

GI General
Instrument

Super 350i
Satellite
Receiver
User's
Guide



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.

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: If you purchased the optional VCRS descrambler module, your Super 350i 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.

VideoCipher® 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 Super 350i 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 Super 350i Receiver, they must be performed by General Instrument Corporation or an authorized service center.

OPERATION PRECAUTIONS

WARNING:

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. Do not open the cabinet. Refer servicing to qualified personnel only.

CAUTION:

To prevent electric shock, do not use this (polarized) plug with an extension cord receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

ATTENTION:

Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
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CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION:

This consumer unit is intended for the authorized descrambling for personal use of those satellite television signals which have been scrambled using the VIDEOCIPHER® Renewable Security scrambling format. Ownership or possession of the descrambler does not entitle (nor enable) the owner or possessor hereof to receive descrambled VIDEOCIPHER Renewable Security television signals. To obtain proper authorization for this consumer descrambler, the owner or possessor must separately contract with the appropriate programming provider(s) or his (their) agent(s).

U.S. government restrictions may prohibit the export of this product outside the United States, its territories, or possessions without a valid export license.

Carried under one or more of the following copyrights:
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VideoCipher®, VIDEOpal®, EZ Sat®, AnyWhere®, Auto Peak® and Master Peak® are registered trademarks of General Instrument Corporation of Delaware. Satellite Video Center® is a registered service mark of DBS Services, Inc. VCRS™, InfoCipher™ and Innovation™ are trademarks of General Instrument Corporation.

Carried under one or more of the following U.S. Patent No.'s 4,608,456; 4,613,901; 4,634,808; 4,712,238; 4,792,973; 4,864,615; 4,933,898; 4,975,951; 5,081,680; 5,083,293 and patents pending. EZ Sat Locator U.S. Patent No. 4,888,592.

This digital apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A/de Classe B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des communications du Canada.

General Instrument Super 350i Quick Reference Guide

(the pound sign) in a box means you need to press a number on the remote to move to an option.
 X in a box means you need to enter the appropriate letter (press the numbered key that corresponds to the letter).

Daily Use

- Audio frequency setting **AUDIO** **1** ◀▶ **ENTER**
- Audio mode select **AUDIO** **2** ◀▶ **ENTER**
- Channel select from view **#** **#** (use leading 0 for 1-9) or **CH** ▲▼
- Channel/service information **TEXT** (VCRS mode only)
- VCRS controls information **HELP** (VCRS mode only)
- Fine tune antenna position (offset) **SAT** ◀▶ **ENTER**
- Fine tune video frequency **VIDEO** **1** ▲▼ **ENTER**
- Message display **MESG** (VCRS mode only)
- Preview next program **NEXT** (VCRS mode only)
- Program information
 Current **VIEW**
- Pay-per-View
 Cancel next program purchase **NEXT** **ENTER** at "PRESS ENTER TO CANCEL" prompt
- Purchase current program Select desired satellite/channel, then: **VIEW** **ENTER** (password if required) **ENTER**
- Purchase next program Select desired satellite/channel, then: **NEXT** **ENTER** (password if required) **ENTER**
- Return to TV viewing (from OSD) **VIEW**
- Satellite select **SAT** **X** **#** or **SAT** ▲▼ **ENTER**
- Satellite programming
 (add, relocate, or program) **MENU** **2** (Enter password if set) **5** ◀▶ (move) **1** ▲▼ (name) **2** (band) ▲▼
 3 ▲▼ (format) **4** ◀▶ ▲▼ (skew) **6** ▲▼ (scan) **ENTER**
- Satellite removal **MENU** **3** ▲▼ **ENTER**
- VCRS Rating ceiling select **SETUP** **1** **3** (Enter password if set) ◀▶ **ENTER** **VIEW**
- Parental lock **VIDEO** **4** ▲▼ (Enter password)



**GI General
Instrument**

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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.

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 may be 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.

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 satellite CATV 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 (5.3mm²) copper, No. 8 AWG (8.4mm²) aluminum, No. 17AWG (1.0mm²) copper-clad steel or bronze wire, or larger, as ground wire.

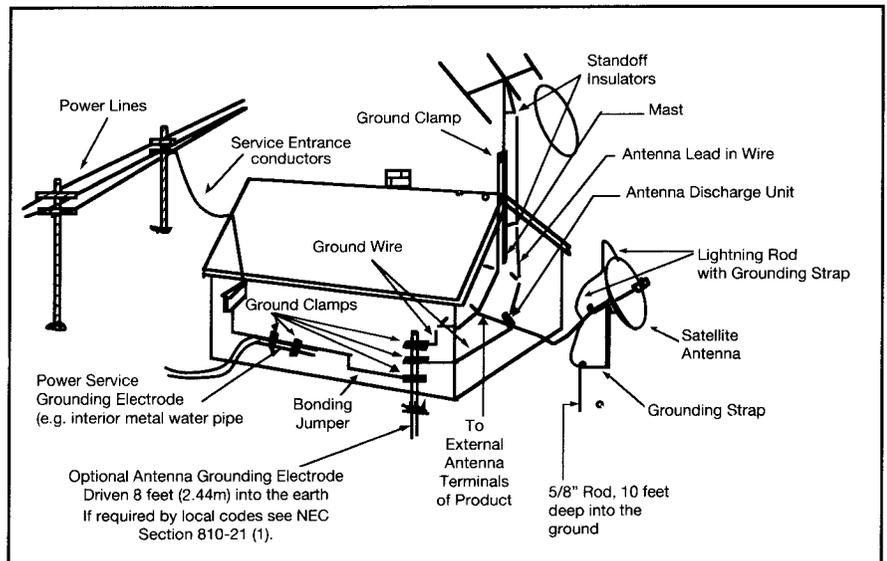
2. Secure antenna lead-in wire and ground wires to house with stand-off insulators spaced 4 ft. (1.22mm) to 6 ft. (1.83mm) apart.
3. Mount antenna discharge unit as close as possible to where the lead-in enters the house.
4. Use jumper wire not smaller than No. 6 AWG (13.3mm²) copper, or the equivalent, 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.

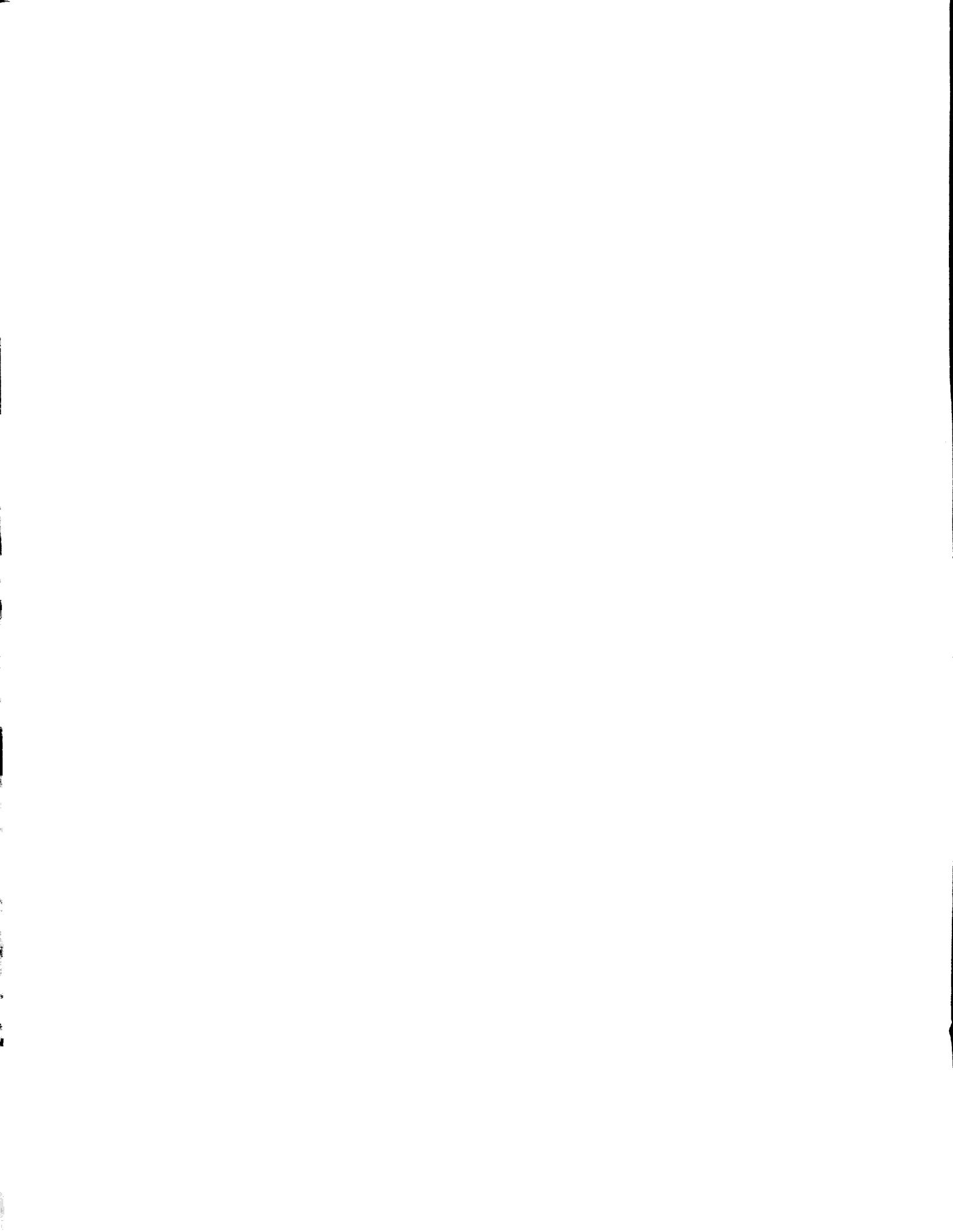
22. Lightning – For added protection for this product before a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and voltage surges. Be 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 powerline, 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 2 MINS



■ Table of Contents

WELCOME	9
FEATURES	10
REMOTE CONTROL FUNCTIONS	12
FRONT PANEL FUNCTIONS	13
BACK PANEL CONNECTIONS	14
DAILY USE OF YOUR RECEIVER	16
Moving through the Menus	17
On Screen Displays	18
Power On	19
Volume Control	19
Selecting a Channel	20
Selecting a Satellite	20
Fine Tuning	21
Favorite Channels	21
Adjusting Video	22
Adjusting Skew	23
Adjusting Antenna Position	23
Adjusting Audio	23
VIDEOCIPHER MODULE OPERATION	24
VIDEOPAL ORDER RECORDER OPERATION	30
VIDEOPAL TROUBLESHOOTING	35
INSTALLATION	37
Installing Components	38
Entering Dealer Information	43
Setting Up Satellites	43
Change Password	46
Parental Lock	47
Using the Erase Functions	48
SUPER 350i FREQUENCY PLANS	49
VIDEOPAL INSTALLATION	52
TROUBLESHOOTING GUIDE	54
IMPORTANT TELEPHONE NUMBERS	57
SPECIFICATIONS	58
WARRANTY	61



■ Welcome to the World of Satellite TV

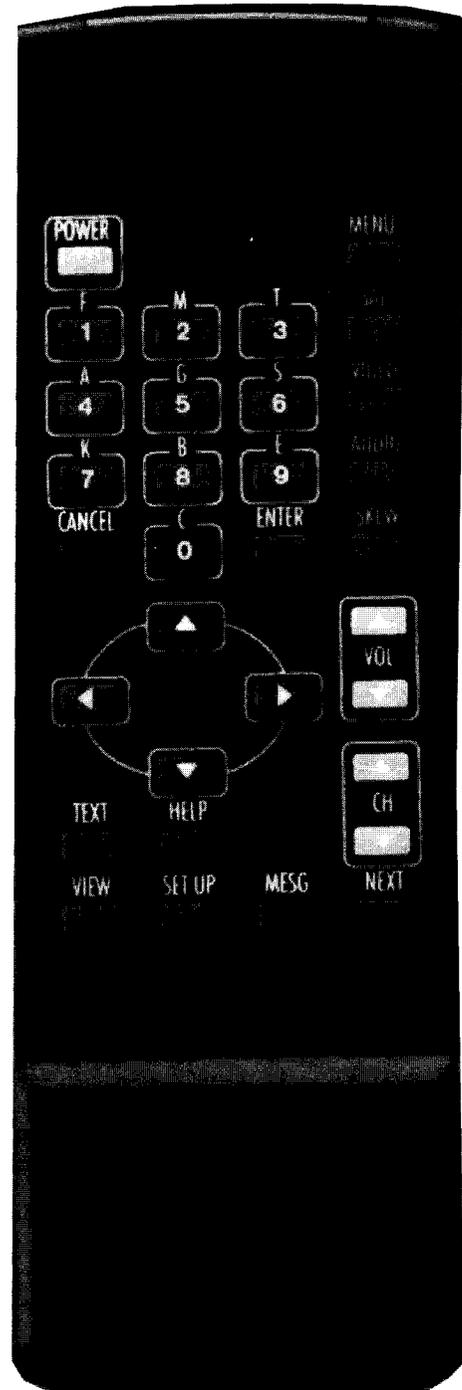
Your new General Instrument Super 350i Satellite Receiver opens the door to satellite viewing with the right mix of low cost and useful features. Now you can receive all unscrambled video and audio signals. Add the optional VideoCipher Renewable Security Module (VCRS) capability and you'll also be able to receive a wide range of exciting subscription programs, and plug in the phone connection for instant pay-per-view.

The Super 350i has many features that add to your viewing pleasure. These include tracker capability, which allows you to tune in available satellites directly from your remote control. The receiver is designed especially for easy installation and use. Readily accessible on-screen displays guide you through installation and programming. The Super 350i's memory can store information for up to 50 satellites and 96 channels, so it's easy to tune in your favorite programs. An infrared remote control provides fingertip convenience from your armchair, or you can choose the optional UHF remote that allows you to control the Super 350i from another room. Either way, you're ready for many hours of pleasurable viewing.

About this Guide

To fully enjoy your new Super 350i, carefully read all sections of interest. If you plan to install your own Super 350i system, start by following the instructions in the installation section. If your Super 350i and satellite TVRO system were installed professionally, read the Features section on the next page, then study Daily Use of Your System on the following pages. After you have reviewed that section, go through it again with remote in hand and see for yourself how things work.

Once you are familiar with everyday use, you can use the information in Programming Your Super 350i to fine tune system capabilities. Then keep the handy Quick Reference Guide nearby to refresh your memory during daily enjoyment of your new Super 350i system.



■ Features

Your new General Instrument Super 350i Satellite Receiver represents state-of-the-art quality in home satellite television viewing. This receiver provides many easy-to-use features, each of which has been designed to deliver maximum enjoyment from your satellite television system.

FULLY INTEGRATED SYSTEM

When purchased with the VCRS option, the Super 350i combines the satellite receiver, VCRS descrambler, VIDEOPAL Order Recorder, 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.

HANDY FRONT PANEL DISPLAYS

The Super 350i front panel's highly legible display shows the selected channel along with light-emitting diodes (LED) that light to indicate system status.

INFRARED REMOTE CONTROL

The standard remote makes control of your Super 350i armchair-easy.

OPTIONAL IR/UHF REMOTE CONTROL

The sleek IR/UHF remote control allows you to control every aspect of setup and use of your Super 350i from almost anywhere in your home.

FAVORITE CHANNEL MEMORY

The Super 350i features a unique Favorite Channel Memory, allowing the convenient storage of your top 10 video and audio channels.

BUILT-IN TRACKER

The Super 350i has a built-in antenna positioner/power supply. Antenna positioning is smooth and precise every time you change satellites.

DIRECT CHANNEL ACCESS

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

C- OR KU-BAND SATELLITE RECEPTION

The Super 350i can tune both C-band and the growing number of Ku-band programs. It can select up to 50 C-band and Ku-band satellites in any combination you choose. This feature will require the purchase of an external C/Ku switch available from your local TVRO dealer.

OPTIONAL INTEGRATED VCRS MODULE

Your new Super 350i is available 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 Super 350i, all aspects of VCRS channel viewing are conveniently controlled with your remote control.

OPTIONAL VIDEOPAL ORDER RECORDER

Your Super 350i is available with General Instrument's VIDEOpal Order Recorder as part of the VCRS descrambler module. With the VIDEOpal unit, you can order special pay-per-view (PPV) 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.

DIGITAL AUDIO SOUND

The Super 350i provides digital stereo from VCRS programs when connected to your home stereo system or monitor/TV, providing audio quality comparable to that of compact discs.

PURCHASE CONTROL

You can assign a password to the VIDEOpal Order Recorder to prevent unauthorized purchase of PPV programs.

UL AND CSA APPROVED

The Super 350i 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 will operate your Super 350i from within approximately 20 feet and 30 degrees to either side of the receiver.

NOTE: All remote control keys are for tuning satellite channels. They have no effect on VHF, UHF or cable programming.

The optional IR/UHF remote can function through most walls, making it easy to control your Super 350i from nearly anywhere in your home. The back of the remote control has a compartment for installing 2 AAA batteries.

R1 POWER

Turns on/off the main power to the Super 350i.

R2 NUMBER KEYS

These keys, 0-9, are used to activate different OSD menus, for direct satellite and channel access, to enter passwords, and to set up VCRS services.

R3 CANCEL

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

R4 ENTER

Used to store satellite locations, tuning information, passwords and other information in the Super 350i memory.

R5 ARROW KEYS

Allow you to scroll up and down and move about in various On Screen Displays (including VCRS channels). From certain menus, the left or right arrow keys also control antenna movement.

R6 VOL

Adjusts the audio output level up or down.

R7 CH

Changes channels up or down.

R8 MENU

Brings up the installation menu used to make adjustments to various settings of your Super 350i system.

R9 SAT

Accesses the satellite OSD for fine tuning adjustments, and for locating and moving between satellites.

R10 VIDEO

Accesses the video menu (OSD) for fine tuning adjustments.

R11 AUDIO

Accesses the audio menu (OSD) for fine tuning adjustments.

R12 SKEW

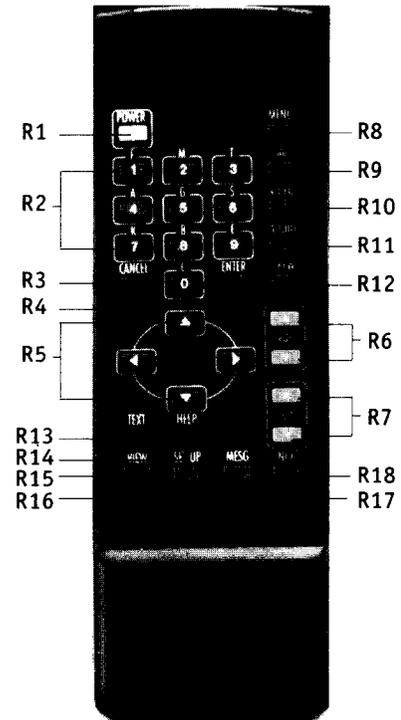
Accesses the OSD for skew adjustments.

R13 TEXT

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

R14 HELP

Used to read HELP messages related to VCRS controls.



Remote Control Keys

R15 VIEW

Used to check the title, running time and other information about the VCRS program you are watching. Press it to leave a menu and return to the program you were viewing.

R16 SETUP

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

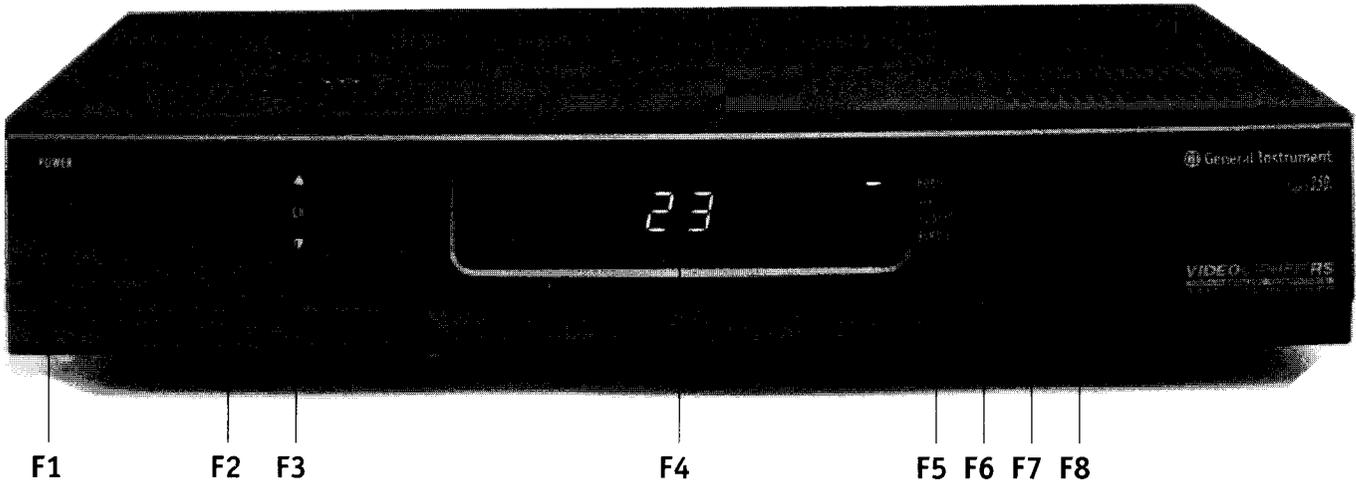
R17 MMSG

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

R18 NEXT

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

■ Front Panel Functions



The Super 350i front panel contains indicators that advise you of the system's status, as well as controls that enable you to select a channel.

NOTE: All Super 350i keys are for tuning satellite channels only. They have no effect on VHF, UHF or cable programming.

The Super 350i front panel key functions can also be found on the remote control, which provides information via the extensive On Screen Display menus.

F1 POWER

Turns on/off the main power to the Super 350i.

F2 CH

Changes channels up (to a higher number).

F3 CH

Changes channel down (to lower number).

F4 CHANNEL DISPLAY

Displays the selected channel.

F5 REMOTE

This indicator blinks whenever the Super 350i receives a signal from the remote control.

F6 VC SYNC

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

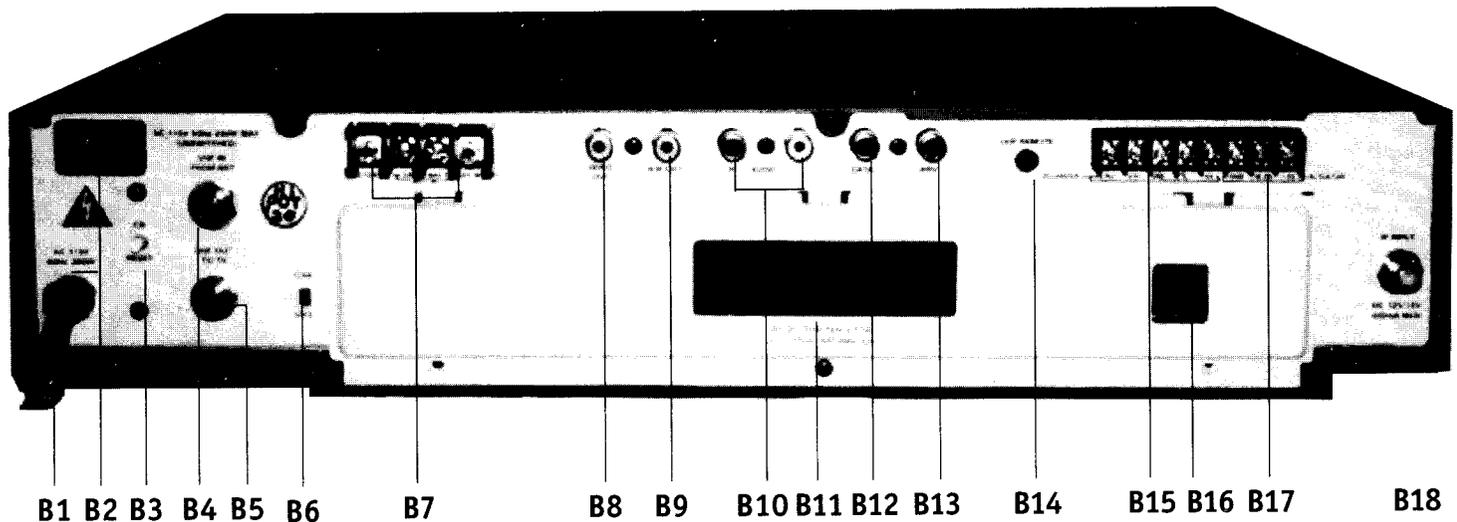
F7 VERT

Indicator lights when viewing a channel that is polarized vertically.

F8 HORIZ

Indicator lights when viewing a channel that is polarized horizontally.

■ Back Panel Connections



Your Super 350i can be connected to a variety of accessories. Please refer to the wiring diagrams in the Installation section or have your installer verify that you have made the proper connections.

B1 POWER CORD

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

B2 AC UNSWITCHED

Convenience outlet to plug in an AC-powered accessory rated at 115 VAC and 250 Watts maximum.

B3 CB RESET

This is a pushbutton 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.

B4 VHF IN FROM ANTENNA

Connect your VHF antenna or cable system lead wire to this connector.

B5 VHF OUT TO TV

Connect your VHF antenna or cable system lead wire to this connector. This connector should be attached to the VHF input on your television set.

B6 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.

B7 M1 and M2

These terminals supply tracker 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. Touching these terminals 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!***

B8 VIDEO OUT

Connect this RCA-type video output jack to the video input connection on your VCR or TV/Monitor. Note: There are blue OSDs on this output.

B9 B/B OUT

External baseband accessories, such as standalone descramblers, can be connected to this RCA-type connector (not required for the VCRS system).

B10 R AUDIO L

These RCA-type connectors may be connected to the auxiliary input jacks on your stereo system to deliver deep, rich digital sound on VCRS channels. Volume level is controlled through your Super 350i and your stereo or monitor/TV.

B11 AUTHORIZATION NUMBER

You can read the first 8 numbers of your Authorization (Address) Number through this window.

B12 DATA

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

B13 IPPV

This RCA-type connector permits interfacing of your Super 350i with a stand-alone pay-per-view programming order recorder such as the General Instrument VIDEOpal Order Recorder.

B14 UHF REMOTE CONNECTOR

Install the optional UHF receiver power/data cord here to allow UHF operation of the unit.

B15 POLARIZER

These terminals are used to connect system components (feedhorn and external H/V polarity switch if used) to the Super 350i.

+5V/□□/GND

Connect the wires from your mechanical polarizer (feedhorn) to these terminals. See manufacturer's instructions or the wiring diagrams in the Installation section.

C/Ku or V/H

Use this terminal to attach a coaxial relay for dual C-band LNB or C-band/Ku-band LNB installations. See the Installation section for details.

B16 TELEPHONE JACK

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

B17 ACTUATOR SENSOR TERMINALS

Connect the actuator sensor to the appropriate lead as described in the Installation section.

B18 IF INPUT

Attach the coaxial cable from the LNB or LNBF to this connector, which will be the primary connection from your antenna.

■ Daily Use of Your Receiver

If the system does not respond as indicated, or if you are using the Super 350i for the first time, refer to the Installation section of this guide.

The instructions are based on using your remote control to operate the system. Refer to the description of remote control functions in this guide. A description of front panel controls is also provided in this guide.

Refer to the Troubleshooting sections of this guide for more information regarding your receiver.

Moving through the Menus

The block diagram on the facing page shows the OSD selection keys (the blue group of keys at the upper right on your remote) with the menus and displays that appear when you press each key. The **[MENU]** key accesses the INSTALLATION menu, which has seven subordinate displays and is described in the Installation section. Each of the other OSD selection keys accesses a single display or menu.

When a menu offers options, one or two lines at the bottom of the display briefly summarize how to move about the menu. The following paragraphs explain those moves in detail.

The pointer (→) points to the currently selected option on a menu.

To select an option, enter the number on the keypad.

To change the status of an option, press either the Up or Down arrow key.

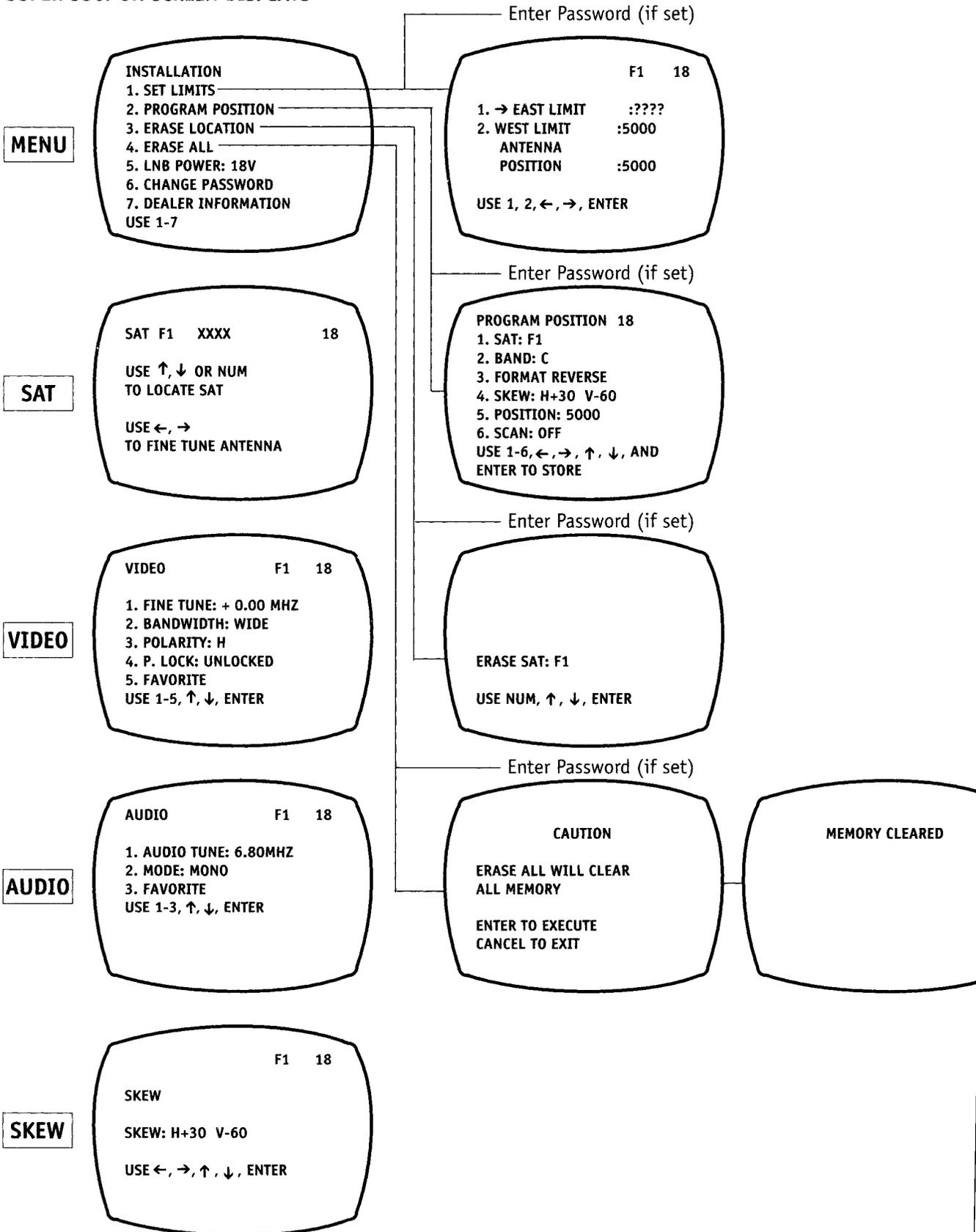
To record changes, press **[ENTER]**.

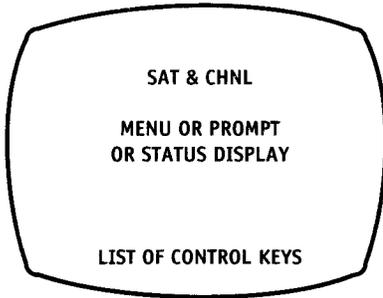
To move to the other column in a two-column display, press the Left or Right arrow key as required.

To step back through preceding screens, press **[CANCEL]**.

To return to viewing mode at any time, press **[VIEW]**.

SUPER 350i ON SCREEN DISPLAYS





ON SCREEN DISPLAYS

The Super 350i Receiver features several on screen displays (OSD) that appear directly on your TV screen to help you set up and use your receiver. There are two types of displays. Informational displays like the one at left alert you to the status of your system or a possible problem. These are called status displays.

The other type of displays, "menus," provide a choice of options. The Installation menu is arranged in a hierarchy that can cause another menu item to appear, or returns you to the previous menu.

Use your remote control to access the OSD menus and status displays.

POWER ON

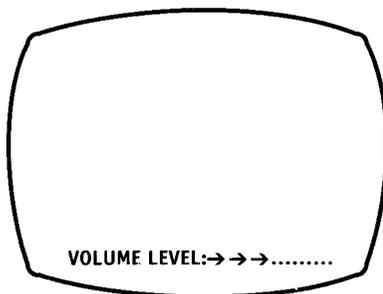
1. With the Super 350i off, turn on your TV set.
2. Press **[POWER]** to turn on the Super 350i.
3. Switch to Channel 3 or 4 on your TV set. Either a blue or black screen or video appears, depending on user programming and current tuning:

Video if you are tuned to a clear (non VCRS) channel.

Blue if you press an OSD key on your remote.

Black if you are tuned to a scrambled (VCRS) channel.

If there is no local programming, you will see snow on the screen when you switch back from satellite to TV. Use your TV set's channel selector to select local programming.



VOLUME CONTROL

Setting the Volume

Use the **[VOL]** keys to control volume. Press the Up arrow key to raise the volume; press the Down arrow key to lower the volume.

NOTE: For best audio quality during satellite viewing, set your TV volume low (but not off), and use the Super 350i to control volume. Use the TV volume control for local viewing only.

SELECTING A CHANNEL

The channel number is displayed on the front panel and the OSD. There are two ways to select a channel:

Using the CH Arrow Keys

Press the CH Up arrow key to move to higher-numbered channels, or press the Down arrow to move to lower-numbered channels.

Using the Numerical Keypad

Press the number of the channel you want.

If the channel is a two-digit channel, simply push the two digits desired.

If the channel is a single-digit, push the digit desired followed by the **[ENTER]** key. If the **[ENTER]** key is not pushed, the channel selected will be selected automatically after approximately five seconds. A single-digit channel can also be entered by pressing 0 and then the desired single-digit channel number. This method will avoid the five-second time interval.

SELECTING A SATELLITE

NOTE: The East and West Limits are set to be equal as a factory default. The limits have to be set at different values so the actuator will function. This is a necessary step to ensure proper installation.

You can use your Super 350i remote control to select more than one satellite.

Direct Entry Method

The remote control numerical keypad has a satellite designation (letter) printed above each key. The letters are arranged so that popular programming can be selected easily.

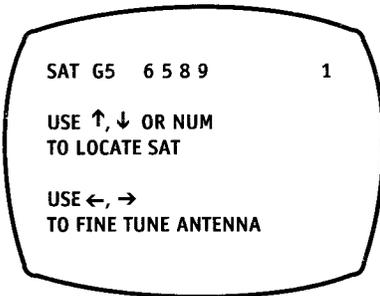
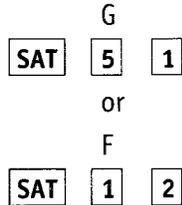
To select a satellite, press **[SAT]**, then the key with the desired satellite letter and the key with the desired satellite number. (Provided that this satellite has been programmed into your system.)



The antenna will move directly to the desired satellite. As the antenna moves, the OSD shows the objective and the antenna position number changes to track progress toward the selected satellite.

NOTE: To stop antenna movement at any time, press [CANCEL].

Examples: To move to G1, press **[SAT]**, **[5]** (has G above it) and **[1]**. To move to F2, press **[SAT]**, **[1]** and **[2]**.



Selection from the Menu

Press **[SAT]**. A Satellite menu similar to the one at left appears. All the satellites you have programmed will be displayed one at a time. Use the Up/Down arrow keys to scroll to the desired satellite. The antenna will begin to move as soon as you have selected a satellite and pressed **[ENTER]**. As the antenna moves, the OSD shows the objective and the antenna position number changes to track progress toward the selected satellite.



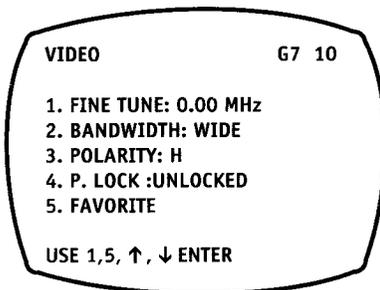
If a password has been set, you will have to enter your password before you can access the menus.

FINE TUNING

You or the installer set up and adjusted the satellites as a part of the installation process (see the Installation section), so fine tuning is not usually necessary. However, there are minor adjustments you can make directly from the remote to improve reception, and those are described here.

For instructions on performing more extensive adjustments, see the Installation section.

Your Super 350i comes with a total of 10 video and audio favorites preprogrammed. Instructions for changing the preset favorites or adding your own are provided in the next section.

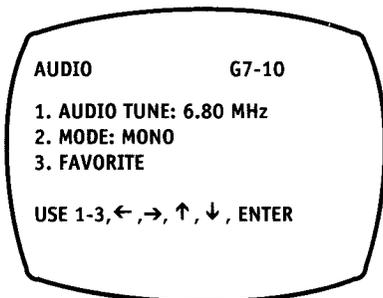


PROGRAMMING FAVORITES

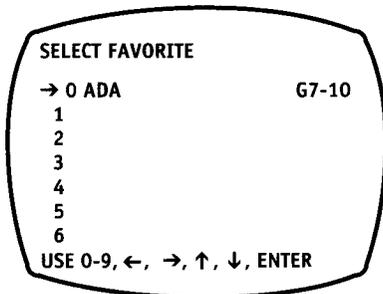
Use these procedures to save your favorite audio and video channels to your Favorite List. The list is numbered from 0-9.

Saving Favorite Video/Audio Channels

1. Use the **[SAT]** and **[CH] [UP]** or **[DN]** arrow keys to move the satellite and channel you want to add to your Favorite List.
2. Press **[VIDEO]** or **[AUDIO]** to access the appropriate menu selections. Press **[5]** (Video) or **[3]** (Audio) to program your favorites. At the Select Favorite Screen use **◆** arrow keys to move to a vacant number on the list. Press the **▶** arrow key. If you are "replacing" an existing favorite, see "Replacing a Favorite" in this section.

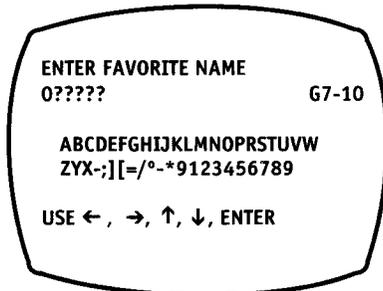


- If you have programmed password protection (such as Parental Control), you will need to enter your password at the screen prompt before proceeding to the Enter Favorite Name screen.
- At the Enter Favorite Name screen use arrow keys to toggle between letters, symbols and numbers to "name" your favorite channel. Note: You may wish to use "V" or "A" as the first letter designation of your channel since Video and Audio channels share the same list.
- Press **[ENTER]** to save your selection.



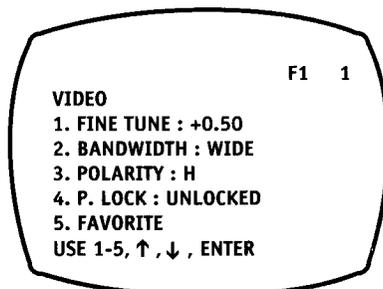
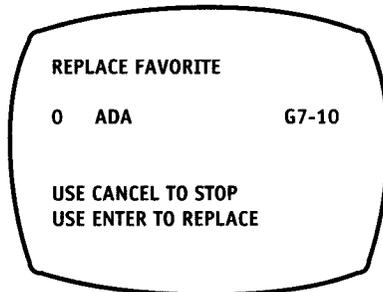
Selecting Favorite Video/Audio Channels

- Press **[VIDEO]** or **[AUDIO]** to access the appropriate menu selection.
- Press **[5]** (Video) or **[3]** (Audio).
- Use arrow keys or press a number on your remote from 0-9 to select a favorite from the list. Press **[ENTER]** and you will move to that channel location.



Replacing a Favorite

- Press **[VIDEO]** or **[AUDIO]** to access the appropriate menu selection.
- Press **[5]** (Video) or **[3]** (Audio).
- Use the arrow keys to move to the channel selection you wish to replace. Press the arrow key. If you have programmed password protection (such as Parental Control), you will need to enter your password at the screen prompt before proceeding to the Enter Favorite Name screen.
- Press **[ENTER]** and repeat the steps for Saving Video/Audio Channels. You may cancel the replacement command by pressing **[CANCEL]** on your remote.



ADJUSTING VIDEO

To adjust video settings, press the **[VIDEO]** key on your remote. The menu at left appears. Proceed as follows.

Adjusting Video Frequency

Select Option 1 from the VIDEO menu. Press and hold the up or down arrow keys to adjust video frequency for optimum reception, then press **[ENTER]** to save.



Selecting Bandwidth

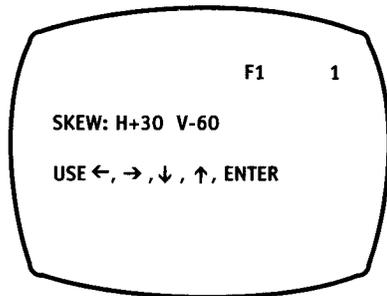
To change the bandwidth, select Option 2 from the VIDEO menu. Use the up or down arrow key to select either a narrow or wide bandwidth, then press [ENTER] to save.

VIDEO 2  ENTER

Selecting Polarity

To change the polarity on a channel, select Option 3 from the VIDEO menu. Use the up or down arrow key to select either H (horizontal) or V (vertical) polarity, then press [ENTER] to save.

VIDEO 2  ENTER



ADJUSTING SKEW

If your system uses a servo type feedhorn, you can fine tune skew for optimum reception while viewing a channel. Press [SKEW]. The OSD at left appears. The current polarization (H for horizontal or V for vertical) will be blinking. Use the left or right arrow to select either H or V, then use the up or down arrow to set the desired degree of skew. Press [ENTER] to save.

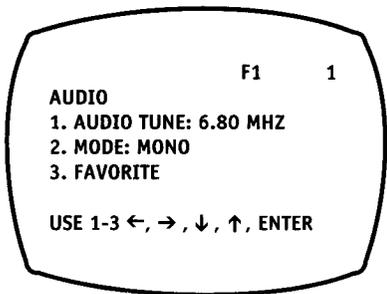
SKEW   ENTER

ADJUSTING ANTENNA POSITION

You can use the tracker to move the antenna slightly in either direction while satellite viewing. Press the [SAT] key, then press the left or right arrow key. Press [ENTER] to save.

SAT  ENTER

Antenna fine tuning only moves the antenna 15 pulse counts in the selected direction. If greater movement is required, refer to Programming Satellites in the Installation section.



ADJUSTING AUDIO

To adjust audio settings, press the [AUDIO] key on your remote. The menu at left appears. Proceed as follows.

Adjusting Audio Frequency

To set the audio subcarrier frequency, select Option 1 from the AUDIO menu. Use the up or down arrow key to select the frequency shown in your satellite program guide or your personal preference. Press [ENTER] to save.

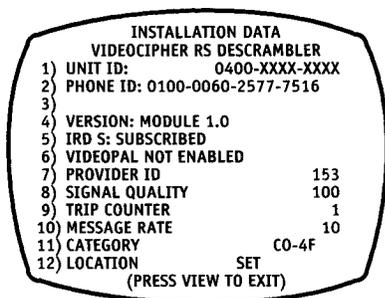
AUDIO 1  ENTER

Selecting Audio Mode

The correct audio mode is Mono for clear channels and VCII Plus for VCRS channels. To change the audio mode, select Option 2 from the AUDIO menu. Use the up or down arrow key to select the appropriate mode, then press [ENTER] to save.

AUDIO 2  ENTER

■ VideoCipher Module Operation



MODULE AUTHORIZATION

1. To purchase subscription services, you must give your service provider certain information. Press **[SETUP]** and **[1]** and **[1]** on a VideoCipher scrambled channel. 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) 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 antenna 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.

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

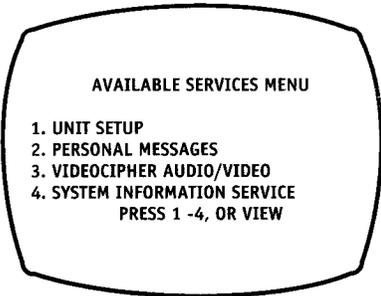
3. After initiating services, leave the IRD tuned to a VideoCipher scrambled channel until the module receives authorization and you are able to view the programs you ordered. If you press the **[SETUP]** **[1]**, **[1]** after authorization and view the screen again, you will notice that your trip counter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

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

OPERATION: ON SCREEN DISPLAYS AND DESCRIPTIONS

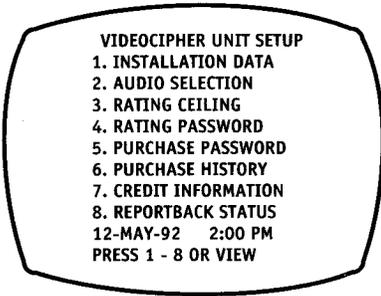
Once your module has received subscription authorization, you may want to take the time to become familiar with the many different features, capabilities, and on screen displays (OSDs) that your VCRS module can produce and what purposes they serve. Your on-screen displays allow you to: 1) see how well 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 is the 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].**



The Setup 1 Screen
VideoCipher Unit Setup

Pressing the **[SETUP]** and **[1]** buttons on your remote 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.



Setup 2
Personal Messages

Pressing **[SETUP]** and **[2]**, or the message key **[MESG]** 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 **[MESG]** 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 offered on the VideoCipher channel that you have selected. Selecting **[VIEW]** is the same as pressing **[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

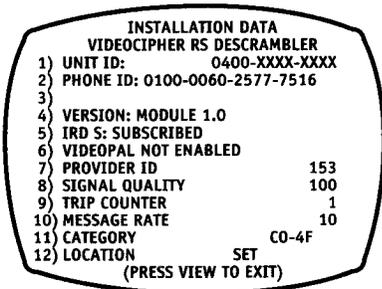
This key allows you to see information about the next program being broadcast on the channel you are viewing. This information is transmitted at the programmer's option.

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

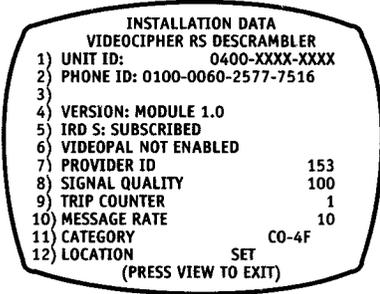
The Setup 1 and 1 Screen

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**

V I D E O C I P H E R M O D U L E O P E R A T I O N



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 VCRS element, the TvPass Card, is installed. It will then display a TvPass Card ID number.

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

NOTE: The numbers shown on your screen may 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 S = Scrambled	Purchased 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.

Line 7 contains the unique Provider (Programmer) ID code for each channel.

Line 8 is your Signal Quality. The maximum Signal Quality is 100. As noted earlier in the Authorization section, if this number is less than 60, you may have difficulty authorizing the module, and your satellite system may be 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 antenna. The clearest signal will be a 10.

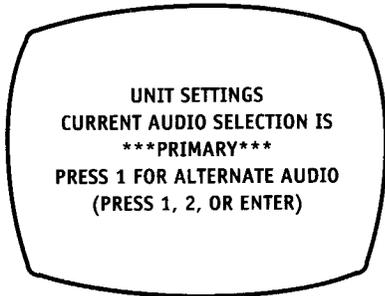
Line 11 shows if your system has received its monthly authorization update from the programmer. These numbers should be the same on all working descramblers, and will change on a monthly basis. Your programmer may ask about these characters should you have trouble gaining access to programming.

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

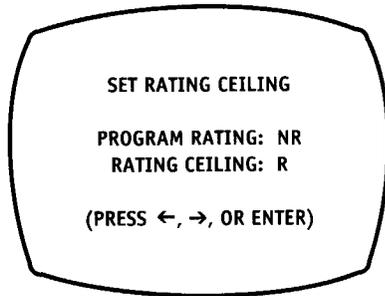
Checking The Unit Settings

When you press **[SETUP]**, **[1]** and **[2]** you will see the AUDIO SELECTION screen.



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.



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, lock out shows with a "G" rating. "NR" can be blocked. Refer to the guide below for a complete list of movie ratings.

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; "NR" can be blocked.
- NC17** - No Children 17 or Under

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 ensure 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. 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.



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.

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 on page 31. 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. A card will be issued to you at that time. This feature consists of a TvPass Card, a plastic "smart card," that is 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.

■ Instant Pay-per-view: VIDEOpal Order Recorder Operation

THE WORLD OF VIDEOPAL INSTANT PAY-PER-VIEW

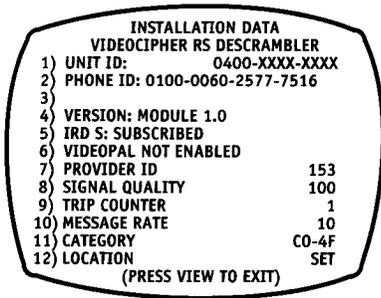
Watch It Now!

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:

<p>THE SATELLITE VIDEO CENTER 800-54-VIDEO (800-548-4336)</p>
--

Serving as a national clearinghouse for pay-per-view programmers, the Satellite Video Center and its customer service representatives will 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.

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 monthly billing statement.



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. The module must be connected to a live telephone line for pay-per-view authorization. It is suggested that you test the 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 antenna alignment, receiver tuning, and/or skew may help to increase the module Signal Quality.

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."



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 Rating Ceiling or Purchase 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 does not reset the Parental Control/Installation password. There may be a charge for a password reset.



The Setup 1 and 6 Screens

Purchase History

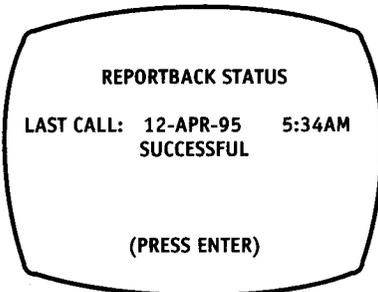
Pressing the [SETUP], [1] and [6] buttons will allow you to view the PURCHASE HISTORY screen. This screen will allow you to review the 16 most recent programs purchased with your instant pay-per-view feature. Use the left and right arrow keys on your remote control to see all sixteen purchases. Press [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.)



The Setup 1 and 7 Screens

Credit Verification

Pressing [SETUP], [1] and [7] will allow you to view the CREDIT VERIFICATION 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 VERIFICATION 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.



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.

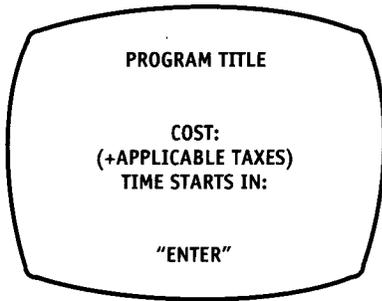


Instant Pay-Per-View Operation

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.

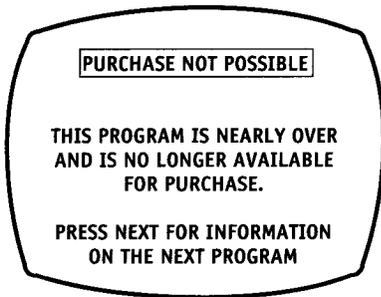
Satellite Video Center Pay-Per-View Programs

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.



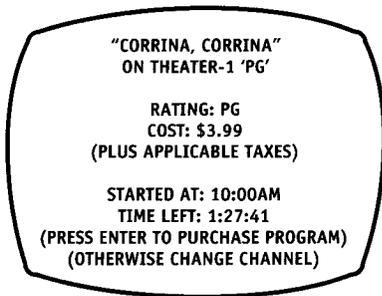
Purchasing The Current Program

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!*



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.



Purchasing 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.

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 re-authorization.

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 later.

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 effect 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).*

■ Installation

This section explains how to:

- connect the Super 350i to your satellite antenna.
- set up the antenna and individual channels for easy operation and clear reception.
- change previously selected settings.

PRE-INSTALLATION CHECKLIST

Remote Control

The remote control can be used to control receiver functions. The remote control is packed inside the styrofoam end caps for shipping. If this item is missing or appears damaged, contact your dealer.

COMPLETE THE PRE-INSTALLATION CHECKLIST

The Pre-Installation Checklist items can affect the performance of your receiver. Please review the checklist to make sure that you have completed each item that applies to the type of system which you are installing.

HOW TO USE THIS CHECKLIST

A satellite TV system has many sophisticated electronic and mechanical components in addition to the receiver. Unless these components are installed and operating correctly, you will not get the best possible reception from the system. Please make this Checklist available to any installer or service technician who is working on your satellite system.

- Read **“Important Safeguards”** in this User’s Guide.
- Complete sections 1 and 2 on this page **before** installing the receiver.
- Complete sections 3, 4 and 5 **before** turning the power on.

1. ELECTRICAL

- ___ Unit is disconnected.
- ___ Unit is attached to a properly grounded receptacle.
- ___ AC plug is held securely in receptacle.
- ___ Power cord is protected from pinching.
- ___ Circuit will not be overloaded.
- ___ Outdoor antenna is properly grounded.
- ___ Outdoor antenna is away from power lines.

2. LOCATION

- ___ Unit is adequately ventilated.
- ___ Unit is not installed near a heat source.
- ___ Unit is on a stable surface.

3. WIRING

- ___ All wiring corresponds to manufacturer’s recommendations or equivalent.
- ___ Long cable runs have been fitted with line amplifiers.
- ___ RG-6/RG-59 coaxial connectors have had their center wires trimmed.
- ___ All splitters will pass DC voltage up to 20 volts.
- ___ Actuator is wired according to diagrams.
- ___ All F and N connectors have been weatherproofed with coax seal.

4. EQUIPMENT

- ___ LNA/BDC or LNB meets minimum gain guidelines.
- ___ Rear module cover is installed.

5. ANTENNA ADJUSTMENTS

- ___ Polar axis has been aligned.
- ___ Elevation has been set.
- ___ Declination has been adjusted.

NOTE: See “Setting Antenna Limits” in this guide.

■ Installing Components

Antenna Adjustments

If you desire multi-satellite access, your antenna must be able to accurately track all satellites in the orbital arc without obstructions or your reception will be degraded. See the antenna manufacturer's instructions before beginning final satellite receiver adjustments.

Replacement Systems

If you are replacing an existing receiver with the Super 350i, do not disconnect your old system yet.

First move the cables from the old system to the Super 350i cable by cable. If you don't have sufficient cable length to place your Super 350i on the floor near your old system while you are transferring wires, label each wire that is attached to your old system. Then, remove your old system and attach the connectors to the Super 350i.

Wiring

Most satellite TV system wiring has standard color coding. Check the manuals for each device in your system to verify the proper coding for each wire.

DC Pass Splitters

Any splitters used in your installation (for dual band, dual feed or multiple receivers) must be capable of passing a 1500 MHz signal and DC voltage even if the master receiver is turned off. If the splitters do not pass DC, you may lose video, audio, or descrambler authorization, or be unable to select different polarities on second receivers. Make certain that these splitters are intended for outdoor use.

Cabling

Several types of cables can be used in a standard installation. To get the best performance from your system, it is important to use the cable recommended in the chart. All system wiring should meet UL standards.

Coaxial cable can lose 10 dB or more of signal for every 100 ft. of length (dB is a measure of signal strength). This loss is called attenuation. If there is too much loss, you may have to install line amplifiers. All coaxial cable used in your Super 350i installation should be capable of a band pass of 950-1450 MHz, as well as passing DC voltage up to 20 volts.

We recommend that you use wiring as large or larger than specified on this chart or in the front section, "Important Safeguards."

Cable Run Loss

1.5 GHz Loss	Loss Per 100 Ft.	100'	200'	300'	400'	500'
RG-59	12db 100 Ft.	12db	12db	*	*	*
RG-6	8.5db 100 Ft.	8.5db	17db	25.5db	*	*
RG-11	6.5db 100 Ft.	6.5db	13db	19.5db	26db	*

* Indicates next larger size cable or additional amplifiers should be inserted.

RG-6 and RG-59 Coaxial Cable

When using RG-6 or RG-59 cable, avoid bending the center wire. To minimize damage, trim the center wire back so that it extends no more than 1/16" beyond the cable end connector.

LNA/Block Down Converter, LNC, or LNB

Your Super 350i *cannot* function with a Low Noise Amplifier (LNA) alone. If you are using an LNA, it will need a minimum gain of 50 dB and a Block Down converter with a minimum gain of 20 dB.

If you are installing your Super 350i with a Low Noise Block Downconverter (LNB), it must have a minimum gain of 55 dB.

C/Ku Band Reception

If you wish to receive both C- and Ku-band satellites, you must have:

- Either a dual (C&Ku) band LNB, or a separate LNB for each band, and
- An external DC coaxial switch as shown in Figure 2 or 3 to accommodate the extra IF in line.

Signal Strength and Line Amplifiers

If your cable runs are over 150 ft., or if terrain or other factors affect your signal strength, you may need to install a line amplifier.

After you have completed the basic installation, check video quality. If the reception is poor, installing a 950-1450 MHz, 20 dB line amplifier on each IF line into the Super 350i may improve it.

These additions should be made after you have completed system installation.

BASIC RECEIVER CONNECTIONS

Most Super 350i's are used in single feed, single receiver installations. Please refer to the wiring diagrams and to the Back Panel figure in this guide to see how your installation should be wired.

1. **Check to make certain that your system is not connected to any AC power.**
2. Connect your VHF input cable (cable service, roof antenna, etc.) to the "VHF IN FROM ANT" connector **B4** on the Super 350i.

The VHF input cable to the Super 350i should be 75 ohm impedance (round). If you have a 300-ohm, 2-wire, flat cable coming from your antenna, you will need to purchase and install an inexpensive 300-to-75 ohm transformer (available at most home centers, department stores, electronics shops, etc.).

Should you wish to watch or record UHF programming, you will need to connect a separate UHF antenna directly to your TV set or VCR.

3. If you are using a regular TV set, attach a standard 75 ohm (round) cable from the "VHF OUT TO TV" connector **B5** to the "VHF ANT" input on your TV. (You may need to purchase and install a 75-to-300 ohm transformer. Please note that this adapter is different from the one mentioned under Step 2).

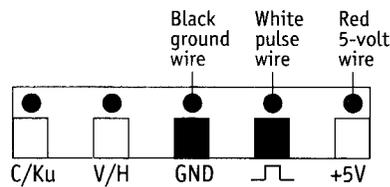
If you are using a TV monitor, use an RCA-type video cable to connect the "VIDEO OUT" connector **B8** on the Super 350i to the video input connector on your monitor.

4. If applicable, use an RCA-type stereo audio cable to attach the "R (Right)" and "L (Left)" audio output connectors **B10** on the Super 350i to the audio inputs on your TV monitor or separate stereo receiver.

Feedhorn Connections

No feedhorn connections are required for LNB systems. For LNB systems, connect the wires from the polarizer (feedhorn) out at your antenna to the three terminals of terminal block **B15** on the back of the Super 350i as follows:

Feedhorn Connections to B15



LNB Connections

1. If your system uses a single C- or Ku-band LNB, attach the 950-1450MHz IF cable (round) from the LNB to the "IF INPUT" connector **B18**. (See Figure 1.)
2. If your system uses separate LNB's for C- and Ku-band, connect the LNB IF cables to a DC coaxial relay. Connect the coax output from the relay to the "IF INPUT" connector **B18**. Connect a 20-gauge wire from the C/Ku terminal at the left end of the polarity terminal block **B15** to the 5Vdc input on the relay. (See Figure 2.)

3. If your system uses a dual-band LNB for C- and Ku-band, connect the LNB IF cables to a DC coaxial relay. Connect the coax output from the relay to the "IF INPUT" connector **B18**. Connect a 20-gauge wire from the H/V to the 5Vdc input on the relay. (See Figure 3.)

Tracker Connections

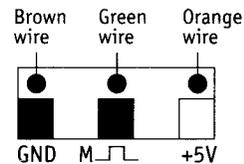
Connect the Super 350i's tracker (internal antenna positioner) power supply to your antenna actuator jack to control antenna movement. Wiring the power supply depends on the type of actuator that you have.

Do not attempt any of this wiring with the Super 350i plugged into an AC power source!

Connect the actuator sensor wires to the Tracker terminal **B17**. Connect as shown in the wiring diagram, Figure 4. Use shielded 20-gauge wire for sensor leads and 14-gauge for motor wire.

Motor wires connect to M1 and M2 terminals **B7**.

Actuator Jack Connection to B17



INSTALLATION CONNECTIONS

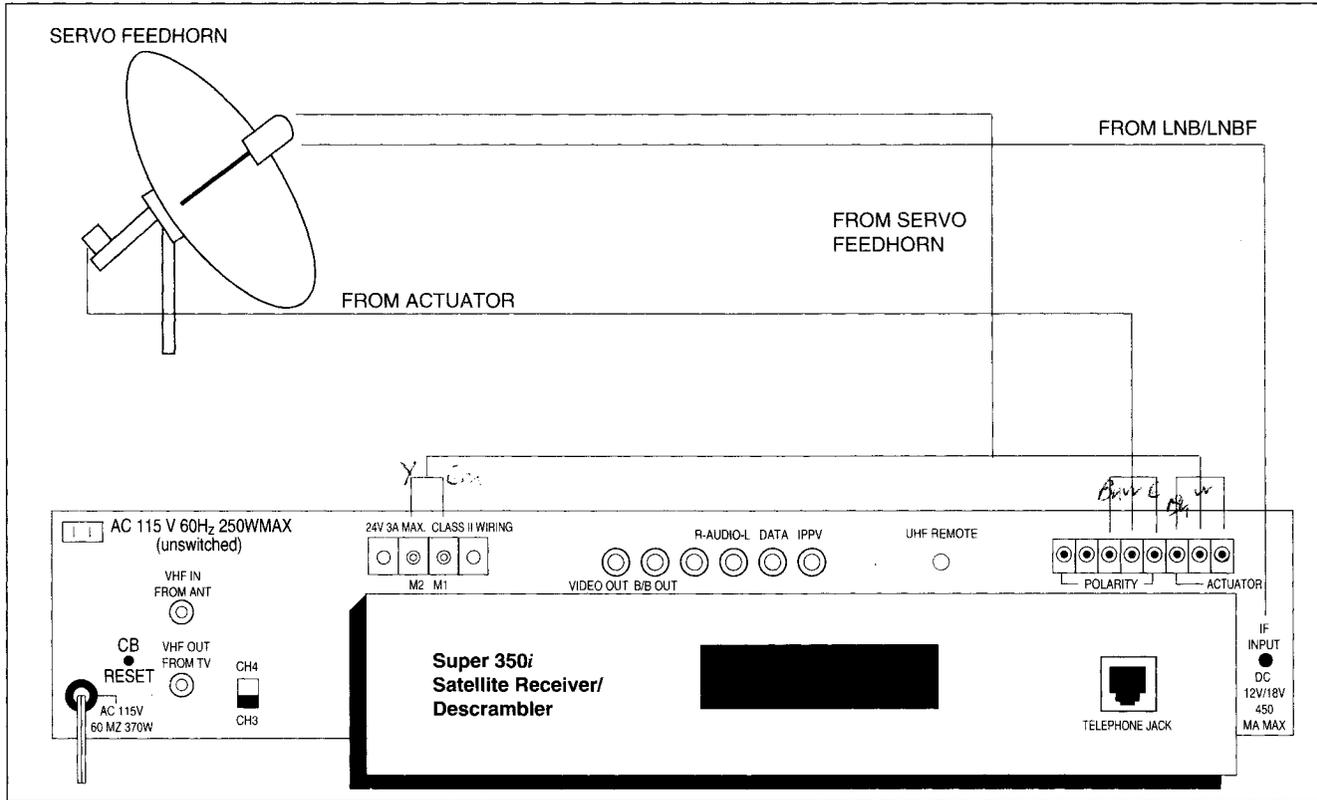


Fig. 1 Single feed (either C- or Ku-band) with servo-type feedhorn

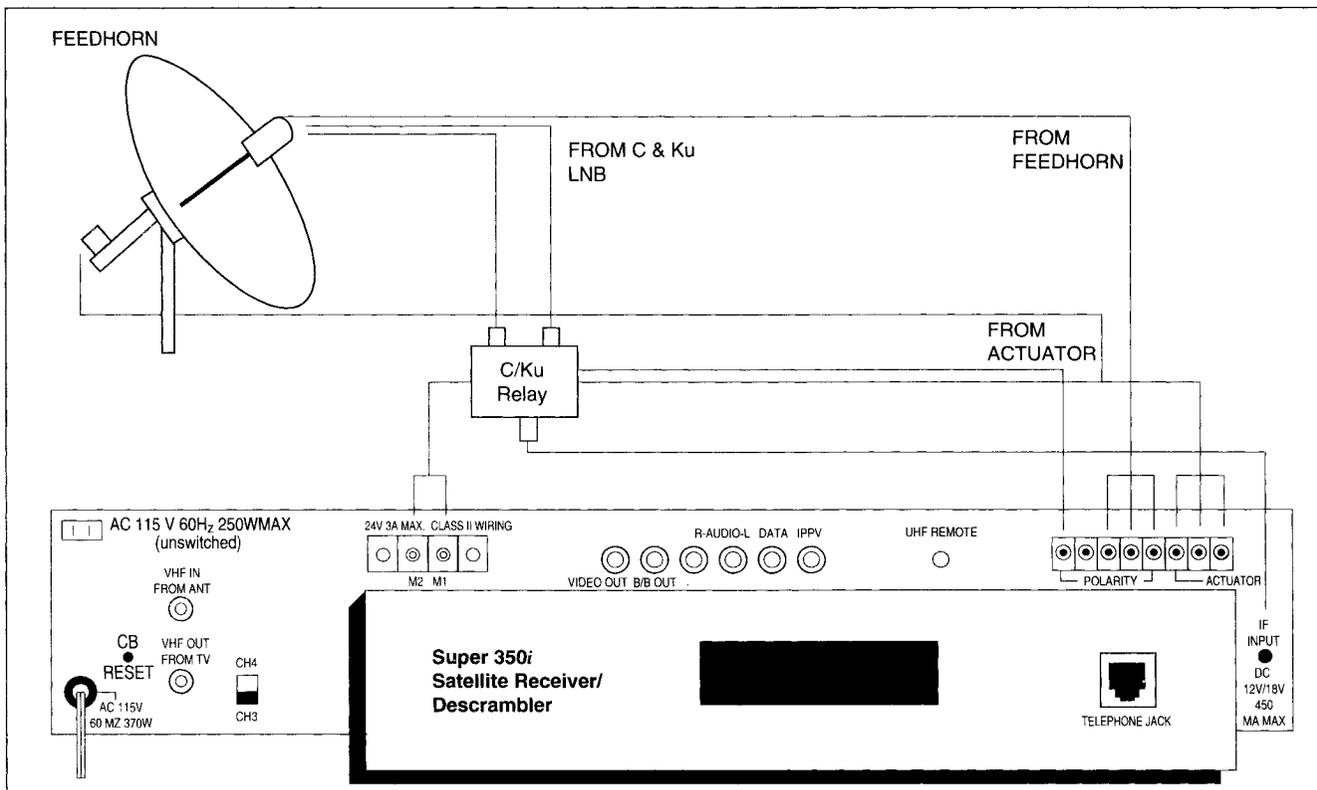


Fig. 2 Separate C- and Ku-bands with Corotor feedhorn and C/Ku dual band relay

I N S T A L L A T I O N

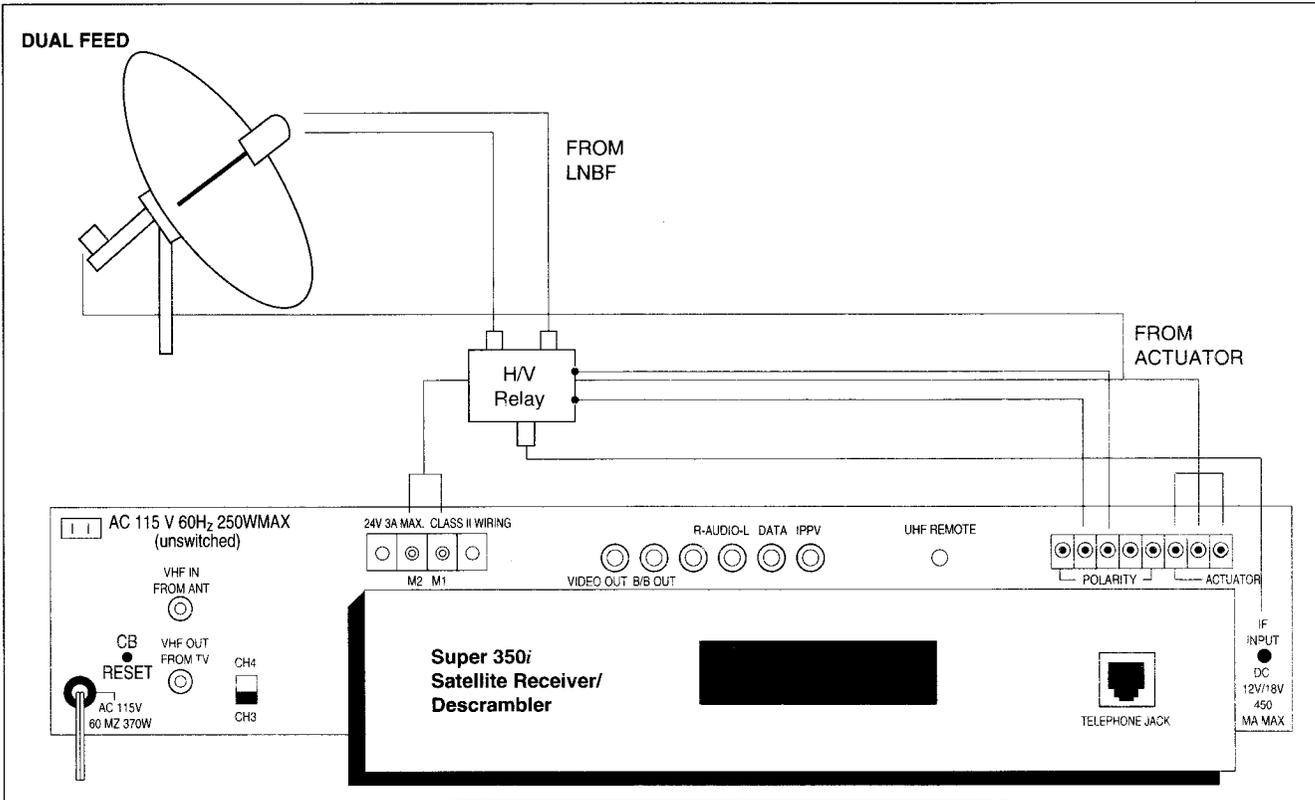


Fig. 3 Dual feed (C- and Ku-band) with H/V dual feed relay

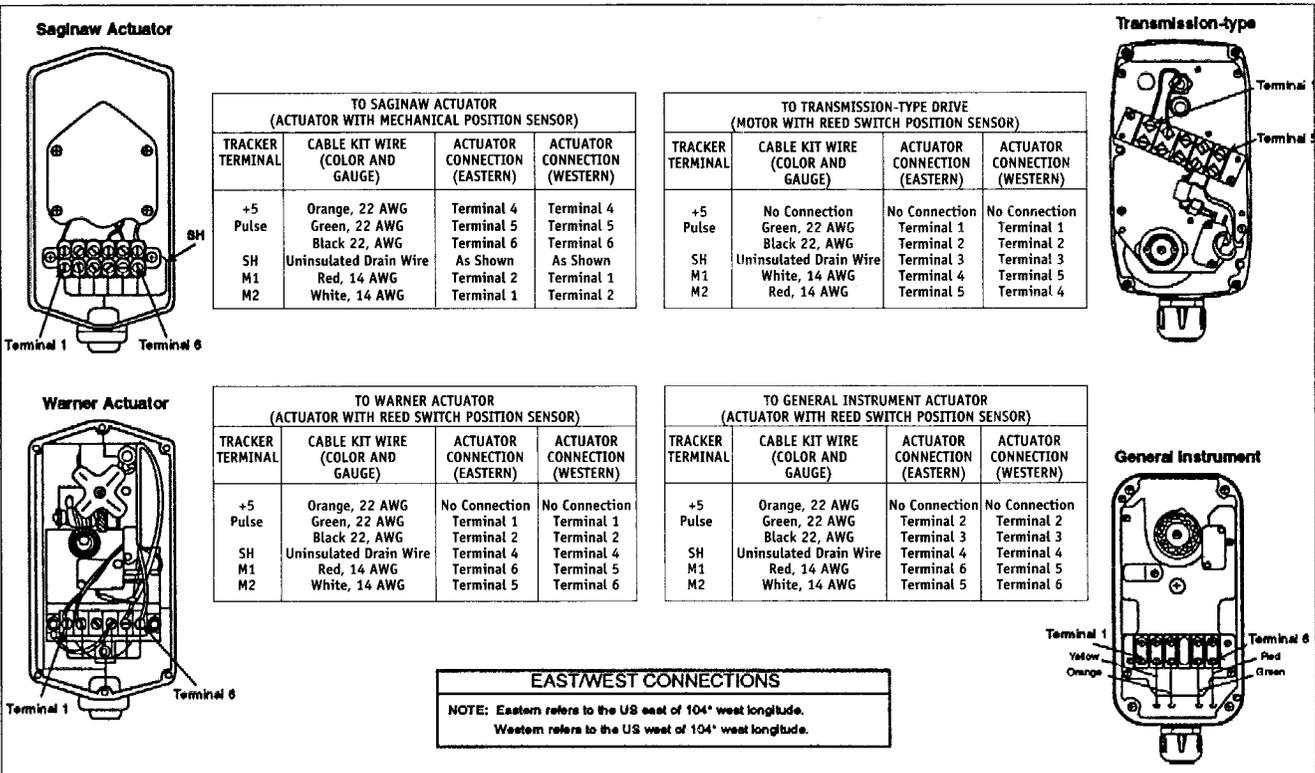


Fig. 4 Tracker Actuator Wiring Diagrams

AUDIO-VIDEO CONNECTIONS

Many standard satellite TV accessories can be used with the Super 350i including VCRs, TV monitors, cable system converters, and your stereo system. Figure 5 details one possible configuration.

Please note that there are several ways of hooking up your system, according to your preferences. Consult the owner's manuals that came with the components you wish to connect to the Super 350i and be aware that their installation diagrams may vary from that shown here. Your satellite system or audio/video dealer may also be able to help you.

Pay careful attention to the audio and video outputs you select for use with your VCR. Be aware that using the video input on some VCRs eliminates their ability to record programs off the air.

Check all your connections before connecting the system to AC power.

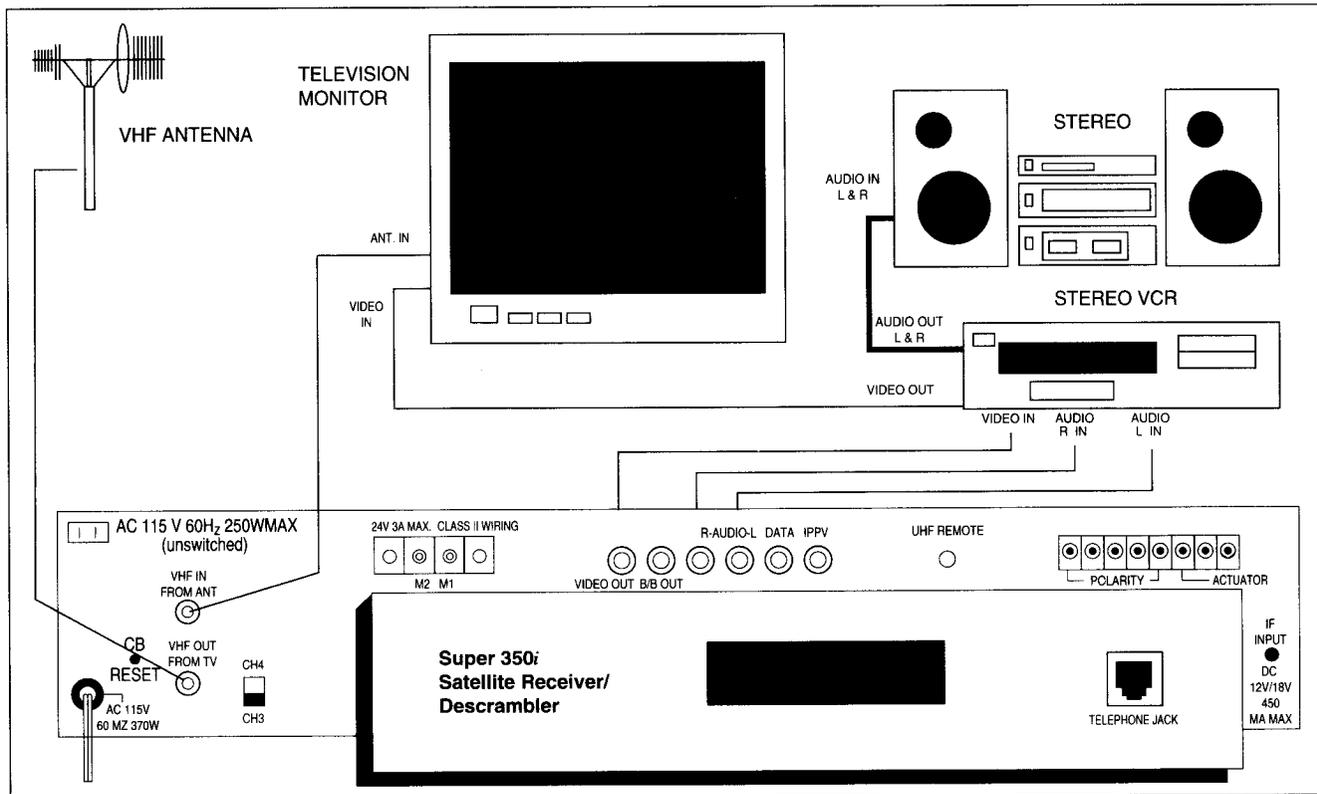
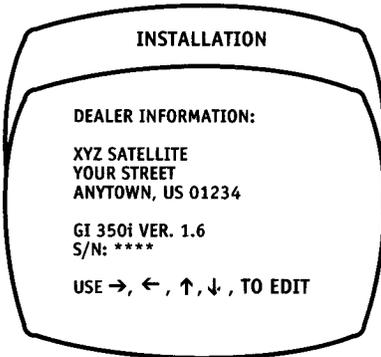


Fig. 5 Typical connections for TV, VCR and stereo

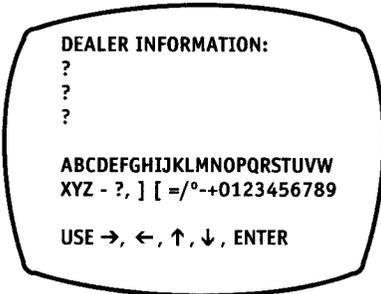


ENTERING DEALER INFORMATION

The Dealer/Product Info displays provide the version number of the firmware (preprogrammed data) supplied with your Super 350i. Your dealer can also list the dealer's name, address, phone number, or other information here.

To enter the dealer name, press **[MENU]** and select Option 7. The display at left appears. Use the up and down arrow keys to change the characters; use the left arrow and right arrow keys to move along the rows. Press **[ENTER]** when you have finished entering the information.

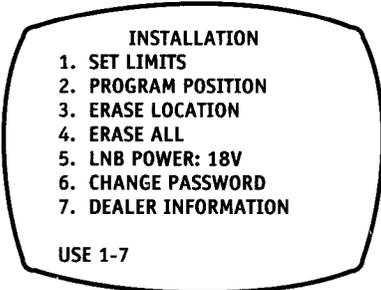
[MENU] **7** **↕** **[ENTER]**



SETTING UP SATELLITES

Satellite setup involves the following sequential steps:

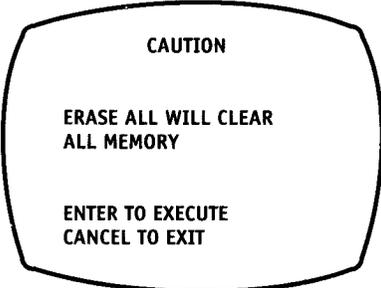
- A. Set East/West antenna limits.
- B. Program the satellites you plan to view.



Setting Single-Satellite Antenna Limits

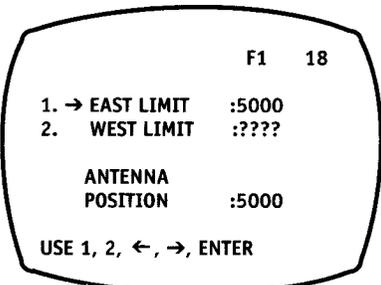
1. If your unit does not have the tracker option installed, you must manually aim your antenna to the desired satellite. Adjust the antenna for optimum reception and secure it in position.
2. Press **[MENU]**. The INSTALLATION menu appears as shown at left. Select Option 4 and press **[ENTER]** to insure that memory is clear.
3. When the prompt OSD at left appears, press **[ENTER]** again to confirm that you want to clear the memory.

[MENU] **4** **[ENTER]** **[ENTER]**



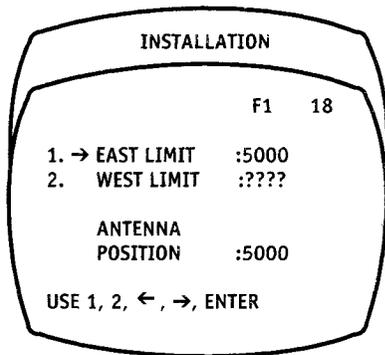
4. From the INSTALLATION menu, select Option 1. When the LIMITS display (below left) appears, set the east and west limits to the current antenna position as follows: Select Option 1 and press **[ENTER]**, then select Option 2 and press **[ENTER]**. The numbers displayed for both the east and west limit now match the current antenna position.

[MENU] **1** **1** **[ENTER]** **2** **[ENTER]**



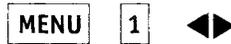
Setting Multi-Satellite Antenna Limits

You can use your remote control to move your antenna so it can receive any satellite within your view. However, before you can select satellites, you must set antenna limits in the Super 350i to prevent the antenna from moving too far in either direction.

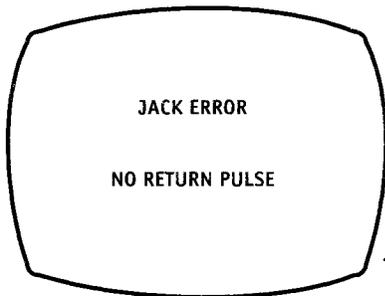


CAUTION: Ensure mechanical limits are set on the actuator. During this procedure, watch antenna movement to be sure the antenna is not damaged by traveling too far or striking an object. If you cannot see the antenna from the location of your Super 350i, have an assistant watch the antenna while you program the limits.

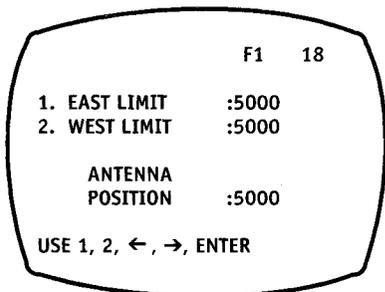
1. From the INSTALLATION menu, press **[1]** to move to the SET LIMITS menu at left.
2. Check that the antenna moves in the correct directions. Briefly press either the left (East) or right (West) arrow key on your remote control and verify that the antenna turns in the appropriate direction.



3. Since antennas in North America look South, pressing the left arrow key should turn the antenna to the East and pressing the right arrow key should turn it to the West. If the antenna did not move in the same direction as the arrow you pressed, your antenna is not correctly connected to the Super 350i. Shut off the satellite system and disconnect the Super 350i AC power source. Then reverse the terminations of the M1 and M2 cables on the back panel. Reconnect the AC power and turn on the system. Repeat Step 2 to verify that the antenna now moves correctly.
4. While watching antenna movement, press and hold the left arrow key to move the antenna to its East limit. Your Antenna/Position numbers will decrease as you perform this function. The antenna position in pulse counts will be displayed as it moves. When the antenna reaches its East limit, the prompt at left appears. Release the left arrow key.
5. Use the left arrow key to jog the antenna back about 20 pulse counts from its East limit. Press **[1]** and **[ENTER]** to stop the East limit, which will be displayed in the data field.



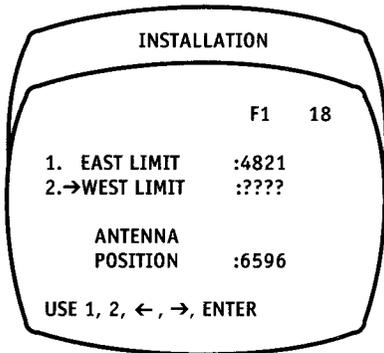
To summarize the sequence: press **[◀]** to move antenna East; press **[▶]** to jog back (West) 20 pulses; press **[1]** to select East limit to equal the current antenna position; press **[ENTER]** to store the East limit.



6. Repeat Steps 4 and 5 for the West limit using the **[◀]** key and menu selections. The sequence is: press **[▶]** to move antenna to the full West position; press **[◀]** to jog back (East) 20 pulses; press **[2]** to select West limit to equal the current antenna position at selected antenna position; press **[ENTER]** to store the West limit.

Changing Tracker Satellite Limits

If you discover you cannot receive satellites that should be within your view because the tracker limits have been set too close to the center of the satellite arc, reset the limits as follows.



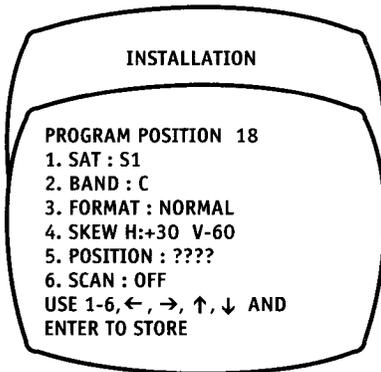
1. From the INSTALLATION menu, press **[1]** to move to the SET LIMITS menu. While watching the antenna to be sure it does not move beyond its physical limits, use the **[◀]** (East) or **[▶]** (West) key to move the antenna to its new limit.
2. Enter the new limit by pressing **[1]** for the East limit, or **[2]** for the West limit. Then press **[ENTER]** to store each limit.
3. When you finish changing the limit, press **[CANCEL]** to return to the INSTALLATION menu.

Setting LNB Power

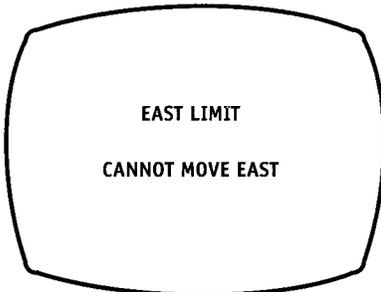
Option 5 on the INSTALLATION menu enables you to select the power (voltage level) at which polarization switches from one setting to another. To set, press **[5]** to select either 18V (for LNB) or 14/18V (for LNBF). Press **[ENTER]** to store the new setting or press **[CANCEL]** to retain the previous setting.

PROGRAMMING SATELLITES

This procedure allows you to specify and control the satellite information stored by your Super 350i.



1. For multi-satellite systems, press **[MENU]** and **[2]**. The PROGRAM SATELLITE menu shown at left appears.
2. Select the SCAN option by pressing **[6]**, then press either **[↑]** or **[↓]** to set SCAN "ON" or "OFF." If SCAN is ON, the receiver will "step" through channels when the dish is moving and Option 5 is selected. Select Option 5 by pressing **[5]**, then use the arrow keys to move to the East or West travel limit. When the limit is reached, a screen similar to the one at left will be shown indicating that the East or West limit has been reached.



3. To select the band, press **[2]**, then use the up and down arrow keys to select the desired band. Refer to your satellite guide and Frequency Plans (located in this guide).
4. Press the left arrow or right arrow key as applicable to move the antenna toward the opposite limit. When the dish points at a satellite, quick blinks of video will appear on the screen and the scan will stop. Use your satellite guide to help identify the satellite picture you see.
5. When you reach a satellite you want to program, briefly press and release the left arrow and right arrow keys to position the dish for the best picture.
6. Press **[1]** then select the correct satellite identification using the up and down arrow keys. Use the up and down keys to change the character; use the left arrow and right arrow keys to switch between the letter and the number.

7. You may need to adjust the format and skew for better reception.

There are two types of satellites, normal and reverse. The normal type has *vertical* polarization on odd-numbered transponders; the reverse has *horizontal* polarization on odd-numbered transponders. Select Option 3, then use the up [▲] and down [▼] arrow keys to select the appropriate format.

Select Option 4. The applicable polarization will be highlighted (H for horizontal, V for vertical). While watching the picture quality, use the ←, →, ↑, ↓, arrow keys to adjust the skew until the picture is good. This procedure works only if you have an adjustable (servo type) feedhorn.

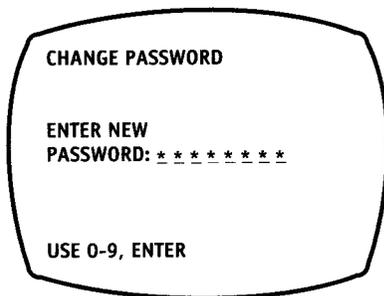
8. Option 6 controls the Scan feature. When it is turned on, the system will automatically search for and stop at the first signal it detects when you are moving the antenna position. To set the Scan, select Option 6 and use the up or down arrow key to select ON or OFF.

9. Continue programming the satellites you wish to receive until you reach the opposite limit. The satellites you have programmed will be scrolled through on the OSD whenever you press [SAT] during satellite viewing.

Change Password

The Change Password feature allows you to input a password in your Super 350i, thus blocking unwanted access to specific menu options and Parental Locked Channels.

NOTE: Your unit is shipped with no password set. If your unit should have a preset password, or you forget your password, contact General Instrument Customer Service at 619-535-1717.



To set password, press [MENU] and select Option 6. The display at the left appears.

Enter a password (up to eight digits) and then press [ENTER]. (You must enter a second time for verification.) Write this number down in a safe place.



If you wish to eliminate your password, press Option 6, then press [ENTER] without entering any digits.

PARENTAL LOCK

To provide control over the types of programs your family watches, the Super 350i offers two methods for locking out channels.

Rating Ceiling (For VCRS Channels)

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. Instructions for this procedure can be found in the VideoCipher Module Operation section.

Parental Lock for Regular and VCRS Channels

For regular and VCRS channels this method allows you to lock up to 12 channels. Before setting Parental Lock on a channel ensure that a password has been set for the unit.

1. To set or clear Parental Lock on a channel presently being viewed, press **[VIDEO]** to select Option 4.
2. Use the up/down arrow keys to select the "LOCKED" option.
3. The OSD will prompt you to enter your password. Once a password has been entered the channel is now Parental Locked. If you wish to unlock the channel, press Option 4 and up or down arrow keys to unlock.
4. To verify that the channel has been locked, use the channel up/down arrow keys to scroll through the channels. The Parental Locked channel will be skipped during the channel scroll.

Viewing a Parental Locked Channel

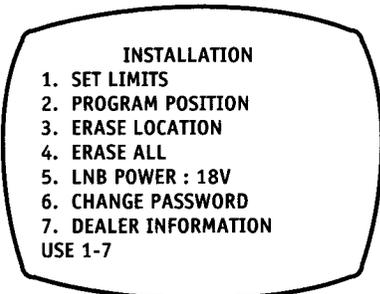
To view a Parental Locked channel you must directly access the channel by selecting the channel number from your remote. Enter your password to temporarily unlock the channel for viewing. Changing the channel reactivates the lock.

Removing Parental Lock from a Channel

1. To remove the Parental Lock from a channel you must directly access the channel by selecting the channel number from your remote.
2. The OSD will prompt you to enter your password.
3. Select Option 4 from the **[VIDEO]** menu.

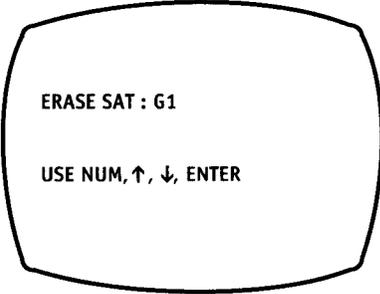


4. Use the up/down arrow keys to deselect the "LOCKED" option.
5. The OSD will prompt you to enter your password. Once the password has been entered the Parental Lock is removed from the channel.
6. To verify that the channel has been unlocked, use the channel up/down arrow keys to scroll through the channels. The unlocked channel will be included in the channel scroll.



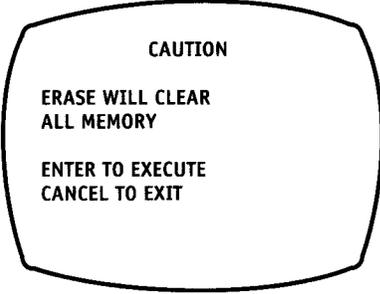
USING THE ERASE FUNCTIONS

CAUTION: Using any erase function destroys all original data programmed by the user in the selected memory (satellite or all).



Removing Satellites

Press **[MENU]**. The INSTALLATION menu at left appears. Select Option3, then use ↑ ↓ up/down arrow keys to select the satellite to be erased. Press **[ENTER]** and the satellite is erased. Press the down/up arrow keys to select another satellite, then press **[CANCEL]** or **[VIEW]** when complete.



Clearing All Memory

This selection clears the entire memory of any settings you may have entered, including antenna limits, passwords and audio or skew adjustments. Reprogramming will be required.

Before the memory is cleared, a prompt like the one at left will appear on the OSD. This gives you the opportunity to confirm your choice by pressing **[ENTER]**, or to change your mind by pressing **[CANCEL]**. Press **[MENU]**. Select Option 4.

■ Super 350i Frequency Plans

Your Super 350i Frequency Plans are shown below and on the following pages:

TABLE 1 C-Band Channel Data

CHANNEL NUMBER	Transponder Frequency (MHz)	Polarization
1	1430	H
2	1410	V
3	1390	H
4	1370	V
5	1350	H
6	1330	V
7	1310	H
8	1290	V
9	1270	H
10	1250	V
11	1230	H
12	1210	V
13	1190	H
14	1170	V
15	1150	H
16	1130	V
17	1110	H
18	1090	V
19	1070	H
20	1050	V
21	1030	H
22	1010	V
23	990	H
24	970	V

F R E Q U E N C Y P L A N S

TABLE 2 Ku-Band Anik Half Channel Data

CHANNEL NUMBER	Transponder Frequency (MHz)	Polarization
1	967	V
2	993	V
3	1028	V
4	1054	V
5	1089	V
6	1115	V
7	1150	V
8	1176	V
9	1211	V
10	1237	V
11	1272	V
12	1298	V
13	1333	V
14	1359	V
15	1394	V
16	1420	V
17	980	H
18	1006	H
19	1041	H
20	1067	H
21	1102	H
22	1128	H
23	1163	H
24	1189	H
25	1224	H
26	1250	H
27	1285	H
28	1311	H
29	1346	H
30	1372	H
31	1407	H
32	1433	H

F R E Q U E N C Y P L A N S

TABLE 3 Ku-Band GE Half Channel Data

CHANNEL NUMBER	Transponder Frequency (MHz)	Polarization
1	974.00	H
2	988.50	V
3	1003.25	H
4	1017.75	V
5	1032.25	H
6	1047.00	V
7	1061.50	H
8	1076.00	V
9	1090.75	H
10	1105.25	V
11	1119.75	H
12	1134.50	V
13	1149.00	H
14	1163.50	V
15	1178.00	H
16	1192.75	V
17	1207.25	H
18	1221.75	V
19	1236.50	H
20	1251.00	V
21	1265.50	H
22	1280.25	V
23	1294.75	H
24	1309.25	V
25	1324.00	H
26	1338.55	V
27	1353.00	H
28	1367.75	V
29	1382.25	H
30	1396.75	V
31	1411.50	H
32	1426.00	V

■ VIDEOpal Order Recorder Installation

NOTICE FOR CANADIANS

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system (if present) are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician.

The Load Number for the VCRS with the internal VIDEOpal system is 7.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the load numbers of all the devices does not exceed 100.

The Standard Connecting Arrangement Code for the VCRS with the internal VIDEOpal system is CA11A.

INSTALLATION INFORMATION

FCC-Required Notification

Type Of Service

The built-in VIDEOpal system in the VCRS module is designed to be used on standard telephone lines and 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.

Telephone Company Procedures

In order for your telephone company to provide you service, it may occasionally be necessary for them to make changes in their equipment, operations, or procedures. If these changes 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. 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 RENs 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 your built-in VIDEOpal system in the VCRS module 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 be informed of your right to file a complaint with the FCC.

NOTE: The VIDEOpal Order Recorder will not work properly at this time if you are on a party line or if operator assistance is required to make long distance telephone calls. Also, if you do not have access to the phone jack on the back of your receiver, you may require an external VIDEOpal order recorder; or, your receiver may not allow for VIDEOpal operation. Contact your local dealer to purchase the external recorder. To determine compatibility, contact your receiver manufacturer.

■ Troubleshooting Guide

BEFORE YOU CALL

Try the Troubleshooting Guide on the following pages. If you still can't solve your problem, try one more thing before you call.

1. Pull the Power Plug from the AC receptacle.
2. Wait 5 minutes.
3. Plug the Receiver back in and try your procedure again.

GETTING HELP

If you still can't correct an operating problem, contact your dealer. If your dealer is unable to solve your problem, contact General Instrument Customer Service. **Please don't open the cabinet and attempt to repair the unit, as this will void your warranty.**

Unplug the receiver and refer servicing to qualified service personnel when:

- The power supply or plug is damaged.
- The receiver has been exposed to rain or water.
- A solid object or liquid has fallen into the receiver.
- The receiver exhibits a distinct change in performance or will not operate normally.
- The receiver has been dropped or the cabinet has been damaged.

MAINTAINING YOUR RECEIVER

The only maintenance that your receiver should require is an occasional dusting. *DO NOT* spray any liquids on the unit!

TO SERVICE THE RECEIVER

1. Customer Service may be reached at 1-619-535-1717 24 hours, 7 days a week.
2. Do not ship your unit to General Instrument until you are asked to do so. You will be given a Return Material Authorization (RMA) number that must be sent with your unit. We suggest you attach a piece of masking tape to the bottom of the unit and write the RMA number on it. Use this RMA number in all correspondence with General Instrument about your repair. In addition, clearly mark the RMA number on the *outside* of your shipping box. Failure to do so could delay repair of your unit.
3. Label each wire and connector before disconnecting the receiver.
4. Ship the unit to General Instrument in its original packing box or an equivalent, padded container. Pre-pay the freight to send the unit to General Instrument. We suggest that you insure it for its full value. Out of warranty repair costs will be billed to you C.O.D. Freight and handling charges may also be billed C.O.D. **See your Limited Warranty for details.**

REPLACEMENT PARTS

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

SAFETY CHECK

After completing any service or repairs to this receiver, ask the service technician to perform safety checks to determine that the receiver is in proper operating condition.

PROBLEM:

Remote Control does not work.

SOLUTION:

- Check to see if the LED under the VC SYNC indicator on the Super 350i's front panel blinks when you press one of the remote control keys. If not, check the remote control's batteries.
- Replace batteries.

PROBLEM:

No picture or sound.

SOLUTION:

- Check all connections.
- Make sure that the Super 350i, your TV and/or stereo system have power.
- Make certain that the Super 350i and the TV are tuned to the same channel (Channel 3 or 4).
- Try another channel.
- Try another satellite.
- Make sure that there is not a problem with the TV. Check off-air/cable operation.
- If you are on a VideoCipher channel, check that you are authorized to receive it.
- See "No Volume Control" on next page.

PROBLEM:

Signal strength at adequate level, but no picture or sound on any satellite.

SOLUTION:

- Try another channel.
- Try another satellite.
- Check tuning of channel.
- If you are on VideoCipher channel, check that you are authorized.
- Check polarity (normal or reverse).
- Check frequency band (C or Ku).

PROBLEM:

No stereo sound on VideoCipher channels.

SOLUTION:

- Turn up volume on TV and IRD and make sure TV MUTE is off.
- Check a program guide to make certain program is broadcast in stereo.
- Make sure the IRD is hooked up to stereo unit (or TV with two audio in-puts) correctly.
- Make sure audio mode is set to stereo [AUDIO], [2], [ENTER].

PROBLEM:

Noisy picture or sound.

SOLUTION:

- Try another channel.
- Try another satellite.
- Check tuning of channel, subcarrier audio, and audio bandwidth.
- Realign antenna.
- Check connections between receiver, LNB, polarizer, and coax relays.
- Check that TV is set on either channel 3 or 4 (depending on which is selected on the IRD's back panel).
- See "Poor Picture" on next page.

PROBLEM:

No VideoCipher LED.

SOLUTION:

- Check tuning of channel.
- Verify that you are on a VideoCipher channel.
- Verify you are equipped with a VCRS module.

PROBLEM:

Cannot watch VHF or cable.

SOLUTION:

- Turn off your Super 350i.

PROBLEM:

Cannot change channels.

SOLUTION:

- If OSD display changes channels, see information under "Problem: Remote control does not work."

PROBLEM:

TV displays "NO SUBSCRIPTION" or TV displays black picture even though the VideoCipher LED is lit.

SOLUTION:

- Call programmer to have your Super 350i authorized to receive signal.

PROBLEM:

TV displays "AUTHORIZATION NOT AVAILABLE."

SOLUTION:

- Call programmer to have your Super 350i authorized to receive signal.

PROBLEM:

TV displays "PROGRAM BLACKED OUT."

SOLUTION:

- Program is not available in your geographical area.

PROBLEM:

An asterisk () appears in corner of screen.*

SOLUTION:

- You have a message from your VideoCipher program supplier. See section on VideoCipher operation.

PROBLEM:

Lost Passwords.

SOLUTION:

- If you forgot your VideoCipher password, call programmer to cancel old password and enter replacement.
- If you forgot your Installation or Parental Control password, call General Instrument's Technical Service and Support Center at 619-535-1717.

PROBLEM:

Cannot switch from Normal to Reverse polarity.

SOLUTION:

- Go to PROGRAM SATELLITE menu and select Option 3, then use down or up arrow keys on the remote control to change format.

PROBLEM:

Poor audio on non-VCRS channels.

SOLUTION:

- Change audio bandwidth setting.
- Check that subcarrier frequency and audio mode are correct (use a program guide).

PROBLEM:

Antenna does not move east or west or OSD says "JACK ERROR."

SOLUTION:

- Verify that East and West limits have been set.
- Check that IRD is wired to the terminal block correctly (see wiring diagram).
- Check that actuator wire is connected correctly at the antenna.
- Check to make sure East and West limits are not set in the same location.

PROBLEM:

No On Screen Displays (OSD).

SOLUTION:

- If you are using a monitor-type TV, check cable going from VIDEO OUT connector on rear panel of IRD to Video Input on the monitor/TV.

PROBLEM:

No volume control.

SOLUTION:

- Check that audio wiring is correct. Make sure that the correct AUDIO outputs are being used to your stereo or monitor/TV.
- Make sure that volume on stereo and or monitor/TV is turned up as well as the IRD's volume.

PROBLEM:

Poor picture on every other channel.

SOLUTION:

- Skew may be set incorrectly for either all odd channels or all even channels. Adjust skew via **[SKEW]** key or PROGRAM SATELLITE menu.
- If a Matrix switch has been installed on your system, check that it is wired correctly.
- Make sure that Polar rotor is working.

PROBLEM:

No power on IRD (no LED's or displays).

SOLUTION:

- Check that unit is plugged in and press **[POWER]** on front panel or remote control.
- Make sure that IRD is not connected to a switchable wall outlet (with on/off switch).
- As a last resort, press circuit breaker (labeled "CB RESET") on back panel.

■ Important Telephone Numbers

The Satellite Video Center
800-54-VIDEO
(800-548-4336)

General Instrument
Technical Service and Support Center
1-619-535-1717

General Instrument Dealer

Please write your Super 350i serial number (found on the bottom panel) and your optional VCRS Descrambler unit address number (found in the center of the back panel) in the spaces below. You will need this and the other information shown below if you call General Instrument for service or the Satellite Video Center (or your billing center) for programming authorization.

Super 350i Serial Number

VideoCipher Unit
Address Number

■ Specifications

INPUT FREQUENCY

Input Frequency	950 to 1450MHz
Input Impedance	75 ohms
Input Level	-65 dBm to -25 dBm
Noise Figure	12 dB maximum

No. of Channels	24 channels in C-band 32 channels in Ku-band
-----------------	---

Second IF Frequency	479.50 MHz
---------------------	------------

Bandwidth	27 MHz at 3 dB point
-----------	----------------------

Threshold (static)	7.0 dB C/N maximum
--------------------	--------------------

Local Oscillator Leakage	Less than -50 dBm maximum
--------------------------	---------------------------

Demodulator	ILO demodulator
-------------	-----------------

VIDEO

De-emphasis	525 line CCIR Rec. 405-1
-------------	--------------------------

Frequency Response	10 Hz to 4.2 MHz ± 1 dB
--------------------	-----------------------------

Differential Gain	3% typical
-------------------	------------

Differential Phase	3° typical
--------------------	------------

Output Impedance	75 ohms
------------------	---------

Clamping	Better than 40 dB
----------	-------------------

S/N	50 dB min weighted at 16 dB C/N (10.7 MHz peak dev.)
-----	--

Output Level	1 Vp-p into 75 ohms
--------------	---------------------

VHF OUTPUT

Impedance	75 ohms
Channel	CH 3 or 4
Level	6.5 dBmV ± 3 dB from VHF modulator

AUDIO

Subcarrier	5.0 to 8.5 MHz
Bandwidth	330 KHz at 3 dB
Modes	Digital Stereo Mono

Frequency Response	± 1 dB, 30 Hz to 15 KHz in non-VC mode ± 1 dB, 30 Hz 15 KHz VC and non-VC mode
--------------------	---

De-emphasis	75 micro sec.
-------------	---------------

Harmonic Distortion	0.2% maximum in VC mode 1.0% maximum in non-VC mode
---------------------	--

S/N	80 dB minimum in VC mode, 50 dB minimum in non-VC mode at 9 dB C/N
-----	--

Volume Control	0 to 40dB 2dB per step
----------------	---------------------------

BASE BAND OUTPUT

Frequency	5.0 Hz to 8.5 MHz
Output Impedance	75 ohms
Output level	1vp-p into 75 ohms

PHYSICAL/ ENVIRONMENTAL

Temperature	0° to 40° C ambient
Humidity	95% relative
Dimensions	17" W x 4-1/16" H x 13-7/8" D

Weight	21 lb., 6 oz.
--------	---------------

Power Input	115V $\pm 10\%$ AC 60W Nominal 370W Maximum
-------------	---

UL	Listed
----	--------

CSA	Certified
-----	-----------

REMOTE CONTROL

Transmitter	Infrared
-------------	----------

Batteries	2x AAA
-----------	--------

Receiver	IR-dedicated range-22 ft. at $\pm 22.5^\circ$ C
----------	---

Optional	UHF remote 433.92 MHz to a maximum of 200 ft. IR range up to 21 ft.
----------	---

Features, functions and specifications are subject to change without notice.

■ Notes

■ Notes

LIMITED WARRANTY

To Original Consumer Purchaser at Retail General Instrument Home Satellite Television Systems and Components

General Instrument Corporation, GI Communications Division ("General Instrument"), warrants only to the original consumer purchaser at retail each General Instrument satellite television system and component which it sells under this limited warranty to be free from defects in materials and workmanship under conditions of normal home use. This limited warranty is for one (1) year on all electrical and mechanical components. This limited warranty runs from the date of original purchase for consumer use.

Responsibilities for You and General Instrument

1. You must retain your sales receipt or provide other proof of purchase date. Promptly completing and mailing in the warranty registration card is one way of providing proof of purchase date. If you have no such proof, then the warranty will run from the date of shipment by General Instrument. You should also keep this warranty for your records.
2. If you desire warranty service, you must notify General Instrument within the applicable warranty period. See "How to Obtain Warranty Service," below.
3. Within a reasonable period after proper notification, General Instrument or an authorized General Instrument Service Center shall, at its option, repair or replace the defective part(s) or the affected component. Replacement may be with factory refurbished parts or components. You are responsible for any packing, shipping and insurance charges associated with sending the component to any authorized service center for repair or replacement.
4. This warranty does not cover charges for any assembly, installation, set-up or removal or adjustment of controls.
5. This warranty shall be void if any product marking or label has been altered, defaced, or removed, or if any product component has been altered, modified, used improperly, or had its housing opened.
6. GENERAL INSTRUMENT IS NOT RESPONSIBLE FOR DAMAGES CAUSED BY IMPROPER ASSEMBLY, INSTALLATION, SETUP OR REMOVAL, DAMAGES OR INOPERABILITY CAUSED BY ASSEMBLY OR USE WITH INCOMPATIBLE PRODUCTS, RECEPTION PROBLEMS CAUSED BY INADEQUATE ANTENNA SYSTEMS, OR DAMAGES CAUSED BY MISUSE, ALTERATION, IMPROPER MAINTENANCE, SHIPMENT, ACCIDENT OR ABUSE. AS TO ANY OUTDOOR COMPONENT, THIS WARRANTY DOES NOT COVER THE PAINTING OR PLATING.

How to Obtain Warranty Service

To obtain warranty service, you must:

1. Call or write General Instrument Technical Service Department within the applicable warranty period at: General Instrument, Satellite Products, Technical Service Dept., 5744 Pacific Center Blvd., San Diego, CA 92121, (619) 535-1717.
When you call or write, explain the problem. Ask whether the component should be returned for service or retained by you for servicing in place. Ask for a Return Material Authorization ("RMA") number and for the address to send the component, if the component is to be returned.

LIMITED WARRANTY REGISTRATION CARD

General Instrument Home Satellite Television Systems and Components

Please complete, detach and mail this card within 15 days of purchase. This provides proof of purchase and will enable General Instrument to send you product information on your purchase.

Name: _____

Address: _____

City: _____ State _____ Zip _____

Telephone Number: () _____

Component _____ Serial Number _____

Decoder Module Address Number _____

Date of Purchase _____ Sales Receipt No. _____

Seller's Name _____

City _____ State _____

Thank you for buying a General Instrument product.

1. The equipment you just purchased is:

- Part of a new TVRO system
 Addition to your existing TVRO system
 Replacement or upgrade to your TVRO system

2. Purchase method: Paid cash Financed

3. Which of the following influenced your decision to purchase?

- Dealer recommendation Friend
 Literature/specifications Company reputation
 Performance/features
 Other _____

4. Which satellite magazines do you read regularly?

- STV Satellite ORBIT
 ON SAT Satellite TV Week
 Other _____

5. How close to a city do you live?

- Within 25 miles
 Within 75 miles
 Further than 75 miles

6. How many TV sets do you have? _____

7. Do you own a personal computer? _____

8. Would you like to receive additional home entertainment/leisure time activity literature? _____

2. If the General Instrument Technical Service Department requests you to return the component, pack it safely and securely, preferably in the original shipping carton. Put the RMA number on the outside of the shipping carton. Enclose a letter explaining the problem. Be sure to include a copy of your sales receipt or other proof of purchase date, a copy of your warranty, and your phone number and return address. Ship it insured to the authorized service center specified by General Instrument. All packing, shipping and insurance charges to return the component to General Instrument must be prepaid by you. A qualified technician may be required to remove or install a component, and any charges for such work are your responsibility.

NOTE: If the Warranty on your component is expired, voided or inapplicable, General Instrument will not repair the component until you agree to pay for quoted charges. If you do not agree within 30 days, the component will be returned unrepaired. You are responsible for transportation charges both ways on components which are not under warranty. Out of warranty product shall be subject to additional service and repair charges if it is determined that any product label, marking or serial number has been altered, defaced or removed, and/or if a product or component has been altered, modified, used improperly or had its housing opened.

VIDEOCIPHER Descrambler Service Information

If your VIDEOCIPHER descrambler must be returned for service, it must be de-authorized with your program distributor who may elect to continue to charge you for programming service. When you receive the repaired or replacement unit you must have it authorized under the new unit address number. If you fail to have your VIDEOCIPHER descrambler de-authorized, you may be charged by the programmer(s) for the time your component was not in service.

Limitations

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