GENERAL INSTRUMENT

Innovation 450i Satellite Receiver User's Guide

VIDEO

GENERAL INSTRUMENT

| Ku | Ti | LOCK | VC sync | TIMER | SAT/TV | IPPV |

VIDEOCIPHER® RS
SATELLITE RECEIVER

NOTE: Please fill out and return the Warranty Card (located at the back of this book) to General Instrument. This will simplify the processing of any necessary warranty repairs. You may wish to include the same information in the spaces provided on page 74 of this manual.

Programming Copyright Notice

Satellite signals originate from a variety of sources and program suppliers. Some of these signals may be proprietary and intended for reception only by approved subscribers or subscription services. General Instrument assumes no responsibility for the use of home TVRO systems by the purchaser of this receiver. The Federal Communications Commission has suggested that all TVRO manufacturers communicate to their customers the following policy statement.

"Use of this device may violate Section 605 of the Communications Act of 1934, as amended, through the unauthorized interception and divulgence of radio communications; or, the use of radio communications for one's own benefit where there is no entitlement to its receipt."

Resale of signals received from broadcast satellites is explicitly regulated. In any use or application involving resale or distribution, the user should verify compliance with current laws, regulations, and approved procedures for use. Where required, local and federal licensing or franchise authorization is the sole responsibility of the user.

Export of this device requires a valid export license issued by the U.S. Department of State, Office of Munitions Control.

Special Note: Your Innovation 450i is equipped with a built-in VIDEOpal® Order Recorder. The VIDEOpal Order Recorder will not work properly at this time if you are on a party line and operator assistance is required to make long distance telephone calls, or if it is necessary to enter an extra number when dialing a toll-free number.

FCC-Required Notification
Type of Service
The VIDEOpal system is designed to be used on standard device telephone lines. The VIDEOpal connects to the telephone line by means of a standard jack called the USOC RJ11C. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party lines service is subject to State tariffs.

Telephone Company Procedures
In order for your telephone company to provide service to you, it may occasionally be necessary for them to make changes in their equipment, operations, or procedures. If these changes might affect your service or the operation of your equipment, the telephone company should give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, your telephone company should provide this information upon request.

Renewable Security (VCRS™)
In certain circumstances, it may be necessary for your telephone company to request information from you concerning the equipment which you have connected to your telephone line. Upon request of your telephone company, provide the FCC registration number and the Ringer Equivalence Number (REN) of the equipment which is connected to your line; both of these items are listed on the equipment label. The sum of all the REN's on your telephone lines should be less than five in order to assure proper service from your telephone company. In some cases, a sum of five may not be usable on a given line. **NOTE: The REN for the Innovation™ 450i with the VideoCipher® VIDEOPal is 0.3B.**

If Problems Arise
If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If your telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you should be notified as soon as possible. When you are notified, you should be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC.

In the event repairs are ever needed on the VIDEOpal module in your Innovation 450i Receiver, they must be performed by General Instrument Corporation or an authorized service center.

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■ Important Safeguards

. . . .

1. **Read Instructions** – All safety and operating instructions should be read before the unit is operated.

2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.

3. **Heed Warnings** – All warnings on the equipment and in the operating instructions should be adhered to.

4. **Follow Instructions** – All operating and use instructions should be followed.

5. **Cleaning** – Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning the unit.

6. **Ventilation** – Slots and openings in the cabinet are provided for ventilation and to protect it from overheating. These openings must not be blocked or covered. This equipment should never be placed near a heat source or in a built-in installation such as a rack unless proper ventilation is provided. Never place the unit on carpeting which might block ventilation through bottom slots.

7. **Power Sources** – This equipment should be operated only from the type of power source indicated on the marking label.

8. **Grounding** – This product is equipped with a polarized alternating-current line plug. This plug will fit into the power outlet only one way. This is a safety feature. If the plug should fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

9. **Power Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them; pay particular attention to cords at plugs, convenience receptacles and the point where cords exit from the equipment.

10. **Overloading** – Do not overload power outlets and extension cords as this can result in a risk of fire or electrical shock.

11. **Damage Requiring Service** – Unplug this equipment from the power source and refer servicing to qualified service personnel under the following conditions:

    a. When the power supply cord or plug is damaged.

    b. If liquid has been spilled or objects have fallen into the unit.

    c. If the equipment has been exposed to rain or water.

    d. If the equipment has been dropped or otherwise damaged.

    e. When the equipment exhibits a distinct change in performance—this indicates a need for service.

12. **Water and Moisture** – Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

13. **Accessories** – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

> NOTE: Do not place this product directly on wood or simulated wood surfaces as these surfaces are easily damaged.

14. **Object and Liquid Entry** – Never push objects of any kind into this product 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 product.

15. **Servicing** – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

16. **Replacement Parts** –When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

WARNING
MOVE WITH CARE!

THIS CART/APPLIANCE COMBINATION SHOULD NOT BE MOVED BY CHILDREN WITHOUT PROPER GUIDANCE FROM AN ADULT

Push to move the cart, do not pull or guide from front. Quick stops, excessive force, or uneven surfaces may cause this cart to tip while being moved.

17. **Safety Check** – Upon completion of service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

18. **Power Lines** – The satellite antenna system should not be located near overhead power lines or other electrical light or power circuits, or where it can fall into power lines or circuits. When installing a satellite antenna system, avoid dangerous contact with power lines or circuits.

19. **Attachments** – Do not use attachments not recommended by the product manufacturer as they may cause hazards.

20. **Outdoor Antenna Grounding** – Be sure the satellite antenna 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:

1. Proper grounding of the mast and supporting structure.

2. Grounding of the lead-in wire to the antenna discharge unit.

3. Size of grounding conductors.

4. Location of antenna-discharge unit.

5. Connection to grounding electrodes.

6. Requirements for the grounding electrode.

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.

An example of antenna grounding as per National Electrical Code Section 810, "Radio and Television Equipment" is illustrated here. Check your local building and electrical codes for other restrictions on antenna grounding

1. Use No. 10 AWG (5.3mm^2) copper, No. 8 AWG (8.4mm^2) aluminum, No. 17 AWG (1.0mm^2) copper-clad steel or bronze wire, or larger, as ground wire.

2. Secure antenna lead-in wire and ground wires to house with stand-off insulators spaced 4 ft. (1.22m) to 6 ft. (1.83m) apart.

3. Mount antenna discharge unit as close as possible to where the lead-in enters the house.

4. Use jumper wire not smaller than No. 6 AWG (13.3mm^2) copper, or the equivalent, when a separate antenna grounding electrode is used. Sec. NEC Section 810-21(1).

5. For those areas that are heavily prone to lightning storms, it is recommended that you have installed a lightning rod, mounted to the top of the antenna on the back side. It is also suggested that a ground strap (2 AWG or larger of copper wire) be installed from the lightning rod to the rest of the antenna ground system.

21. **Outdoor Cable Protection** – All outdoor connections should be protected from moisture. All "N" and "F" connectors on your BDC or LNB should be treated with coax seal upon installation, even if the connection is installed under a weatherproof cover. Internal heating can draw moisture or condensation into the covering of the unit and affect its operation. We do not recommend the use of silicon seal, since it has a tendency to form air pockets.

22. **Lightning** – For added protection for this product before 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 product due to lightning and power-line surges. Be sure your antenna is properly grounded, as defined above. If you live in an area heavily prone to lightning storms, it is recommended that you invest in power-line, telephone-line, RF cable and Actuator/Polarization surge protectors to protect your satellite system from possible damage.

CAUTION:TO PREVENT FIRE OR ELECTRICAL SHOCK DO NOT OPERATE ACTUATOR CONTINUOUSLY FOR LONGER THAN 1 MIN.

■ Table of Contents

■ Welcome to a Whole New World

Satellite TV.
It's Never Been So Easy.
Thank you for selecting the all new General Instrument VideoCipher Innovation 450*i* Satellite Receiver! With it, you'll find watching satellite TV the most enjoyable it can be. This advanced receiver enables you to receive unscrambled video and audio signals and many subscription channels*, while incorporating a wide range of important features and functions designed to make the Innovation 450*i* the center of your entertainment system.

Installation of the Innovation 450*i* is simple—thanks to a host of On Screen Displays to guide you every step of the way and an impressive microprocessor system with many of the installation procedures already pre-programmed. Once your Innovation 450*i* is operational, you'll discover how easy it is to use with the advanced, multi-function remote control. Every aspect of daily use can be controlled from the comfort of your favorite armchair with On Screen Displays to keep you fully informed on your system's functional status.

About this Guide
To make certain that your new Innovation 450*i* provides you with optimum enjoyment, we recommend that you read this guide thoroughly. If your 450*i* and satellite TVRO system were professionally installed, we suggest you start by reading the FEATURES and DAILY USE sections in front of the guide. If you plan to install your own system, we suggest starting in the back with the PRE-INSTALLATION CHECKLIST, INSTALLATION, and PROGRAMMING YOUR INNOVATION 450*i* sections.

*Subscription required.
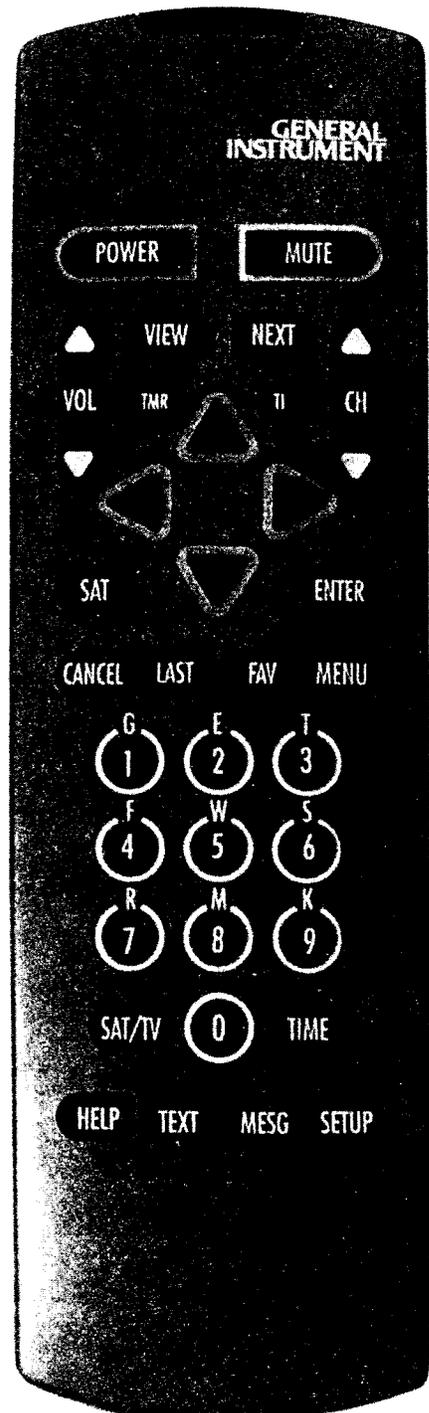
■ Features

Your new General Instrument Innovation 450i Satellite Receiver represents state-of-the-art convenience and quality in home satellite television viewing. This fully integrated receiver/descrambler provides a wide range of easy-to-use features, each of which has been designed to deliver maximum enjoyment from your satellite television system.

FULLY INTEGRATED SYSTEM

The Innovation 450i combines the satellite receiver, VideoCipher Renewable Security (VCRS) descrambler, antenna positioner and power supply all in a single, attractive unit.

ON SCREEN DISPLAYS

Extensive On Screen Display (OSD) menus and prompts are conveniently displayed on your television screen to guide you easily through every step of system setup and daily use. With these simple OSDs, you'll enjoy high quality reception of VCRS and other satellite signals quickly and easily.

2 WEEK/4 EVENT TIMER

For convenient viewing of daily program or special events, your Innovation 450i features a built-in automatic timer which can be set for one of your favorite daily programs (game shows, soap operas, news, etc.) and three special events (movies, concerts, sporting events...) up to two weeks in advance. The timer will turn on your receiver, move the dish to the proper satellite, and tune in and adjust the channel to pre-programmed settings... automatically!

PRE-PROGRAMMED SATELLITES

The characteristics (abbreviation, frequency, etc.) of current operational C-Band and Ku-Band satellites have been pre-programmed into the Innovation 450i's memory—with additional space for a total of 64 satellites in all.

FAVORITE CHANNEL MEMORY

The Innovation 450i features a unique Favorite Channel Memory, allowing the convenient storage of your top 10 channels.

MULTI-FUNCTION REMOTE CONTROL

The sleek remote control allows you to control every aspect of setup and use of your Innovation 450i from the comfort of your easy chair.

OPTIONAL FEATURES

The optional AnyWhere® UHF remote control is also available as an enhancement to your system, allowing you to control the Innovation 450i from almost anywhere in your house. Ask for the URK-45.

The optional Flashcard™ IR remote control is a simplified infrared remote control with 16 of the most used keys making every day use even easier. Ask your dealer for the optional Flashcard IR remote control.

OPTICAL INTERLOCK

The Innovation 450i back panel incorporates a safety interlock that shuts off power to the unit whenever the back panel faceplate has been removed to gain access to the VideoCipher module.

EZ SAT LOCATER

By locating and programming two satellites into memory, your Innovation 450*i* will then automatically program the locations of other current C-Band and Ku-Band satellites in orbit.

AUTOPEAK TUNING

AutoPeak Tuning automatically positions your antenna on a selected satellite for maximum signal strength, then adjusts the skew control for the highest quality picture possible.

VIDEOPAL ORDER RECORDER

Your Innovation 450*i* may include General Instrument's VIDEOpal Order Recorder. With the VIDEOpal unit, you can order special pay-per-view programming such as early release movies, concerts, sporting events, and more with just a touch of your remote control. There's no need to call the programmer to make your purchase, the VIDEOpal Order Recorder does it for you automatically.

BUILT-IN ANTENNA POSITIONER POWER SUPPLY

The Innovation 450*i* comes with a built-in antenna positioner/power supply, so there's no need to purchase and install a separate unit to control antenna movement. Antenna positioning is smooth and precise every time you change satellites.

DIGITAL AUDIO SOUND

The Innovation 450*i* provides digital audio stereo from VCRS programs when connected to your home stereo system or monitor/TV, providing audio quality comparable to that of Compact Discs.

PARENTAL CONTROL

Your Innovation 450*i* provides you with two methods for restricting program viewing. You can lock out selected channels or satellites completely, or you can set program rating ceilings for VCRS channels.

INTERNAL C/Ku SATELLITE SWITCHING

The Innovation 450*i* can tune both C-Band and the growing number of Ku-Band programs. It can select up to 64 C-band and Ku-band satellites in any combination you choose and is pre-programmed for the multiple Ku-Band frequency plans currently in use. Switching between C-Band and Ku-Band is accomplished automatically by an internal C/Ku switch for maximum convenience.

INTEGRATED VCRS MODULE

Your new Innovation 450*i* is compatible with the VCRS descrambler module. Once the module is properly authorized, you'll have access to some of the finest satellite TV programming available. And like all the other functions of the Innovation 450*i*, all aspects of VCRS channel viewing are conveniently controlled with your remote control.

DIRECT SATELLITE & CHANNEL ACCESS

By using the remote control, you may switch directly to the satellite or channel you wish without having to go through on-screen menus.

INTEGRATED TI FILTER

Your Innovation 450*i* features a built-in TI (Terrestrial Interference) filter to reduce most microwave signal interference.

UL AND CSA APPROVED

The Innovation 450*i* has received approval from both Underwriters Laboratory and the Canadian Standards Association as providing safe operation when properly installed.

■ Remote Control Functions

The multi-function remote control contains several additional keys that are not found on the front panel.

> NOTE: All remote control keys (except SAT/TV) are for tuning satellite channels. They have no effect on VHF, UHF or cable programming.

The back of the remote control has a compartment for installing 2 AAA batteries. The remote control is effective up to a range of 30 ft. but will not operate through walls.

The optional AnyWhere® UHF remote can function through most walls, making it easy to control your Innovation 450*i* from nearly anywhere in your home. See your dealer for details.

Remote Control Keys

R1 POWER
Turns on the main power to the Innovation 450*i*.

R2 MUTE
Mutes or unmutes the audio output of your Innovation 450*i*.

R3 VOL
Adjusts the audio output level up or down.

R4 VIEW
Used to check the title, running time and other information about the program you are watching (only on VCRS channels). Press it to leave a menu and return to the program you were viewing.

R5 NEXT
Allows you to read information about the next scheduled program on a VCRS channel.

R6 TMR
A master timer override enabling/disabling your preset timers.

R7 TI
Turns the TI Filter on or off.

R8 CH
Changes channels up or down.

R9 ARROW KEYS
Allow you to scroll up and down and move about in various On Screen Displays (including VCRS channels). The [LEFT/RIGHT] keys also control antenna movement, and the [DOWN/UP] keys adjust video fine tuning in the normal mode.

R10 SAT
Displays the satellite menu for easy selection of the satellite you wish to view, or to access a satellite directly.

R11 ENTER
Used to store satellite locations, tuning information, passwords and other information into the Innovation 450*i* memory.

R12 CANCEL
Clears most numbers or commands that you entered incorrectly. It also clears menus from your screen one level at a time.

R13 LAST
Returns you to the previous channel you were watching.

R14 FAV
Along with either the number keys or the cursor keys, is used to store and recall up to 10 Favorite Channels.

R15 MENU
Brings up OSD menus required if you wish to make adjustments to the various settings of your Innovation 450*i* system.
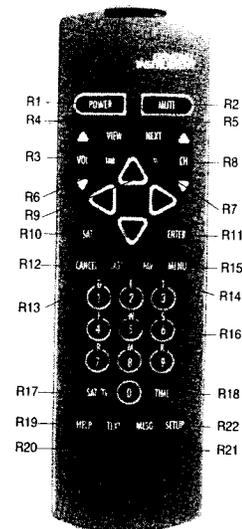
R16 NUMBER KEYS
These keys, 0-9, are used to activate different OSD menus, for direct channel/satellite access, to enter passwords, and to set up VCRS services.

R17 SAT/TV
Switches your TV between VHF or Cable and your satellite system.

R18 TIME
Allows you to call up the current time of day on the television screen.

R19 HELP
Used to read HELP messages related to VCRS controls.

R20 TEXT
Used to view channel and service-related text on your TV screen. VCRS messages can include news bulletins, program promotions and other special notes.

R21 MESG
If there is a message for you, you will see a flashing asterisk (*) on your TV screen. Press the [MESG] key to read messages.

R22 SETUP
Used with the number keys to view or change the setup of your VCRS module.

▌ Front Panel Functions
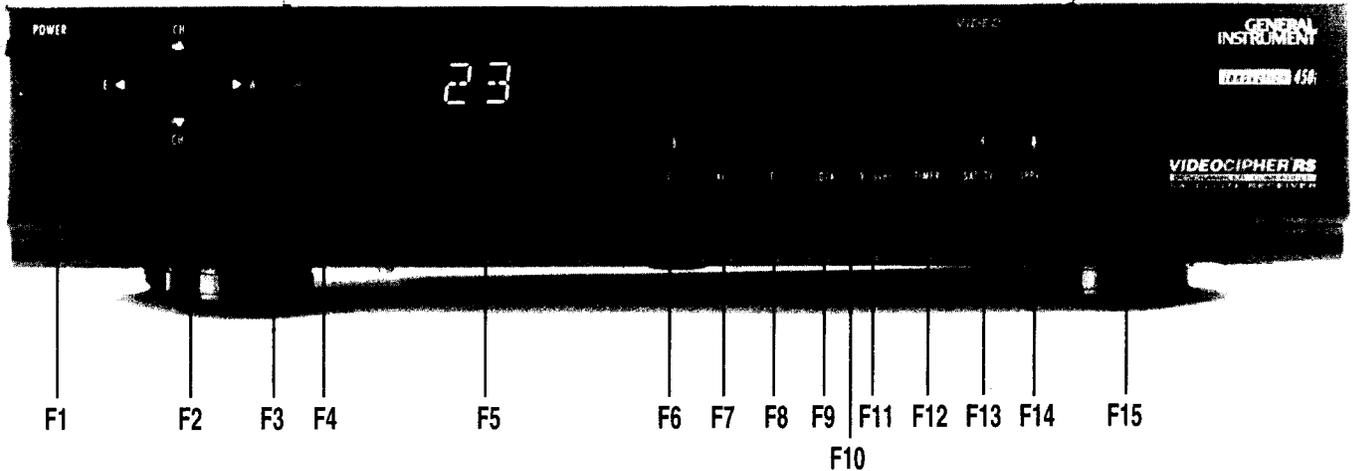
The front panel of your Innovation 450*i* contains many of the indicators (or LEDs) that will help you set up and adjust your satellite signal reception.

> NOTE: All Innovation 450*i* keys are for tuning satellite channels only. They have no effect on VHF, UHF or Cable programming.
>
> Some of the Innovation 450*i* front panel keys can also be found on the remote control, most of which provide information via the extensive On Screen Display menus.

F1 POWER
Turns on the main power to the Innovation 450*i*.

F2 E SATELLITE W
Moves your antenna to the next selected satellite in either the East or West direction.

F3 CHANNEL
Changes channels up or down.

F4 TIMER
Enables or disables the timer function. It can also deactivate the timer after an event has started.

F5 SATELLITE AND CHANNEL INDICATOR
This two-digit display indicates the channel to which you are currently tuned and also indicates the satellite to which you are currently tuned or are selecting during the satellite selection process or when the VIEW key is pressed.

F6 C
Indicates that the Innovation 450*i* is set to receive C-Band satellite signals.

F7 Ku
This LED indicates that your Innovation 450*i* is set to receive Ku-Band satellite signals.

F8 TI
This indicator lights when the internal TI Filter has been activated.

F9 LOCK
This LED will display when your receiver is tuned to a channel on which you are using the Parental Control feature.

F10 REMOTE CONTROL TARGET
This is the target point for the infrared remote control signal.

F11 VC SYNC
This LED illuminates when your system is tuned to a VCRS channel.

F12 TIMER
Indicates that the Innovation 450*i*'s timer has been set.

F13 SAT/TV
The SAT indicator will light when your system is set to watch satellite broadcasts.

F14 IPPV
This LED indicates the presence of the internal VIDEOpal Order Recorder.

F15 REMOTE CONTROL
Located in the upper right corner of the lens area. This indicater will blink whenever the Innovation 450*i* receives a signal from the remote control.

■ Back Panel Connections

B1 B2   B3   B4 B5 B6 B7 B8 B9   B11 B10 B12   B13   B14 B16 B18

B15   B17
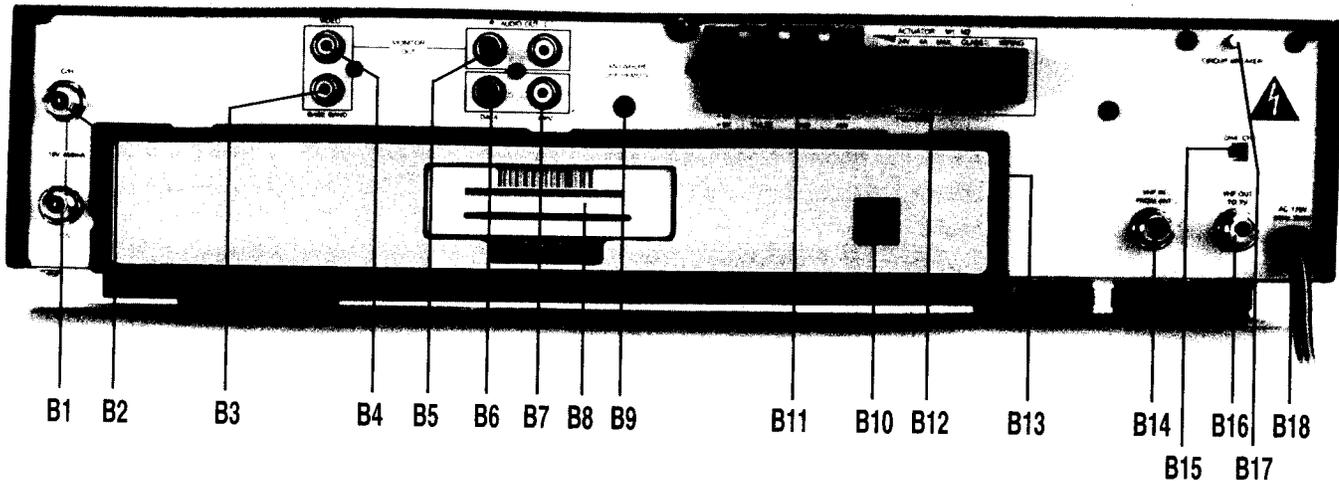
Your Innovation 450i can be connected to a variety of accessories. Please refer to the wiring diagrams on page 61 or have your installer verify that you have made the proper connections.

B1 K/V
Attach the coaxial cable from the Ku-Band LNB or the vertical LNB (if your system makes use of both a horizontal and a vertical LNB) to this connection.

B2 C/H
Attach the coaxial cable from the C-Band, LNB, LNBF or the horizontal LNB, to this connection. This will be the primary connection from your antenna.

B3 BASEBAND
External baseband accessories, such as stand alone descramblers, can be connected to this terminal (not required for the VCRS system).

B4 VIDEO OUT
Connect this video output jack to the video input connection on your VCR or TV/Monitor. **NOTE:** There are blue OSDs on this output.

B5 R AUDIO OUT L
These RCA-type connectors may be connected to the auxiliary input jacks on your stereo system to deliver deep, rich digital sound. Volume level is controlled through your Innovation 450i and your stereo.

B6 DATA
This RCA-type connector is for connecting an auxiliary piece of equipment.

B7 IPPV
This connector permits interfacing of your Innovation 450i with a stand alone pay-per-view programming order recorder such as the General Instrument VIDEOpal Order Recorder.

B8 AUTHORIZATION NUMBER
You can read the first 8 numbers of your Authorization (Address) Number through this window. See page 27 for the directions in reading your full 12-digit number.

B9 UHF REMOTE
This mini-phono connector is used to attach the optional AnyWhere UHF remote control receiver to the Innovation 450i. See your satellite dealer for details.

B10 PHONE LINE CONNECTOR
This jack is used to connect the built-in VIDEOpal Order Recorder unit to a central billing office via a telephone line.

B11 TERMINAL BLOCK
The terminal block is used to connect system components to the Innovation 450i.

+5V/PULSE/GND
Connect the wires from your mechanical polarizer (feedhorn) to the lower terminals and your actuator to the upper terminals. See manufacturer's instructions or the wiring diagram on pages 58 and 59 in this manual.

C/Ku OR H/V
Use this terminal to attach a coaxial relay for dual C-Band LNB or C-Band/Ku-Band LNB installations. See pages 58 and 59 for details.

B12 M1 AND M2
These terminals supply power to your actuator jack in order to move the antenna from one satellite to another. The circuit between these two terminals is capable of producing up to 35 volts and may result in electrical shock. *Do not make any wire connections to these terminals or leave the cover off while the unit is plugged into an AC wall outlet!*

B13 OPTICAL INTERLOCK
Shuts off power to the unit whenever the back panel faceplate has been removed to gain access to the VideoCipher module.

13

B14 VHF IN FROM ANT
Connect your VHF antenna or cable system lead wire to this connector.

B15 CH3-CH4
This switch determines the VHF channel output to the TV. It should be set to the weaker of these two local VHF channels in your area. This switch setting should be the same as the channel setting on your TV.

B16 VHF OUT TO TV
This connector should be attached to the VHF input on your television set.

B17 CB
This is a push button circuit breaker. Should your system shut down, first try to determine the cause of the outage (power brownout, voltage spike, electrical short, etc.) before resetting.

B18 POWER CORD
115 VAC, 60Hz, 300W AC power cord. Use only with an outlet that accepts a polarized plug (one blade is larger than the other).

■ Daily Use of Your Receiver

GETTING STARTED

1. Turn your television set on but leave the Innovation 450*i* off and tune to a local VHF station. This will verify that your TV is hooked up to the Innovation 450*i* properly.

2. Turn the Innovation 450*i* on. You should get a blue screen. If not, check to make sure your TV is tuned to the same channel as the Channel 3/4 switch on the rear panel of the Innovation 450*i*.

3. Press the **[SAT/TV]** key on your remote control to switch between the blue screen and local VHF TV. If there is no local programming on Channel 3 or 4, you will see snow on the screen. To watch local programming, use your TV set's channel selector. To return to the blue screen (Innovation 450*i* operation), select channel 3 or 4 on your TV set and press the **[SAT/TV]** key on your Innovation 450*i* remote control.

Due to the extensive number of On Screen Displays used with the Innovation 450*i*, your remote control features several keys that perform many convenient functions. A few of the most frequently used keys are:

[ENTER] – usually the final key you press when you've finished a command (go to a favorite channel, change fine tuning, etc.).

[CANCEL] – stops an action (such as erasing a satellite). It also takes you back out of menus one screen at a time until you reach the program on the channel you were watching.

[DOWN/UP, LEFT/RIGHT] Arrow Keys – move the arrow indicator about on the screen. In certain modes, the **[DOWN/UP]** arrow keys change fine tuning aspects of picture and sound while the **[LEFT/RIGHT]** arrow keys move the dish, etc.

[VIEW] – will take you out of any On Screen Display and directly to satellite signal viewing (once system has been setup and programmed).

[FAV] – displays the Favorite Channel Menu for quick selection of your favorite channels.

[SAT] – will take you directly to the satellite menu for quick and easy selection of any satellites that have been stored into memory.

NOTE: All available options may not be displayed in some OSDs. *This does not indicate a malfunction of your equipment.* Your Innovation 450*i* is programmed to automatically delete options that do not apply to your system's configuration. The OSD examples used in this guide show all possible options.

For example, fixed LNBs (LNBFs) automatically adjust dish skew to either vertical or horizontal; therefore, LNBF systems omit options 3 (Autopeak Skew) and 5 (Skew) on the "Sat Adjustments" menu (page 17). Skew is also omitted from option 4 of that menu.

DISH IS MOVING TO F4

DISH POSITION 4108

VOLUME: ▮▮▮▮▮▮▮▮▮

VOLUME: MUTED
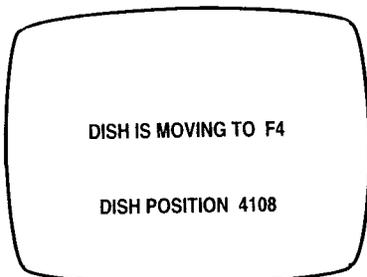
CHANNEL SELECTION METHODS

To change channels, use the channel **[CH]** key . Or, use the direct access method by entering the two digits of the channel you want.

Last Channel

This feature is especially convenient when changing between Favorite Channels because it automatically remembers the last channel you viewed on each satellite. You may return directly to the last channel you were watching by pressing **[LAST]**.

| LAST |

> NOTE: If you need to stop the dish movement at any time, press **[SAT]** or **[CANCEL]**.

Your Innovation 450*i* has been designed to return to the last channel viewed on a satellite unless you select the channel prior to moving the dish.
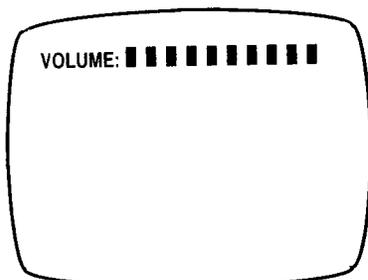
VOLUME CONTROL

To increase or decrease the volume level, press the **[VOL]** key on your remote control. (The volume OSD can be turned off through the "Viewer Preferences" menu—see page 24.)

> NOTE: Audio distortion may be encountered if the volume level of the Innovation 450*i* is low and the volume control of your television is turned high to compensate. Instead, turn your TV volume control low (not OFF), and control the overall volume level through the Innovation 450*i*. When viewing local television, the Innovation 450*i*'s volume control becomes inactive; therefore, it will be necessary to use your television set's volume control to set the audio level.
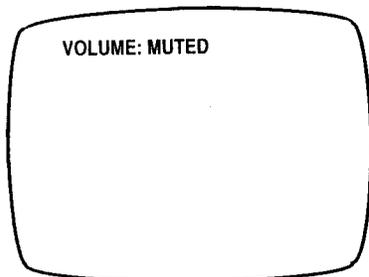
Mute

Press **[MUTE]** to shut off the sound when watching satellite TV (to answer the phone, etc.). Press **[MUTE]** to restore sound.

| MUTE |

```
5:37PM                     F4 07
  S2   F2   G2   K2→ F4   T2
  K1   W3   B4   G3   B3   T1
  W4   R1   D1   R2   D2   M1

      DISH IS MOVING TO
      G1 AT 4634

      DISH POSITION 4150
```
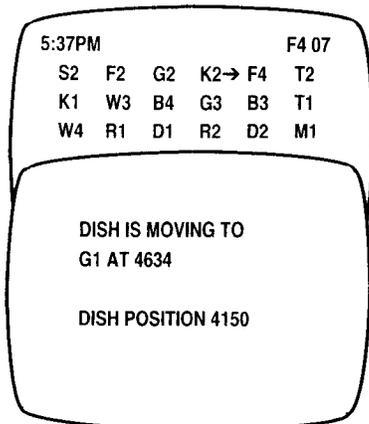
SATELLITE SELECTION METHODS

Selection from the Satellite Menu

To select a satellite (and channel) for viewing, use the **[SAT]** key and the **[LEFT/ RIGHT, DOWN/UP]** keys to move to the desired satellite. The arrow prompt will mark your progress toward the satellite. A small dot will remind you of your starting point.

> NOTE: BEFORE pressing the **[ENTER]** key, use the **[CH]** key to select the channel you want. Press **[ENTER]** and the 450*i* will tune to the selected satellite and channel.
>
> NOTE: If more than 36 satellites have been programmed into your 450*i*, the satellite menu will scroll to show you the complete list.

| SAT | ◄▲► [CH ▲] | ENTER |
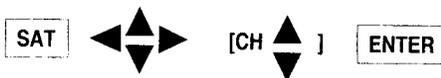
Direct Entry Method

The remote control supplied with your 450*i* has satellite letter designations above each numeric key. Pressing the **[SAT]** key followed by a number key with the desired letter designator and then the desired number will move the antenna directly to the desired satellite. For example, to move to G1 press **[SAT]**, **[1]** (the G), **[1]**. To move to T3 press **[SAT]**, **[3]** (the T), **[3]**.

> NOTE: Satellites with popular programming are arranged to simplify the key strokes for direct entry. Pre-selecting the channel cannot be used in the direct entry mode.

Example:

| | G | | |
| SAT | 1 | 1 | selects G1 |

or

| | T | | |
| SAT | 3 | 3 | selects T3 |

```
       MAIN MENU
      1 TIMER & CLOCK

  SAT ADJUSTMENTS        1
  1  DISH OFFSET         0
  2  AUTOPEAK DISH
  3  AUTOPEAK SKEW
  4  AUTOPEAK DISH & SKEW
  5  SKEW   H:+4V    V:-60
            SIGNAL -32
  USE 1-5  ENTER
```
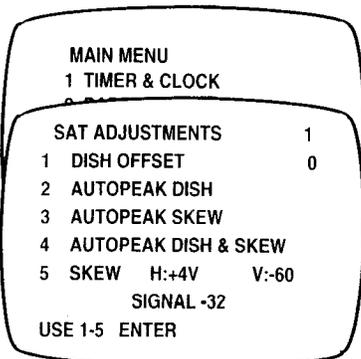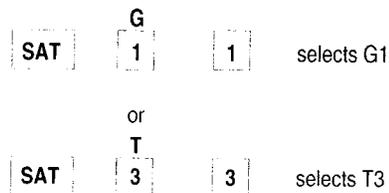
ADJUSTMENTS

Video adjustments to your Innovation 450*i* are divided into two categories; those that affect the dish (satellite adjust) and those that affect channel tuning (channel adjust).

Satellite Adjustments

1.   At the "Main Menu", press **[4]** to enter the "satellite adjust" menu.

| MENU | 4 |

2. To activate the AutoPeak circuitry for both dish position and skew press **[4]**. To activate individual AutoPeak functions or change settings press the number of the item to be changed.

    | 1 | ◀▶ to change dish position

    | 2 | AutoPeak dish

    | 3 | AutoPeak skew

    | 4 | AutoPeak dish position and skew

    | 5 | ▲▼ to change the skew settings

    | ENTER | (Password if required) to save changes

    > NOTE: When using AutoPeak, the Innovation 450*i* will tune for the strongest signal. Terrestrial Interference in your area (telephone, microwave signals, etc.) could cause the unit to seek a satellite other than the one you wish to AutoPeak. Using the TI Filter may or may not alleviate this problem. If it does not, you may wish to perform the peaking adjustments for that satellite manually.

```
    MAIN MENU

1 TIMER & CLOCK

  CHN    ADJUSTMENTS    1

1 FINETUNE         0.00MHZ
2 FILTER             27MHZ
3 VIDEO ATTEN          OFF
4 AUDIO ADJUSTMENTS
5 GO TO PRESET CHN

USE 1-5 ENTER
```

Channel Adjustments

1. To make channel adjustments at the "Main Menu" press **[3]**.

    | MENU | | 3 |

2. To change any of the settings, press the number of the item to be changed:

    | 1 | ▲▼ to fine tune video.   ◀▶ = 1 MHz steps.

    ▲▼ = .25 MHz steps.

    | 2 | ▲▼ to turn the TI filter on or off.

    | 3 | ▲▼ to turn the video attenuator on or off.

    | 4 | See page 20 for audio adjustments.

    > NOTE: Turning on the video attenuator may improve the picture on some signals such as found on K2.

    | 5 | To restore the channel to factory presets (set fine tuning to 0.00 MHz, TI to off, etc.).

Video Adjustments (Directly from the Remote Control)

Once you've programmed your system and have become familiar with its operation, you may wish to go back and fine-tune some of the channels. There are several fine-tuning adjustments of which you will want to be aware.
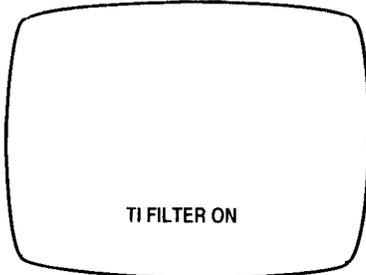
TI Filter (Directly from the Remote Control)

If your picture contains "sparklies," activate the TI Filter by pressing the **[TI]** key. (**NOTE:** Sometimes you'll receive a better picture with the TI Filter off.) The TI Filter setting for a specific satellite or channel can be entered into memory so that it becomes unnecessary to activate it every time you tune to that satellite or channel.

| TI |

Video Fine Tune (Directly from the Remote Control)

You may fine tune the video signal at any time while watching satellite programming. Press and hold the **[DOWN/UP]** keys until you get the best picture. (You may wish to try this with the TI Filter on and then off).

▲
▼
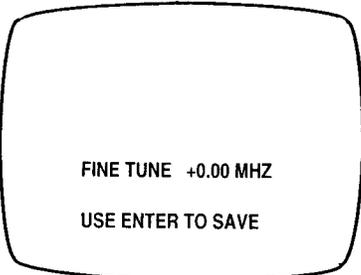
> NOTE: Video Fine Tune and Dish Fine Tune by use of the arrow keys may be parental password protected in the viewer preferences menu.

Dish Fine Tune

If you wish to move your dish slightly in either direction while watching satellite programming, press the **[EAST/WEST]** keys on your remote. You will be limited to 16 pulse counts in either direction. If greater movement is required, you must use the "Program Satellite Menu" on page 44.

◄►

TI FILTER ON

FINE TUNE   +0.00 MHZ

USE ENTER TO SAVE

FINE TUNE DISH
ANTENNA 5002
OFFSET   0

USE ENTER TO SAVE
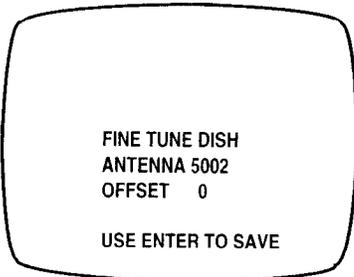
Audio Adjustments

> NOTE: The Innovation 450*i* is pre-programmed with all the proper audio settings for over 200 of the most popular channels. The "Audio Tuning" procedure detailed here is necessary only if you are watching a channel that is not already pre-programmed, or if you wish to change the pre-programmed audio settings to your own preference.

```
        MAIN MENU
1 TIMER & CLOCK

    AUDIO ADJUSTMENTS

1 GO TO PRESET AUDIO
2 MODE VCRS  →  MONO
3 BANDWIDTH NARROW
4 AUDIO A 6.80MHZ

USE 1-4  ENTER
```

1. To enter or change audio settings for the channel, press **[MENU]**, **[3]**, then **[4]**.

    | MENU | 3 | 4 |

2. After the "Audio Adjustment" screen appears, press **[2]** and the **[DOWN/UP]** keys to select between mono and VideoCipher audio (see your satellite guide for the proper audio settings for a channel).

    | 2 | ▲▼

    When setting the audio mode on line 2, your Innovation 450*i* can be set for "auto switching" between Digital Stereo or monaural subcarrier audio. For Example: The Innovation 450*i* can be set to provide digital stereo sound when available, or automatically switch over to the monaural mode if digital stereo is not present. The chart to the left shows the "auto switching" combination available on the Innovation 450*i*. When the "auto switching" combination is chosen, a small arrow will appear on line 2 between the audio and the alternate mono audio mode, depending upon which type of audio signal is present. The arrow changes directions to indicate which you are listening to. If VCRS audio is available, you may manually switch between the audio signal and the alternate signal by pressing the **[LEFT/RIGHT]** arrow keys.

"Auto Switching"	
First Priority	Second Priority
VCRS Digital Stereo	Mono

3. To select the proper bandwidth (either wide or narrow), press **[3]** and the **[UP]** key. See your satellite guide for the proper bandwidth setting. (Not applicable to VideoCipher digital stereo signals.)

    | 3 | ▲

4. To adjust the audio subcarrier, press **[4]** and the **[DOWN/UP]** arrow keys to tune in the audio signal.

    | 4 | ▲▼

    Adjust line 4 to the subcarrier frequencies shown in your satellite guide or to personal preference.

5. To restore the channel to factory presets, press **[1]**. When you have finished all setting changes, press **[ENTER]** to store in memory.

    | ENTER |

```
   DATA NOT SAVED
   MEMORY IS FULL
```

> NOTE: Make changes to audio adjustments sparingly in order to conserve memory space in the Innovation 450*i*. If you should get a "MEMORY IS FULL" message, go to preset audio by pressing **[1]** at the audio adjustments menu. This will clear an old audio record so a new record is made available.

FAVORITE CHANNELS

To make daily use of your receiver easy, we've equipped the Innovation 450*i* with a favorite channel system which allows you to save your top 10 audio or video channels for easy access via the **[FAV]** key.
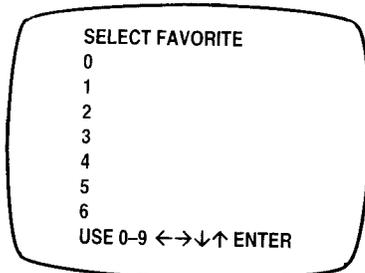
Saving Favorite Video Channels

1. To save a favorite video channel, first tune to the satellite and channel to be stored by using the **[SAT]** and channel **[DOWN/UP]** keys. Then press **[FAV]** on your remote control to access the favorite channel menu.

```
SELECT FAVORITE
0
1
2
3
4
5
6
USE 0-9 ←→↓↑ ENTER
```

```
[SAT]   ▲   [FAV]
        ▼
```

2. Select a slot for your new favorite by using the **[DOWN/UP]** arrow keys and then press the **[RIGHT]** arrow key to present the "Enter Favorite Name" menu (shown at left). If you have stored a parental lock password (see page 23), you will be asked to enter your password prior to storing a favorite audio channel.

```
ENTER FAVORITE NAME

0  ▌▌▌▌▌    G1-07
ABCDEFGHIJKLMNOPQRST
UVWXYZ0123456789-'.

USER ←→↓↑ ENTER
```

> NOTE: If there is already a Favorite Channel stored, you will be asked whether or not you want to replace it before storing a new one.

3. Use the **[LEFT/RIGHT, DOWN/UP]** arrow keys to program a name for your favorite audio channel. Press the **[ENTER]** key when done creating a name.

Saving Favorite Audio Channels

1. To save a favorite audio channel, first tune to the satellite and channel to be saved by using the **[SAT]** and channel **[DOWN/UP]** keys. Then tune to the desired audio using the "Audio Adjustments" menu (see page 20). After tuning to the audio you want to save as a favorite channel, press **[FAV]** on your remote control to access the favorite channel menu.

> NOTE: After tuning the audio in "Audio Adjustments," press cancel to exit the menu and avoid saving the favorite audio settings tuned as the default audio for the channel you are on.

2. Select a slot for your new favorite by using the **[DOWN/UP]** arrow keys and then press the **[RIGHT]** arrow key to present the "Enter Favorite Name" menu. If you have stored a parental lock password (see page 23), you will be asked to enter your password prior to storing a favorite audio channel.

3. Use the **[LEFT/RIGHT, DOWN/UP]** arrow keys to program a name for your favorite audio channel. Press **[ENTER]** key when done creating a name.

Selecting Favorite Audio or Video Channels

1. To select a favorite audio or video channel that you have saved, press **[FAV]** on the remote control and use the **[DOWN/UP]** keys to select the favorite channel desired. Then press **[ENTER]** and the dish will move to the correct satellite, channel, and audio settings for the favorite selected.

```
 _____
|                           |
|   ERASE FAVORITE          |
|                           |
|   0 CNN          G1–07     |
|                           |
|   USE CANCEL TO KEEP      |
|   USE ENTER TO ERASE      |
|_____|
```
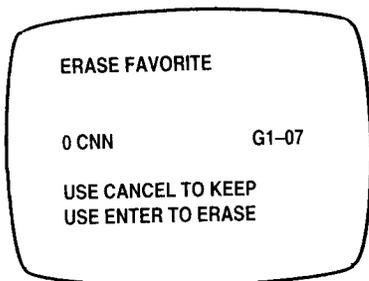
Removing Favorite Audio or Video Channels

1. To remove a favorite audio or video channel, press **[FAV]** on the remote control and use the **[DOWN/UP]** arrow keys to select the favorite channel to be removed. Press **[LEFT]** arrow key and an OSD (shown at left) will ask if you want to erase the favorite selected.

2. To erase the old favorite channel, press **[ENTER].** To stop from erasing the old favorite, press **[CANCEL].**

> NOTE: If a Parental Password has been set, you will be asked to enter the password prior to erasing a favorite channel.

PARENTAL CONTROL

To provide you with control over the types of programs your family watches, your Innovation 450*i* offers two methods for locking out satellites and channels.

The Rating Ceiling (For VCRS)

The Rating Ceiling method applies only to VCRS channels. You can prevent the viewing of all VCRS channel programs rated above the level that you set. Details for this procedure can be found in the section on VCRS channels, see page 31.

Regular Channels and VCRS Channels

For regular channels and VCRS channels the second method of Parental Control provides complete satellite or channel lockout and may be used on both VCRS and unscrambled channels.

Setting a Parental Control Password

Press **[MENU]**, **[2]**, and then **[6]**. Enter a password (up to eight digits) and then press **[ENTER]**. (Must enter a second time for verification.) Write this number down in a safe place.

| MENU | 2 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | ENTER |

Password

Locking out a Satellite

At the "Parental Control" menu, you will need to select a satellite **[1]** (use arrow keys to select satellite) then press **[ENTER]** to return to the "Parental Control" menu. Press **[2]** then the **[UP]** key to lock the satellite and **[ENTER]** to save.

| 1 | ◆ | ENTER | 2 | ▲ | ENTER |

Locking a Channel

To lock a channel on the satellite you are viewing, press **[3]** and the **[UP]** key followed by **[ENTER]** to save. If you wish to lock a channel on another satellite, follow the procedure above for locking a satellite but select the channel using the channel **[DOWN/UP]** key while you are in the satellite menu.

| 3 | ▲ | ENTER | or | 1 | ◆ | [CH ▲▼] | ENTER | 3 | ▲ | ENTER |

To Unlock Channels

1. Tune to the channel you wish to unlock via Direct Access. Enter your password and the channel will be temporarily unlocked for viewing. To re-activate the lock, simply change the channel.

2. To remove a lock, select the channel to be unlocked via Direct Access. Enter your password. Press **[MENU]** and **[2]**, then enter your password again. At the "Parental Control" menu, press **[3]** then the **[UP]** key to unlock the channel. Press **[ENTER]** to leave the menu.

MENU   2

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | ENTER | 3 | ▲ | ENTER |

Password

G1 14

MAIN MENU
1 TIMER & CLOCK

PARENTAL CONTROL   1

1 SELECT SATELLITE

ENTER PARENTAL
CONTROL
PASSWORD (- - - - - - - -)

USE 0 - 9 ENTER

ENTER PARENTAL
CONTROL
PASSWORD (- - - - - - - -)

USE 0 - 9 ENTER

ENTER PARENTAL
CONTROL

MAIN MENU
1 TIMER & CLOCK

ENTER PARENTAL
CONTROL

PARENTAL CONTROL   1
1 SELECT SATELLITE
2 SAT F1   UNLOCKED
3 CHANNEL   UNLOCKED
4 PC SYSTEM   ENABLED
5 ERASE ALL PC LOCKS
6 SET PC PASSWORD

USE 1-6 ↓↑ ENTER

```
     PARENTAL CONTROL
  1 SELECT SATELLITE

        ** CAUTION ! **

        THIS WILL ERASE
      ALL PARENTAL LOCKS!

       USE CANCEL TO STOP

       USE ENTER TO ERASE
```

Temporary Removal of Locks
To override channel locks temporarily, go to the "Parental Control" menu, select your channel, then press **[4]**, then the **[UP]** key to disable, then press **[ENTER]**. You may now select any locked out channel via Direct Access. Using the channel up or channel down key will skip the "locked" channel. To re-activate locks, repeat sequence.

| MENU | | 2 | | 4 | ▲ | ENTER |

Erasing All Locks
All channel locks can be erased quickly and easily. Go to the "Parental Control" menu and press **[5]**. Press **[ENTER]** to erase all locks, or press **[CANCEL]** to stop this action without erasing the locks

| MENU | | 4 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | ENTER | | 5 | | ENTER | or | CANCEL |
Password

```
     VIEWER PREFERENCES

  1 CLOCK DISPLAY       ON
  2 VOLUME DISPLAY      ON
  3 CH TUNING           STEP
  4 PSWD TO
    SAVE DATA           ON

  USE 1-4
```
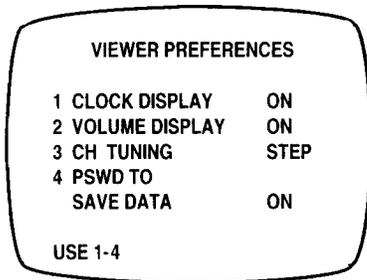
VIEWER PREFERENCES
After you've gained some experience in using your satellite system, you may decide to change some of the displays that appear on your TV screen.

Changing On Screen Displays (OSD)
You may turn on or off many of the On Screen Displays. Press **[MENU]** and then **[5]**. At the "Control Options" menu, press the number for the display you wish to change.

1. Press **[1]** then the **[UP]** key to turn on or off the clock display.

2. Press **[2]** then the **[UP]** key to turn on or off the volume display.

3. Press **[3]** then the **[UP]** key to set the Innovation 450*i* to display **(STEP)** every channel on a satellite or alternate **(ALT)** all odd, followed by all even, to reduce wear on the polarizer.

   When you have finished with your changes, press **[ENTER]**.

   | ENTER |

PASSWORD OPTION FOR SAVING DATA
Some changes to unit settings may be made quickly without resorting to menus (video fine tune, dish fine tune, etc.). You may elect to require a Parental Control password to complete a permanent save of the change.

Press **[MENU]** and then **[5]** followed by **[4]**. Enter your Parental Control password followed by the **[UP]** key to turn the password option on or off.

| MENU | | 5 | | 4 |

| 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | ENTER | ▲
Password
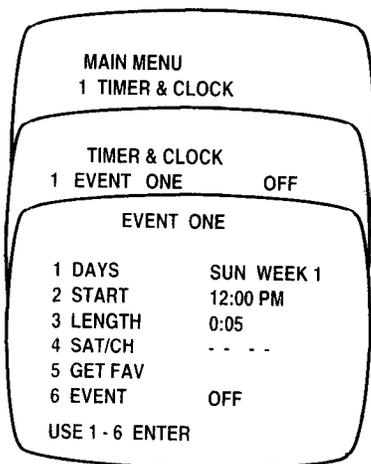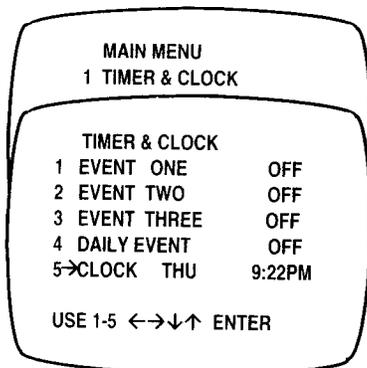
TIMER FUNCTIONS

Your Innovation 450*i* features a built-in automatic timer which can be set to tune in one of your favorite daily programs and three special events up to two weeks in advance. The timer will automatically turn on your receiver, move the dish to the proper satellite, and tune in and adjust the channel to pre-programmed settings. Among other uses, this allows you to record programs with your VCR while you are away from home.

Setting the Clock

Before the timer can be set for the programs you wish to view or record, it is necessary to set the Innovation 450*i*'s internal clock.

1. Press **[MENU]** and then **[1]**. Press **[5]** and then use the **[LEFT/RIGHT, DOWN/ UP]** arrow keys to set the day and time. Press **[ENTER]**. The clock is set.

```
ENTER    1    5   ◄◆►   ENTER
```

Setting an Event Timer

1. To enter a special event, press **[MENU]** and **[1]**, then press **[1]** (for the first event, **[2]** for the second event, etc.). Press **[1]** again and then the **[UP]** key to select the day and week that the event occurs.

```
MENU    1    1    1   ▲
```

2. Press **[2]** and then the **[DOWN/UP]** arrow keys to set the program's starting time. (Timer operates in 5-minute increments.)

3. Use **[3]** and the **[DOWN/UP]** arrow keys to enter the program's length (in 5 minute increments up to eight hours in length).

> NOTE: Use **[LEFT/RIGHT]** arrows to rapidly change hours.

4. Press **[4]** and then the **[LEFT/RIGHT]** arrow keys to enter the satellite, then press the channel **[DOWN/UP]** key to select the channel. Press **[ENTER]** to return to the timer menu.

5. An optional method for selecting the satellite and channel on line 4 uses your pre-programmed favorites. Press **[5]** and the **[DOWN/UP]** arrow keys to search your favorite listing. Pressing **[ENTER]** in favorite menu will return you to the timer menu with the satellite and channel from your favorite selection automatically entered on line 4.

> IMPORTANT! Make certain that event is SET on line 6 and then press **[ENTER]** or timer will not function.

To set other events, repeat the above steps.

> NOTE: Should you desire to record a channel while you and your family are away and that channel has been locked out, it will be necessary to enter your Parental Control password.

MAIN MENU
1 TIMER & CLOCK

TIMER & CLOCK
1 EVENT ONE   OFF
2 EVENT TWO   OFF
3 EVENT THREE   OFF
4 DAILY EVENT   OFF
5→CLOCK   THU   9:22PM

USE 1-5 ←→↓↑ ENTER

MAIN MENU
1 TIMER & CLOCK

TIMER & CLOCK
1 EVENT ONE   OFF

EVENT ONE

1 DAYS   SUN WEEK 1
2 START   12:00 PM
3 LENGTH   0:05
4 SAT/CH   - - - -
5 GET FAV
6 EVENT   OFF

USE 1 - 6 ENTER

TIMER EVENT SAVED

PRESS ANY KEY

25

```
        DAILY EVENT
                  MTWTF SS
  1 DAYS          ----- --
  2 START         12:00PM
  3 LENGTH        0:05
  4 SAT           -- --
  5 GET FAV
  6 EVENT         OFF

     USE 1-6 ENTER
```

```
     TIMER EVENT SAVED
```

Setting the Daily Timer
To set your system to tune in the same program every day that it is broadcast:

1. Press **[MENU]** and then **[1]**, then press **[4]**. After the "Daily Event" menu appea press **[1]**. Using the **[LEFT/RIGHT]** arrow keys, select the day of the week. Pr the **[DOWN/UP]** arrow keys to activate that day, a star (✱) should appear unde that day. To set the same program for more than one day, repeat the process. star (✱) should appear under each day of the week you have selected.

    | MENU | 1 | 4 | 1 | ◀ ▶ ▲ ▼

2. Press **[2]** and then the **[LEFT/RIGHT,DOWN/UP]** arrow keys to set the progran starting time.

3. Use **[3]** and then the **[LEFT/RIGHT,DOWN/UP]** arrow keys to enter the program's length.

4. Press **[4]** and then the **[LEFT/RIGHT,DOWN/UP]** arrow keys to enter the satellite, then press the channel **[DOWN /UP]** key to select the channel. Press **[ENTER]** to return to the timer menu.

5. An optional method for selecting the satellite and channel on line 4 uses your pre-programmed favorites. Press **[5]** and the **[DOWN/UP]** arrow keys to searcr your favorite listing. Pressing **[ENTER]** in favorite menu will return you to the timer menu with the satellite and channel from your favorite selection automatically entered on line 4.

> IMPORTANT! Make certain that the event is SET on line 6 (press **[6]** and the **[UP]** key) and then press **[ENTER]** or the timer will not function.

To shut the daily timer off while you are on vacation, press **[MENU]** and then **[1]**. Press **[4]** then **[6]**, then press the **[UP]** key to shut the timer off, then press **[ENTER]**. Repeat to re-activate daily timer.

6. Press **[VIEW]** to return to your programming.

> IMPORTANT NOTE: When you have entered an event in the timer, the Innovation 450*i* will alert you two minutes before a program starts. After the alert, the dish will begin moving to the satellite and channel you have se- lected. The timer LED on the front panel will blink during an event.

To Cancel Timer
1. To cancel the timer, press **[MENU]** and **[1]**, enter the number of the event to b cancelled and then press **[6]**. Use the **[UP]** key to turn off the event (line 6), th press **[ENTER]** to cancel the event.

    | MENU | 1 | # | 6 | ▲ | ENTER |
          no. of event
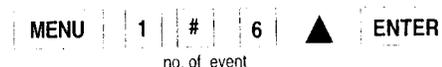
2. To cancel a timer event after it has started, press the **[TIMER]** key on the front panel of your Innovation 450*i*.

    | TIMER |

■ VideoCipher Module Operation

```
INSTALLATION DATA
VIDEOCIPHER RS DESCRAMBLER
1) UNIT ID:        040X-XXXX-XXXX
2) PHONE ID:  0100-0060-2577-7516
3)
4) VERSION: MODULE 1.0
5) IRD  S: SUBSCRIBED
6) VIDEOPAL NOT ENABLED
7) PROVIDER ID              153
8) SIGNAL QUALITY           100
9) TRIP COUNTER               1
10) MESSAGE RATE             10
11) CATEGORY          CO-4F
12) LOCATION          SET
          (PRESS VIEW TO EXIT)
```

MODULE AUTHORIZATION

1. Press **[SETUP]** and **[1]** and **[1]**. The Unit ID will appear in two formats on the screen (shown below) in lines number 1 and 2. Please write the numbers down in the spaces provided:
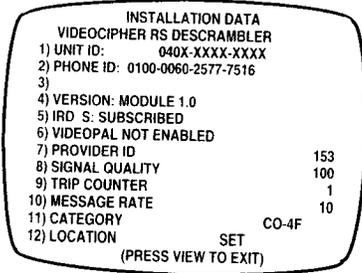
   | SETUP | | 1 | | 1 |

   Unit ID: __ __ __ __ . __ __ __ __ . __ __ __ __

   Phone ID: __ __ __ __ . __ __ __ __ . __ __ __ __ . __ __ __ __

   These lines contain your unique unit identification numbers (which will differ from those shown above) and are used by your program providers to authorize you for subscription program reception.

2. The installation data will also show Signal Quality on line 8. This should read greater than 60. If this signal reads less than 60, you may experience difficulty authorizing the module. Adjusting dish alignment, receiver video fine tuning, and/or skew may help to increase the Signal Quality received by the module. Press **[VIEW]** to leave this screen and resume normal viewing.

Subscription Services Transfer: New or Existing

3. If your new IRD is replacing an old module, call the programmer(s) who provided subscription services for your old module. This is necessary to transfer your subscription programs to your new module. Programmers may ask for the Unit ID that appears on some billing statement, or on the back of your older module, and other billing information.

   > NOTE: The Unit ID is sometimes referred to as the Unit Address, or UA.

4. After initiating or transferring services, leave the receiver or IRD tuned to a VideoCipher scrambled channel until the module receives authorization and you are able to view the programs you ordered. If you press the **[SETUP]**, **[1]**, **[1]** after authorization and view the screen again, you will notice that your trip counter number has increased.

OPERATION: ON-SCREEN DISPLAYS AND DESCRIPTIONS

Once your module has received subscription authorization, you may want to take the time to become familiar with the many different features, capabilities, and on-screen displays (OSDs) that your VCRS module can produce and what purposes they serve. Your on-screen displays allow you to: 1) see how well your system is functioning on VideoCipher channels; 2) receive important messages from your programmer; 3) limit access to programs with mature subject material; or 4) to use the Instant Pay-Per-View features of your module.

> NOTE: These on-screen displays are visible only on VideoCipher channels.

The Setup Screen
Available Services Menu

The first screen you see after you press the **[SETUP]** button on your remote control or on the IRD front panel, is "Available Services Menu". This menu simply allows you to choose the next screen you want to see from four available choices. **If you wish to return to normal television viewing at any time, press [VIEW].**

```
       AVAILABLE SERVICES MENU

  1.  UNIT SETUP
  2.  PERSONAL MESSAGES
  3.  VIDEOCIPHER AUDIO/VIDEO
  4.  SYSTEM INFORMATION SERVICE
        PRESS 1 - 4, OR VIEW
```

The Setup 1 Screen
VideoCipher Unit Setup

Pressing the **[SETUP]** and **[1]** buttons on your remote, or on the front of your descrambler, will allow you to view the VideoCipher Unit Setup screen. This screen contains eight different choices. Choices 1 through 4 are used for normal operation of the module, while choices 5 through 8 relate to pay-per-view operation. Press **[VIEW]** to leave this screen and resume normal viewing.

```
       VIDEOCIPHER UNIT SETUP
  1.  INSTALLATION DATA
  2.  AUDIO SELECTION
  3.  RATING CEILING
  4.  RATING PASSWORD
  5.  PURCHASE PASSWORD
  6.  PURCHASE HISTORY
  7.  CREDIT INFORMATION
  8.  REPORTBACK STATUS
  12-MAY-92      2:00 PM
        PRESS 1 - 8, OR VIEW
```

```
  SETUP     1
```

Setup 2
Personal Messages

Pressing **[SETUP]** and **[2]**, or the message key on your remote, will allow you to view the Personal Messages screen. Unless your programmer has sent you a message, this screen will read "No Personal Messages". Press **[HELP]** for additional information on the Personal Messages screen. Press **[VIEW]** to leave this screen and return to normal viewing.

> NOTE: Your VCRS module cannot be disabled from receiving messages. Read messages (to remove the blinking message indicator) by pushing the **[MESSAGE]** key. Press **[VIEW]** to leave this screen and resume normal viewing.

Setup 3
VideoCipher Audio/Video

Pressing **[SETUP]** and **[3]** will allow you to view the programming currently offere on the VideoCipher channel that you have selected. Selecting **[VIEW]** is the sam as pressing **[SETUP]**, **[3]**.

```
  SETUP     3
```

· ·

Setup 4
System Information Service

Pressing **[SETUP]** and **[4]** will allow you to view the Systems Information Services screen. This screen is intended for broadcast text messages and will be headed by the title VideoCipher Text Service. This text service is broadcast at the programmer's option and may not be available on many channels. Press **[HELP]** for further information on the Systems Information Services screen. Press **[VIEW]** to leave this screen and return to normal viewing.
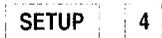
| SETUP | 4 |

Other Module Functions

In addition to the **[SETUP]** key functions, your VCRS module also offers some other key inputs. They are listed below:

HELP
This key provides any additional information available for the screen you are viewing.
MESG
This key allows you to view any personal messages you may have.
NEXT
This key allows you to see information about the next program being broadcast on the channel you are viewing. This information is transmitted at the programmer's option.
VIEW
This key allows you to see information about the current program. This may include the program name and how much time is left in the program. In addition, it returns you to normal viewing from any other on-screen display. The information displayed disappears after 5 seconds if the key is not pressed again.

> NOTE: Not all programmers broadcast **[VIEW]** or **[NEXT]** information.

The VideoCipher Unit Setup screen contains many important diagnostic items. Let's review them one at a time.

Diagnostic Screens

```
        INSTALLATION DATA
     VIDEOCIPHER RS DESCRAMBLER
 1) UNIT ID:        040X-XXXX-XXXX
 2) PHONE ID: 0100-0060-2577-7516
 3)
 4) VERSION: MODULE 1.0
 5) IRD S: SUBSCRIBED
 6) VIDEOPAL NOT ENABLED
 7) PROVIDER ID              153
 8) SIGNAL QUALITY           100
 9) TRIP COUNTER               1
10) MESSAGE RATE              10
11) CATEGORY           CO-4F
12) LOCATION                 SET
          (PRESS VIEW TO EXIT)
```

The Setup 1 and 1 Screen
#### Checking The Unit Status

When you press **[SETUP]**, **[1]** and **[1]** you will see the Installation Data screen. This screen provides information about unit and system operation. Press **[HELP]** for additional information on the Installation Data screen. Press **[VIEW]** to leave this screen and continue normal viewing, or press **[ENTER]** to return to the Setup menu.

| SETUP | 1 | 1 |

```
         INSTALLATION DATA
     VIDEOCIPHER RS DESCRAMBLER
  1) UNIT ID:        040X-XXXX-XXXX
  2) PHONE ID: 0100-0060-2577-7516
  3)
  4) VERSION: MODULE 1.0
  5) IRD  S: SUBSCRIBED
  6) VIDEOPAL NOT ENABLED
  7) PROVIDER ID                153
  8) SIGNAL QUALITY             100
  9) TRIP COUNTER                 1
 10) MESSAGE RATE                10
 11) CATEGORY            CO-4F
 12) LOCATION                   SET
         (PRESS VIEW TO EXIT)
```
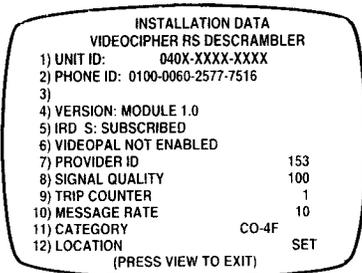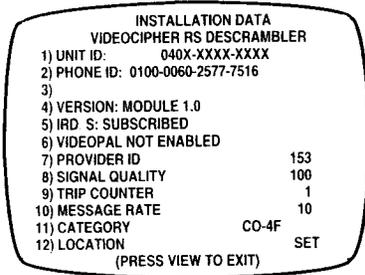
Lines 1 and **2** contain your unique unit identification number, used by the programmer to authorize you for subscription programming.

Line 3 will be blank unless the VideoCipher RS replaceable security element, the TvPass Card, is installed. It will then display a TvPassCard ID number.

Line 4 tells you what version of module and TvPass Card is in your system.

> NOTE: The numbers shown on your screen will be different from the ones shown above. The TvPass Card version will only show up if one is installed.

Line 5 tells you the scrambling status of the VideoCipher channel to which you are currently tuned. Refer to the table below for possible displays.

MODEL TYPE	SCRAMBLING STATUS	AUTHORIZATION STATUS
DES = Module inserted into a standalone descrambler	F = Fixed Key	Subscribed
IRD = Module inserted into an integrated receiver descrambler	P = Processed, Unscrambled	Purchased
	S = Scrambled	Not Subscribed

Line 6 shows if your new module has been authorized for instant pay-per-view operation. This line will read, "VIDEOpal enabled' if the module is authorized for instant pay-per-view (see page 35 of this manual to authorize your built-in VIDEOpal Order Recorder).

Line 7 contains the unique Programer ID code for each channel.

Line 8 is your Signal Quality. The maximum Signal Quality is 100. As noted earlier in the Authorization section of this manual, if this number is less than 60, you may have difficulty authorizing the module and your satellite system is possibly in need of tuning or maintenance to operate properly.

Line 9 shows how many authorization change requests your module has received since you turned to this screen.

Line 10 shows if your module is receiving a clear signal from your satellite dish. The clearest signal will be a 10.

Line 11 shows if your system has received its monthly authorization update from the programmer. These numbers should be the same on all working descramblers, and will change on a monthly basis. Your programmer may ask about these characters should you have trouble gaining access to programming.

Line 12 shows that the programmer has your unit identification number stored properly enabling you to receive the programming available in your area.

The Setup 1 and 2 Screen
Checking The Unit Settings
When you press **[SETUP]**, **[1]** and **[2]** you will see the Audio Selection screen.

SETUP   1   2

Current Audio Selection
This feature allows setting the audio on scrambled channels to either ***Primary*** or ***Alternate***. The normal setting will be ***Primary***. Scrambled channels may or may not broadcast an ***Alternate*** audio feed. Pressing **[1]** will change the module setting to ***Alternate***. (Alternate could be a second language transmission.) Press **[VIEW]** at any time to resume normal viewing.

UNIT SETTINGS
CURRENT AUDIO SELECTION IS
PRIMARY
PRESS 1 FOR ALTERNATE AUDIO
(PRESS 1, 2, OR ENTER)

The Setup 1 and 3 Screen
Setting The Rating Ceiling
Pressing **[SETUP]**, **[1]** and **[3]** reveals the Set Rating Ceiling screen. For example, if you set your Rating Ceiling at "PG-13", your module will require a password (if one has been set) before allowing viewing access of any movies with "R" or "X" ratings. You cannot, however, lockout shows with a "G" rating or non-rating, "NR". Refer to the guide below for a complete list of movie ratings.

SET RATING CEILING

PROGRAM RATING: NR
RATING CEILING: R

(PRESS ←, →, OR ENTER)

MOVIE RATINGS GUIDE
 NONE - No Rating
 G - General Audiences
 PG - Parental Guidance Suggested
 PG13 - Parental Guidance for Children Under 13
 R - Restricted
 NR - Not Rated; Used for Non-Rated Adult Programming
 NC17 - No Children 17 or Under
 X - Adult, No One Under 18

SETUP   1   3

The Program Rating line shows the rating the current program carries. An "NR" on this line indicates the program being viewed is not rated by the Motion Picture Association of America (MPAA). The Rating Ceiling line indicates the highest rating the module will allow to be viewed. To set the level, press the left or right arrow keys until the rating ceiling reaches the desired level. If you wish to insure that no programs are locked out due to Rating Ceiling, this setting should remain at "X". Remember, you must press **[ENTER]** to save the changes and it is advisable to set a password, as described below, to enforce this rating level. Press **[HELP]** for additional information on the Set Rating Ceiling screen. Press **[VIEW]** to return to normal viewing.

```
    SET RATING PASSWORD

  ENTER THE NEW PROGRAM
  RATING PASSWORD (0 TO 8
  DIGITS, FOLLOWED BY ENTER).
```
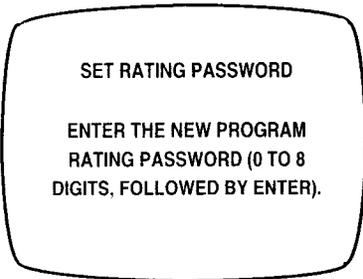
The Setup 1 and 4 Screen
Setting A Rating Password
Pressing **[SETUP]**, **[1]** and **[4]** allows you to establish a Rating Password. This screen will allow putting a password into place so that the Rating Ceiling can only be changed by you.

| SETUP | | 1 | | 3 |
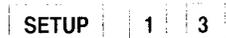
To Set A Rating Password
Choose an easy to remember number (a birth date, etc.). Enter up to 8 characters (the screen will show one * for each number pressed) and press **[ENTER]**. The module will ask you to enter your password again for confirmation. Enter the same numbers, followed by **[ENTER]**. Your new Rating Ceiling Password will be stored. If you make a mistake, use the left arrow key to erase the entry. If you decide to change your Rating Ceiling (**[SETUP]**, **[1]** and **[3]**), the module will ask you to enter the existing Rating Password. After the password has been entered, you can change your Rating Ceiling as described above. Press **[HELP]** for further information on the Set Rating Password screen. Press **[VIEW]** to leave this screen and resume normal viewing.

To Remove A Rating Password
Press **[SETUP]**, **[1]** and **[4]** to re-enter the Password screen. Next, enter the existing password, then press **[ENTER]**. Now, press **[ENTER]** two more times to remove your Rating Ceiling Password. If you want to set a new password, follow the instructions above. Press **[VIEW]** to resume normal viewing.

THE TVPASS CARD
In the event of a VideoCipher II Plus security breach, programmers may decide to utilize the card authorization feature of the VCRS module. This feature consists of a TvPass Card, which is a plastic "smart card", about the size of an average credit card. This card will fit into the slot provided in the rear of the module, often found at the back of IRDs or descramblers.

If a TvPass Card is in use with this VCRS module, you will need to be aware of some additional OSDs. These OSDs are designed to inform you of satellite system problems relating to the installation and use of the TvPass Card. These displays will appear automatically on all VideoCipher Channels in the event of a problem with your TvPass Card.

> NOTE: These displays cannot be seen unless the TvPass Card replaceable security system is in use and you are tuned to a VideoCipher channel.

```
  PLEASE INSERT
  A TVPASS CARD
```
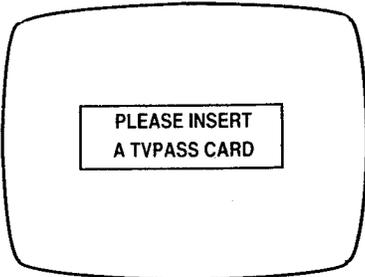
TvPass Card Not Installed
Explanation/Action
System security has been upgraded to a higher level, which now requires a TvPass Card.

1. Insert your TvPass Card into the VCRS descrambler via the opening in the module.

```
*TVPASS CARD INSTALLATION ERROR*
IT MAY:
        -BE INSERTED BACKWARDS
        -BE INSERTED UPSIDE DOWN
        -NOT BE A TVPASS CARD
REMOVE CARD, CHECK AND REINSERT.
IF CONDITION PERSISTS, CONTACT YOUR
        PROGRAM PROVIDER.
```
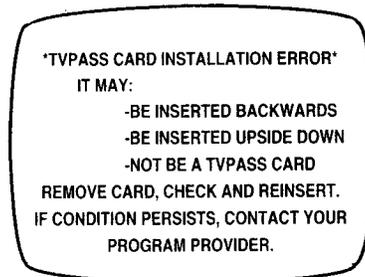
2. If this screen appears and you do not have a TvPass Card, contact your program provider.

TvPass Card Installation Error
The TvPass Card you are attempting to install is not working properly. Please make sure that its orientation is correct. Only General Instrument TvPass Cards will work in this VCRS descrambler. Contact your program provider if this problem persists.

```
THIS TVPASS CARD NEEDS ADDITIONAL
INFORMATION TO OPERATE.
WRITE THESE NUMBERS DOWN:
1) PHONE ID:  0020-1003-0100-0133
2) CARD ID:  5253-5741-6720-0333
LEAVE YOUR TVPASS CARD INSTALLED.
CONTACT YOUR PROGRAM PROVIDER.
STAY TUNED TO THIS CHANNEL.
```
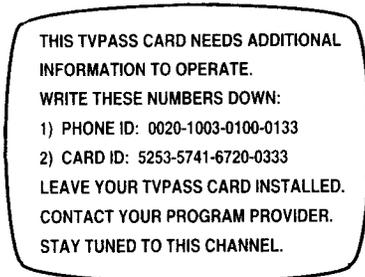
TvPass Card Needs Information
This TvPass Card needs additional information to operate. Write down the numbers appearing on **your** screen, leave your TvPass Card installed, stay tuned to this channel, and contact your program provider.

Phone ID: ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___

Card ID: ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___

```
THIS DESCRAMBLER DOES NOT HAVE
CURRENT AUTHORIZATION.
WRITE THESE NUMBERS DOWN:
1) PHONE ID:  0020-1003-0100-0133
2) CARD ID:  5253-5741-6720-0333
LEAVE YOUR TVPASS CARD INSTALLED.
CONTACT YOUR PROGRAM PROVIDER.
STAY TUNED TO THIS CHANNEL.
```
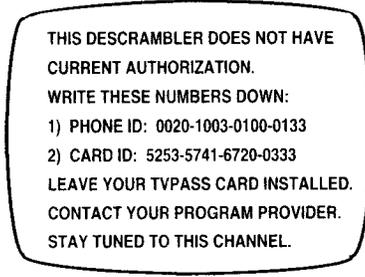
Descrambler Not Authorized
This descrambler is not currently authorized. Write down the numbers appearing on **your** screen, leave your TvPass Card installed, stay tuned to this channel, and contact your program provider.

Phone ID: ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___

Card ID: ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___ - ___ ___ ___ ___

```
        ***ERROR***
THIS TVPASS CARD WILL NOT WORK
WITH THIS DESCRAMBLER.
PLEASE REMOVE THE TVPASS CARD.
RETURN TVPASS CARD TO CORRECT
DESCRAMBLER.
```
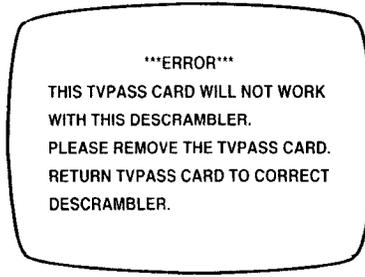
Wrong TvPass Card In Descrambler
This TvPass Card was authorized in a different VCRS-equipped IRD, and cannot be moved to this VCRS descrambler. You must return it to the original unit.

THE WORLD OF VIDEOPAL INSTANT PAY-PER-VIEW
Watch It Now!
With the VIDEOpal Order Recorder, pay-per-view movies, concerts, sporting events, etc., will be available for you to watch at home. There's no need to fight crowds at the event or closed circuit arena, no need to rent a videocassette (and then have to return it later), or wait until the program appears through other distribution channels. The VIDEOpal feature eliminates all the hassle and disappointment because ordering is instantaneous. And the VIDEOpal Order Recorder movies are *never* out of stock! After you've installed the VIDEOpal Order Recorder feature of your IRD, all you need to do to have your descrambler authorized for pay-per-view programming is call your pay-per-view billing service, or the Satellite Video Center (SVC) at:

> **THE SATELLITE VIDEO CENTER**
> **800-54-VIDEO**
> **(800-548-4336)**

Serving as a national clearinghouse for pay-per-view programmers, the Satellite Video Center and its customer service representatives will be glad to open an account in your name and initiate the electronic authorization process (there may be a one-time service charge to establish your account). After your account is established with a pay-per-view billing center or the Satellite Video Center, your favorite pay-per-view shows will be just a touch of a button away by using the remote control key pad of your IRD.

Look for this symbol in many satellite programming guides: . It indicates many of the pay-per-view programs you can enjoy with your VIDEOpal Order Recorder. The VIDEOpal Order Recorder automatically keeps track of the programs you have watched and then reports periodically (at no charge to your home telephone account) to the Satellite Video Center or to a pay-per-view billing center. The Satellite Video Center or the pay-per-view billing center will send you a billing statement for the months in which programs are ordered.

```
          INSTALLATION DATA
      VIDEOCIPHER RS DESCRAMBLER
 1) UNIT ID:        04XX-XXXX-XXXX
 2) PHONE ID: 0100-0060-2577-7516
 3)
 4) VERSION: MODULE 1.0
 5) IRD  S: SUBSCRIBED
 6) VIDEOPAL NOT ENABLED
 7) PROVIDER ID                153
 8) SIGNAL QUALITY             100
 9) TRIP COUNTER                 1
10) MESSAGE RATE                10
11) CATEGORY                 CO-4F
12) LOCATION                   SET
           (PRESS VIEW TO EXIT)
```

PAY-PER-VIEW AUTHORIZATION WITH THE SATELLITE VIDEO CENTER

To authorize your VCRS module for pay-per-view programming, please follow these simple steps:

1. Ensure proper connection of the module to the telephone system as explained in the installation instructions. It is necessary for the module to be connected to a live telephone line for pay-per-view authorization. It is suggested that you test this line by connecting a telephone to this line and placing a call. Be sure to reconnect the telephone line to the module before proceeding with authorization.

2. Tune to a VideoCipher scrambled channel and verify proper signal strength. Press **[SETUP]**, **[1]** and **[1]** to verify. The signal strength that appears on line 8 should read greater than 60. If this signal reads less than 60, you may experience difficulty authorizing the module. Adjusting dish alignment, receiver tuning, and/or skew may help to increase the module Signal Quality.

    | SETUP | | 1 | | 1 |

3. Call your pay-per-view program provider or the Satellite Video Center at 800-54-VIDEO (800-548-4336). A customer service representative will assist you in setting up an account to purchase pay-per-view. The module is authorized for pay-per-view when Line 6 reads "VIDEOpal enabled".

```
  SET PURCHASE PASSWORD
  ENTER THE NEW PROGRAM
PURCHASE PASSWORD (0 TO 8 DIGITS,
    FOLLOWED BY ENTER).

       PASSWORD:
```

```
   SET RATING PASSWORD
  ENTER THE OLD PROGRAM
   RATING PASSWORD (0 TO 8
 DIGITS, FOLLOWED BY ENTER).

       PASSWORD:
```

ON-SCREEN DISPLAYS AND DESCRIPTIONS
FOR PAY-PER-VIEW
The Setup 1 and 5 Screen
Setting/Changing Purchase Passwords

1. Press **[SETUP]**, **[1]** and **[5]** to establish a purchase password. This screen allows you to limit access to pay-per-view programming, by setting a security password for use with the module's internal VIDEOpal Order Recorder. For example, you may wish to prevent purchases by children or babysitters in your home. This feature is for customer convenience, but is not required to operate the instant pay-per-view feature. It is, however, strongly suggested that a password be used in order to prevent unauthorized pay-per-view purchases. Press **[HELP]** for further information on the Purchase Password screen. Press **[VIEW]** to leave this screen and resume normal viewing.

    | SETUP | | 1 | | 5 |

2. There are two types of passwords with this product. You may have already set a Rating Password, now you are going to set a Purchase Password. Choose an easy to remember number (such as an anniversary, etc.). Enter up to 8 characters (the screen will show one * for each number pressed) and then press **[ENTER]**. For confirmation, the module will ask you to enter your new password again. Enter the same numbers, followed by the **[ENTER]** key. Your new Purchase Password will be stored. If you then wish to make a purchase, you will be asked to enter the Purchase Password. Enter it as instructed above and you will be allowed to complete your purchase.

To Change A Purchase Password
Follow these simple steps:
Press the **[SETUP]**, **[1]** and **[5]** keys on the remote control.

Removing A Password
Press **[SETUP]**, **[1]** and **[5]** to re-enter the Password screen. Next, enter the existing password, then press **[ENTER]**. Now, press **[ENTER]** two more times to remove your Purchase Password. If you want to set a new password, follow the instructions at the top of this page. Press **[VIEW]** to resume normal viewing.

> NOTE: If you should forget your password, it may be necessary to call your pay-per-view program provider or the Satellite Video Center at 800-54-VIDEO. They will remove the forgotten password via satellite. This will reset the Purchase Password and the Rating Password, making it necessary to reset both. There may be a charge for a password reset.

```
┌──────────────────────────────┐
│                              │
│      PURCHASE HISTORY        │
│   9-SEP.-91   11:00PM  $3.99 │
│                              │
│                              │
│    "SHIPWRECKED" "PG"        │
│    ON ABC PAY-PER-VIEW       │
│                              │
└──────────────────────────────┘
```

**The Setup 1 and 6 Screens**
Purchase History
Pressing the **[SETUP]**, **[1]** and **[6]** buttons will allow you to view the Purchase History screen. This screen will allow you to review the 16 most recent programs purchased with your instant pay-per-view feature. Use the left and right arrow keys on your remote control to see all sixteen purchases. Press **[HELP]** for additional information on the Purchase History screen. Press **[VIEW]** to leave this screen and resume normal viewing. (If you have no purchase history, you will only view the Unit Setup screen.)

| SETUP | | 1 | | 6 |

```
┌──────────────────────────────┐
│                              │
│   CREDIT VERIFICATION:       │
│   F246 ODOB 94AB 3678 FB     │
│                              │
│   YOU HAVE ESTABLISHED AN    │
│        ACCOUNT TO            │
│   PURCHASE PROGRAMS.         │
│                              │
│      (PRESS ENTER)           │
│                              │
└──────────────────────────────┘
```

The Setup 1 and 7 Screens
*Credit Information*
Pressing **[SETUP]**, **[1]** and **[7]** will allow you to view the Credit Information screen. The Satellite Video Center (or another authorization center) may ask you to read this screen if the unit's instant pay-per-view services are interrupted. **The credit amount shown at the top of the screen does not represent dollars credited to the unit account—it is for administrative purposes only.** The last line indicates whether or not you have established an account to purchase programs with the Satellite Video Center. Press **[HELP]** for additional information on the Credit Information screen. Press **[VIEW]** to leave this screen and resume normal viewing. You will not be able to access this screen if you have not established VIDEOpal services.

| SETUP | | 1 | | 7 |

The Setup 1 and 8 Screens
Reportback Status
Pressing **[SETUP]**, **[1]** and **[8]** will allow you to view the Reportback Status screen. Periodically, the VIDEOpal Order Recorder will report through a toll-free (800) number, any instant pay-per-view purchases that have been made. This screen will display whether or not the last reportback attempt was successful. The screen should always read SUCCESSFUL. If this screen reads anything else, please check the telephone cable connection on the rear of the module and contact the Satellite Video Center at 800-54-VIDEO. Press **[HELP]** for additional information on the Reportback Status screen. Press **[VIEW]** to leave this screen and resume normal viewing.

```
┌──────────────────────────────┐
│                              │
│     REPORTBACK STATUS        │
│                              │
│  LAST CALL:  9-SEP-91  10:08PM│
│        SUCCESSFUL            │
│                              │
│      (PRESS ENTER)           │
│                              │
└──────────────────────────────┘
```

| SETUP | | 1 | | 8 |

Instant Pay-Per-View Operation
Once authorized by the Satellite Video Center, your module provides you with the ability to purchase pay-per-view services on satellite. Simply consult your program listings for available program services and follow the instructions below to enjoy VCRS pay-per-view programming.

Satellite Video Center Pay-Per-View Programs
The VIDEOpal built into the module allows purchase of the current program being offered on pay-per-view channels or the program coming up next after the current program ends.

```
PROGRAM TITLE

COST:
(+APPLICABLE TAXES)
TIME STARTS IN:

"ENTER"
```

Purchasing The Current Program

1. Tune the satellite receiver or IRD to the satellite and transponder (channel) of the pay-per-view program you wish to purchase. For a complete listing of pay-per-view movies and events, check your satellite program guide.

2. Press **[VIEW]** for purchasing information. This screen will display the name of the program, the amount of time remaining in the program (if it has already started), and the price of the program.

3. To order the program, press the **[ENTER]** key, enter the password (if there is one), then press **[ENTER]** again to confirm the order. *That's all it takes!*

| VIEW | ENTER | ENTER |

NOTE: Pay special attention to the time the program ends. Your account will be billed for the full program price regardless of how much of the program has elapsed before you order. Also, Rating Ceiling lockout applies prior to confirmation of purchase, if active.

NOTE: All programmers have the ability to prevent a late program purchase after some portion of the program has already elapsed. For example, if you should accidentally try to purchase a program after it has passed the halfway mark, you may see a message stating that you cannot purchase this program. This lockout feature, called the Purchase Window, is optional with each programmer who may or may not decide to use it.

```
PURCHASE NOT POSSIBLE


PROGRAM IS NEARLY OVER
AND IS NO LONGER AVAILABLE
FOR PURCHASES.
```

```
PROGRAM TITLE
RATING:    PG 13
COST:    4.95
(+APPLICABLE TAXES)
STARTS AT:    7:37AM
STARTS IN:    1:25:15
"PRESS ENTER TO PURCHASE
PROGRAM"
```

Puchasing The Next Program

1. To order the next program, tune the satellite receiver or IRD to the correct satellite and transponder (channel) and press **[NEXT]**. The screen will display information on the program title, cost, and the amount of time remaining before the next program begins. You may also consult a satellite guide for program availability.

2. The screen will prompt you to press **[ENTER]** to purchase the next program. Press **[ENTER]** if you wish to order the program, enter the purchase password (if there is one), and then press **[ENTER]** again to confirm the order. Keep your IRD turned on and wait for the start of the next program. You may buy only one show in advance.

| NEXT | ENTER | ENTER |

IMPORTANT: Cancelling The Program After Ordered
It is possible to cancel the NEXT program once it has been ordered. Should you decide **not** to view the program coming up next, simply change the channel. Or, you may also press **[NEXT]** and then **[ENTER]** at the "press ENTER to CANCEL" prompt **before** the program begins. Your account will not be billed for the purchase of the program if it is cancelled before it begins. It is not possible, however, to cancel the current program once it has been purchased and the program has begun.

■ VIDEOpal Order Recorder Troubleshooting

VIDEOPAL ORDER RECORDER TROUBLESHOOTING:
QUESTIONS AND ANSWERS

Q) What happens if the phone line to the VCRS system is accidentally unplugged?
A) If the unit should be disconnected from your home telephone system your pay-per-view programming services may be interrupted. If your service is discontinued, you must call the billing center or the Satellite Video Center for reauthorization.

Q) Will the VIDEOpal system interfere with my phone service?
A) Usually not. The VIDEOpal system is called upon to use your phone line when you are least likely to be using it. If you should pick up your receiver and hear a very unusual noise, it may be the VIDEOpal unit communicating with the Satellite Video Center's (or billing center's) computer at the other end. Please hang up and try your call again.

Q) Do I have to pay for the phone call?
A) The VIDEOpal Order Recorder calls in on a special toll-free (800) number so you shouldn't see the call on your monthly phone bill.

Q) How long do the calls last?
A) Typically, they last less than 15 seconds and they are usually made late at night when you are least likely to be using your telephone.

Q) Will the VIDEOpal system interfere with my telephone answering service or answering machine?
A) The VIDEOpal module is not equipped to receive phone calls, only make them. If your service or answering machine is not currently disturbed by outgoing calls, the VIDEOpal system should not cause any problems.

Q) I'm on a party line. What happens if my VIDEOpal unit tries to make a call and someone else is on the line?
A) The VIDEOpal will not work with party lines, or if you require an operator's assistance to make long distance calls.

Q) I have call forwarding/call waiting. Will the VIDEOpal system have any affect on it?
A) The VIDEOpal feature should not have any affect on these services.

Q) I sometimes unplug my phone at night. Will that affect the VIDEOpal system's ability to call out?
A) It is all right to unplug your phone, however, be certain to unplug it rather than leave the receiver off the hook. Leave the VIDEOpal unit plugged into the phone line at all times.

Q) What if I should happen to forget my password?
A) If you should forget your password, it will be necessary to call the Satellite Video Center (or your billing center). They will remove the password for you, **along with any other VCRS passwords.** (There may be a service charge for this.) You may then enter a new password if you wish. **NOTE:** The VIDEOpal password may be the same as your VCRS password.

Q) What if I should change channels while the event is taking place, and then tune back to the same channel? Will I be charged twice for the same program?

A) No. To clarify, you will not be charged again when returning to a purchased program, even if you purchased a second program before returning to the original.

Q) What if I purchase the NEXT program, but then don't watch it?

A) Your account won't be charged for any programming you order in advance if your receiver is tuned to a different channel before the next program starts.

Q) How far in advance may I order a program?

A) You may order only the program in progress or the next program available.

Q) My telephone sometimes chirps when the VIDEOpal Order Recorder is making a phone call. Is this normal?

A) There are two basic types of phone service your phone company may offer: Rotary/Pulse (mechanical dial) and Tone (push button). Many electronic push button telephones will work with Rotary/Pulse service by using the Pulse dialing method (after pressing the telephone's buttons you will hear a clicking sound in the receiver.) The VIDEOpal Order Recorder operates in the same manner as a Pulse telephone and may cause some telephones to chirp briefly when it makes a call. This will not interfere with your telephone service or your telephone.

Q) I cannot receive the channel. What do I do?

A) Operation of the VIDEOpal system is almost totally automatic and there are no adjustments necessary. If you should ever experience any difficulty using the VIDEOpal system, please refer to the following troubleshooting suggestions:

1) Check all connections and make sure that the power is ON to all components.

*2) Make certain that your satellite system is tuned to the correct satellite and channel. **NOTE:** Weather conditions and your geographical location may affect signal quality.*

3) Check a program guide to make certain that the program you're interested in is available for pay-per-view and can be ordered with the VIDEOpal system.

*4) Make certain your account is current (press **[SETUP]**, **[1]**, **[7]** for possible on-screen directions).*