



USER'S GUIDE

250SM

DIGITAL SATELLITE RECEIVER

Panarex Electronics

Sun Valley, California, USA

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



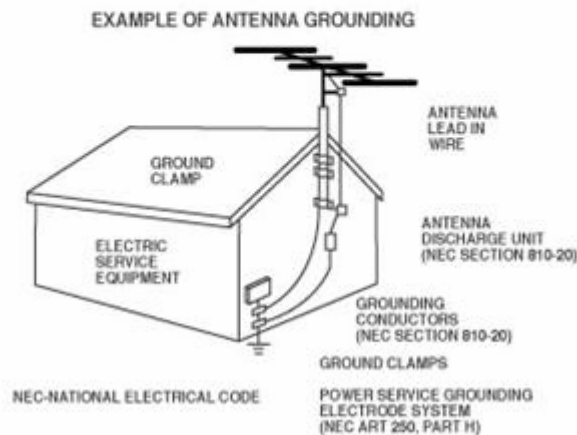
IMPORTANT SAFETY INSTRUCTIONS

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 provided 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.

PREFACE

1. OVERVIEW

1. WHAT IS THIS PRODUCT FOR?
2. WHAT FEATURE DOES THIS PRODUCT OFFER?
3. FOR YOUR SAFETY
4. PLEASE CHECK THE FOLLOWING ACCRSSIONS ARE ENCLOSED
5. HOW TO USE THE REMOTE CONTROL KEY
6. FRONT PANEL
7. REAR PANEL
8. SIMPLE DIGITAL CONNECTION
9. ANALOGUE / DIGITAL CONNECTION

2. OPERATING

1. Start Up
2. Installation
3. Channel Edit
4. User Setup
5. System Setup
6. Channel List
7. Program Guide
8. Audio Change
9. USB Memory Stick
10. Multi Pictures
11. Embedded
12. Recall the Favorite Channel
13. Download Procedure between Receiver & PC

3. UHF REMOTE CONTROL KIT U-30 (Optional)

4. SPECIFICATION

5. TROUBLE SHOOTING

1. OVERVIEW

1. WHAT IS THIS PRODUCT FOR?

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. WHAT FEATURE DOES THIS PRODUCT OFFER?

2.1 General Features

- 10days EPG (Electronic Program Guide)
- Full Compliant of MPEG-2 Digital & DVB broadcasting
- 950-2, 150MHz Input Frequency (IF Loop Throughout)
- Variable Input Symbol Rate (1-45Msps)
- Multi Language OSD
- Automatic PAL/NTSC Conversion
- Fast Channel Change & Scan
- 5,000 Channel TV & Radio Program
- Flexible reception of SCPC & MCPC from C/Ku-Band Satellites
- S/PDIF (Digital Audio or Dolby AC3 Stream out)
- Timer Function (Automatic Turn On/Off by Setting Function)
- 256 Colors (Graphic User Interface) Number
- PIG (Picture In Graphic)
- 5 Favorite List & 100 programs per each
- Powerful Channel Editing Function
 - Sorting: Alphabetic, Satellite, TP order, FTA/Scramble, Parental Lock
 - Move, Delete, Favorite Edit
 - Parental Lock, Channel Rename, Channel Skip
- Manual PID/Satellite & TP/Network Scan
- Smart Search

- Satellite Scan – Simultaneous Scan with various Satellites
- DiSEqC 1.2 & USALS Compatible
- Comparable of Setting the Frequency for SMATV System
- Software Upgrade via USB Memory Stick or RS232C (Receiver to Receiver, PC to Receiver)
- UHF- Ready (U-30 Kit optional)
- S-VHS Out
- Universal II Remote Control (3 different code selectable)

2.2 Additional Features

- RTC (Real Time Clock)
- Component Out (YPbPr)
- Integrated USB2.0 (Host), Support to USB Memory Stick
- Multi Pictures (Max. 16)

2.3 Conditional Access

- Conditional Access – Conax CAS Embedded

3. FOR YOUR SAFETY

- Do not open the cover. It may cause malfunction or electric shock.
- When you do not use the product for a long time, please pull the power cord out from the outlet.
Also do not use a damaged power cord that may cause fire or electric shock.
- Do not use install the product in a humid area.
- Do not cover the product or place anything heavy on the product, Keep clear space around the product for sufficient ventilation.
- Avoid using spray or liquid materials around the product. Don't make other materials come into the inside the product.
- Do not connect to modify cables when the product is plugged in.
- Socket-outlet shall be installed near the equipment and shall be easily accessible.
- Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases shall be placed on the apparatus.







4 PLEASE CHECK THE FOLLOWING ACCRSSIONS ARE ENCLOSED

- User Manual 1 set
- Remote Control Unit 1 Set
- Batteries (AAA Type) 2EA
- 128Mb (min.) Memory Stick 1 pc



Note !

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

5. HOW TO USE THE REMOTE CONTROL KEY

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

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

6. FRONT PANEL

1. POWER
To put power in and out of standby mode.
2. VOLUME
To make volume up and down.
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. Display
To show channel number, error messages, remote control commands and time in standby mode.

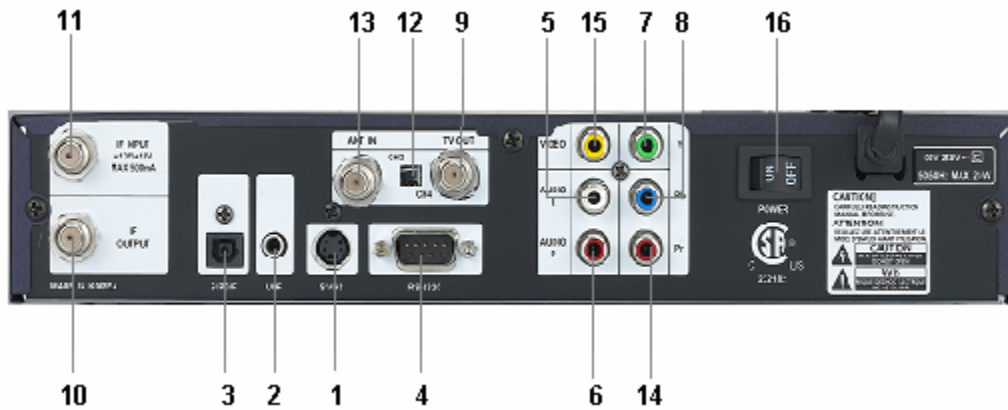


7. USB
Connect UBS Port.



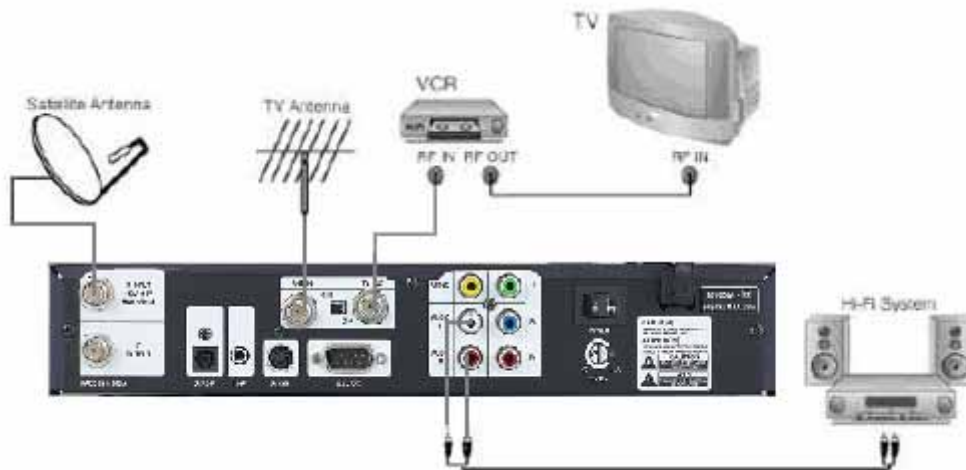
7. REAR PANEL

NO	NAME	FUNCTION
1	S-VHS	Super Video output to TV or VCR
2	UHF	Option for UHF Remote Control lit
3	S/PDIF	For digital audio output
4	RS232	Serial port used for software upgrade
5	L	Left Audio Output
6	R	Right Audio Output
7	Y	Component Video Output
8	Pb	Component Video Output
9	TV OUT	Output to TV
10	IF OUTPUT	IF Loop-through output to 2 nd receiver
11	IF INPUT	IF INPUT from LNB to receiver
12	Modulator Switch	CH 3/4 Switch
13	ANT IN	Input from terrestrial TV antenna
14	Pr	Component Video Output
15	VIDEO	Composite Video Output
16	AC SWITCH	AC Power ON/OFF (Reset Function)



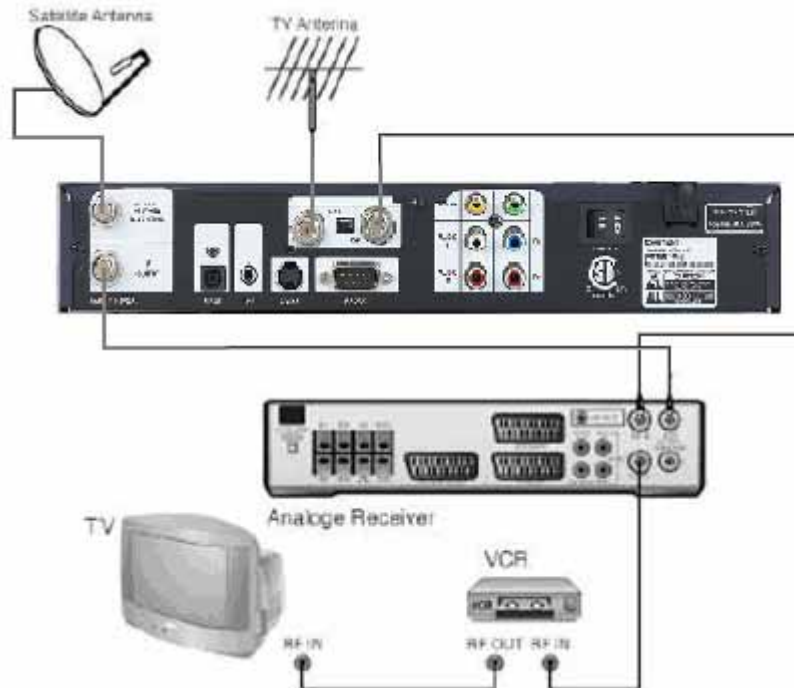
8. SIMPLE DIGITAL CONNECTION

When connecting receiver to TV and VCR with RF Cable (Single Antenna)



9. ANALOGUE / DIGITAL CONNECTION

When connecting receiver to analogue receiver and VCR with RF Cable



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 PAL-G and channel 38 at the factory. For USA, Ch3 is factory preset.

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

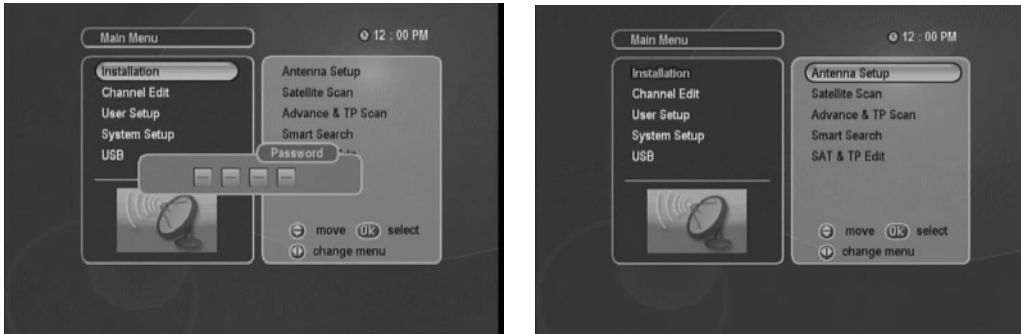
When the receiver is turned on for the first time, the language selection menu is appeared as in the Fig 1-1. Select the desired language and press OK to confirm it.



This receiver supports 8 languages.

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

2. Installation



Press the OK key. Use common password "0000". Parental control and channel edit are 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 could know how to operate LNB set-up.

2.1.1 Satellite



- When you adjust the LNB set-up, you select the satellite using **OK** key.
- Adjust TP, LNB Power, LNB Type, LNB Local freq, 22k, DiSEqC, Legacy sw, positioner setting
- You can cancel the satellite you chose using **EXIT** key.

2.1.2 TP

Select a specific transponder by using the **←** keys and **▲▼** keys.

2.1.3 LNB type

Select LNB type using **←** keys and **▲▼** keys.

There are 7 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) / 10175(H))

2.1.4 LNB Lo-Freq

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

2.1.5 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.

2.1.6 DiSEqC

- DiSEqC 1.0, 1.2, 1.3 (STAB USALS) is compatible
 - DiSEqC 2X1 & 4X1 is usually available.

2.1.7 Positioner Setting

It is used to set the DiSEqC 1.2 motor & USALS

If you have no positioner equipment, select "Disable"

1) DiSEqC 1.2

(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) East Limit Set

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

(4) West Limit Set

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

(5) Limits Disable

Select Disable limits by using **OK** key

(6) Go to reference

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

This selection also enables "resynchronize" programmed positions when shifted after certain period operation.

2) USALS (DiSEqC 1.3)

(1) Satellite Position

It points out the position of saved satellite. Change satellite position number to maximize quality level if needed.

(2) Local Longitude

Please input Local Longitude by numeric keys and adjust E.W by using **←** **→** keys.

(3) Local latitude

Please input Local Latitude by numeric keys and adjust N.S by using **←** **→** keys.

(4) Reference position

This is the same as DiSEqC 1.2 Reference except “resynchronization” function inapplicable.

(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.

2.1.8 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.

If you press **SIG** key on RCU, signal strength menu will be displayed in the screen with beep sound.

2.2 Satellite Scan



Scan all the listed transponders in a selected satellite.

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

2.3 Advanced & TP Scan

Scan a selected TP or new TP.

(1) Select a satellite

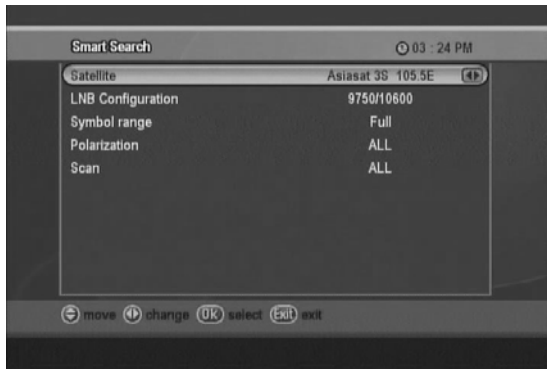
(2) Select a TP in TP list or type any new TP data if needed.

- (3) Set scan option by using keys. Select items in the list and press **OK**.
- (4) PID data can be applied manually.
- (5) Choose scan type (ALL or FTA) using keys. Then press OK to search in Scan Start.

2.4 Smart Search

Smart Scan enables to search and scan all channels in the satellite without any preprogrammed data.

Recommend to use this function once in a while or anytime TP & Channel data changed.



2.4.1 Satellite

1. Select a satellite by using keys.

2.4.2 LNB Configuration

Please refer to 2.1 Antenna Setup

2.4.3 Symbol range

- Full : High and Low

2.4.4 Polarity

- Select Horizontal / Vertical with keys.
- All :Horizontal and Vertical
- Horizontal : Scan Horizontal TP only.
- Vertical : Scan Vertical TP only.

2.4.5 Scan

- Select scan type with keys.
- When you select **OK** key, the scanning will start.

2.5 SAT & TP Edit

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

Also you can update or delete the transponder information.

2.5.1 How to add a new satellite

- Select "New" in the satellite name by using CH ▲▼ keys. Press VOL ▲▼ keys to input the name of satellite in keyboard menu. Then press OK to save.
- If you want to add TP, please refer to 2.5.3 item.

2.5.2 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 ▲▼ keys and press **OK** key.

2.5.3 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.

2.5.4 How to add a new transponder

- Press ▲▼ keys to move into TP list.
- Press ▲▼ keys to go NEW item.
- Press **OK** key selecting "NEW" in the transponder list
- Enter the Down frequency, Symbol Rate and LNB Polarity.
- Press **EXIT** or **OK**. Then new transponder information is stored.

2.5.5 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 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 selected TP is deleted.

3. Channel Edit

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 skip channels.
- (5) You can change the channel name, as you want.
- (6) To enter channel edit mode, you need to press 4 digits password (factory setting is "0-0-0-0").

3.1 How to sort the channel



- (1) Press **OK** after selecting **Sort**
- (2) Sub mode will be appeared as follows
 - ALL
 - Alphabetic
 - Satellite
 - TP order
 - FTA/Scramble
 - P-Lock
 - S-ID

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

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

3.2 How to move the channel

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

using CH **▲▼** keys or **▲▼** keys

- (3) Repress **CH** keys

3.3 How to delete the channel

- (1) Select Delete and press **OK**
- (2) Select a delete mode by using the keys.
- (3) Select a channel you want to delete by using the keys.
- (4) Press **OK** key.
- (5) All channels that you selected are deleted.

3.4 Favorite

- (1) Select Favorite and choose one channel list.
- (2) Press **OK** then cursor is moved to the channel list.
- (3) Press keys on the channel that you want to insert this favorite list. This function is toggle function.
- (4) If you press OK on the Channel List, channel will be played.
- (5) You can rename on the Favorite mode by pressing keys.

3.5 How to lock/unlock the channel

- (1) Select P-LOCK and press **OK**.
- (2) Select the channel that you want to lock and press 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 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.

3.6 How to SKIP the channel

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

3.7 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 keys 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.
- (5) After completion of entering new, press **OK** on the keyboard.

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

After selecting Time, you can adjust the time. Also select "ON" at Timer by pressing keys and press OK button. You can set the wakeup time and sleeping time to turn receiver on and off automatically according to the time programmed.



4.2. Parental Control



After selecting Parental Control and entering the correct password, the screen 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 Change PIN code

You can change the PIN code (password) if you want.

- (1) Enter the new password.
- (2) Insert numbers into confirm password

Warning!

You must remember the changed 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 channel edit menu
- (4) To execute factory setting
- (5) To enter installation menu.

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

4.3 Language

Press **EXIT** key after you select your preferable language and audio language by using VOL keys.

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

4.4 AV Output Setting

4.4.1 TV Type

You can set the TV type (PAL, NTSC and AUTO) by pressing VOL keys.

If the setting value is Auto, then TV is set automatically by source program.

So, the source program is PAL, TV set PAL source program is NTSC, TV set NTSC.

In case you selected PAL mode accidentally and the TV picture rolling up and down, press remote button as follows to recover.

Power Off -> SAT -> SIG -> Power ON

4.4.2 Aspect ratio

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

4.4.3 Closed caption

You can set the closed caption ON/OFF.

4.5 OSD setting

You can adjust the transparency level and Banner timeout by using key. And you can select installation menu password on/off by using keys.

5. System Setup

5.1 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.

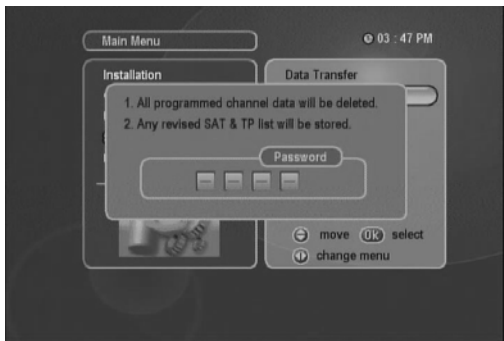
Warning! Do not disturb data transfer by touching any remote button, RS232 cable, IF cable, RCA cable etc. during

data transfer period until “Please wait for saving” message disappeared. Interruption of data transfer could damage the receiver’s flash memory chip which makes the receiver dead and void warranty.

5.2 Factory Setting

Once the Factory setting is selected and type password by pressing 4-digit numeric keys followed by OK key, whole parameters will be changed to the default value written in the factory. 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.



5.3. System Information

Show the information of model name, data and version of STB(Set Top Box).

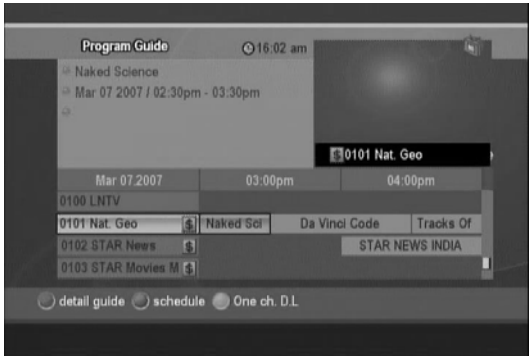
6. Channel List

- 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/RAD** to change radio list, you can exit from the list menu by pressing **EXIT** key.



7. 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. The channel will be changed.
- If you want to watch TV with full screen, Press EXIT.



8. 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.



9. USB Memory Stick (DC 5V, Max.100mA)

Warning!


Please use USB memory stick memory 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.

10. Multi Pictures

1. Press  and select the multi picture mode (2X2 or 3X3 or 4x4) that you want.
2. Move the cursor and select one picture to play

11. Embedded

- If you insert smart card inside the receiver smart card reader, the receiver will recognize it automatically.

12. Recall the Favorite Channel

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

13. Download Procedure between PC & Receiver

1. Connect [RS232 Null Modem] cable between PC and receive.
2. Select serial port [Com1 etc]. Baud Rate fixed no 115200.
3. Browse the Bin File to download and select File Type.
4. Click "Download" first and turn the receiver power OFF/ON to start download.
5. After download completed, wait another 30seconds more until rebooting finished.
6. If "Error" appears, check the reason and try again or follow the reason displayed.

Warning!

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

3 UHF REMOTE CONTROL KIT(Optional item)



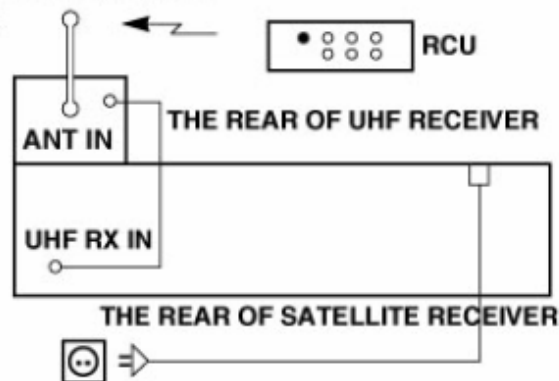
WARNING : To prevent electrical shortage, do not install the UHF Receiver on the condition that AC power cord of the Satellite Receiver is plugged in.

3.1 U-30 KIT LIST

1. UHF Receiver
2. UHF Antenna
3. UHF Remote Control
4. Battery(AAA Type) - 2pcs.

3.2 INSTALLATION

1. Take off the AC power plug of the Satellite Receiver from the wall socket.
2. Connect the UHF antenna to ANT IN.
3. Connect the Cable Assembly to the UHF RX IN on the rear of the Satellite Receiver.
4. Plug the AC powercord and turn on the receiver.
5. Use UHF Remote Controller.



3.3 SPECIFICATION

UHF Receiver

FREQUENCY	912.00MHz
MODULATION MODE	FSK
UHF INPUT LEVEL (SENSITIVITY)	-95dBm
WHIP ANTENNA	177mm
SIZE(mm)	65 x 96 x 33

UHF Remote Control

INDOOR USE	About 60m
OUTDOOR USE	About 200m
BATTERIES(AAA Type)	1.5V x 2pcs.

4. SPECIFICATION

Embedded Smart Card Slot	1 Smart Card Reader
USB 2.0 with On-The-Go	1 Host
Front-End	
1 Input Connector	F-type, IEC 169-24
IF Input Frequency	950MHz to 2150MHz
IF Loop Throughout	950MHz to 2150MHz
IF Frequency	Zero-IF
Input Level	-65 dBm ~ -25 dBm
LNB Power	13 /18VDC / 500mA Max
DISEQC Control	Diseqc 1.2 & USALS Compatible
Band Switch	22KHz Tone
Demodulation	QPSK
Symbol Rate	1~45 Msps(SCPC, MCPC)
Viterbi Decoding Rate	1/2, 2/3, 3/4, 5/6 and 7/8
Reed Solomon Decoding	FEC: 204, 188. t=8
MPEG transport Stream A/V Decoding	
Demultiplex	According to ISO/IEC 13818-1
Input stream	Max. 90Mbit/s
Aspect Ratio	4:3, 16:9
Video Resolution	720x576 (PAL), 720x480 (NTSC)
Audio Decoding	MPEG Layer I & II
Audio Mode	Single Channel / Dual Channel, Stereo, Joint Stereo
Audio Sampling Frequency	16/22, 05/24/32/41, 1/48 khz
Microprocessor & Memories	
Main Processor	VRGO SE
CPU Clock	150 MHz
Flash Memory	8 Mbyte
SDRAM	32 Mbyte
EEPROM	256 Kbit
Data port	
Connector	9Pin D-Sub Type
Protocol	RS232 Asynchronous
Data Rate	Max. 115.2Kbps
RF Modulator	
Connector	IEC 169-24, Male/ Female
Frequency	CH3 (61.25MHz), CH4 (67.25 MHz)
Output Channel	CH 3-4
TV Standard	NTSC
Preset Channel	Ch3-4
Front Panel	
4 Digits LED	Channel Number Display
8 keys	Volume Up/Down, Channel Down/Up, OK, Power, Menu, Exit
Smart Card Interface	1 Slot
USB Memory Card Slot(Max. 500mA)	1 Host
Rear Panel	
IF Input	F-type Connector
IF Loopthrough output	F-type Connector
6 Phone (Cinch)	Video, Audio L, Audio R, Y/P/B/r
S/PDIF Optical	
S-VHS	
UHF	
Modulator	
RS232 Serial Port	9Pin D-Sub Type
Remote Control	
Type	IR Remote
Battery	2x1.5V AAA Type
Electrical and Mechanical	
Input Voltage	AC 90 -250V, 60Hz
Power Consumption	Max. 25 Watts
Standby Power	Less than 11 Watts
Size(WxHxD)	290x200x55mm
Weight	2.1kg

* All specifications are subject to change without any notice.

5. 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 Wrong connection of antenna cable Wrong direction of antenna No signal or weak signal Wrong setting of channels Information in MENU screen	Connect two terminals correctly With scart cable or RCA or RF cable Connect the antenna cable Correctly Adjust the direction of antenna Check the cable connections, 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 Use the NTSC/PAL converter Connection to the receiver and TV
The remote controller is not working	Battery exhausted Fluorescent light interfering with the remote controller Remote controller is incorrectly aimed	Change the batteries Switch off the light 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 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

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