

Appendix F. USER`S MANUAL

OPERATION INSTRUCTIONS

AD-2000FTA

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I. Safety Precautions

Before using this device, please read the following carefully.

The apparatus shall not be exposed to dripping or splashing.

No objects filled with liquids, such as vases, shall be placed on the apparatus.

Power Requirements: AC 100 - 240V ~, 50/60Hz

Disassemble! Do not attempt to disassemble the product since opening the cabinet may cause a malfunction or electric shock.

Overloading: Do not place anything heavy on the ventilation openings, connection cord and power adapter to prevent electric shocks and fire hazards.

Humidity: Do not install the equipment in an overly humid place.

Liquids : Keep liquids away from the DSR

Small Object: Coin or the small object must be kept away from the DSR as they can fall into the ventilation opening of the DSR and cause serious damage

Ventilation: Do not block the DSR's ventilation openings to protect it from overheating, which may cause malfunction. Install the equipment on a firm and flat surface. Avoid extreme heat and direct sunlight.

Location: Locate the DSR on a firm and flat surface. Avoid extreme heat and direct sunlight

Do not install this equipment in a confined space such as a book case or similar unit.

Replacement Parts: Do not use parts and accessories that have not been provided by the manufacturer. Unauthorized substitutes may cause electrical damage to the DSR



  		This Symbol indicates "dangerous voltage" inside the product that present a risk of electric shock or personal injury			
		This symbol indicates important instructions accompanying the product			
		Double Insulator		Power ON	 Power OFF

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II. Before Start

1. Preface

A Digital Satellite Receiver is a convenient product that allows you to view a variety of programs provided through satellite. This user's manual covers the installation of the DSR and the necessary steps to implement various features. This also explains special features available only in this DSR in detail, which will allow you to make full use of these features.

To install the DSR or before using it after installation, be sure to read this user's manual and keep it handy for future reference.

• User's Manual Contents

Before start	Please read through these instructions thoroughly.
Installation	Explains the installation of the DSR to VCR and TV.
Getting started	Explains the basic concept of how to use this DSR.
Menu	Detailed explanation of the DSRs extensive feature list.
Trouble shootings	Description of solutions to common problems.
Specifications	Specifications

2. Product Characteristics

- Fully DVB compliant
- High quality video and sound by MPEG-2 standard
- Easy-to-use menu system with comments for guiding
- Channel moving, skipping, locking, favorite, deleting, moving and sorting function
- Automatic digital satellite signal detecting function
- Separate automatic search for newly added transponders and channels
- Multiple sorting functions of EPG (Electronic Program Guide)
- Support various switch types, LNB types, and NTSC/PAL monitor types

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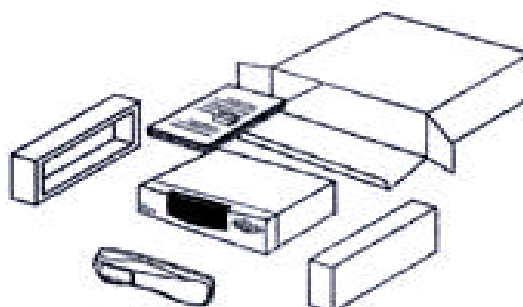
2. Product Characteristics (Continue)

- Zapping Function
- Fast Scan / Detail Scan Function
- Manual editing function of transponder information
- Support PAL/NTSC system
- Parent control function
- Last channel auto-saving and recall function
- Data memory for 31 satellites and 2,000 channel memory capacity
- Satellite name-change function
- Hi-speed software upgrade through RS-232
- Receiver to receiver data transfer through RS232
- PLL type RF-Modulator (Ch. 21- 69) and UHF tuning function
- Antenna-positioning-help function
- Timer function
- Teletext function
- Automatic FEC and PID detection and manual entry of PID value
- Pause function
- Loop through tuner

3. Unpacking

After purchasing the DSR, unpack it and check to make sure that all of the following items are included in the packaging.

- 1 x Remote Control Unit (RCU)
- 2 x AAA batteries
- 1 x User manual
- 1 x DSR

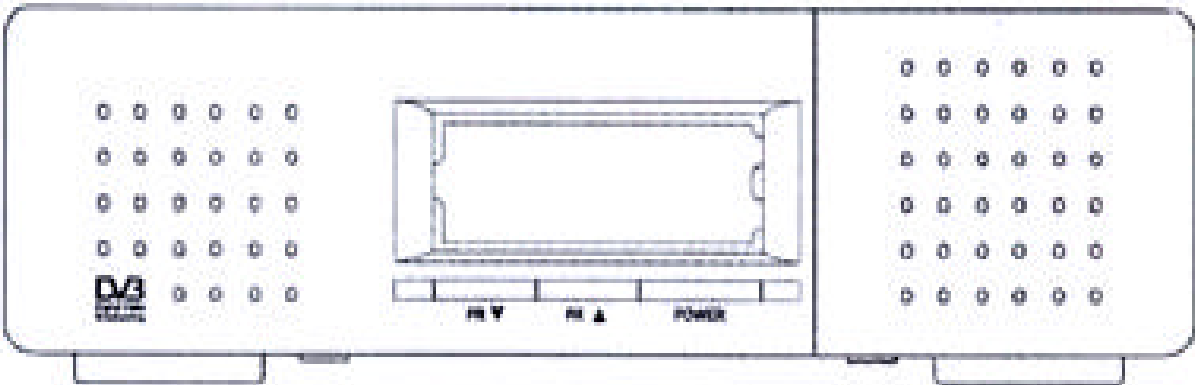


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4. DSR Front & Rear Panel

4-1. Front Panel

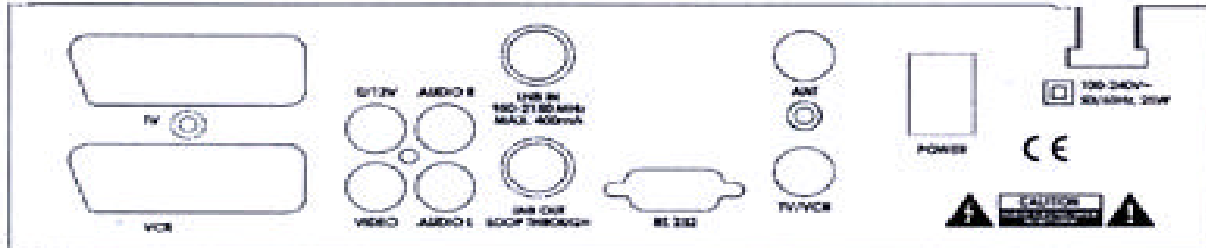


Key	Function
STAND BY / ON	Turns on and off the power of the receiver.
PR▲	When watching, decreases the volume, or in the menu, moves to the left item
PR▼	When watching, increases the volume, or in the menu, moves to the right item
LED	When watching shows the current channel number, or in stand-by mode, shows the current time.

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4-2. Rear Panel



Name	Function
TV/VCR	Connect the receiver to a TV or VCR.
ANT	Connect to the TV antenna input and/or CATV cable.
TV	Connect the receiver to a TV using a SCART cable.
VCR	Connect the receiver to a VCR using a SCART cable.
AUDIO R	Connect the AUDIO R output jack to the TV AUDIO R input or the AUDIO R input of an audio amplifier.
AUDIO L	Connect the AUDIO L output jack to the TV AUDIO L input or the AUDIO L input of an audio amplifier.
VIDEO	Connect to the external VIDEO input of the TV.
0/12V	Connect to an external 0/12V switch.
RS 232	Connect to PC or another DSR for software upgrades.
LNB IN	Connect to satellite antenna.
LNB OUT	Connect to the LNB IN of a second receiver.
AC100-240V~	Connect to the main AC Power.

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5. Remote Control Unit (RCU)

To use various features of the DSR, use the remote control unit for faster and more convenient usage. Insert batteries before using the remote.

- Remote Control Unit



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RCU Key and their Function

Key	Function
	Switch the DSR between active mode and standby mode.
	Press this key one time to run main menu screen or return to previous menu on the menu screen.
	Disappears OSD menu screen.
	Page up in channel list and menu list. Moves to each favorite channel in the circle of favorite group
	Page down in channel list and menu list. Moves to each favorite channel in the circle of favorite group
	Execute a selected item on menu screen. Enter a desired value in any input mode. View program list menu while watching.
	Change a channel upward or downward Move the cursor to an upper or lower item on menu screen.
	Adjust the volume. Move the cursor to a left or right item on menu screen.
	Select a channel number to watch. Enter requested numbers on menu screen.
	Access the UHF Tuning menu.
	Access sub-menu.

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RCU Key and their Function

Key	Function
	Return to the previous channel.
	Switch between TV and AV mode.
	Pause the screen while watching.
	Call up an EPG (Electronic Program Guide).
	Turn Teletext mode on or off.
	View the information of current channel.
	Switch between TV and Radio mode. Switch between "All List" and "Favorite List" in program list.
	Select different audio modes.
	Switch an audio language while watching.
	Mute the sound while watching.

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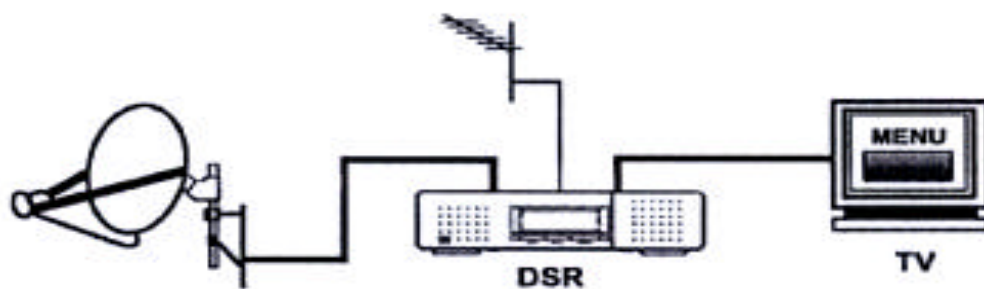
User Instructions

III. Installation

1. Installation

This section explains the installation of the DSR. Refer to the manuals supplied with the equipment for the installation of outdoor equipment such as the dish antenna. When adding new equipment, be sure to refer to the related parts of the manual for the installation.

1. Install an antenna and point it in the exact direction of the satellite. Then connect the DSR to the antenna cable.
2. Connect the DSR to your TV and if applicable to other peripheral equipment.
3. Setup the Installation menu items of the DSR in accordance with the peripheral equipment used in the installation.
4. Tune to the required broadcast channels. Now, the DSR is ready to use.



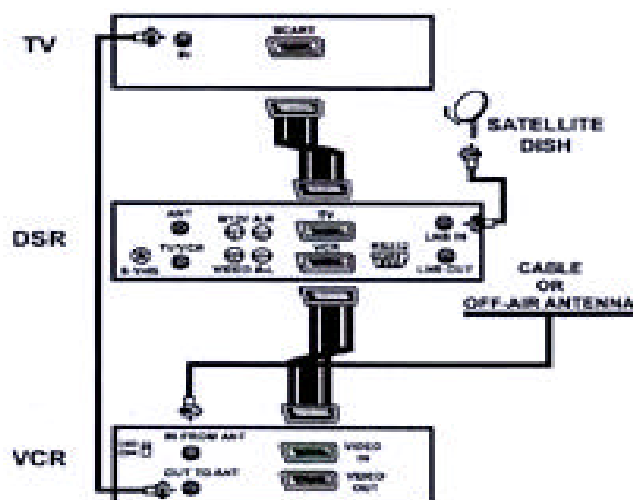
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2. Connection Method

This section explains how to connect peripheral equipment to your DSR during the installation of the unit. The DSR can be used in connection with a VCR, TV and other equipment as shown in the diagram below.

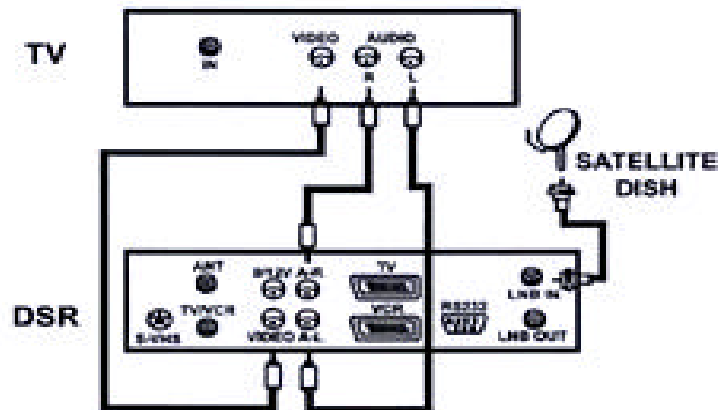
1. Connecting to the DSR to a TV and or VCR using SCART support.



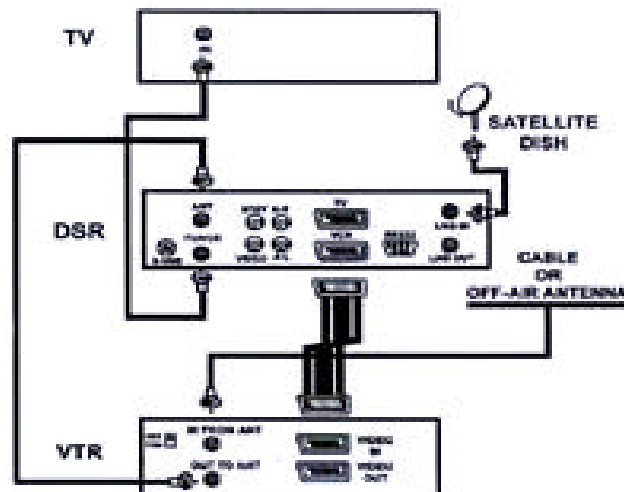
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2. Connecting the DSR to a TV using RCA support



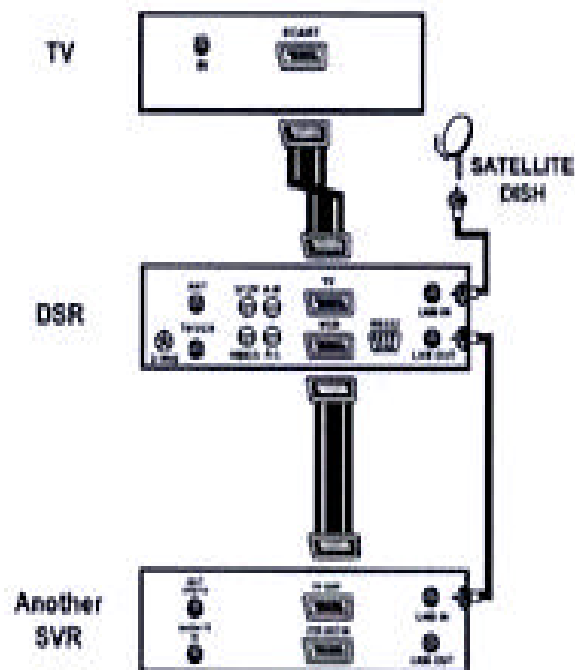
4. Connecting the DSR to a TV and or VCR using RF support.



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5. Connecting the DSR to another Set-top box using Loop-through connector.



Connections using RCA support and RF support, please refer to "2. Connecting the DSR to TV and a VCR using RCA support" and "4. Connecting the DSR to a TV and a VCR using RF support" respectively

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IV. Getting Started

1. Basic Usage of the DSR

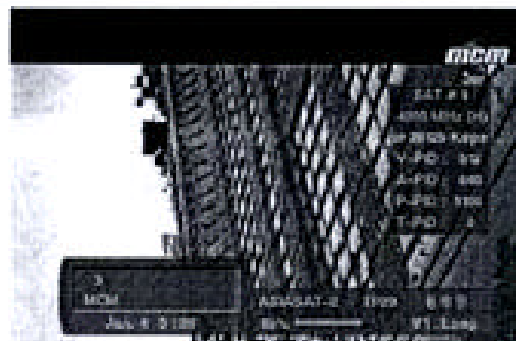
1. Turn on the TV and connect the peripheral equipment to the system.
2. Set the TV mode to A/V, or tune the TV to the appropriate RF channel. Please consult the Operating Manual of the TV for more information on how to do this.
3. Turn on the DSR by pressing the  key. The LED on the front panel of the DSR will change from red to green, indicating that it is on.
4. Select TV/Radio mode.

1-1. TV/Radio Channel

1. Press the  key to select TV or audio mode.
2. When watching, press  key to select the next channel and press  key to select the previous channel. When a channel is selected, the channel information will be shown at the bottom of the screen. At the right hand side of the screen, audio selection box and language alternation box will turn up.



3. When pressing  key, signal quality box will turn up above audio selection box.



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1-2. Volume

- 1. To increase the volume, press the  key, and to decrease volume, press the  key.
- 2. The 33 steps of volume level can be identified by the volume level indicator on the screen.



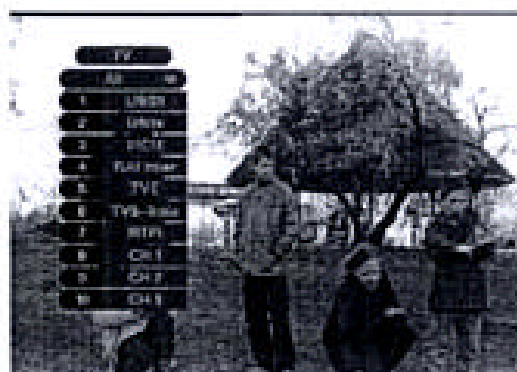
1-3. Mute

- 1. Press the  key to mute the sound when watching.
- 2. To bring back the sound, press the  key once more. The sound returns to the same volume level as before.

1-4. Audio

- 1. Press the  key repeatedly to select one of three possible settings (Left, Right, Stereo).





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1-7. Last Channel Auto-Saving and Recall

If there is an interruption of AC power caused by pulling out the main plug of the DSR or brown-outs (power interruptions), once AC power is reapplied the previous TV channel appears without having to press the  key. To memorize the current channel automatically regardless AC power interruptions, press the  key twice (changes from 'OFF' to 'ON') or watch that channel for more than 10 minutes.

1-8. RF Tuning Function

You can watch Satellite channels and Terrestrial Broadcasting channels using the RF Modulator.

1. Connecting to a TV which has direct RF channel '21' to '69' ('14' to '83'-USA Channel) selection.

- ① Connect your TV RF input to the TV/VCR terminal of the DSR. Connect the terrestrial antenna cable to the ANT terminal of the DSR's RF Modulator.
- ② Tune the RF channel of your TV to channel '40'.
(The factory default RF channel is '40').

2. Connecting to a TV which does not support direct RF selection

- ① Follow the steps outlined in "1-1."
- ② Try to find the channel by using the Channel Search tuning function of the TV.

3. If it is not possible to tune to the RF channel in the above-mentioned cases, please try following steps for tuning RF channel.

- ① Follow the steps mentioned in "1-1."
- ② Tune the TV to any RF channel '21' to '69' ('14' to '83'-USA Channel) and press  key on the remote control. The front panel display will show "No." followed by the RF channel number.
- ③ Press  or  key of the RCU repeatedly until the TV screen shows the TPSG (Test Pattern Signal Generator).
- ④ Press  or  key on the remote control to exit the RF tuning mode.
- ⑤ Go to the "Option" menu of the DSR and select the appropriate "PAL Type" in the "TV TYPE" menu.

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1-9. TELETEXT Function

Only TELETEXT supported TV users can use this function.

Press the  key of the RCU. If the channel have TELETEXT service, "TELETEXT ON" will be displayed. Press  key one more time, "TELETEXT OFF" will come up the TELETEXT service will be stopped.

If the channel does not have TELETEXT service, "NO TELETEXT" will be displayed.

After selection of " TELETEXT ON", operate the TELETEXT function of TV set to watch the TELETEXT service.

* For reference

In the case of a channel is reserved for future TELETEXT service but actual TELETEXT data are not transmitted, then there is no teletext service even though "TELETEXT ON" is on the screen

1-10. Previous Channel Recall

If you want to watch the previous channel when watching, press  key.

1-11. Screen Pause

If you want to have still picture on the screen when watching, press  key once.

Press  key one more time to watch the channel again.

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1-12. Channel/Satellite Name Edit Function

1. Channel Name Edit

After selection of a channel in the 'rename of TV/Radio Channel Organizer' menu, press  key to call up the following character table and take the following steps to change name.

2. Satellite Name Edit

After selection of a satellite in the 'Antenna/Satellite' field of 'Antenna Setup' menu, press  key to call up the following character table and take the following steps to change name.



- Enter the name by selecting the characters using the , ,  and  key following by the  key on the RCU.
- Selection of "◀" key on the table will delete character.
- After changing channel or satellite name, select 'OK' to save the new name or 'CANCEL' not to change the entered name.

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VII. Specifications

- **System capabilities**
Fully DVB compliant
- **Video decoder**
MPEG-2 Main Profile @ Main Level
Data Rates ----- up to 15Mbits/s
Video formats ----- 4:3, 16:9
- **LCD in the front panel**
Dynamic 7 Segment 4 Digits
- **Audio decoder**
MPEG-1 layer I & II (Musicam Audio)
Mono, Dual, Stereo, Joint stereo
- **Application system resources**
Processor ----- STi 5500
RAM memory ----- 2MByte
Flash memory ----- 1MByte
Graphic display ----- 720 x 576 (PAL)
720 x 480 (NTSC)
- **Connector summary**
1 x LNB input (F-type)
1 x LNB output (F-type): Loop through
4 x RCA jacks (CVBS, AUDIO L/R, 0/12V)
2 x Scart ports (TV, VCR)
1 x RS232 (9-pin D-sub)
1 x RF Modulator (IEC 169-2)
- **TV Scart**
RGB, CVBS, Audio L/R
- **RF Modulator**
Input Connector ----- IEC 169-2 Female
Output Connector ----- IEC 169-2 Male
CCIR Channel ----- 21 to 69
USA Channel ----- 14 to 83
RF Signal ----- PAL B/G, I, D/K, NTSC M

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- **VCR Scart**
CVBS IN/OUT, Audio L/R IN/OUT
- **Control Output (0/12V)**
Connector 1 x RCA
Voltage 0/12 Volts
- **Composite video output**
Connector 1 x RCA
- **Hi-Fi quality audio output**
Connector 2 x RCA (L/R)
- **Serial data interface**
Connector 9-pin D-sub
Signals RS232 max. 19.2K baud
- **LNB / Tuner Input**
Connector 2 x Female
Input frequency 950 - 2150MHz
LNB Supply 13/18V, Max.400mA
Band switch control 22KHz
Demodulation QPSK
Symbol rate 1-45Msps
SCPC & MCPC capable
C & KU band capable
- **Input voltage**
AC 100 - 240V~
- **Power consumption**
25 W
- **Dimension (W x D x H)**
250 x 175 x 65 mm
- **Weight**
1.6Kg

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FCC WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

INFORMATION TO THE USER

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 generate 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 the 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer for technical assistance.