



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, 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

 Satellite TV System

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User's Manual



3500S

**DVB Digital Video Broadcasting Receiver
CONAX/SD MEMORY CARD INTERFACE
(Note : MMC CARD may be also interfaced)**

UNIVERSAL REMOTE



Panarex Electronics
SUN VALLEY, CALIFORNIA, U.S.A.

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



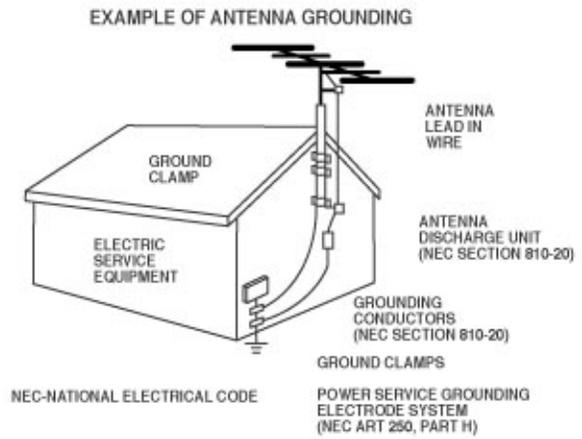
IMPORTANT SAFETY INSTRUCTIONS

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.

PREFACE

1 OVERVIEW

- 1) How to use the REMOTE CONTROL KEY
- 2) FRONT PANEL
- 3) REAR PANEL
- 4) Simple Digital Connections
- 5) Analogue / Digital Connections

2 OPERATING

1. Start Up
2. Installation
3. Parental Control
4. Channel Edit
5. User Setup
6. Factory Setting
7. System Information
8. Channel List
9. Program Guide
10. Audio Change
11. SD Memory
12. Embedded
13. Recall the Favorite Channel
14. How to download Software via RS-232 Serial Cable

3 UHF REMOTE CONTROL KIT (Optional)

4 SPECIFICATIONS

5 TROUBLE SHOOTING

1. WHAT IS THIS PRODUCT FOR?

This product is designed for using Digital Satellite Broadcasting 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.

Throughout 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

- EPG (Electronic Program Guide)
- Full Compliant of MPEG-2 Digital & DVB broadcasting
- 950-2,150 MHz input Frequency (IF Loop Throughout)
- Variable Input Symbol Rate (1-45 Msps)
- Multi Language OSD
- Automatic PAL/NTSC Conversion
- Fast Channel Change
- 5,000 Channels TV & Radio Program
- Universal Remote
- 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 & Unlimited Programs per each
- Powerful Channel Editing Function
 - Sorting : Alphabetic, Satellite, 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 4 Satellites

- DiSEqC 1.3 Control Compatible (STAB USALS)
- Capable of Setting the Frequency for SMATV System
- Software Upgrade via RS-232C (Receiver to Receiver, PC to Receiver)

2.2 Additional Features

- Component Out (YPbPr)
- RTC (Real Time Clock)

2.3 Conditional Access

- Conax CAS Embedded

2.4 Secure Digital(SD) Card Access

- MP3 Audio file decoding
- Firmware Download via SD-Card
 - Easy software upgrading
 (Note : MMC CARD may be also interfaced)

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 rime, 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 or 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.
- Do not plug in power core before finishing all connections.

4. PLEASE CHECK THE FOLLOWING ACCESSORIES ARE ENCLOSED

- User Manual 1 set
- Remote Control Unit 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.

1. How to use the REMOTE CONTROL KEY

Key	Function
POWER ⏻	Turns this receiver on/off. In the standby mode, it is automatically changed to TV mode that enables to watch terrestrial TV broadcasting.
TV/SAT	Toggles between TV & SAT
TV/VCR	Toggles between TV & VCR
TIME	TIME Shows current Time
⊘	Sounds Off/On
i	Shows channel information, such as channel number, channel name, Frequency, Polarity, Symbol Rate, Video PID, Audio PID and PCR PID & HDD Info
EPG	Electronic program guide
TV/RADIO	Toggless between the TV service and radio service
PAUSE	Holds the picture or release the pause only for live broadcasting
SIG	Shows signal quality
AUDIO	Selects audio mode(Stereo, left only and right only). Selects language in case of Multilingual program.
MENU	MENU Enters main menu screen or Exits menu screen
EXIT	EXIT Moves to upper menu
CH ▲▼	Channel up/down. Moves the cursor upward/downward in the menu screen.
OK	Shows channel list or confirms selection
VOL ◀▶	Volume down/up. Changes the value of a selected item
LAST	Returns to previous program.
FAV	Enters favorite program or Exit from Favorite program.
0~9	Changes channel directly. Controls the numerical operation. Inputs the alphabet in the name edit screen.
⏴	Execute page down function in the menu.
⏵	Execute page up function in the menu.
SAT	Classifies satellite by satellite



Special keys for Pansat 5000HC, VCR & AUX (DVD, CATV)

Key	Function
HDD	Enter HDD menu
⏮	Fast Rewind (1. 2. 4. 8)
⏭	Fast Forward (1. 2. 4. 8. 12)
▶	Start Playing / Release Pause
■	Stop Recording
●	Start Recording
⏸	Pause
◀◀	Slow Rewind (1/2, 1/4, 1/8)
▶▶	Slow Forward (1/2, 1/4, 1/8)
⏪	Time-Shift (Reverse)
⏩	Time-Shift (Forward)
■	PIP (Picture In Picture)
↔	Swap from main picture to sub-picture on PIP
● Red key	A) Confirmation for cutting out selected region "Cut Recorded Channels" Menu
● Green key	A) Selecting starting point to cut wanted region of recorded file on "Cut Recorded Channels" Menu
● Orange key	A) Selecting ending point to cut wanted region of recorded file on "Cut Recorded Channels" Menu
EXIT	Moves to upper menu / Saving others except cut-region (HDD menu)

Universal Remote Interface Programming

1. Turn the TV set power on.
2. Press the remote TV & OK buttons (1-2 second) simultaneously until power button red light appears.
3. Aim the remote to the TV set and press the 3 digit specific code number of the TV set (refer attached chart). The TV set power will be turned off right away. If not, try another 3 digit code in the chart.
4. Press the remote TV button to save the program (power button light will blink 3 times).

NOTE: If power button function respond and other buttons not , repeat above procedure with another 3 digit code in the chart.

*Repeat same procedure for other items , VCR, AUX(DVD, CATV).

Brand List (NTSC TV Set)

ADMIRAL	072 081 160 161	DAEWOO	001 004 016 026
A MARK	112		043 076 103 114
AKAI	070 146		120 127 128 136
AMSTRAD	052		192
ANAM	043 054 056 080	DAYTRON	001
	112	DYNASTY	043
AOC	001 058 070 112	ELECTROHOME	024 076 120
AUDIOVOX	076 120	EMERSON	001 005 028 043
BLAUPUNKT	088		047 048 050 051
CANDLE	001 003 004 070		070 076 096 120
CAPEHART	058		153 154 155 191
CCE	001 024 211	FISHER	007 057
CETRONIC	043	FUJITSU	198
CITIZEN	001 003 004 043	FUNAL	028 043
	070 101 103	FUTURETECH	043
CLASSIC	043	GE	001 008 009 034
CONCERTO	001		056 070 073 074
CONTEC	043 050 051		130 145 155 160
CRAIG	043 054 191		161 165 167
CROWN	043	GOLDSTAR / LG	001 017 106 110
CURTIS MATHES	001 070 101		112 119 127 193
CXC	043	GRADIENTE	001 106

Brand List (NTSC TV Set)

HALL MARK	001	ONWA	043
HITACHI	001 007 009 010 011 012 072 158	OPTONICA	019 081
HYUNDAI	002	ORION	201 202 203 204 205
INFINITY	164	PANASONIC	034 056 080 164
JBL	164	PHILCO	001 003 024 056 059 060 070 164
JCPENNEY	001 008 009 024 030 070 101 160	PHILIPS	001 003 005 059 070 093 127 164
JENSEN	013	PIONEER	001 018 025 070
JVC	034 083 211	PORTLAND	001
KEC	043	PROSCAN	145 160 161 167
KENWOOD	070 211	PROTON	001 058 112 171 173
KLOSS	004 059	QUASAR	034 056 080 164
KTV	043 070 154	RADIO SHACK	001 019 043 127
LODGENET	072	RCA	001 024 056 070 074 145 152 160 161 165 167
LOGIK	072	REALISTIC	007 019 043 047
LAUXMAN	001	RUNCO	072 130
LXI	007 015 052 081 160	SAMPO	001 058 070 207
MAGNAVOX	001 003 022 059 060 061 070 127 160 164	SAMSUNG	001 006 021 050 089 101 105 127 133 160
MARANTZ	070 164	SANYO	007 020 053 057 082
MATSUI	164	SCOTT	001 028 043 048
MEMOREX	001 007 072	SEARS	001 007 015 028 030 057 082 160 167
METZ	088	SELECO	200
MGA	001 024 024 028 042 070	SHARP	001 014 019 022 028 081
MINERVA	088	SIEMENS	088
MITSUBISHI	001 024 028 040 042 146	SIGNATURE	072
MTC	001 070 101	SONY	027 029 079 126 211
NAD	015 025		
NEC	001 016 019 024 040 056 070 130 134		
NIKEI	043		
ONKING	043		

Brand List (NTSC TV Set)

SOUNDESIGN	001 003 028 043	TMK	001
SPECTRICON	112	TOSHIBA	007 015 030 040 101
SSS	001 043	UNIVERSAL	008 009
SUPRE MACY	004	VIDEO CONCEPTS	146
SYLVANIA	003 044 059 060 070 127 160 164	VIDTECH	001
SYMPHONICS	194 052	WARDS	001 008 009 019 028 060 061 072 074 164 165
TANDY	081	WESTING HOUSE	076 120
TATUNG	056	YAMAHA	001 070
TECHNICS	034 080	YORK	001
TECHWOOD	001	YUPITERU	043
TEKNIKA	001 003 004 024 028 043 072 101	ZENITH	072 073 095 103
TELERENT	072	ZONDA	112
TERA	173		

Brand List (NTSC VCR)

AIWA	001	EMERSON	029 031 035 036 037 044 046 101 129 131 138 152 153 157
AKAI	016 043 046 124 125 146	FISHER	003 008 009 010
AMPRO	072	FUNAI	001
ANAM	031	GE	031 072 144 147 151 156
AUDIO DYNAMICS	012 023 039 043	GO VIDEO	040 132 136
BROOKSONIC	035 037 044 129 152	GOLDSTAR / LG	012 101 123 163 114
CANON	028 031	HARMAN KARDON	012 045
CAPEHART	108	HITACHI	001 026 137 150 156 163
CRAIG	003 040	HUGHES	163
CURTIS MATHES	031 156	INSTANTREPLAY	031
DEAWOO	005 007 010 108 110 112 116 117 119	JCL	031
DAYTRON	108	JCPENNY	012 040 066 101 156 163
DIMENSIA	156	JENSEN	043
DBX	012 023 039 043	JVC	012 031 043 130 150
DYNATECH	001 053		
ELECTROHOME	059		
EMERSON	001 006 017 025 027		

Brand List (NTSC VCR)

KENWOOD	001 014 023 047	SALORA	014	
LLOYD	001	SAMSUNG	032 034 040 104 112	
LXI	001 003 009 017		113 115 120 122 125	
MAGIN	040		159	
MAGNAVOX	001 031 067 068 154	SANSUI	022 043	
MARANTZ	012 023 031 067 067 069	SANYO	003 007 010 014 102 134	
MARTA	101	SCOTT	017 037 044 112 129	
MATSUI	027 030		131 159	
MEI	031	SEARS	003 008 009 010 014 017 081 101 163	
MEMOREX	001 003 010 014 031	SHARP	031 053 054	
	053 072 101 102 134		SHINTOM	024
	139		SIGNATURE	001
MGA	045 046 059	SONY	003 031 052 056 057 058 155	
MINOLTA	156 163	SOUNDESIGN	001	
MITSUBISHI	045 046 051 059 061 162 163		STS	163
MTC	001 040	SYLVANIA	001 031 059 067	
MULTITECH	001 024	SYMPHONIC	001	
NEC	012 023 039 043	TANDY	001 010	
NORDMENDE	043	TATUNG	023 039 043	
OPTONICA	053 054	TEAC	001 023 039 043	
PANASONIC	031 066 070 133 161	TECHNICS	031 070	
PENTAX	031 156 163	TEKNIKA	001 019 031 101	
PHILCO	001 031 067	TMK	006	
PHILIPS	001 031 054 067 071		TOSHIBA	008 042 047 059 082 112 131 163
	101	TOTEVISION	040 101	
PILOT	101	UNITECH	040	
PIONEER	021 163	VECTOR RESEARCH	012	
PORTLAND	108	VIDEO CONCEPTS	001 012 046	
QUARTZ	002 014	VIDEOSONIC	040	
QUASAR	031 066 070 133 161	WARDS	001 003 017 024 031 040 053 054 131 163	
RADIO SHACK	123		YAMAHA	001 012 039 043
RCA	001 031 040 140 144 147 151 156 163	ZENITH	001 056 058 072 080 101	
REALISTIC	001 003 008 010 014 031 040 053 054 101			
RICO	058			

Brand List (NTSC DVD)

Alpine	009	Mx Onda	001
Apex Digital	075 076 061	NAD	057 077
Brandt	001	Onkyo	207 071 072
California Audio	002	Oritron	001
Crown	001	Panasonic	002 003 039 051 054 079 073
Cytron	001		Philips
Denon	030 043 044 226 062	PROCEED	083
Diamond	001	Proline	001
Dual	001	Pioneer	055 057 085
DVD-Video	063	Proscan	035
ECA	084	QUASAR	002
Ferguson	001	RCA	035 001
Fisher	002	Saba	001
GE	035 084	Samsung	040 047 065
GoldStar / LG	028 041 069	Sanyo	052
Goodmans	001	Schneider	001
GRADIENTE	064 065	Scott	001
Grundig	001	Sharp	060 078
Harman Kardon	217 066 067	Standard	001
Hitachi	011	Sony	037 050 053 086
Kenwood	060 068	Technics	002 051 054 079
Koss	001	Tensai	001
Lenco	001	Tevion	001
Lifetec	001	THOMSON	084
Magnavox	008 038 048 057	Toshiba	038 060 206 072 080 081
MARANTZ	070		Yamaha
Matsui	001	Zenith	028 041 069
Medion	001		
Mitsubishi	032 057		

Brand List (NTSC CATV)

HAMLIN	107 109	PIONEER	103 112 113
JERROLD / G.I	105 111	Scientific/Atlanta	100 102 106
OAK	104 108 110	ZENITH	101

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 key to enter the sub-menu if there is no instruction marked 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

2. FRONT PANEL

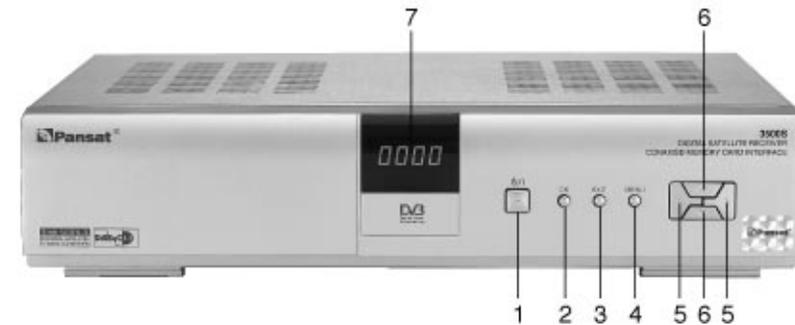


Fig 2-2 Front panel

1. POWER

Switches Stand by mode and Normal viewing mode.

2. OK

Confirm selection, shows list.

3. EXIT

Moves to upper menu.

4. MENU

Enters main menu screen.

5. VOLUME

To make volume up and down.

6. CH ▲, CH ▼

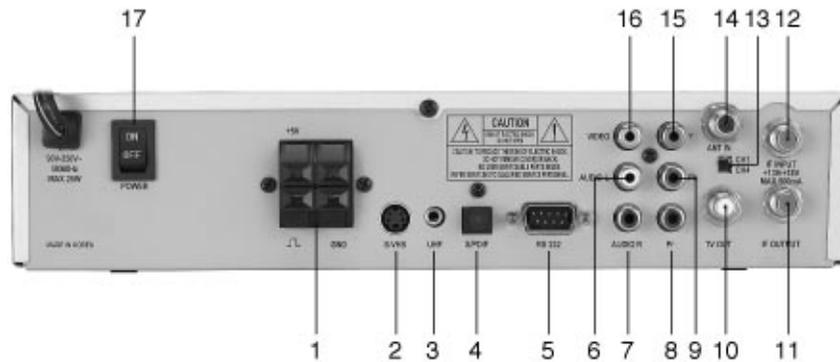
Changes Channel Up/Down

7. CHANNEL DISPLAY (4 digit / 7 Segment)

After pressing the power button, "Init" is showed on screen.

After the receiver searches program, the program number is displayed as "0001~2000". Real time will be displayed at stand by mode.

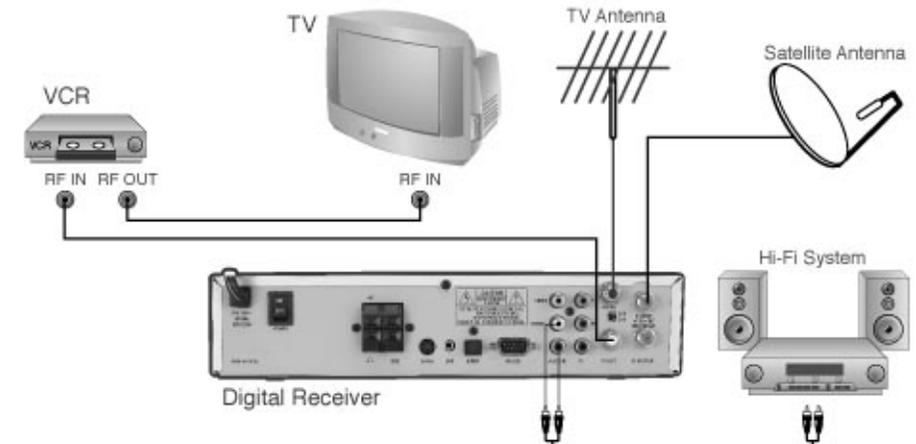
3. REAR PANEL



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

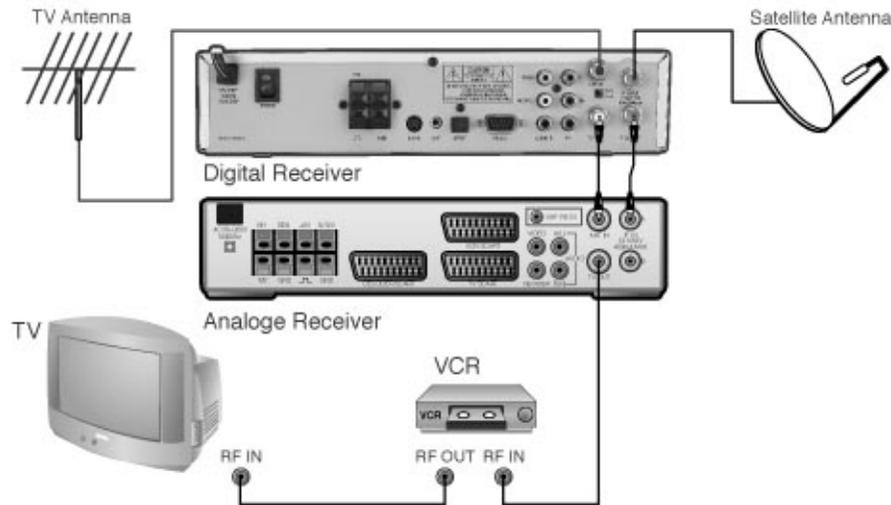
4. SIMPLE DIGITAL CONNECTION

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



5. ANALOG / DIGITAL CONNECTION

When connecting receiver to analog receiver and VCR with RF Cable



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, Ch.3 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.



[Fig 1-1]

This receiver supports 7 languages.

- English,
- German,
- French,
- Portugal,
- Spanish,
- Turkish,
- Arabic,

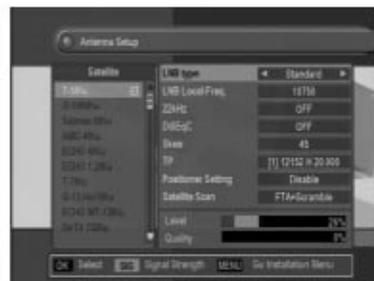
2. Installation



Press the OK key. Use common password "0000". Parental control and channel edit are not accessible until satellite channels 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 ◀&▶ key.
- After selecting the satellite, Press OK
- Adjust LNB type, LNB Lo-Freq, 22kHz, DiSEqC, LNB power, 0/12V, TP, Positioner Setting.
- You can cancel the satellite you chose using ◀&▶ key.

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) / 10175(H))

22kHz control is automatically set for each LNB alternative.

If Universal 1 or 2 is selected, 22kHz control should be "off state."

2.1.3 LNB Lo-Freq

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

For USA : C-Band L/O : 5150 MHz

Ku-Band L/O : 10750 MHz, 11250MHz

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

2.1.6 Skew

In case that LNB with mechanical polarizer is used in your system.

Adjust skew value by using "◀/▶"key and check signal status bar at the same time. Keep on adjusting at the maximum signal status.

2.1.7 TP

Select a specific transponder by using the VOL ◀▶ keys.

2.1.8 Positioner Setting

It is used to set the DiSEqC 1.2 motor & USALS

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

1) DiSEqC 1.2

(1) Current position

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

(2) Movement

Select East / West by using ◀▶ keys and press OK to stop

(3) Nudge East / West

Select Nudge East / West by using ◀▶ keys and press OK to save current position

(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 OK then East Limit is stored

(6) Limits Disable

Select Disable limits by using OK key

(7) Go to reference

Select got to reference by using OK key

2) USALS (DiSEqC 1.3)

(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 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 present position will be saved.

2.1.9 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 strngth menu will be displayed on the screen.

2.2 Satellite scan

Scan all the transponder of selected satellites.

(1) Press OK key and Select wanted satellite by using ▼&▲key

(If you want to scan several satellites once, You can control by ◀▶ keys)

Then press OK key to execute scanning.

(2) You can select satellites whatever You chose though. It is possible to search only for 4 satellites among satellites you chose.

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



2.3 TP scan

Selected TP is scanned in this menu

(1) Select TP scan in the installation menu

(2) Select a satellite

(3) Select TP to scan by using the ▲▼ key (using ◀▶ keys you can multiscan), then press OK to search

2.4 Network Scan

Procedure for setting up is same as TP scan.

Advantage: All the TPs belong to same network group will be automatically scanned.

2.5 Advanced Scan

Advanced Scan is used to scan the new TP of which the parameters have been entered manually. After setting the search parameters like down frequency, symbol rate and polarity by using the numeric keys and VOL ◀▶ keys, press "OK."

Setting Video PID/Audio PID/PCR PID

- You can set the PID to search program.
- After setting the PID values, press OK key.

2.6 Smart Search

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

2.6.1 How to add a new satellite

1. Select the satellite name with ◀▶ keys.
2. If you want to add a new satellite, press the OK key.



2.6.2 LNB Configuration

Please refer to 4.1 Antenna Setup.

2.6.3 Symbol range

- Select Full, High or Low
- Full : High and Low
- High : >7.5M
- Low : <7.5M

2.6.4 Polarity

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



2.6.5 Scan

- Select Scan type with ◀▶ keys.
- When you select the OK key, the scanning will start.

2.7 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.

2.7.1 How to add a new satellite

- Select "New" in the satellite name the using the numeric key or CH ▲▼ key, Press VOL ◀▶ keys to move digit.
- Maximum number of characters is 12-digit.
- Press OK key.
- Enter the Down frequency, Symbol Rate and LNB Polarity.
- Press EXIT or OK key, the new transponder information is stored.

2.7.2 How to rename the satellite

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

2.7.3 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.

2.7.4 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
- Press EXIT or OK, the new transponder information is stored

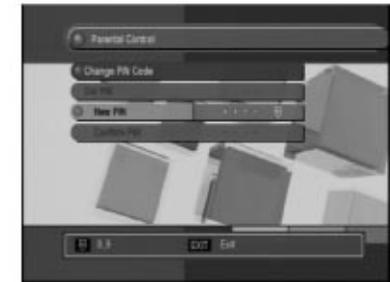
2.7.5 How to delete or update a transponder added

- 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 list TP
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 TP selected is deleted

3. 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 selected programs.



3.1 Change PIN Code

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

- (1) Enter the Old password. If you enter this mode for the first time after purchasing the receiver, the OLD PIN Code is the default password.
- (2) Enter the new password.
- (3) Reenter the new password to confirm.

* In case of forgotten password programmed, call dealer to get master factory password.

Warning! You must remember the New password because it is used in several Function as follows.

Password is required

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

4. Channel Edit

In this mode.

- (1) You can sort the channels out upon your Preference.
- (2) You can rearrange the channel list.
- (3) You can delete channel.
- (4) You can adjust the favorite channel list, as required.
- (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 digit password (factory setting is "0-0-0-0")

4.1 How to sort the channel

- (1) Press OK after selecting Sort.
- (2) Sub mode will be appeared as follows
 - Alphabetic
 - Satellite
 - FTA/Scramble
 - P-Lock
- (3) Select the mode among the 4 kinds of mode that you want to sort and press OK
- (4) Press EXIT to exit from this mode.



Note

The Format of Sorted List

- Alphabetic & Satellite: In Alphabetical order
- FTA/Scramble: The Free channels first & the scrambled channels later and vice-versa
- P-Lock: The channels of P-Lock first

4.2 How to move the channel

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

4.3 How to delete the channel

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

4.4 How to store/release the favorite channel

- (1) Select "Favorite" and press "OK."
- (2) Press "OK", then this channel is included to the favorite channel list.
- (3) The mark stands for the favorite channel.
- (4) To delete a channel from the favorite list, go to the marked channel and Press "OK".

4.5 How to lock/unlock the channel

- (1) Select P-LOCK in the screen as shown and press OK.
- (2) Select the channel that you want to lock and press "OK".
- (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 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.

4.6 How to SKIP the channel

- (1) Select "SKIP" and then press "OK"
- (2) Select the channel you want to hide
- (3) Press "OK"

4.7 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 OK to enter the character input mode.
- (4) Put new names, as you want using the 4 arrows keys and numeric key. The maximum number of characters is 20.
- (5) After completion of entering new, press OK

5. User Setup

In this USER SETUP mode, you can select the sub-mode as shown on the [Fig 6] by pressing the OK key and CH ▲▼ key. The changed set-up is activated and stored by pressing the EXIT key.



5.1 Language

Press the EXIT key after you select your preferable language by using VOL ◀▶ key.

English, German, French, Portugal, Spanish, Turkish, Arabic, Croatia

5.2 Aspect ratio

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

5.3 TV Type (USA Standard is NTSC)

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 → TAST → SIG → Power ON

5.4 Time Setting

After selecting the Time Setting, you can adjust the time. Also you can set the wakeup time and sleeping time to turn receiver on and off automatically according to the time programmed.



5.5 Modulator

If you want to watch the broadcasting through, the modulator output, you could change the modulator channel as follows after pressing the OK key to enter the sub-menu.

- (1) NTSC is supported.
- (2) You can adjust the Modulator type by pressing VOL ◀▶ key.
- (3) You can adjust Modulator type, you can go back to the previous mode by pressing EXIT or OK key.
- (4) The adjusted data is programmed automatically when the EXIT key is pressed.
- (5) Modulator channel can be changed from the channel 3 to channel 4.
 - 1) Set TV channel to 3 and find menu screen.
 - 2) Select modulator column and change the channel number by ◀▶ key.
 - 3) Press "EXIT" key to store and menu screen is appeared.
 - 4) Tune TV channel to the channel newly stored as in the above.

5.6 OSD setting

You can adjust the transparency level by using ◀▶ key.

5.7 Data Transfer (Receiver to Receiver)

- 1) Connect Null Modem RS 232 Cable (Pin #2 & 3 twisted) between master and slave receiver.
- 2) Leave the slave receiver power on condition all the time until completion of date transfer.
- 3) Hook up the master receiver to the TV and select "SW Transfer" at "User Setup" screen.
- 4) Select "Ver Code" or "Ch Data" by using "Vol ◀" or "Vol ▶" button. Then press "CH" button to start transfer. During data transfer, processing percentage will be displayed on the screen.

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.

6. Factory Setting

Once the Factory setting is selected and the correct 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.



7. System Information

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

8. 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 ◀▶ keys ▲▼ 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 change from channel list to channel list Radio You can exit from the channel list menu by pressing "EXIT" key or "OK" key.



9. 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.



10. Audio change

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



11. SD Memory



1. FLASH UPGRADE (SD CARD to RECEIVER)

- Insert SD CARD into the receiver SD CARD slot.
- Select SD memory at Main Menu and press OK button.
- Select the Bin file to transfer (Version code or CH data) and press OK button. **** Enter BACK UP to find the files previously backed up from the receiver.**
- Wait until the receiver fully rebooted after writing completed (about 40 seconds).



2. FLASH BACK UP (RECEIVER to SD CARD)



- Insert SD CARD into the receiver SD CARD slot.
- Select SD memory at Main Menu and press OK button.
- Select BACKUP and press OK button.
- Code Backup: Press Red button on the remote and make desired file name up to 8 digits , move cursor to OK font and press OK button. Wait about 10 seconds to complete. CH Data Backup: Press Green button on the remote and repeat same as above.
(Note : MMC CARD may be also interfaced)

3. MP 3 PLAY



- Insert SD CARD into the receiver SD CARD slot.
- Select SD memory at Main Menu and press OK button.
- Select MP 3 and press OK button.
- Select the MP 3 file to play and press OK button.
- For multiple MP 3 play, use left/right volume buttons to select or cancel the files to play.

All selected files (up to 20) will be played one by one.

12. Embedded

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



13. Recall the Favorite channel

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

14. Download Procedure between Pansat 3500S & PC

- Turn the receiver power on.
- Connect Null Modem RS232C cable (#2&3 twisted) between PC and the receiver.
- Open the GTRom Loader of 3500S model.
- Select the BIN file to download.
- Select the File type and press Download.
- 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.



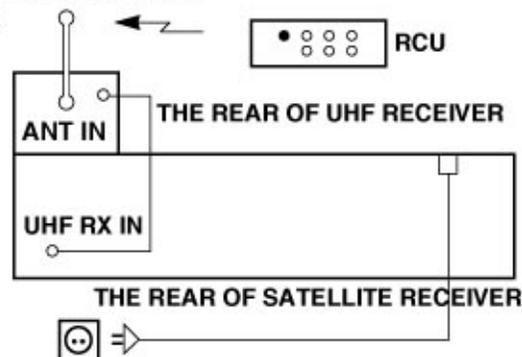
WARNING : To prevent electrical shortage, do not install the UHF Receiver on the condition that AC power cord of the Satellite Receiver is plugged in.

3.1 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.

Embedded smart card slot

1 Smart Card Reader

SD-CARD Interface

1 SD-Card compatible memory card slot

(Note : MMC CARD may be also interfaced)

Front-End

2 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~ -25dBm
 LNB Power 13/18VDC / 500mA Max
 DiSEqC Control Version 1.3 Compatible
 Band Switching 22KHz Tone
 Demodulation QPSK
 System Rate 1~45 Msp (SCPC, MCPC)
 Viterbi Decoding Rate 1/2, 2/3, 3/4, 5/6, 7/8
 Reed Solomon Decoding FEC: 204, 188, t=8
 DiSEqC 1.3 Compatible (STAB USALS)

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 720 x 576(PAL), 720 x 480 (NTSC)
 Audio Decoding MPEG layer I and II
 Audio Mode Single/Dual Channel, Stereo, Joint Stereo
 Audio Sampling Frequency 16/22,05/24/32/44,1 48khz

Microprocessor & Memories

Main Processor STI 5518 BVB, ST20 32 bit
 CPU Clock 81MHz(100 MIPS)
 Flash Memory 2 Mbyte
 SDRAM 16 Mbyte
 EEPROM 32 kbit

Data Port

Connector 9 Pin D-Sub Type
 Protocol RS232 Asynchronous
 Data Rate Max. 19,2kbps

RF Modulator

Connector IEC 169-24 Male / Female
 Frequency CH 3 (61.25MHz)
 CH4 (67.25 MHz)
 Output Channel CH 3-4
 TV Standard NTSC
 Preset Channel CH3, Changeable by Menu Screen

Front Panel

4 Digits LED Display Channel Number Display
 8 Keys Power, Channel Up/Down, Volume Up/Down, OK, Exit, Menu

Rear Panel

IF Input F-type Connector
 IF Loopthrough output F-type Connector
 6 Phone (Cinch) Video, Audio L, Audio R, YPbPr

S/PDIF Optical

Skew 3 Push Terminal (5V, GND, PULSE)
 S-VHS
 UHF
 Modulator
 RS232 Serial Port 9 Pin D-sub Type
 Y/Pb/Pr Digital Component Video Out

Remote Control

Type Infra-red (Carrier Freq : 38 KHz)
 Battery 2 x 1.5V AAA Type

Electrical and Mechanical

Input Voltage AC90-250, 50/60Hz
 Power Consumption Max. 55 Watts
 Standby Power Less than 5 Watts
 Dimension 290 x 200 x 65 mm
 2.1 kgs

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	Connect two terminals correctly with scart cable or RCA or RF cable
	Wrong connection of satellite antenna cable	Connect the antenna cable correctly
	Wrong direction of satellite antenna	Adjust the direction of antenna
	No signal or weak signal	Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna
	Wrong setting of channel information in MENU screen	Type the setting value correctly
Black-and-white screen or V-Hold	Your TV mode is different from satellite broadcasting mode	Use TV of same mode
		Use the NTSC/PAL converter connected 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 switch OFF/ON