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[1] For Your Protection

FCC WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

To meet FCC requirements, shielded cables are required to connect the device to a personal computer or other Class B certified device.

WARNING

To reduce the risk of fire or electric shock, do not expose this television to rain or moisture. Do not open the cabinet; dangerous high voltage is present. Refer servicing to qualified personnel only. This television should only be used with 120V, 60Hz (standard U.S./Canada household) current.

CAUTION

To prevent fire, shock hazard, or annoying interference, use only the recommended accessories. To prevent electric shock, do not use this (polarized) plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted to prevent blade exposure. To reduce the risk of electric shock, do not remove the unit cover or back.

There are no serviceable parts inside. Refer servicing to qualified personnel only.

CLOSED CAPTIONING

This television receiver provides display of television closed captioning in accordance with Part 15.119 of the FCC rules

WARNING: TO PREVENT FIRE OR SHOCK HAZARD DO NOT EXPOSE THE SET TO RAIN OR MOISTURE OR EQUIVALENT.

APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS OR EQUIVALENT.

THE SOCKET-OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment, and invalids the manufacturer warranty.



This symbol is intended to alert the user to the presence of non-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute risk of fire or electric shock.



This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying this product.

[2]



Important Safety Information

1. READ THESE INSTRUCTIONS
2. KEEP THESE INSTRUCTIONS
3. HEED ALL WARNINGS
4. FOLLOW ALL INSTRUCTIONS
5. DO NOT USE THIS APPARATUS NEAR WATER
6. CLEAN ONLY WITH A DRY CLOTH
7. DO NOT BLOCK ANY OF THE VENTILATION OPENINGS.

Install in accordance with the manufacturer's instructions.

8. **DO NOT INSTALL NEAR ANY HEAT SOURCES** such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. **DO NOT DEFEAT THE SAFETY PURPOSE OF THE POLARIZED OR GROUNDING-TYPE PLUG.** A polarized plug has two blades with one wider than the other. A grounding-type plug

has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

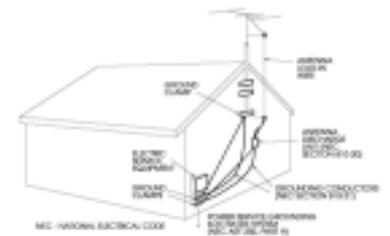
10. **PROTECT THE POWER CORD** from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. **ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.**
12. **USE ONLY WITH A CART, STAND, TRIPOD, BRACKET, OR TABLE** specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. **UNPLUG THIS APPARATUS DURING LIGHTNING STORMS**, or when unused for long periods of time.
14. **REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.** Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Important Safety Information

POWER SOURCES - This unit 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 supply to your home, consult your dealer or local power company.

OUTDOOR ANTENNA GROUNDING - If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 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. See figure.



POWER LINES - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, 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.

OVERLOADING - Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

OBJECTS AND LIQUIDS - Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquids of any kind onto the unit. Should spillage occur, unplug the unit and

have it checked by a technician before use.

SERVICING - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

REPLACEMENT PARTS - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in safe operating order.

[3] PRECAUTIONS

*PLEASE READ THIS MANUAL CAREFULLY BEFORE USING THE RECEIVER.

- . DO NOT OPERATE THE RECEIVER WITH IN AN UNSTABLE CONDITION SUCH AS HIGH HUMIDITY, HEATING, AND MOISTURE.
- . STOP THE OPERATION IMMEDIATELY IF ANY LIQUID OR SOLID OBJECT SHOULD FALL INTO THE RECEIVER.
- . DO NOT TOUCH OR OPERATE THE RECEIVER WITH WET HANDS.
- . OPERATE THE RECEIVER ONLY WITH PROPER POWER SOURCE MARKED ON THE RECEIVER.
- . UNPLUG THE RECEIVER POWER CORD BY GRIPPING THE POWER PLUG, NOT THE CORD.
- . DO NOT OPEN THE RECEIVER COVER AND TRY FIX IT BY YOURSELF. ONLY QUALIFIED SERVICE PERSONNEL ARE ALLOWED TO MAKE REPAIRS.
- . PLEASE UNPLUG THE POWER CABLE IF IT IS UNUSED FOR A LONG TIME OR DURING THE BAD WETHER SUCH AS LIGHTNING AND THUNDER STROM.
- . DO NOT STACK ANY HEAVY ITEMS ON THE RECEIVER.
- . DO NOT CONNECT OR MODIFY CABLES WHEN THE RECEIVER IS PLUGGED IN.

[4] REMOTE CONTROL UNIT



POWER ON: Turns the receiver ON/OFF

MUTE: Switches the sound ON/OFF

0~9/A~Z: Direct Choice of TV/Radio channel and other commands by the numeric keys. Input the character by the alphabetical keys.

FIND: Quick search for finding a channel.

RECALL: Returns to the previously viewed channel.

MENU: Displays the Menu on the screen.

EXIT: Returns to the previous Menu and the Screen.

EPG: Displays the EPG (Electronic Program Guide)

INFO: Displays the program information box on the screen.

UP/DOWN: Turns to the next or previous channel.

LEFT/RIGHT: Adjusts the sound volume (Increase / Decrease)

OK/LIST: Shows the Channel List or selects an item on the Menu.

PAUSE: Pauses the playing picture.

ZOOM: Zooms in on the current displaying channel.

CALENDAR: Displays a calendar.

TIMER: One-button jump to TIMER Menu.

PG/DN, PG/UP: Turns to the next or previous channel list.

EDIT: You can edit the current channel information.

P. SCAN: One-button quick start POWER Scan.

TV/RADIO: Switches between TV and Radio mode.

TV/DBS: Switches between TV and Satellite mode.

CLOSED CAPTION: Pass the Closed Captioning information to your TV if available. (Closed Captioning option may also need to be activated on your TV.)

AUDIO: Selects the audio mode between Stereo and Mono.

SAT: Changes the satellite on the Channel List.

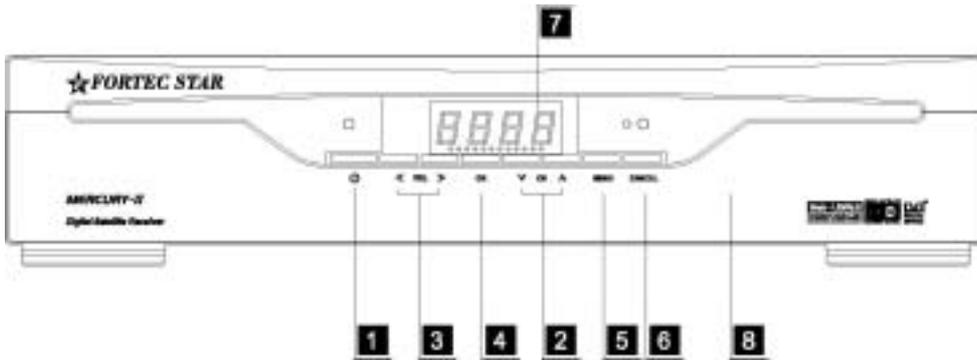
FAV: Displays the favorite channel list.

SIG: Displays a signal bar.

MULTI-PICTURE: Shows the Multi-Picture on the screen.

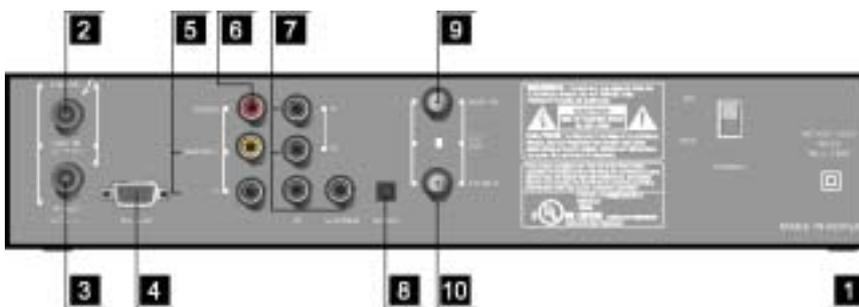
[5] HARDWARE DESCRIPTION

<1> FRONT PANEL



1. POWER: Turns the receiver ON/OFF.
2. CH UP/DOWN (▲,▼): Selects the next or previous saved channel. Also highlights choices in the Menu.
3. VOL UP/DOWN (◀,▶): Increases/Decreases the volume levels or changes the setting in the Menu.
4. OK: Shows the Channel List on the screen and use to make selections in the Menu.
5. MENU: Shows the Main Menu on the screen.
6. CANCEL: Cancels the selected function.
7. DISPLAY: Shows the channel information or current status.
8. SMART CARD SLOT: To insert the proper smart card fully into the slot. (Available only for CAS model)

<2> REAL PANEL

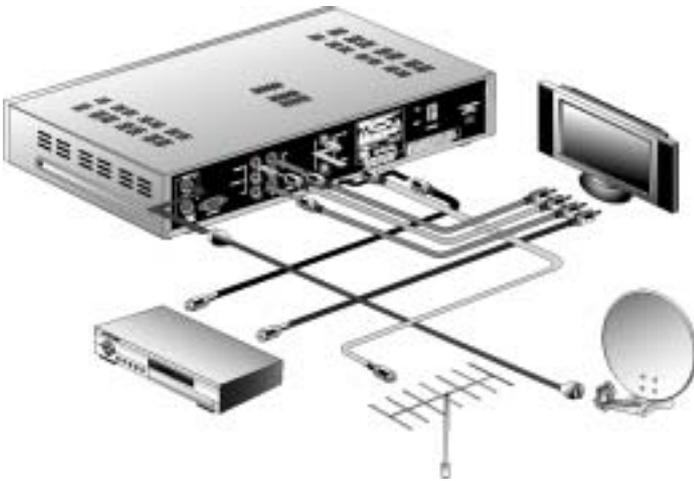


1. POWER: Power connection cable AC 110~120V, 50Hz.
2. LNB IN: Connects the coaxial cable from the LNB.
3. IF OUT: Connects to another satellite receiver if required.
4. SERIAL PORT: Transfers the data to another STB or PC by RS-232 NULL cable.
5. AUDIO (R/L): Provides the stereo audio output to TV or other equipments.
6. VIDEO: Provides a composite video output to TV or other equipments.
7. Y·Pb·Pr·S-VIDEO: Provides a component or S-video output to TV or other equipments.
8. S/PDIF: Digital Audio Interface.
9. ANT IN: Connects the terrestrial or cable antenna.

10. TV OUT: Connects to the TV with coaxial cable.

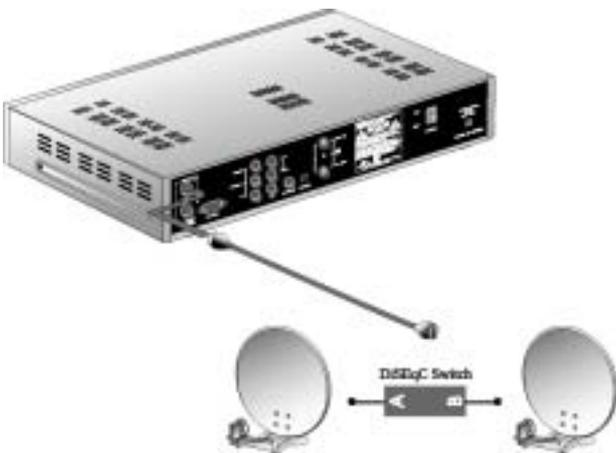
<3> CONNECTION DIAGRAM

1. Connecting to the TV and VCR



1. Connect the satellite signal from the LNB to the LNB IN.
2. Connect the terrestrial antenna or cable to ANT IN if available.
2. You can connect your receiver to a TV or VCR with RCA cables (Video, Audio R/L).
3. For better picture quality, you can use the S-VIDEO for connecting your receiver to the TV.
4. If you want to hear the sound through an Amplifier, connect AMP to the S/PDIF.

2. Connecting using a DiSEqC switch



If you want to use a DiSEqC switch for more than one satellite, connect the LNB OUT from the satellite dishes to the DiSEqC switch IN connectors, and connect the DiSEqC switch OUT connector to the LNB IN of your receiver.

[6] OPERATION

<1> MAIN MENU

Press MENU button, "Main Menu" and the following 4 Sub Menus will be displayed on the screen.

(1) Installation

Antenna Setup, Auto Scan, TP Scan, Power Scan, Factory Reset

(2) System Setup

Language, TV Setup, Time Setup, Parental Control Locks, Product Information, Others

(3) Channel Manager

Channel Edit, Channel Sort, Channel FAV

(4) Utility

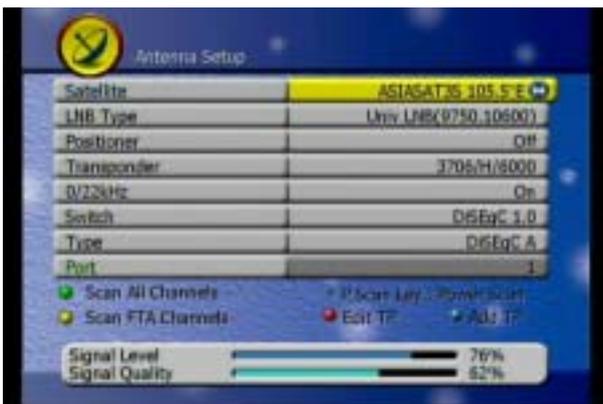
Edit Satellite, Add Channel, Calendar, Game, Timer Setup

(1) Installation

Press MENU button and select "Installation"



1. Antenna Setup (This picture will be changed)



Set up the antenna to get the proper signal and then, search the channels.

Satellite: You can select a satellite that you want to get the signal from.

LNB Type: You can select a LNB frequency for the LNB you are using.

Positioner: If you have a DiSEqC 1.2 or USALS capable motor, select DiSEqC 1.2 or USALS. Then by pressing OK on the DiSEqC 1.2 or USALS field, you can complete the "Motorized Dish Setup" (see page **). If you don't use any motorized positioner, please select "Off".

Transponder: You can select the desired TP. (You will only get a signal from an active TP.)

[**Note:** You can refer to the Web site www.lyngsat.com or www.satcodx.com for a full list of all satellites and the channels available on each satellite.]

0/22kHz: You can select 22kHz ON or OFF.

Switch: You can select the available switch mode, according to your DiSEqC switch model.

- None: DiSEqC switch is not used.

- DiSEqC 1.0: You can select this switch type for DiSEqC 1.0 or DiSEqC 2.0.

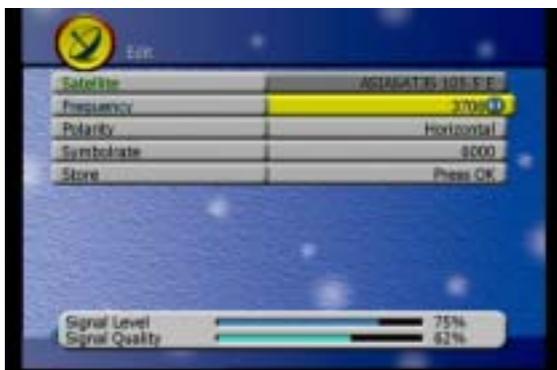
- DiSEqC 1.1: You can select this switch type for DiSEqC 1.1 or DiSEqC 2.1. You will have to also select the port for each connection.

If you press the Green button, it will start to scan all channels (Free-to-air and scrambled).

If you press the Yellow button, it will start to scan only FTA channel.

1-1. P. Scan: If you press the P.Scan button, the POWER Scan menu will be displayed. (See page **).

1-2. Edit TP: If you press the Red button in Antenna Setup menu, you can edit the TP.

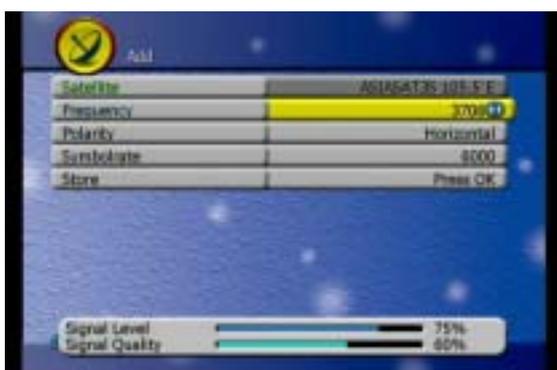


Please select the satellite that has the TP that you want to edit.

You can then adjust the TP Frequency, Polarity and Symbol Rate.

After making the changes, please save the data by pressing OK button on Store menu bar.

1-3. Add TP: If you press the Blue button in Antenna Setup menu, you can add a TP.



Please select the satellite that has the TP that you want to add.

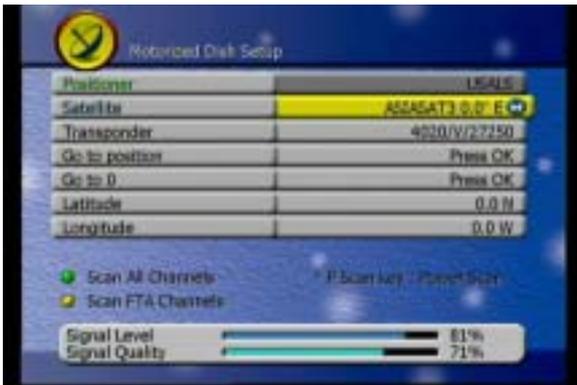
You can then adjust the TP Frequency, Polarity and Symbol Rate.

After making the changes, please save the data by pressing OK button on Store menu bar.

1-4. Motorized Dish Setup

If you have a USALS or DiSEqC 1.2 motor, please set it up as follows.

1-4-1. USALS



Satellite: Select the satellite that you want to get the signal from.

Transponder: Select the desired TP. (You will only get a signal from an active TP.)

Go to Position: If you press the OK button, it will go to the satellite position.

Go to 0: If you press OK button, it will go to the center position of your motor. This can be used to reset the motor.

Latitude: You must enter your latitude for your location.

Longitude: You must enter your longitude for your location.

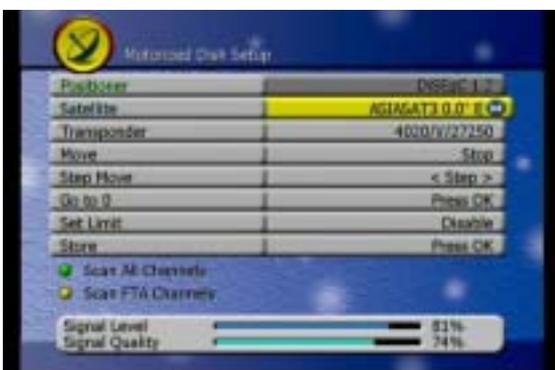
For further help with this process, go to www.usals.info.

If you press the Green button, it will start to scan all channels (FTA and scrambled).

If you press the Yellow button, it will start to scan only FTA channels.

If you press the P. Scan button, the POWER Scan menu will be displayed (See page ***).

1-4-2. DiSEqC 1.2



Satellite: Select the satellite that you want to get the signal from.

Transponder: Select the desired TP. (You will only get a signal from an active TP.)

Move: You can adjust the antenna position to the EAST or WEST by pressing < VOL > buttons.

Step Move: By pressing < VOL > buttons, the antenna position will move in small increments.

Go to 0: If you press the OK button, it will go to the center position of the motor.

Set Limit: You can set or disable the limits of the antenna position by pressing < VOL > buttons.

Press the OK button to save/delete.

Store: Press OK button to save data.

If you press the Green button, it will start to search all channels (FTA and scrambled).

If you press the Yellow button, it will start to search only FTA channels.

2. Auto Scan

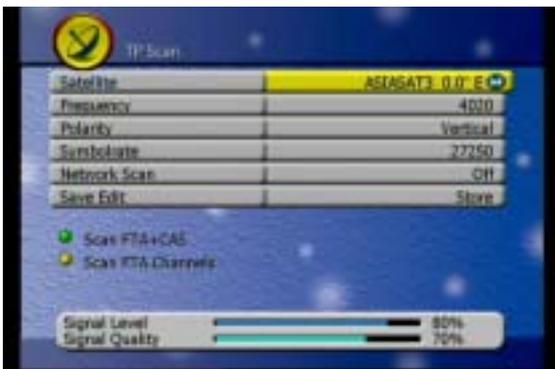


Select desired satellite on the Satellite List. Ensure that the correct Antenna Setup information has already been entered in the Antenna Setup menu for the satellites you want to scan.

If you press the Green button, it will start to search all channels on the selected satellites.

If you press the Yellow button, it will start to search only FTA (Free-to-air channels on the selected satellites).

3. TP Scan



Satellite: Select the satellite that you want to get the signal from.

Frequency: Enter the TP frequency with the numeric button or select one using the < VOL > buttons.

Polarity: Select Vertical or Horizontal polarity.

Symbol Rate: Enter the TP symbol rate value with the numeric button.

Network Scan: You can select NIT (Network Information Table) scan On/Off.

Save Edit: You can save/delete edited TP.

If you press the Green button, it will start to search all channels on the selected TP.

If you press the Yellow button, it will start to search only FTA (Free-to-air channels on the selected TP).

4. POWER Scan



Satellite: Select the satellite that you want to get the signal from.

Symbol Rate: This scan will search the full range of symbol rates.

Polarity: Choose Vertical or Horizontal polarity.

Start Frequency: Input the frequency for starting or use the default value.

End Frequency: Input the frequency for ending or use the default value.

Frequency Step: You can select the frequency scanning step in MHz.

Mode: You can select Scan All or FTA (Free-to-air) channels only.

Locking Speed: If the Symbol Rate is over 10M, select Quick.

If the Symbol Rate is over 5M, select Normal.

If the Symbol Rate is under 5M, select Detailed, but it will take time to scan.

Start Scan: Press OK button to start scanning the satellite for the channels.

5. Factory Reset



Factory Reset: Press OK to return your STB to the factory default settings.

Channel Backup: If you press OK, it backs up the currently stored channel data.

Channel Recovery: If you press OK, all the current channel data is erased, and the channels that have been stored using the Channel Backup command are restored to the receiver.

Delete All Channels: It deletes all the currently scanned channel data.

(2) System Setup

Press MENU button and select "System Setup"



1. Language



You can select the language for Menu and Audio.

2. TV Setup



You can set up the system for your TV.

Aspect Ratio: You can select 16:9, 4:3, 4:3 Letter Box or 4:3 Center.

Video Output: You can select YPbPr or S-Video.

SP/DIF Output: If you connect your receiver to an AC3 decoder (i.e., Dolby Digital) through the SP/DIF optical connection, select On.

3. Time Setup



If you select GMT On, you can set up the follows.

Clock Display: You can select the clock display among 12 hour / 24 hour.

Time Zone: You can select a city in your time zone.

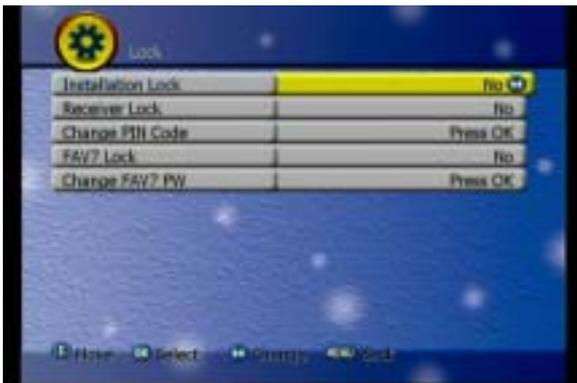
Summer Time: During summer time period, you may select On.

Time Offset: You can adjust time offset from -59 to +59.

If you select GMT Off, you can set up the local time for Date, Hour and Minute.

4. Lock

You can set up or change the password for your receiver and each menu as follows.



Installation Lock: You can lock the installation menu. It will require a PIN code to unlock it.

Receiver Lock: You can lock the receiver. It will require a PIN code to unlock it.

Change PIN Code: You can change the PIN code. After pressing OK, please enter the current PIN Code (Initial code is 0000), and enter the new code that you want to use.

FAV7 Lock: You can lock favorite list #7 (FAV7). Putting a channel in FAV 7 and locking this favorite list, the channels will be hidden from the channel list and EPG.

Change FAV7 PW: You can change FAV7 password. After pressing OK, please enter the current password (Initial P/W is 1234), and enter the new password that you want to use.

5. Product Information



- You can see the product information. i.e., Model, Last Updated date, S/W Version, H/W Version, and Loader Version.
- Software Transfer: Press OK to transfer software to other receiver. (See the next "IRD to IRD Download")

5-1. IRD to IRD Download



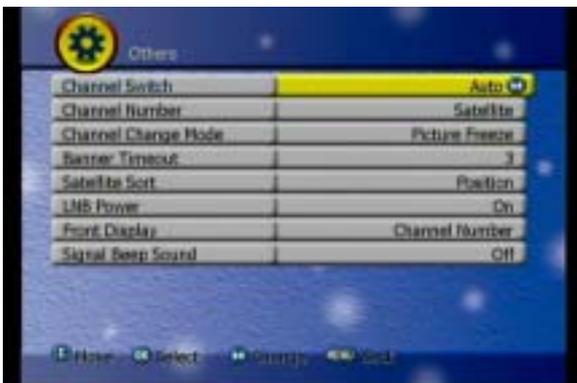
5-1-1. Firmware Download

You can transfer the Firmware of your receiver to another receiver.
Please connect the slave receiver with a RS-232 Cable.

5-1-2. Database Download

You can transfer the Database of your receiver to another receiver.
Please connect the slave receiver with a RS-232 Cable.

6. Others



Channel Switch: You can select the channel movement method among Auto, Direct or Delayed when you are watching the Picture-in-Graphic (small screen) in the channel list.

- Auto: If you scanned the channels with a DiSEqC 1.2 or USALS motor, it will use "Delayed" automatically. Otherwise Auto will use the Direct mode.
- Delayed: The Picture-in-Graphic (small screen) in the Channel List continues to show the current channel even if you scroll the high-light bar to other channels. The P-I-G will change the display to the new channel high-lighted only after pressing the OK button.
- Direct: The Picture-in-Graphic (small screen) in the Channel List will display the new channel each time the high-light bar is moved to a new channel.

Channel Number: You can select Satellite or All Channels.

Channel Change Mode: You can select the channel-changing mode to be used while in the TV viewing mode. The Picture Freeze mode will pause the picture for the old channel until the new channel is tuned and can be displayed. The Picture Hide mode will display a black screen before the picture is displayed when changing changes.

Banner Timeout: You can select the INFO banner bar appearing time.

Satellite Sort: You can the satellite select option as Default (the order that the satellites are downloaded), Position (meaning orbital position) or A to Z.

LNB Power: You can select LNB Power On/Off.

Front Display: You can select the front display to be the Channel Number (all the time) or Local Time. With this option, the channel number will still be displayed when you change the channel, but the display will switch back to the time once the INFO bar disappears.

Signal Beep Sound: If you select ON, you can hear the signal beep sound when you get the signal.

(3) Channel Manager

Press MENU button and select "Channel Manager".



1. Channel Edit



You can edit the channel in this menu.

Lock Channel: Select the channels you want to lock with the OK button, and press the Blue button to save the changes.

Delete Channel: Select the channels you want to delete, and press the Blue button to save the changes.

Skip Channel: Select the channels you want to the channel change to skip, and press the Blue button to save the changes.

Move Channel: Select the channel move. Then use the arrow keys to move the channel to the new position. Press the Blue button to save the changes.

Rename Channel: Change the channel name by using the alphabetic buttons.

Add to FAV: You can add channels to a favorite list as Movie, Music, Sports, Drama, Kids, News, FAV 7, and TV 2. Select the favorite list first, and then select the channel by pressing the OK button. Press the Blue button to save the changes.

Move FAV: Move the channel within the favorite list.

Rename FAV: Select one favorite list and change the FAV name by the alphabetic buttons.

2. Channel Sort



You can sort the channels as follows:

A to Z: Sort the channels alphabetically.

Satellite: Sort the channels by the satellite list.

Network: Sort the channels by the network name (the network name is provided by the satellite).

CAS: Sort the channels by the different types of Conditional Access Systems (CAS).

Lock: Sort the channels into un-locked or locked channels.

3. Channel FAV



Select a Favorite List category among Move, Music, Sports, Drama, Kids, News FAV 7, and TV 2. You can see the channel list for that Favorite group. (If you have created a favorite list, you will need to do so first by using the Channel Edit menu.)

You can then press the Edit button (blue button), to edit any channel in the Favorite list. Editing a channel from the Favorite list also edits the channel from the normal Channel List view as well.

In order to return to viewing all the channels again, press the Find button, and all channels will be displayed.

(4) Utility

Press MENU button and select "Utility".



1. Edit Satellite

1-1. Edit Satellite



Satellite: Select the satellite you want to edit. Pressing OK displays the drop-down list of all satellites. The left/right arrow keys allow you to scroll through the satellite list. By using the alpha/numeric keys, you can edit the name of the satellite.

LNB Type: Select your LNB type.

LNB Low: Enter the LNB Low frequency value by pressing the numeric buttons.

LNB High: Enter the LNB High value frequency by pressing the numeric buttons.

East/West: Select the satellite's orbital position, East or West. (In North America, all satellites that can be viewed are located in the West position.)

Position: Enter the satellite's orbital position in degrees by pressing the numeric buttons.

Store: Press OK to save the data.

1-2. Add Satellite



To add a new satellite, you edit an existing satellite, but when you save, it will store it as a new satellite.

Satellite: By using the alpha/numeric keys, you can edit the name of the satellite.

LNB Type: Select your LNB type.

LNB Low: Enter the LNB Low frequency value by pressing the numeric buttons.

LNB High: Enter the LNB High value frequency by pressing the numeric buttons.

East/West: Select the satellite's orbital position, East or West. (In North America, all satellites that can be viewed are located in the West position.)

Position: Enter the satellite's orbital position in degrees by pressing the numeric buttons.

Store: Press OK to save the data.

1-3. Delete Satellite

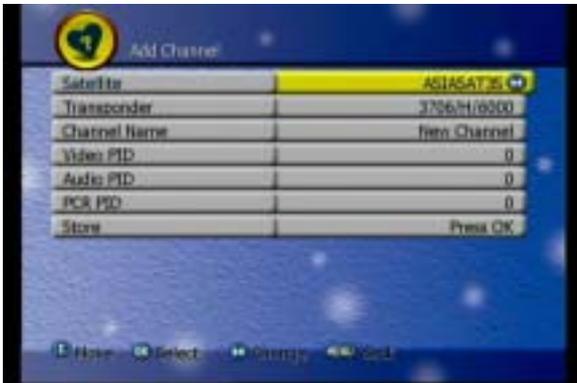


Satellite: Select the desired satellite.

Delete Channel: Delete all the channels on the selected satellite.

Delete Satellite: Delete the satellite.

2. Add Channel



Satellite: Select the satellite you want to add the channel to.

Transponder: Select TP frequency that the channel is on. If the TP does not exist in the list, you will need to add the TP first in the Antenna Setup menu.

Channel Name: Enter the new channel name by pressing the alphabetic buttons.

Video PID: Enter the Video PID value by pressing the numeric buttons.

Audio PID: Enter the Audio PID value by pressing the numeric buttons.

PCR PID: Enter the PCR PID value by pressing the numeric buttons.

Store: Press OK to save data. The channel will be added to the Channel List.

3. Calendar



This option will display the calendar. It can also be accessed directly from the remote by pressing the Calendar button.

4. Game

There are two games to choose from.



4-1. Tetris



Match the blocks in one line once they fall down.

- Green button: Re-starts the game.
- Yellow button: Increasing the game skill level.

4-2. Push Push



Moving the yellow boxes to each stage destination.

- Red button: Re-starts the Game.
- Green button: Back to the previous step.
- Yellow button: Go to the next step.
- Blue button: Sound on/off

5. Timer Setup



Timer: Select an event number (1-20).

Mode: For each timer event, you can select the Wake-Up mode, Sleep mode, the Channel Reminder Mode, and the VCR programming mode.

Type: You can select Once, Daily, Weekly, Everyday M-F.

Channel: You can select the channel that will be shown at the specified time.

Start Date: Press OK button to select the date.

Start Time: Enter by using the numeric buttons.

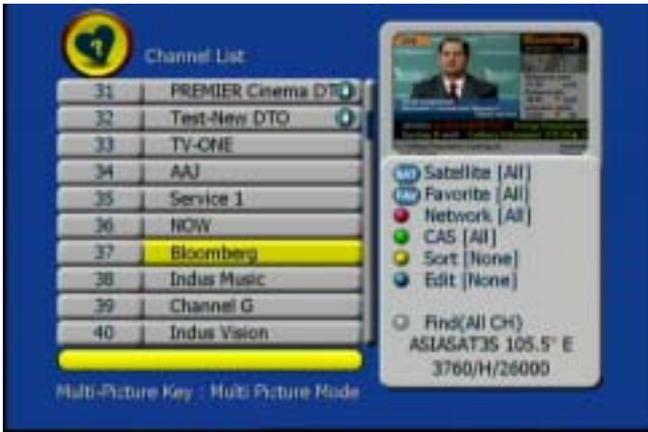
Stop Date: Press OK button to select the date.

Stop Time: Enter by using the numeric buttons.

Store: Press OK to save.

<2> REMOTE BUTTONS

(1) Channel List



While viewing a channel, press the OK button and the Channel List will be displayed.

You can easily find, edit, delete and sort the channels from this screen.

Red button (Network): By pressing the Red button, you can search the channels by network.

Green button (CAS): By pressing the Green button, you can search the channels by CAS.

Yellow button (Sort): By pressing the Yellow button, you can sort the channels from A to Z, or by Satellite, Network, CAS, and Locked/unlocked.

Blue button (Edit): By pressing the Blue button, you can edit the channels (Lock, Delete, Skip, Move, and Rename channels. You can also add to a Favorite list, Move within a Favorite list, or Rename the Favorite list.)

White button (Find): By pressing White button, you can quickly find a channel alphabetically.

(2) FIND



By pressing the FIND button, you can see the complete channel list. Select OK from the Quick Find window to continue to view the complete Channel List, or select characters from the Quick Find window to find channels alphabetically.

(3) EPG



You can check the program information of the current channel by using EPG button, provided that the EPG data is available from the satellite.

White button (Service Mode): By pressing White button, you can see the EPG information by different modes.

Yellow button (9 Days EPG): By pressing Yellow button, you can see the detailed information for the next 9 days, such as the program's story, the program's starting/ending time, etc., provided that the EPG data is available from the satellite.

(4) EDIT (Picture will be added)

You can edit the channel you are watching by pressing Edit button.

Add to FAV: Press the OK button to add to a FAV group.

Lock Channel: Select Yes or No.

Delete Channel: Select Yes or No.

Skip Channel: Select Yes or No.

Rename Channel: Press OK button to rename this channel.

Volume Offset: You can control the volume of this channel -7 ~ +8 relative to the volume of the other channels.

Store: Press OK button to save.

(5) RECALL



You can see the last channel viewed with Pressing Recall button.

(6) ZOOM



To zoom in on the screen, press the ZOOM button.

The small square box is designating the part of the screen that is magnified.

By pressing Page up/down buttons, you can control 4 levels of magnifications.

(7) SAT



The SAT button allows you to select a satellite from the list of all satellites that channels are downloaded from.

By selecting a satellite from the list, all the channels on that satellite will be displayed in the channel list.

(8) FAV



The FAV button allows you to select from the list of Favorite groups. You cannot select a favorite group if no channels have been added to that favorite group.

By selecting a favorite group from the list, all the channels in the favorite group will be displayed in the channel list.

(9) MULTI PICTURE



This option allows you to see several channels on the screen at the same time. (Note: Only one channel can be viewed live using this option. The other channels will be paused.)

You can select the multi-picture screen for 4/9/13/16 pictures.

[7] SPECIFICATION

- Tuner & Demodulator

* RF Input Connector	F-Female, IEC 169-24
* RF Frequency Range	950 MHz to 2150 MHz
* Input Impedance	75Ω Unbalanced
* Input Signal Level	-65dBm to-30dBm
* IF Frequency	Zero IF
* LNB Power	Vertical: 13.0V dc Horizontal: 18.0V dc Current: 500mA(MAX) Overload Protection
* LNB Control	DiSEqc 1.0, 1.1 / DiSEqc 1.2 / USALS
* Band Switch Control	22KHz Ton
* 22KHz Ton	Frequency: 22±2 KHz Amplitude : 0.6±0.2V
* Demodulation	QPSK
* Symbol Rate	1 to 45Msps

- A/V Decoding

* Transport Stream	MPEG-2 ISO/IEC 13818 Transport Stream Specification
* Profile Level	MPEG-2 MP@ML
* Input Rate	Max, 60 Mbit/s
* Aspect Ratio	4:3, 16:9 (Letter Box)
* Video Resolution	720 x 480(NTSC)
* Audio Decoding	MPEG Layer I & II
* Audio Mode	Signal Channel / Dual Channel Joint Stereo / Stereo
* Sampling Rate	32, 44.1 & 48 KHz

* Audio Mode	Signal Channel / Dual Channel Joint Stereo / Stereo
* Sampling Rate	32, 44.1 & 48 KHz
* Graphic Engine	3-display Plane 1-Background Plane / 256 Full Color
- Main System	
* CPU	NEC 61114
* Flash Memory	2 Mbytes
* Graphic & System Memory (SDRAM)	16 Mbytes

- A/V Data In/Out

* VIDEO	RCA composite, component (Y,PB,Pr), S-Video
* AUDIO R/L	RCA/Cinch Volume & Mute Control
* RS-232C	Transfer Rate 115.2Kbps 9 Pin D-sub Type

- Power Supply

* Input Voltage	100 to 240 VAC, 50Hz/60Hz
* Type	SMPS
* Power Consumption	Max. 30W

- Environment

* Operating Temperature	+5°C ~+50°C
* Storage Temperature	-40°C~ +65°C - Physical Specification
* Size (W x D x H)	300 x 210 x 60mm Weight (Net) 2.52 kg

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