video	158						
TV	Goldstar(LG)	012	132	183	196	234	288	294
TV	Goldstar(LG)	300	322	343				
TV	Grundig	322						
TV	Hall Mark	183	268					
TV	Hitachi	012	132	182	184	233	268	276
TV	Hitachi	278						
TV	Hyundai	116						
TV	Inkel	227						
TV	Insignia	155	237					
TV	JC Penney	028	076	132	183	250	268	281
TV	JC Penney	343						
TV	Jensen	130						
TV	JVC	018	106	185	213	274	280	
TV	Kawasho	183	268					
TV	Kmc	012						
TV	Konka	242						
TV	KTV	012	209	322	343			
TV	Kurazai	082	382					
TV	LG (Goldstar)	012	132	183	196	234	288	294
TV	LG (Goldstar)	300	322	343				
TV	Lodgenet	082	382					

TV	Logik	082	382					
TV	Luxman	132	183	268				
TV	LXI	046	056	394				
TV	Magnavox (Philips)	010	012	018	128	132	163	166
TV	Magnavox (Philips)	181	183	212	220	234	246	250
TV	Magnavox (Philips)	275		378				
TV	Majestic	082	382					
TV	Marantz	294	300	307	343			
TV	Megatron	054						
TV	Memorex	028	082	214	216	234	382	
TV	MGA/Mitsubishi	126	132	133	133	183	230	234
TV	MGA/Mitsubishi	256	260	268	294	300	302	307
TV	MGA/Mitsubishi	337	343	388				
TV	Montgomery Ward	012	046	082	163	166	201	300
TV	Montgomery Ward	343	382					
TV	NEC	052	061	132	234	300		
TV	Norcent	269						
TV	Orion	030	148	040	123	243	254	398
TV	Panasonic	049	060	073	074	091	092	
TV	Philco	012	132	163	166	246	343	
TV	Philips (Magnavox)	010	012	018	128	132	163	166
TV	Philips (Magnavox)	181	183	212	220	234	246	250
TV	Philips (Magnavox)	275	304	378				
TV	Pilot	181	183	322				
TV	Pioneer	124	315	381				
TV	Portland	012	132					
TV	Proscan	104	228					
TV	Proton	065		234	255	259		
TV	Proview	058						
TV	Pulsar	183						
TV	Quasar	060						
TV	Radio Shack	183						
TV	RCA	092	100	104	112	113	132	147
TV	RCA	228	343					
TV	Realistic	201	327	328				

TV	Sampo	234	300					
TV	Samsung	001	012	042	048	075	120	217
TV	Samsung	229	234	235	294	300	378	385
TV	Sansui	077	114					
TV	Sanyo	016	028	127	283	351		
TV	Scott	234	300	327				
TV	Sears	012	016	028	048	070	076	132
TV	Sears	283						
TV	Sharp	001	012	044	046	056	059	061
TV	Sharp	094	131	201	260	342		
TV	Signature 2000	012	046	082	300	382		
TV	Sony	043	177	198	341			
TV	Soundesign Soundesign	246						
TV	Squareview	394						
TV	Supre-Macy	263						
TV	Sylvania	031	132	139	163	166	221	234
TV	Sylvania	246	250	275	294	300	394	
TV	Symphonic	090	394					
TV	Tatung	060	156					
TV	TechWood	132						
TV	Teknika	012	082	132	166	246	327	
TV	Telerent	012	082					
TV	Tera	215						
TV	Tevion	097	336					
TV	TMK	132	234					
TV	Toshiba	041	048	070	076			
TV	Totevision	322						
TV	Universal	132	281					
TV	VidTech	132						
TV	ViewSonic	050						
TV	Wards	132	234					
TV	Westing House	332						
TV	White Westinghouse	266	334	382				
TV	XR-1000	082						
TV	Yamaha	132						

TV	York	234	300					
TV	Zenith	072	088	090	102	117	121	210
TV	Zenith	216	219					

DEVICE	BRAND			N	EW COD	Έ		
VCR	Admiral	125	358					
VCR	Aiwa	352						
VCR	Akai	009	024	025	033	087	249	
VCR	Audio Dynamics	004	367					
VCR	Bell & Howell	017	383					
VCR	Broksonic	027	257	285	377			
VCR	Canon	122	287					
VCR	Citizen	005	035	068	395			
VCR	Colortyme	004						
VCR	Craig	286	395					
VCR	Curtis Mathes	004	035	122	316			
VCR	Daewoo	023	026	068	365	372	374	376
VCR	Daytron	023	262					
VCR	Dbx	004	367					
VCR	Dynatech	352						
VCR	Emerson	005	006	007	022	025	027	068
VCR	Emerson	122	245	253	346	352	366	373
VCR	Emerson	375	377					
VCR	Fisher	017	063	207	286	383		
VCR	Funai	352						
VCR	GE	122	223	225	395			
VCR	Go Video	248	251	265				
VCR	Goldstar(LG)	005	035					
VCR	Harman/Kardon	004						
VCR	Hitachi	195	352					
VCR	Instant Replay	122						
VCR	JC Penney	004	122	195	383	395		
VCR	JCL	122						
VCR	JVC	035	036	331	335	364	367	383
VCR	Kenwood	035	331	352	367	383		

VCR	LG (Goldstar)	005	035					
VCR	Lloyd	352						
VCR	Logik	019						
VCR	LXI	005	352					
VCR	Magnavox (Philips)	122	179	352				
VCR	Marantz	004	035	122	179	383	395	
VCR	Marta	005						
VCR	Matsui	284						
VCR	Memorex	005	194	204	286	352	383	
VCR	Mitsubishi	039	368					
VCR	Montgomery Ward	125	176	205	223			
VCR	MTC	352	395					
VCR	Multitech	019	352	395				
VCR	NEC	004	011	231	331	367	383	
VCR	Orion	002	006	007	800	348	361	
VCR	Panasonic	111	122	170	316			
VCR	Pentax	195						
VCR	Philco	122	179	352				
VCR	Philips (Magnavox)	122	179	352				
VCR	Pioneer	137	195	331				
VCR	Portland	023						
VCR	Proscan	223	225					
VCR	Quartz	360	383					
VCR	Quasar	316						
VCR	RCA	021	122	176	195	223	225	352
VCR	RCA	395						
VCR	Realistic	125	286	352	383			
VCR	Samsung	033	087	089	353	355		
VCR	Sansui	019	211	331				
VCR	Sanyo	017	286	372	383			
VCR	Scott	019	068	373				
VCR	Sears	005	063	195	286	383		
VCR	Sharp	125	358					
VCR	Shintom	019						
VCR	Signature 2000	125	176	205	223			

VCR	Sony	109	115	129				
VCR	Soundesign	352						
VCR	Sylvania	002	003	021	122	179	339	352
VCR	Symphonic	352						
VCR	Tandy	352	383					
VCR	Tashiko	005						
VCR	Tatung	367						
VCR	Teac	352	367					
VCR	Technics	122						
VCR	Teknika	005	285	352				
VCR	Thomas	352						
VCR	TMK	366						
VCR	Toshiba	063	068	195	207			
VCR	Totevision	005	395					
VCR	Unitech	395						
VCR	Vector Research	004						
VCR	Video Concepts	004	352					
VCR	Wards	005	035	125	352	395		
VCR	XR-1000	019						
VCR	Yamaha	004	352	367	383			
VCR	Zenith	081	115	331	335	338	352	

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