



USER'S GUIDE

9000HD

HIGH-DEFINITION DIGITAL SATELLITE &
TERRESTRIAL RECEIVER



Panarex Electronics

SUN VALLEY, CALIFORNIA, USA

PREFACE

IMPORTANT SAFETY INSTRUCTIONS

1 OVERVIEW

- 1) INTRODUCTION
- 2) FEATURES
- 3) ACCESSORIES
- 4) REMOTE CONTROL UNIT
- 5) FRONT PANEL
- 6) REAR PANEL
- 7) UNIVERSAL II REMOTE INTERFACE PROGRAMMING
- 8) CONNECTION DIAGRAM

2 OPERATION

1. START UP
2. INSTALLATION
3. CHANNEL EDIT
4. USER SETUP
5. SYSTEM INFORMATION
6. USB MODE
7. CHANNEL LIST
8. PROGRAM GUIDE
9. AUDIO CHANGE
10. RECALL THE FAVORITE CHANNEL
11. DOWNLOAD PROCEDURE BETWEEN RECEIVER & PC

3 SPECIFICATIONS

4 TROUBLE SHOOTING

5 WARRANTY

IMPORTANT SAFETY INSTRUCTIONS

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, 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 electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and servicing instructions in the literature accompanying the appliance.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE TO CATV SYSTEM INSTALLER

THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.

CAUTION

The AC power cord provided with this product is polarized (one blade wider than the other).

To prevent electrical shock, match wide blade of plug to wide slot, fully insert the AC plug into a standard 120V~, 60Hz polarized outlet.

IMPORTANT SAFETY INSTRUCTIONS

NOTE

Never connect the plug to an electrical source other than one providing 120V~, 60Hz power. Use only the attached power cord. If the polarized AC cord does not fit into a non-polarized outlet, do not cut or file the blade. You are responsible for having the obsolete outlet replaced with a polarized outlet.

If you feel a static discharge when touching the unit, and the unit does not function, simply unplug the unit from the outlet. When you plug the unit back in, it should work normally.

Do not install power cords near any heating element or cooking appliances.
Important Safeguards

IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR SATELLITE RECEIVER EQUIPMENT AND RETAIN FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE TV RECEIVER.

- 1 Read all of these instructions.
- 2 Save these instructions for later use.
- 3 Unplug this Satellite Receiver equipment 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 Satellite Receiver equipment manufacturer as they may result in the risk of fire, electric shock or other personal injury.
- 5 Do not use this Satellite Receiver equipment 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.
- 6 Do not place this Satellite Receiver equipment on an unstable cart, stand, or table. The Satellite Receiver equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Use only with a cart or stand recommended by the manufacturer, or sold with the Satellite Receiver equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
- 6A An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
- 7 Slots and openings in the cabinet and the back or bottom are provided for ventilation and to ensure reliable operation of the Satellite Receiver equipment; and to protect it from overheating, these openings, must not be blocked or covered. The openings should never be blocked by placing the Satellite Receiver



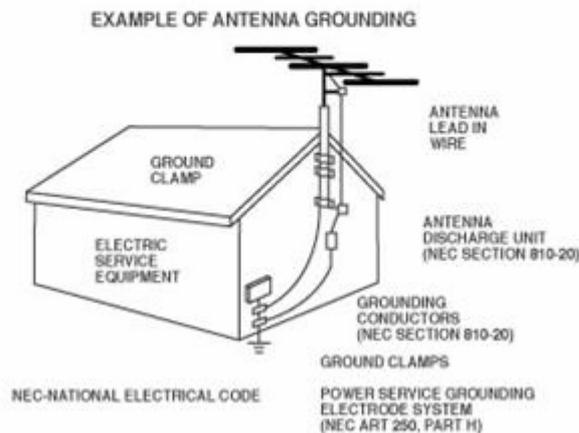
IMPORTANT SAFETY INSTRUCTIONS

equipment on a bed, sofa, rug, or other similar surface. (This equipment should never be placed near or over a radiator or heat register.) This Satellite Receiver equipment should not be placed in a built-in installation, such as a bookcase, unless proper ventilation is provided.

- 8 This Satellite Receiver equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your Satellite Receiver dealer or local power company.
 - 9 This Satellite Receiver equipment 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 rest on the power cord. Do not locate this Satellite Receiver equipment where the cord will be abused by persons walking on it.
 - 11 Follow all warnings and instructions marked on the Satellite Receiver equipment.
 - 12 For added protection for this Satellite Receiver equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.
- Important Safeguards**
- 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.
 - 14 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 Satellite Receiver equipment through openings, as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the Satellite Receiver equipment.
 - 16 Do not attempt to service this Satellite Receiver equipment 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 Satellite Receiver equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - (a) When the power-supply cord or plug is damaged or frayed.
 - (b) If liquid has been spilled, or objects have fallen into the Satellite Receiver equipment.
 - (c) If the Satellite Receiver equipment has been exposed to rain or water.

IMPORTANT SAFETY INSTRUCTIONS

- (d) If the Satellite Receiver equipment does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV receiver to its normal operation.
 - (e) If the Satellite Receiver equipment has been dropped or the cabinet has been damaged.
 - (f) When the Satellite Receiver equipment 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 other hazards.
- 19 Upon completion of any service or repairs to this Satellite Receiver equipment, ask the service technician to perform safety checks to determine that the Satellite Receiver is in a safe operating condition.
- 20 If an outside antenna or cable system is connected to the Satellite Receiver receiver, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA N0.70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



IMPORTANT SAFETY INSTRUCTIONS

FCC RF INTERFERENCE STATEMENT

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 technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.

1. OVERVIEW

1. INTRODUCTION

This product is designed for using Digital Satellite and allows you to enjoy a lot of broadcasting whenever you want to watch it anytime. By simply pressing the button of the remote control unit, the vivid picture and life –like sound of digital broadcasting that your TV portrays through this product, allows you to watch whatever channel you wish of the digital broadcasting.

Through this manual you will notice that the operation is easy to use.

This manual will help you get the most from this product and guide you through Installation, channel selection and many other functions.

In case you experience any difficulties to use this product, please consult the relevant section of this manual.

From now on, enjoy digital broadcasting with digital satellite receiver!!!

2. FEATURES

2.1 General Features

- Standard Definition/High Definition contents (MPEG2 and support MPEG4 AVC/H.264)
- High Definition Video output : HDMI(HDCP) and Component(YPbPr)
- Audio Decoding :ISO/IEC13818-3(MPEG-2 audio/MUSICAM) Dolby AC-3
- Full Compliant of MPEG-S & DVB-S2 Digital & DVB broadcasting
- 950-2150 MHz input Frequency (IF Loop Throughout)
- Satellite Scan - Simultaneous Scan with 10 Satellites
- Flexible reception of SCPC & MCPC from C/Ku-Band Satellites
- Variable input Symbol Rate (1-45 Msps)
- Video output resolution: 480p,720p,1080i
- User selectable output resolution
- EPG (Electronic Program Guide)
- Multi Language OSD
- Fast Channel Change
- 10,000 Channels TV & Radio program
- Timer Function (Automatic Turn On/ Off by Setting Function)
- RTC (Real Time Clock)
- PIG (Picture In Graphic)
- 5 Favorite List & Unlimited Programs per each
- Powerful Channel Editing Function
 - Sorting: Alphabetic, Satellite, FTA/Scramble, Parental Lock, CAS, S-ID, TP Order, All
 - Move, Delete, Favorite Edit

- Parental Lock, Channel Rename, Channel Skip
- Manual PID/ Satellite & TP/ Network Scan
- S/PDIF (Digital Audio or Dolby AC3 stream out)
- Diseqc 1.2 and USALS Compatible
- Comparable of Setting the Frequency for SMATV System
- Universal II Remote
- Integrated USB2.0 (Host), Support to USB Memory Stick
- UHF Ready (U-30 Kit optional)

3 PLEASE CHECK THE FOLLOWING ACCESSORIES ARE ENCLOSED

- User Manual 1 set
- Remote Control Unit 1 Set
- HDMI Cable 1 set
- RCA Cable 1 set
- Memory Stick 1 set
- Batteries (AAA Type) 2EA

Note !

If any of the accessories listed above are missing, please contact the sales outlet where this product was initially purchased.

4. HOW TO USE THE REMOTE CONTROL KEY

Key	Function
	Turns the selected equipment (Set Top Box, AUX, TV) on/off.
TV/SAT	Toggles between TV & SAT operation
STB	Enable remote to control the receiver
AUX	Enable remote to control aux any unit
VIDEO INPUT	Toggles between TV & video input
TV	Enable remote to control TV set
MUTE	Sounds Off/On
TV/RAD	Toggles between the TV service and radio service
AUDIO	Selects audio mode (Stereo, left only and right only). Select language in case of multilingual program.
LAST	Returns to previous program
 VOL I	Volume down/up Change the value of a selected line
	Shows channel information, such as channel number, channel name, frequency, polarity, symbol rate, scrambled/Dolby/favorite/lock
EPG	Shows program information
	Channel up/down Moves the cursor upward/downward in the menu screen
MENU	Enters main menu screen.
FAV	Enter favorite program
SAT	Enter programmed satellite list
EXIT	Moves to upper menu
	Execute page up function in the menu
OK	Shows channel list. Confirms selection
	Execute page down function in the menu
MODE	Change the output resolution (Component & HDMI only)



SIG	Shows signal quality
	Multi picture (Max 16 CH)
TIME	Time shows current time
	Changes channel directly. Controls the numerical operation.
PAUSE	Holds the picture or release the pause

Operating Principle

- Select an item by using up and down key and change the value of the highlighted (selected) item by using keys shown on the screen. Press OK to enter to the sub-menu if there is no instruction marks on the screen.
- The items are automatically stored and moved the upper menu by pressing the 'EXIT' key
- You can return to normal mode at any time by pressing the menu key from the menu mode

Universal II Remote Interface Programming

A) Manual Code Input Method

1. Turn the TV set power on.
2. Press remote **TV** button for 5 seconds until TV button LED red light on.
3. While LED red light on (within 10 seconds), aim remote to the TV set and enter 3 digit code in the list.
If the code is a matched one, red light will flash 3 times and the TV set power will be turned off automatically. If red light does not flash, try another 3 digit code one by one.
4. For other AUX products, follow same as above steps.

B) Automatic Code Search Method

1. Turn the TV set power on.
2. Press remote TV button for 5 seconds until TV button LED light on.
3. While LED red light on (within 10 seconds), aim remote to the TV set and press and release **UP(▲)** button and wait 3 seconds. If auto search code is a matched one, red light will flash 3 times and the TV set power will be turned off automatically.
If no response within 3 seconds, press and release **UP(▲)** button again and wait 3 seconds for another code search. Continue this procedure until you get the response.
4. For other AUX products, follow same as above steps.

Custom Code Programming

When the remote control interfering TV (AUX) set at "STB" operation position, program another code among 3 different codes to avoid the problem.

Press **OK** and number **2 (or 3)** button simultaneously about 5 seconds until STB button red light flash 3 times

Brand List for TV

A Mark	351	JC Penney	203	206	210	216	217	Radio Shack / Realistic	205	216	218	230	242					
Abex	330		218	241	245	255	260		245	258	275	330	339					
Admiral	213	331	366	261	264	278	295	296	RCA	202	215	216	217	218				
Aiko	209			317	330	332	339			219	245	290	291	292				
Akai	214			Jensen	216	218				293	294	299	318	332				
Alleron	256			JVC	205	206	207	246	247	335	336	343	353	362				
Amtron	230				248	261	268	328	329	367	372	376	380					
Anam National	215	230			333	358	378			Realistic	242	258						
AOC	216	217	218	219	340	Kawasho	214	216	218	Runco	325							
	341	369				KEC	351			Sampo	216	218	330	339				
Apex	381					Kenwood	202	216	218	Samsung	200	202	205	208	216			
Audiovox	230					Kloss Novabeam	230	249	265		217	218	295	296	297			
Belcor	216					KMC	351				330	339	351	363				
Bell & Howell	213	242	258			KTV	230	266	339	342	Sansui	368						
Broksonic	216	382				LG(Goldstar)	202	205	216	217	218	Sanyo	216	242	253	257	258	
Brokwood	216						255	263	264	320	327		285	298	337	344		
Candle	216						330	339	351			Scott	205	216	218	221	230	
Carver	212					Logik	213						232	256				
Celebrity	214					Luxman	216	218				Sears	202	206	207	212	216	
Citizen	209	210	216	218	230	LXI	212	218	240	241	242		218	240	241	242	245	
	242	296	339	373			245	258	332				247	256	257	258	259	
Colortyme	211	216	218			Magnavox	202	210	212	216	218		286	287	332	344	351	
Concerto	216						243	244	249	250	265		360					
Contec / Cony	205	206	207	230			279	310	311	312	351		Sharp	205	216	218	223	226
Coronado	351					Majestic	213							275	280	288	289	313
Craig	230					Marantz	212	216	218	251	267			331	339	351		
Crosley	212					Megatron	218	267					Shogun	216				
Crown	230					Memorex	213	217	218	242	256		Signature	213				
Curtis Mathes	208	212	216	218	242		258						Sony	214	350	357	359	364
	245	258	296	339	372	MGA	202	203	216	217	218			370	377			
	373						252	253	259				Soundesign	210	216	218	230	256
Daewoo	200	201	209	216	217	Midland	330						SSS	216				
	218	316	339	351	367	Mitsubishi	202	203	216	217	218		Starlite	230				
	216	218	339				252	253	254	259	315		Sylvania	202	210	212	216	218
Daytron	216	218	339			Montgomery Ward	213							243	244	249	250	265
Dimensia	245					Motorola	215	331						279	281	346		
Dumont	216	325				MTC	216	217	218	296			Symphonic	220	230	256	360	
Dynatech	216					Multitech	230						Tandy	331				
Electroband	214					Multivision	276						Tashiko	241				
Electrohome	202	203	214	215	216	NAD	218	240	241	334	371		Tatung	215				
	218					NEC	211	215	216	217	218		Technics	261				
Emerson	204	205	216	218	220	Nikko	209	218					Techwood	216	218	261		
	221	222	223	224	225	Onwa	230						Teknika	205	206	207	209	210
	226	227	228	229	230	Optimus	334	371						212	213	216	217	218
	231	232	233	234	235	Optonica	275	331						230	244	256	296	338
	236	237	238	239	242	Orion	232	368						339	351	375		
	256	258	314	339	342	Panasonic	215	261	338	352	375		Telecaption	282				
	343	351	367	378		Philco	202	205	210	212	215		Tera	216				
Envision	216	218					216	217	218	243	249		Thomson	354				
Fisher	242	257	258	259	344		250	265	351			TMK	216					
Fujitsu	256					Phillips	202	205	210	212	215		Toshiba	240	241	242	258	282
Funai	230	256					216	243	249	265	270			283	286	296	345	346
GE	203	215	216	218	245		277	278	279	351				355	356	383		
	260	261	262	278	332	Pilot	216						Totevision	339				
	347	348	349	374		Pioneer	216	218	271	272	334		Universal	260	278			
Gilbralter	216						343	371					Vidikron	212				
Grundy	256					Portland	209	216	217	218	339		Vidtech	216				
Hallmark	216	218					351						Wards	202	212	213	216	217
Hitachi	205	206	207	216	218	Price Club	296							218	220	221	243	244
	267	268	269	300	301	Prism	261							245	249	256	260	265
	302	303	304	305	306	Proscan	245	332						275	278	279	284	351
	307	308	309	319	323	Proton	205	216	218	273			Yamaha	202	216	217	218	
	324	343	351	361	371	Pulsar	216						Zenith	213	216	321	322	325
	379					Quasar	215	261	266	274	375			326	365			
Infinity	212					Radlo Shack	242	258										
JBL	212																	

Brand List for AUX

- PVR/DVR -

AT&T	209
ECHOSTAR	200
PANASONIC	209
PHILIPS	201 202 204
RCA	210
Replay TV	209
Sonic Blue	209
SONY	203 206
TIVO	202 203 204 205 206
TOSHIBA	205

- Receiver/AMP/Tuner -

AIWA	258 259 260 261 262 272 278
CARVER	258
Harman Kardon	258 271
JBL	271
JVC	263
KENWOOD	264
LINN	258
MAGNAVOX	258
MARANTZ	258
ONKYO	273
PANASONIC	274 275
PHILIPS	258
PIONEER	270
RCA	265
SANSUI	258
SHERWOOD	277
SONY	266 267 276
TECHNICS	274 275
WARDS	258 270
YAMAHA	268 269 270

- CD -

ADC	213
AIWA	218
AKAI	214
EMERSON	219
FISHER	220
GE	216
HITACHI	221
JVC	222
KENWOOD	223
MARANTZ	225
MITSUBISHI	217
NAKAMICHI	234
NEC	224
ONKYO	226
PANASONIC	227
PIONEER	228
RCA	229
SEARS	215
SHERWOOD	235
SONY	230
TECHNICS	231
TOSHIBA	233
YAMAHA	232

- CABLE -

ABC	246 252
Colour Voice	239 254
DISHNET	246
ECHOSTAR	251
GE	242 247 249
GEMINI	246
General Instrument	247
HITACHI	247
JERROLD	246 247
MOTOROLA	246 251
PHILIPS	240 254
PIONEER	248 255
PROSCAN	243 248 250
RCA	244 251
SAMSUNG	255
Scientific Atlanta	236 238 241 245 252 253 256
SIGNATURE	248
STARCOM	246
STARGATE	246
TOCOM	253
ZENITH	237 257

5. FRONT PANEL

1. POWER

To put Power in and out of standby mode.

2. VOLUME

To make volume up and down & to change the value of a selected line

3. CHANNEL

To move up and down in the menus, To change channels.

4. Menu

To enter main menu screen.

5. Exit

To move to previous menu.

6. OK

To confirm selection.

7. Display

To show channel number, resolution, remote control commands and time in standby mode.

8. A/C reset switch

Main power ON/OFF (When you open the front door, you can see A/C reset switch).

9. Resolution Mark

To show a resolution.



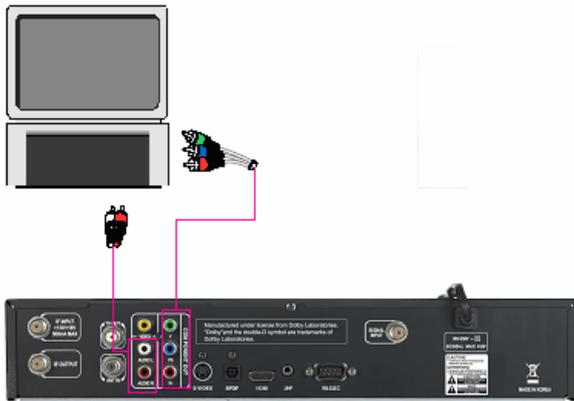
6. REAR PANEL

NO	NAME	FUNCTION
1	IF INPUT	IF INPUT from LNB to receiver
2	IF OUTPUT	IF Loop-through output to 2 nd receiver
3	TV OUT	Output to TV
4	ANT IN	Input from off-air TV or cable etc.
5	VIDEO	Composite Video Output
6	AUDIO L	Left Audio Output
7	AUDIO R	Right Audio Output
8	Y	Component Video Output
9	Pb	Component Video Output
10	Pr	Component Video Output
11	S-VIDEO	Super Video output to TV or VCR
12	S/PDIF	For Digital Audio Output
13	HDMI	HDMI Output
14	UHF	Option for UHF Remote control kit
15	RS232	Serial port used for software upgrade
16	SIGNAL INPUT	Input from Terrestrial HD TV antenna



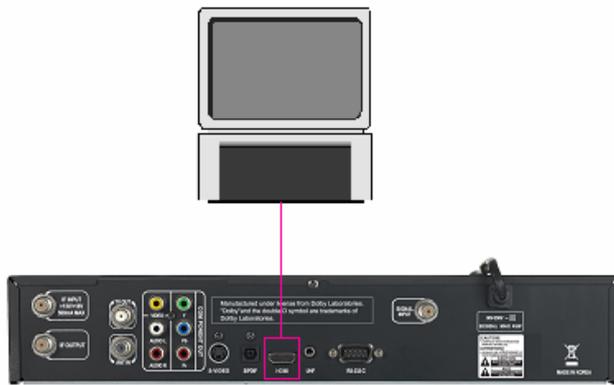
7. CONNECTION

<Connecting to digital TV which can support HD resolution (1080i,720p,480p) using YPbPr port>



1. Connect STB's YPbPr OUT and audio L/R OUT to YPbPr IN and audio L/R IN of TV.
2. Set STB's video output mode to 1080i or 720p or 480p using 'Mode' key of remote controller.
Please check TV's user manual for detail connecting method of the YPbPr input port.

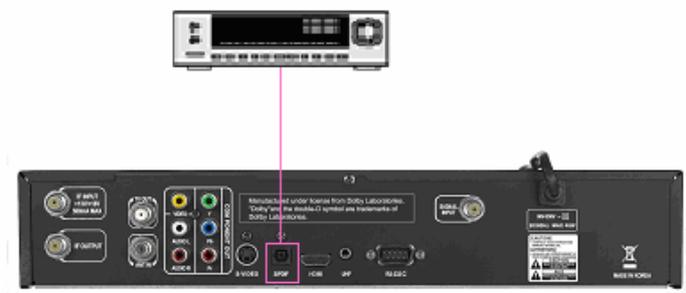
<Connecting to PC monitor or digital TV which has HDMI input port>



1. Connect STB's HDMI OUT to HDMI IN of monitor or TV.
2. Set STB's video output mode to 1080i or 720p or 480p using 'Mode' key of remote controller.

For the best access to HD programming at the highest available resolution, use this connection method.

<Connecting to A/V receiver (Dolby digital amplifier)>



1. Connect STB's optical audio out to A/V receiver.
2. Press Audio key and sets "Dolby digital Language."

2. OPERATING

1. Start Up

If you are watching TV through the RF-cable, you need to adjust the channel number. The type of TV and channel numbers are set to NTSC and channel 3 at the factory.

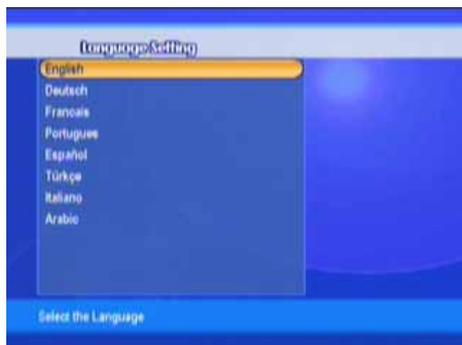
Please follow the brief procedure below and watch the satellite programs.

- 1) Select the language
- 2) Select the antenna setup in main menu screen
- 3) Adjust LNB configuration per each satellite
- 4) Execute scanning to find program
- 5) Exit from installation after all programs are searched.

1.1 Language

When the receiver is turned on for the first time, the language selection menu is appeared as in the Fig 1-1.

Select the desired language and press OK to confirm it.



This Receiver supports **8 languages**.

- English
- German
- French
- Portuguese
- Spanish
- Turkish
- Italian
- Arabic

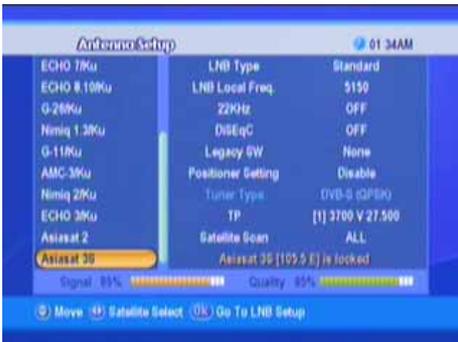
2. Installation

Press the OK key. Use common password "0000." Channel edit is not accessible until satellite channel scanned and saved. Antenna setup is appeared on screen as upper second figure.



2.1 Antenna Setup

In this section you, all parameters can be set to get enough signal & quality levels to be locked.



2.1.1 Satellite

- Select the satellite by using ▲ ▼, and press OK to enter right side menu.

2.1.2 LNB type

Select LNB type using keys.

There are 5 LNB alternatives.

- Universal 1 (9750MHz & 10600 MHz)
- Universal 2 (9750MHz & 10750 MHz)
- Single-SL (5150MHz & 5750 MHz)
- Single-SH (5150MHz & 5750 MHz)
- Standard for USA (10750 or 11250)
- Single Stack (10750(V) or 10175(H))

22KHz control is automatically set for each LNB alternative or you can change it by yourself.

2.1.3 LNB Lo-Freq

If the required LNB frequency is not available, select "Standard" and then input the frequency manually using the numeric keys.

2.1.4 22KHz

In case you are using a dual LNB or two antennas connected to a 22KHz tone switch box, make 22KHz tone switch "ON" or "OFF" to select an LNB or an antenna.

2.1.5 DiSEqC

- DiSEqC 2X1 & 4X1 are supported.
- Select the port connected to the LNB or LNBF.

2.1.6 Positioner Setting

It is used to set the DiSEqC 1.2 or USALS motor.

If you have no positioner equipment, select "Disable". Otherwise, you can select either DiSEqC 1.2 or USALS.

1) DiSEqC 1.2 (manual operation)

(1) Current position

Select the position number by using keys (#0~#26:default define, #27~#49: user define)

(2) Movement

Select East / West by using keys.

(3) Store

Please select "Store" and the current position will be saved.

(4) East Limit Set

Move the position to the most eastern position and press **OK** then East Limit is stored.

(5) West Limit Set

Move the position to the most western position and press **OK** then West Limit is stored.

(6) Limits Disable

Select Disable limits by using **OK** key

(7) Go to reference

Select go to reference by using **OK** key

If the motor shifted to one side(usually it happens after used), you can resynchronize by using DiSEqC 1.2 "go to reference" and then go back to programmed mode.

2) USALS (DiSEqC 1.3 automatic operation)

(1) Satellite Position

It points out the position of saved satellite. You can change the position of the satellite by numeric keys.

(2) My Longitude

Please input Local Longitude by numeric keys

(3) My latitude

Please input Local Latitude by numeric keys

(4) Reference position

This is the same as DiSEqC 1.2 Reference

(5) Move

The satellite's position of (1) and the one calculated by value of (2) & (3) will be shown. Press **OK** key and it will move.

(6) Store

Please select "Store" and the current position will be saved.

2.1.7 TP

Select a specific transponder by using the keys

2.1.8 Satellite Scan

After all LNB setting is finished, adjust antenna direction toward satellite until signal & quality level maximized. Then select and confirm Satellite Scan to start scan and saved.

Below the Menu, Signal and Quality will be displayed in the screen.

2.2 Satellite Scan

Scan all the transponder of selected satellites.



(1) Press **OK** key and select wanted satellite by using **▼&▲** keys.

(If you want to scan several satellites once, you can control keys.)

Then press **OK** key to execute scanning.

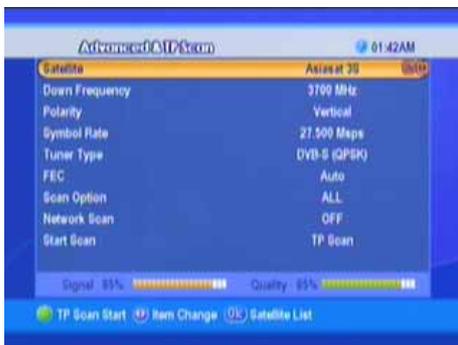
(2) You can select satellite whatever you chose though.

(3) Transponder will be consecutively scanned all selected satellites.

2.3 Advanced & TP Scan

2.3.1 Satellite

Select a satellite by using keys. Select items in the list and press **OK**.



2.3.2 Down Frequency

Input the Frequency that is down converted through LNB in common.

When you press **OK** key, TP List will be displayed and if you press Left / Right key on the RCU, you can select Multi TP.

2.3.3 Polarity

Select Horizontal or Vertical by using keys.

2.3.4 Symbol Rate

Input correct value using numeric keys.

2.3.5 Tuner Type

DVB-S(QPSK), DVB-S2(QPSK), DVB-S2(8PSK)

Select the Tuner Type by using keys.

2.3.6 FEC

Select items in the list by using keys.

2.3.7 PID Scan

Select Auto or Manual mode.

Type PID number at manual mode.

2.3.8 Scan Option

Select scan option by using keys (ALL, FTA).

2.3.9 Network Scan

Select 'ON' or 'OFF' by using keys.

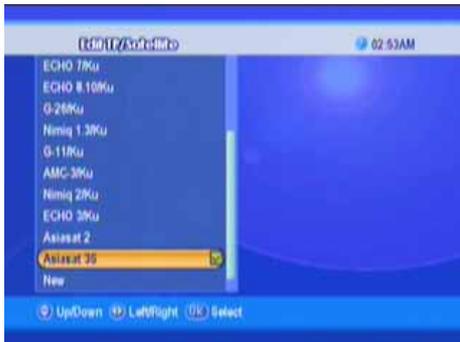
2.3.10 Start Scan

After all setting is finished, then press **OK** to start scan.

2.4 Edit TP/Satellite

In this mode, you can add the new satellite and the new transponder information.

Also you can update or delete the transponder information.



2.4.1 How to add a new satellite

- Select "New" in the satellite name by using CH **▲▼** keys. Press VOL keys to move digit.
- Maximum number of characters is 12-digit.
- Press **OK** key.
- Enter the Down Frequency, Symbol Rate, LNB Polarity, Tuner Type, FEC.
- Press **EXIT** or **OK** key, then new transponder information is stored.

2.4.2 How to rename a satellite

- Press **OK** after selecting a satellite of which you want to change name.
- Select "Rename" in the menu.
- Enter new name by using VOL Keys CH **▲▼** keys and press **OK** key.

2.4.3 How to delete/restore a satellite

- Press **OK** key after selecting a satellite you want to delete.
- Press **OK** to confirm, otherwise press **EXIT** to cancel. The color of the deleted satellite name in the list is changed.
- The satellite which has had already searched channels cannot be deleted.
- To restore the deleted satellite, move the cursor to the deleted satellite and press **OK** key. Then select "Restore" in the screen and press **OK** key.

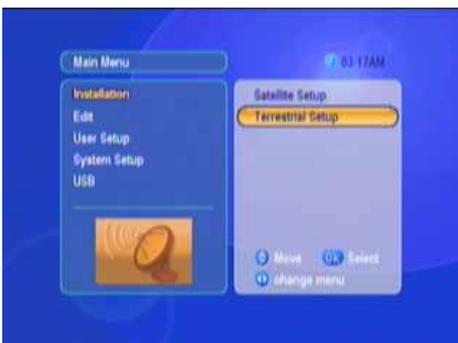
2.4.4 How to add a new transponder

- Press **OK** after selecting a satellite
- Select Edit TP and then transponder list is shown.
- Press **OK** key selecting "NEW" in the transponder list
- Enter the Down Frequency, Symbol Rate and LNB Polarity, Tuner Type, FEC.
- Press **EXIT** or **OK**. Then new transponder information is stored.

2.4.5 How to delete or update a transponder added

- Press **OK** key after selecting a satellite
- Select Edit TP, then transponder list is shown
- Select a transponder you want to delete or update.
- Press **OK** on the TP you want to edit or delete.
- You can see the edit or delete in the small-menu.
- In case you want to edit a TP list,
Select EDIT and press **OK** key.
Enter Down Frequency, LNB Polarity and Symbol Rate, Tuner Type, FEC and press **EXIT** or **OK**
Then New TP date is automatically updated.
- In case you want to delete a TP
Select Delete in the small menu, press **OK** key.
Then the TP selected is deleted.

2.5 DVB-T Setup



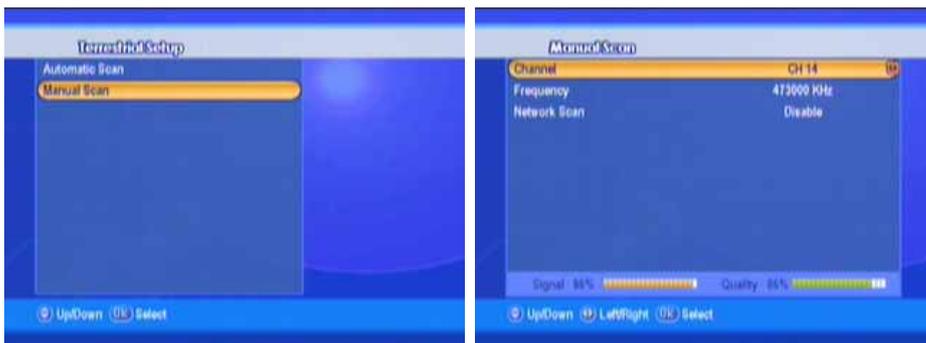
2.5.1 Automatic Scan

If you select this menu, Automatic DVB-T signal reception setup will be done.



2.5.2 Manual Scan

You can adjust the channel, Frequency, Network scan.



2.5.2.1 Channel

You can select the channel by using key Channel selection (6~12, 21~69)

2.5.2.2 Frequency

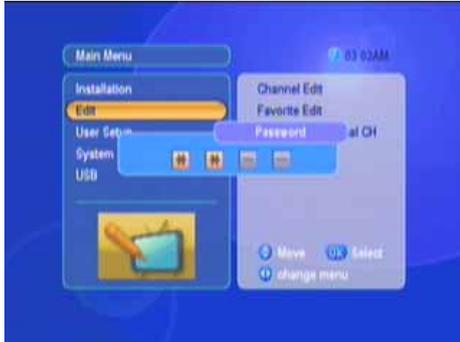
You can input by numeric keys. It has basic frequency on channel.

2.5.2.3 Network scan

You can select "Disable" or "Enable" of Network Scan by using key.

3. Channel Edit

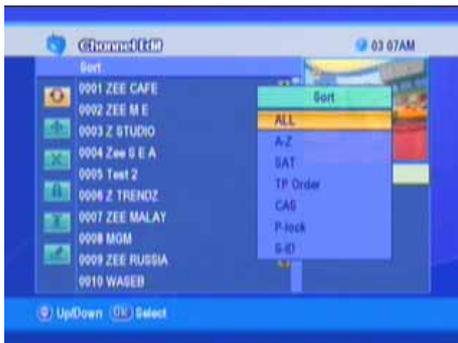
3.1 Channel Edit



After pressing the password, you can edit channels of satellite in this mode.

- (1) You can sort the channels out upon your preference.
- (2) You can rearrange the channel list.
- (3) You can delete channels.
- (4) You can select P-Lock menu.
- (5) You can skip channels.
- (6) You can change the channel name, as you want.
- (7) To enter channel edit mode, you need to press 4 digits password (factory setting is "0-0-0-0").

3.1.1 How to sort the channel



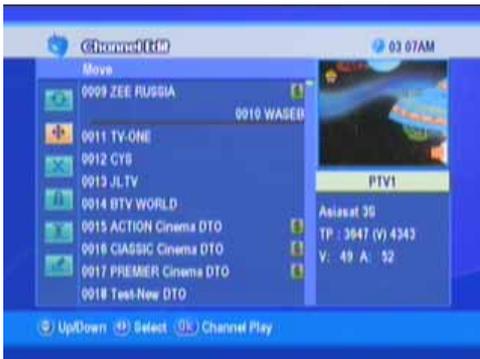
- (1) Press OK after selecting Sort
- (2) Sub mode will be appeared as follows
 - ALL
 - A-Z
 - SAT
 - TP order
 - CAS

- P-Lock
- S-ID

Select the mode that you want to sort and press **OK**

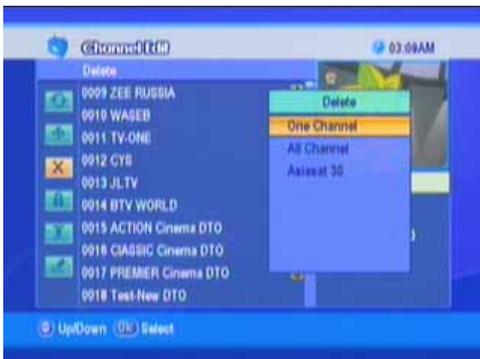
- (3) Press **EXIT** to exit from this mode.

3.1.2 How to move the channel



- (1) Press **OK** key after selecting **Move** key
- (2) Press **CH ▲▼** keys to select a channel to move and then move the selected channel to the new position by using **CH ▲▼** keys.
- (3) Repress **CH ▲▼** keys.

3.1.3 How to delete the channel



- (1) Select **Delete** and press **OK**
- (2) Select a channel you want to delete by using the **OK** or **CH ▲▼** keys (One channel, All channel, Satellite).
- (3) Press **OK** key.
- (4) All channels that you selected are deleted.

3.1.4 How to lock/unlock the channel



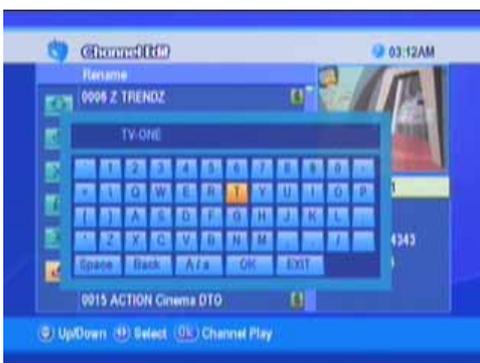
- (1) Select P-LOCK and press **OK**.
- (2) Select the channel that you want to lock and press **OK** keys
- (3) This channel is now locked and the symbol of lock will be shown as a locked channel.
- (4) You can release the locked channel if you press **OK** keys after selecting the locked channel.
- (5) Once locked channel is selected while watching television, password is requested.
- (6) Picture and sound is appeared after the correct password is given by pressing the numeric key.

3.1.5 How to skip the channel



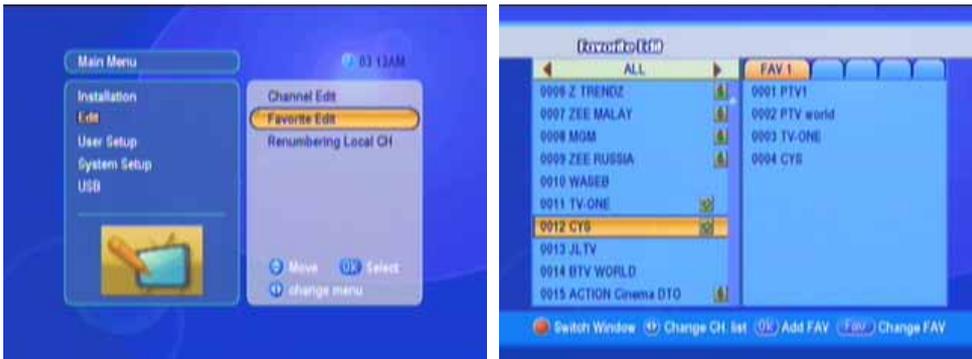
- (1) Select SKIP and press **OK**
- (2) Select the channel that you want to hide and press **OK** keys.

3.1.6 How to rename the channel



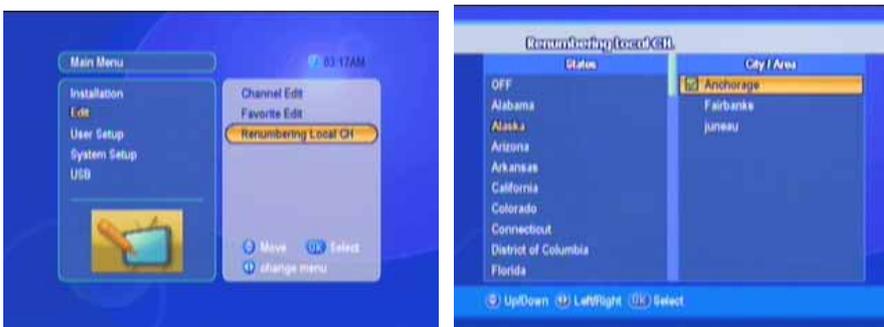
- (1) Press **OK** after selecting RENAME mode
- (2) Select the channel of which you want to change name
- (3) Press **OK** to enter the character input mode
- (4) Put new names, as you want using the 4 arrows keys. The maximum number of characters is 20.
- (4) After completion of entering new, press **OK**

3.2 Favorite Edit



- (1) Select one channel of channel list.
- (2) Press **OK**, then this channel is moved to the favorite channel list.
- (3) For deleting a channel from the favorite list, press **RCU RED** key to go to Favorite List, select one channel to delete and press **OK**. The selected channel disappears in favorite list.

3.3 Renumbering Local CH



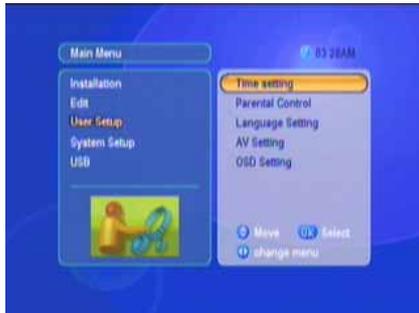
You can change the automatically scanned channel's number into original local channel's number

4. User Setup

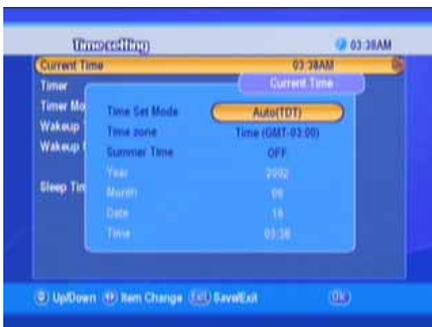
In this USER SETUP mode, you can select the sub-mode by pressing **OK** and CH **▲▼** key.

The changed set-up is activated and stored by pressing **EXIT** key.

4.1 Time Setting



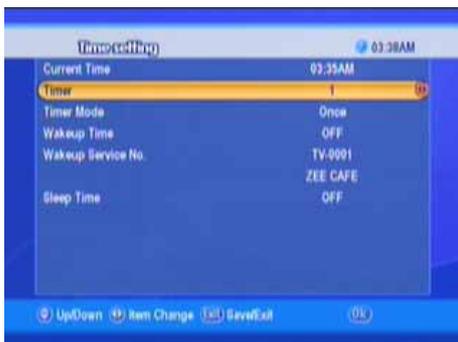
4.1.2 Current Time



After selecting Time mode, you can adjust the time as follows.

- Current Year > Set up by pressing numeric keys
- Current Month / Day> Set up by pressing numeric keys
- Current Time> Set up by pressing numeric keys

4.1.3 Timer



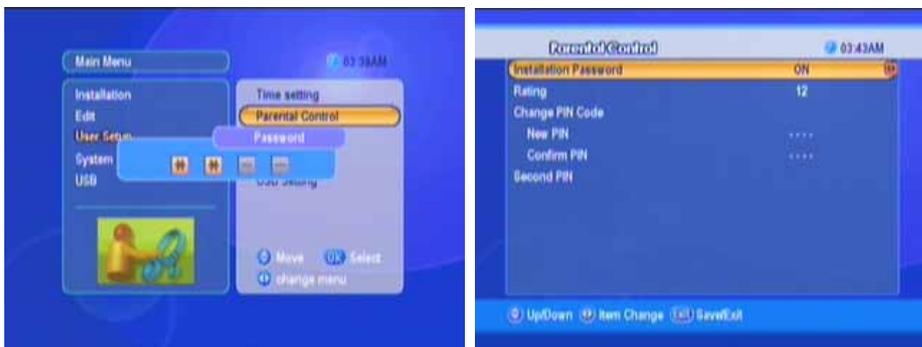
After selecting timer, you can see timer list and adjust the time as follows.

- Time zone
- Summer time
- Timer mode > Once, Daily
- Wakeup time > Set up by pressing numeric keys

- Wakeup service No.
- Sleep Time >> Set up by pressing numeric keys

4.2. Parental Control

After selecting parental control and entering the correct password, the screen as shown in the right appears. The default password at the factory is "0-0-0-0". You may change the PIN code, which is your password in other words, and lock the receiver to prevent children from watching programs.



4.2.1 Installation Password

You can set the function of parental control by pressing keys as "on" or "off."

4.2.2 Rating

You can set an age limit (All, 12, 15, 18).

4.2.3 Change PIN Code

You can change the PIN Code (Password) if you want.

- (1) Enter the new password.
- (2) Reenter the new password to confirm.

Warning!

You must remember the exchanged password because it is used in several functions as follows.

Password required

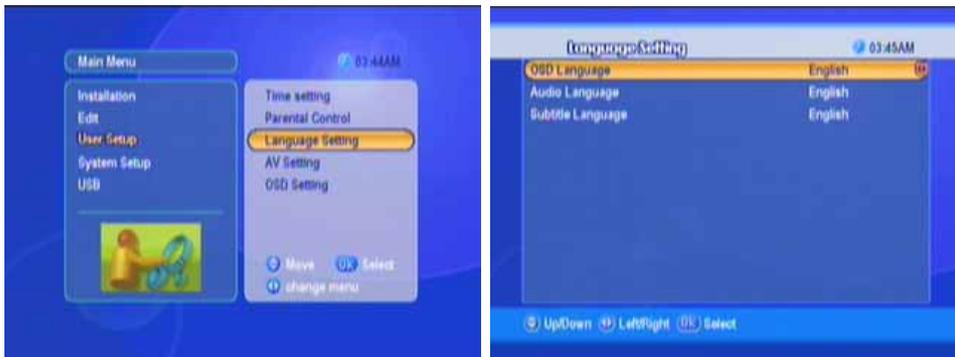
- (1) To show parental locked channels
- (2) To enter parental control menu
- (3) To enter edit menu
- (4) To execute factory setting

- (5) To enter Installation menu.
- (6) To video format change menu

In case of forgotten password programmed call Pansat's dealer to get master factory password.

4.3 Language

4.3.1 OSD Language



Press **EXIT** key after you select your preferable language and audio language by using VOL keys. English, German, French, Spanish, Italiano, Portuguese, Turkish, Arabic

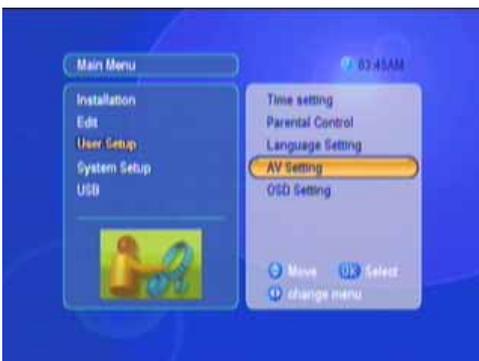
4.3.2 Audio Language

Select the preferable Audio language by using the keys

4.3.3 Subtitle Language

Select the preferable Subtitle language by using the keys

4.4 A/V Setting



4.4.1 TV Screen Format

You can set the TV aspect ratio (4:3 for normal TV & 16:9 for wide TV) by pressing VOL keys.

4.4.2 Video Format

You can set it by pressing VOL keys (1080i, 720p, 480p)

When you change Video Format, enter the Password.

4.4.3 Display Format

You can select Full screen or Letter Box.

*****(Full screen** Letter Box , 가 가)***

4.4.4 Modulator Channel

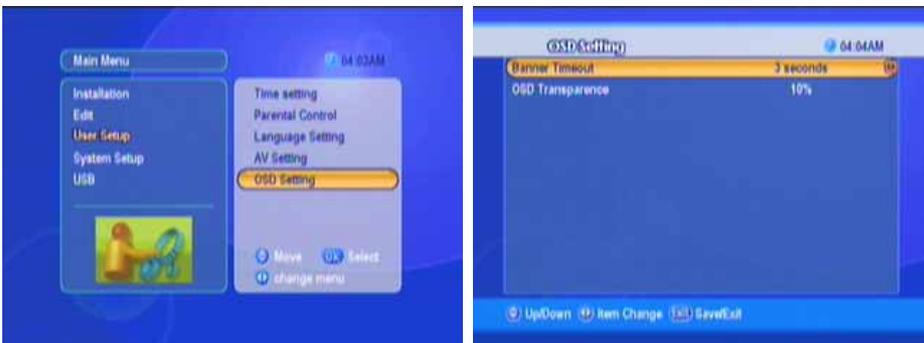
You can set it by pressing VOL keys (CH3,CH4)

4.4.5 Closed Caption

Select 'On' or 'OFF' by using keys and press **OK**.

4.5 OSD Setting

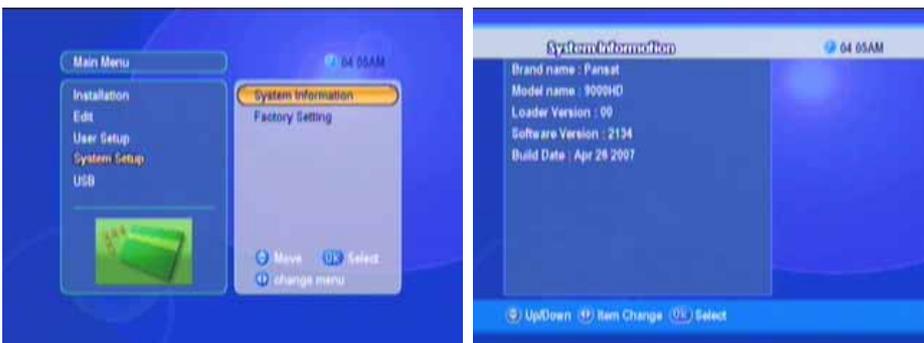
You can adjust the transparency level and Banner timeout by using key



5. System Setup

5.1 System Information

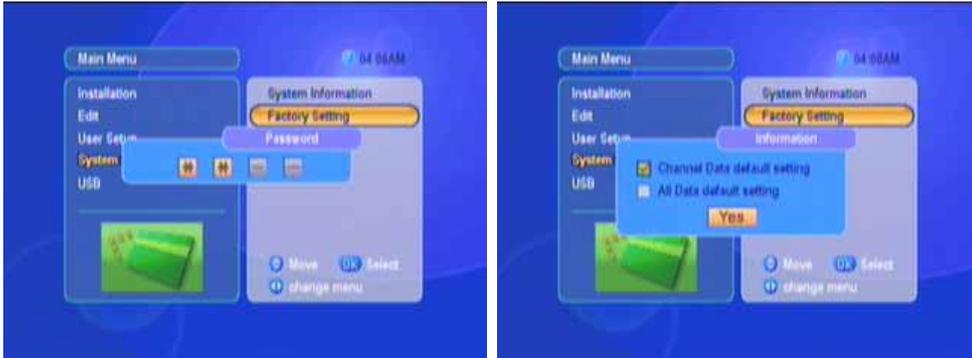
Show the information of model name, data and version of STB.



5.2 Factory Setting

Once the Factory setting is selected and the collect password is given by pressing 4-digit numeric keys followed by OK key, whole parameters are changed to the value written in the factory. That is, factory setting functions your STB (Set Top Box) the first stage. If you do not want to continue this mode, press **EXIT** key before you enter password.

Common password is "0000". In case selected password is forgotten, call Pansat's dealer to get factory master password.



You can select factory setting as follows:

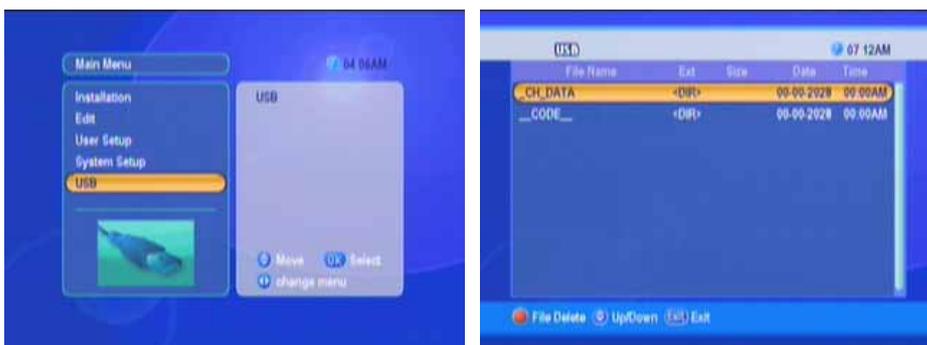
- Channel Data default setting
- All Data default setting

5.3 Data Transfer (Receiver to Receiver)

- 1) Connect null modem RS232 Cable (Pin #2 & #3 twisted) between master and slave receiver.
- 2) Hook up the master receiver to the TV and select transfer mode.
- 3) Turn the slave receiver power off/on to start.

Warning! Do not disturb data transfer by touching any Remote button, RS232 Cable, IF Cable, RCA Cable etc. during data transfer period. Interruption of data transfer could damage the receiver's Flash memory chip which makes the receiver dead and void warranty.

6. USB Mode



Warning!

Please use USB memory stick only.

Don't use any other product like USB charger.

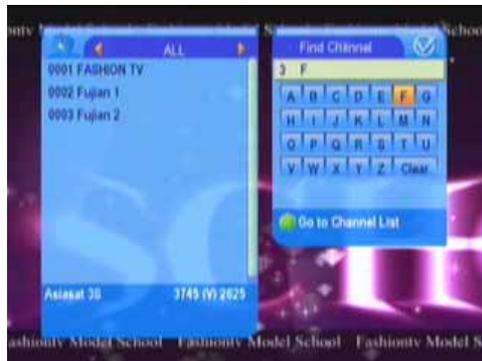
Don't use USB related products which cannot meet DC5V, & Max .100mA.

1. USB menu can be watched after inserting USB stick in normal video mode and the menu list can be displayed.
2. Flash ROM writing file is in code backup folder and channel data is in channel data backup folder.
3. Select Flash ROM writing file and press 'OK'. API code transfer menu is displayed and API code download is executed.
4. After API code download is done, "Complete" message is displayed and then the receiver starts rebooting.
5. Select the file in channel data folder and press 'OK' key. Channel data transfer menu is displayed and channel data download is executed.
6. API Code and CH Data uploading is possible.
7. In API code uploading API code is saved in code backup folder of USB and in channel data uploading channel data file is save in channel data backup folder of USB. Selected files (up to 20) will be displayed one by one.

7. Channel List



- You can see the channel list as shown in the above figure by pressing OK key
- To watch another channel, move the cursor to the channel you want by using ▲▼ PG↑ PG↓ and press OK key
- If favorite channels are saved, the list is changed from channel list TV to favorite list.
- Pressing TV/RADIO key changed list radio, you can exit from the list menu by pressing EXIT key.



7.1 Red Button

If you press the red button, you can sort the channels by Satellite, Alphabet, CAS.

7.2 Green Button

If you press the green button, you can find the channels including the alphabet which you insert.

8. Program Guide



- The title and start time of the program is shown as in the right figure after pressing EPG key.
- Select the particular channel you. The channel will be changed.
- If you want to watch TV with full screen, press EXIT.

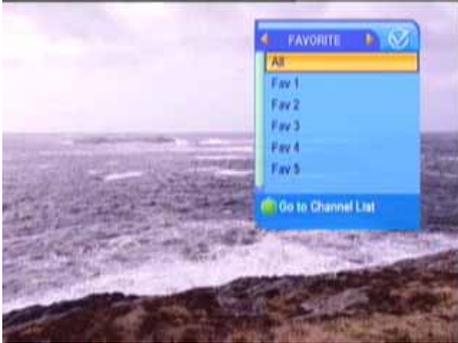
When you press the RED key on the RCU, Single Channel Mode will be executed.

9. Audio Change



- In multilingual program, favorite language is selected by pressing **AUDIO** key and CH▲▼ keys
- Audio mode (L-left, R-right, L/R-stereo) can be changed by pressing **AUDIO** key and VOL key.

10. Recall the Favorite Channel



- Press **FAV** key to recall a stored favorite channel.
- Favorite channel is programmed and stored in the Favorite Edit menu.

11. Download Procedure between Receiver & PC

1. Turn the receiver power on.
2. Connect Null Modem RS232C cable (#2&3 twisted) between PC and the receiver.
3. Open the GTROM Loader
4. Select the BIN File to download.
5. Select the File Type and press download.
6. Press DOWNLOAD.
7. Wait until download and the receiver flash write are fully completed.

Warning!

Do not interrupt the receiver power until download and flash write are fully completed. Otherwise the receiver will be damaged or dead

3. SPECIFICATION

Front-End

1 Input Connector	F-type, IEC 169-24
IF Input Frequency	950MHz to 2150MHz
IF Loop Throughout	950MHz to 2150MHz
Input Level	-65 dBm~-25 dBm
LNB Power	13 /18VDC / 500mA Max
DISEqC Control	1.0,1.2 &USALS compatible
Band Switch	22kHz Tone(22 +/- 4kHz,Amplitude 0.6 +/- 0.2V)
Modulation method	LDP C/BCH(DVB- S2) 8PSK/QPSK, DVB-S QPSK
Symbol Rate	LDP C/BCH(DVB- S2) 8PSK/QPSK :10~30Mbps DVB-S QPSK : 1~45Mbps
Viterbi Decoding Rate	1/2,2/3,3/4,5/6 and 7/8
Bandwidth	36MHz
LDP C/BCH	Punctured Code , 1/2,2/3,3/4,3/5,4/5,5/6,8/9,9/10 in DVB- S2
Terrestrial Tuner	ATSC A/53 compliant 8/16VSB and MMDS 2/4/8VSB receiver ITU- U.J.83 Annex B/C, SCTE D/VS-D31 compliant 64/256QAM receiver

MPEG transport Stream A/V Decoding

Demultiplex	According to ISO/IEC 13818-1(MPEG-2 system)
Input stream	Max. 90Mbit/s
Aspect Ratio	4:3(default), 16:9 letterbox
Video Decoding	ISO/IEC 13818-2(MPEG2 video) MP@HL,ISO/IEC 14496-10 HP@L4
Video Resolution	480p or 576p,720p,1080i
Audio Decoding	ISO/IEC 13818-3(MPEG2 audio/MUSICAM), Dolby AC-3
Audio Mode	Single Channel /Dual Channel, Stereo, Joint Stereo
Video Output	HDMI/HD DCP,RCA

Microprocessor & Memories

Main Processor	ARM926
CPU Clock	280MIPS
Flash Memory	8 Mbyte
SDRAM	128 Mbyte
EEPROM	32 kbit

Data port

Connector	9 Pin D-Sub Type
Protocol	RS232 Asynchronous
Data Rate	Max. 19.2Kbps 115.2K

A/V output

Digital output	HDMI/HD DCP, YPbPr
Video RCA	1 output
Audio RCA	2 output
Digital Audio	1 optical output S/PDIF

Front Panel

Smart Card Slot (Optional)	1 Embedded Slot
4 Digits LED	Channel Number Display
8 keys	Power, Channel Down/Up, Volume up/down, Menu, Exit, OK
USB	USB2.0 Host

Rear Panel

IF Input	F-type Connector
IF Loophrough output	F-type Connector
6RCA	Video, Audio L, Audio R, YPbPr
Modulator	F-type
S/PDIF	Optical
S-Video	
HDMI	Type A
RS232 Serial Port	9 Pin D-Sub Type
UHF Optional U-30 Kit Signal In	ATSC RF Signal Input

Remote Control

Type	Universal Remote
Battery	2x1.5V AAA Type

Electrical and Mechanical

Input Voltage	AC 90-250V, 50/60Hz
Power Consumption	Max. 40 Watts
Size(WxDxH)	340x245x65mm
Weight	2.5kg

* All specifications are subject to change without any notice.

4. TROUBLE SHOOTING

There may be various reasons for the abnormal of the unit. Therefore, if the unit does not work properly, check the unit according to the procedures shown in the table below.

Problem	Possible causes	Remedy
LED on front panel Does not light	AC Power cord disconnected	Connect power cord properly into the power socket
No Picture or Sound	Wrong connection of the Video/audio output to TV input Terminal	Connect two terminals correctly With scart cable or RCA or RF cable
	Wrong connection of antenna cable	Connect the antenna cable Correctly
	Wrong direction of antenna	Adjust the direction of antenna
	No signal or weak signal	Check the cable connections,
	Wrong setting of channels Information in MENU screen	Type the setting value correctly
Black-and-white Screen or V-Hold	Your TV mode is different from broadcasting mode	Use TV of same mode Connection to the receiver and TV
The remote controller is not working	Battery exhausted	Change the batteries
	Fluorescent light interfering with the remote controller	Switch off the light
	Remote controller is incorrectly aimed	Aim the remote control at the receiver
Distorted menu screen	Too high brightness and contrast level of TV set	Adjust brightness and contrast to low level
Not working	Process Down	Remove the power code or AC reset switch OFF/ON



LIMITED WARRANTY

PANAREX Inc. warrants to the original purchaser that this product shall be free from defects in workmanship and material for two years from the date of original purchase. During this warranty period PANAREX will provide free of charge both parts and labor necessary to correct defects in workmanship or material.

This warranty does not cover damage due to lightning, fire, flood, or other acts of God, damage from accident abnormal conditions, improper use, or faulty installation, unauthorized software/hardware modification or damage by attempts to repair the units other than by the authorized service of PANAREX.

PANAREX's liability under this warranty is limited to servicing or adjusting equipment returned to PANAREX authorized service centers with freight prepaid.

Panarex Electronics

 **Pansat**® Satellite TV System

www.pansatusa.com

www.panarex.com

11672 Tuxford Street,

Sun Valley, CA91352. U.S.A.

Telephone : #818-768-5161

Fax : #818-768-5191