

DSR 922 Operator's Guide



 General Instrument®

This manual is for use with the DSR 922 IRD

Publication #468478-001

Rev B

General Instrument Corporation

6450 Sequence Dr.

San Diego, California 92121

Internet: <http://www.GI.com>

DOCUMENTATION NOTICE

The information contained in this document is subject to change without notice and should not be construed as a commitment by General Instrument Corporation.

General Instrument assumes no responsibility for any errors that may appear in this document nor does it make an express or implied warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

General Instrument shall not be liable for incidental or consequential damages in connection with, or arising out of the furnishing, performance, or use of this document and the equipment which it describes.

DSR 922

Digital Satellite Receiver

User Guide

General Instrument Corporation

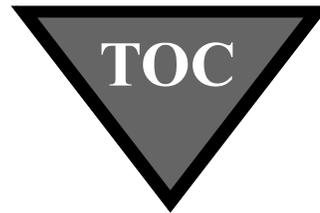


Table of Contents

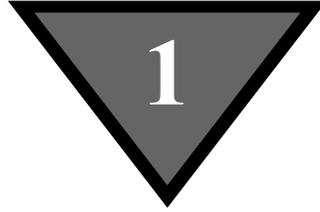
1. Welcome!	9
2. Regulatory Information	11
Programming Copyright Notice	11
FCC Certified	12
FCC Part 68	13
User Instructions	14
Equipment Attachment Limitations	15
Operation Precautions	16
Important Safeguards	17
Safeguard Instructions	19
3. DSR-922 Connections	23
Connecting Your VideoCipher® Module	23
Connecting Components	25
Connection Diagrams	29
4. Installing the Receiver	33
Initial Installation	33
Programming	36
Satellite Updates	40
Code Downloads	41
TvPass® Card	42
5. Using Your Remote	43
Key Functions	44
Programming the Remote Control	46
If Your Remote Control Cannot Find a Working Three-Digit Code in the Tables (Scanning)	47
Volume Control Crossover	48
Programming the Master Power Feature	49



Verifying Your TV, VCR and AUX Mode Codes	49
If You Have More Than One Satellite Receiver	50
Replacing the Remote Control Batteries	51
"Remote Energy Saver"	51
TV Codes (To program AUX, press TV mode key)	52
VCR Codes (To program AUX, press VCR mode key)	55
Cable Boxes (To program AUX, press VCR mode key)	57
DVD Codes (To program AUX, press VCR mode key)	57
6. Using Your DSR-922	59
Front Panel Key Descriptions	59
How to Select Menu Options	61
Configure the DSR-922 Receiver with Onscreen Menus	61
LNB Offset Menu	65
Viewing and Language Settings	67
Audio Settings	68
How to Fine Tune a Channel	71
Authorization Screens	71
Adjusting the Picture	72
7. Watching TV	75
8. Options	79
How to Display and Use the Options Menu	79
How to View the Videocipher Setup Menu	81
Opening Your Mail	82
Setting Favorite Channels	84
Setting Timers	87
Setting Parental Controls & Passwords	93
9. Interactive Prog. Guide	101
How to Display the Guide	101
10. Interests and Favorites	107
11. Pay Per View Events	111
Purchasing Pay Per View Events	111
How to Purchase an IPPV Event	112
12. Help	117
Using Help	117
13. Troubleshooting	119
Troubleshooting Your Receiver	119
14. Specifications	123
Input	123
Video	123

VHF Output	124
Audio	124
15. Warranty & Service	125
Limited Warranty and Obtaining Services	125
Limitations.....	126
Calling for Service.....	127
How to Obtain Warranty Service	127





Welcome!

The 4DTV Model 922 receiver brings you the ultimate in entertainment value—more programming choices, better picture quality, and the freedom that only big-dish systems can deliver. When you add the 4DTV digital satellite receiver to your system, you'll be able to receive all four available satellite signals: analog "in the clear" (free) programming, analog VideoCipher® II+ scrambled (subscription) channels, and all of the cutting-edge free and DigiCipher® II scrambled digital broadcasts.

Beginning at the current level of more than 500 channels, you'll have more Pay Per View channels, sports, movies, music, special interest channels, adult entertainment, and international programming. And with multiple programming packages available, you'll be able to choose where you buy your programming - allowing you to shop around for the best price!

This handbook will provide guidance to get your system up and running, information about the day-to-day features you are most likely to use as you operate the DSR-922 receiver, programming and operating the remote control as well as performing basic troubleshooting tasks and obtaining service.

For the latest information on the status of 4DTV programming, dealers, and program providers, access the 4DTV web site at www.4dtv.com. If you have further questions, please contact your authorized 4DTV dealer. If you are having technical problems with your 4DTV receiver see Chapter's 13 and 15.





2

Regulatory Information

Programming Copyright Notice

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

Changes or modifications to this device not expressly approved by the party responsible for compliance with FCC regulations (the manufacturer) could void the user's authority to operate the equipment.

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.

FCC-Required Notification of Service

The Impulse Pay-Per-View system is designed to be used on standard device telephone lines. The Impulse Pay-Per-View 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 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 REN's on your telephone line 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 Digital Entertainment Receiver with Impulse Pay-Per-View 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.

FCC Certified

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause

harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

FCC Part 68

This equipment complies with Part 68 of the FCC rules. Located on the equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN). If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive REN's on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total REN's contact the telephone company to determine the maximum REN for the calling area.

This equipment cannot be used on the telephone company-provided coin service connection to party Line Service is subject to State Tariffs.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment, please contact:

General Instrument Corp.
6450 Sequence Dr., San Diego, CA 92121
1-888-436-4678

If the trouble is causing harm to the telephone network, the telephone company may request you to remove the equipment from the network until the problem is resolved.

This equipment uses the following USOC jacks: RJ11C

It is recommended that the customer install an AC surge arrester in the AC outlet to which this device is connected. This is to avoid damaging the equipment caused by local lightning strikes and other electrical surges.

This equipment is hearing-Aid Compatible (HAC).

The telephone consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

User Instructions

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and then on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment into a different outlet so that the equipment and receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by General Instrument could void the user's right to operate the equipment and/or the equipment warranty.

Equipment Attachment Limitations

Note: This product was FCC certified under test conditions that included the use of shielded I/O cables and connectors between system components. To comply with FCC regulations, the user must use shielded cables and connectors and install them properly.

CP-01, Part 1, Section 10.1 . "NOTICE: 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 telecommunication 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, as appropriate."

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the ringer Equivalence Numbers of all the devices does not exceed 5.

The standard connecting arrangement (telephone jack type) for this equipment is CA11A.

The Ringer Equivalence Number (REN) of this device is 0.3.

Operation Precautions

WARNING: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture. Do not open the unit. 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 éviter les chocs électriques, ne pas utiliser cette fiche (polarisée) avec la prise d'une rallonge ou de tout autre prise de courant si les lames de la fiche ne peuvent être insérées à fond.



Lightning Flash Icon. The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s housing that may be strong enough to constitute a risk of electric shock to persons.



Exclamation Point Icon. 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.

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.

Important Safeguards



Read, Follow and Keep Instructions. Before you operate the unit, read and follow all of the safety and operating instructions. Keep the safety and operating instructions for future reference.



Heed Warning. Pay attention to all warnings on the equipment and in the operating instructions.



Cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth to clean the outside of the unit. Do not open the unit for cleaning or any other reason.



Power Cord Protection. Place power supply cords so that they are not walked on or pinched by items placed on or against them. Pay particular attention to the cords where they join the plug, near convenience receptacles, and where they exit from the equipment.



Power Sources/Grounding. Operate the equipment from the type of power source indicated on the marking label.

This product has a polarized alternating-current line plug as a safety feature. This plug fits into the power outlet only one way. If the plug does not fit, contact your electrician to replace your obsolete outlet. Do not try to change the plug or defeat its safety purpose.



Ventilation. Do not block or cover the slots and openings of the unit. They provide ventilation and protect it from overheating. Never place the unit on carpeting, which it may block ventilation through the bottom slots. Never place the unit near a source of heat or in a built-in installation rack unless there is proper ventilation.



Do Not Operate near Water. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, swimming pool, laundry tub, in a wet basement, or in similar situations.



Objects or Liquid in the Unit. Never push any object into this unit through any of its openings because they may touch dangerous voltage points or short out the parts. This could cause a fire or any electrical shock. Do not spill liquid of any kind on the unit.



Overloading. Do not overload power outlets or extension cords. This can result in a risk of fire or electrical shock.



Damage Requiring Service. Unplug this equipment from the power source, and contact a qualified service provider if any of the following situations occurs:

- If the power supply cord or plug is damaged.
- If liquid or objects have fallen into the unit.
- If the unit became wet from rain or water.
- If the unit was dropped or damaged.
- If the unit's performance changes.



Service. Do not try to service this product yourself. If you open or remove the cover, you may be exposed to dangerous voltage or other hazards and may void the unit's warranty. Contact a qualified service provider for all service.



Mounting and Placement. Do not place this product on an unstable surface such as a cart, stand, tripod, bracket, or table. It may fall, causing serious injury to a child, adult, or to the unit itself. To mount the unit, follow the manufacturer's instructions, and use a mounting accessory recommended by the manufacturer. Do not place this product directly on wood or simulated wood surfaces because these surfaces may be damaged.



Power Lines. Do not locate the satellite antenna system near overhead power lines, 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.



Outdoor Antenna Grounding. To provide some protection against voltage surges, lightning, and built-up static charges, make sure that the satellite antenna is grounded.



Outdoor Cable Protection. Protect all outdoor connections from moisture. During installation, treat all of the "N" and "F" connectors on your LNB with coax seal, 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. Do not use silicone seal because it has a tendency to form air pockets.



Replacement Parts. If your receiver requires repairs, contact your program provider, who will be able to assist you.



Safety Check. After the unit is serviced or repaired, ask the service technician to perform safety checks to find out if the unit is in proper operating condition.



Lightning. To protect the product from damage caused by lightning and power line surges, unplug it from the wall outlet and disconnect it from the antenna or cable system before a lightning storm or if the unit will be left unattended or unused for a long period of time. Once a storm passes, reconnect all antenna cables to the correct connectors. If you live in an area that has many lightning storms, buy polarized surge protectors and surge protectors for the power line, telephone line, and RF cable to protect your system from damage. Never attempt to connect or disconnect any wires during a thunderstorm or lightning storm.

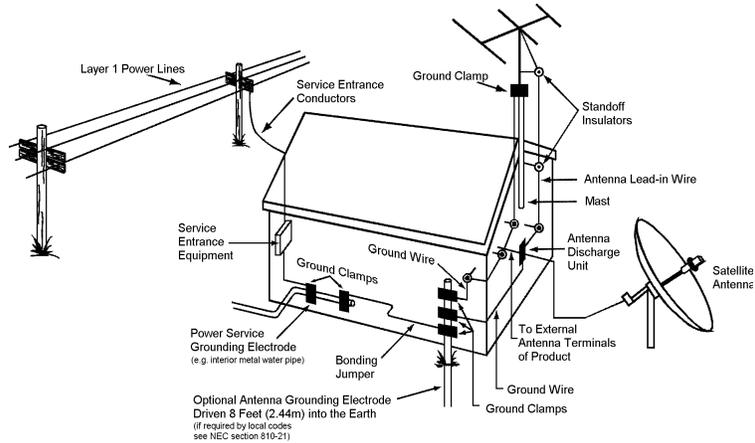
Safeguard Instructions

1. For the ground wire, use No. 10 AWG (5.3mm²) copper, No. 8 AWG (8.4mm²) aluminum, No. 17 AWG (1.0mm²) copper-clad steel or bronze wire, or larger.
2. Secure the antenna lead-in wire and ground wires to the house with stand-off insulators spaced 4 ft. (1.22mm) to 6 ft. (1.83mm) apart.
3. Mount the antenna discharge unit as close as possible to the place where the lead-in enters the house.
4. Use a jumper wire that is no smaller than No. 6 AWG (13.3mm²) copper, or the equivalent, when using a

separate antenna grounding electrode. See NEC Section 810-21(1).

5. In areas that are heavily prone to lightning storms install a lightning rod mounted to the top of the antenna on the back side. Install a ground strap (2 AWG, or larger, of copper wire) from the lightning rod to the rest of the antenna ground system.
6. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information about the following items:
 - Proper grounding of the mast and supporting structure.
 - Grounding of the lead-in wire to the antenna discharge unit.
 - Size of grounding conductors.
 - Location of antenna-discharge unit.
 - Connection to grounding electrodes.
 - Requirement for the grounding electrode.

Regulatory Information



Note to the system installer: The purpose of this reminder is to call your 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. The illustration is an example of antenna grounding according to the National Electrical Code Section 810, "Radio and Television Equipment." Check your local building and electrical codes for other restrictions on antenna grounding.

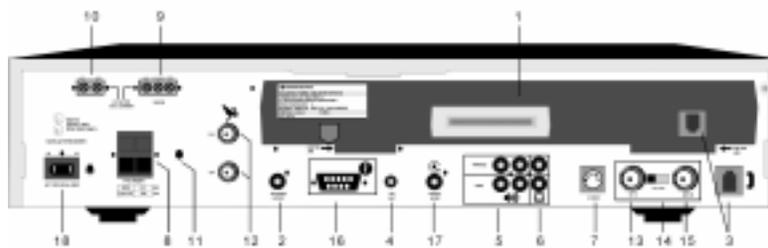




DSR-922 Connections

Prior to disconnecting your old unit, position the dish at 123 degrees west - satellite Galaxy 10R. This is identified as G0 on the 4DTV system.

Connecting Your VideoCipher® Module



1. Install VideoCipher® Module. The following steps pertain to connections for the VideoCipher renewable security (VCRS™) satellite TV descrambler module. The VideoCipher® module (with its built-in VIDEOpal™ order recorder) allows you to receive VideoCipher subscription programming as well as other Pay Per View (PPV) programming. You may call your 4DTV™ system dealer to order a VideoCipher® module if your old receiver is not equipped with one.

- You will have to remove the old VideoCipher module and re-install it in the 4DTV receiver. **Make sure both old and new receivers are unplugged when you remove or install a VideoCipher module.** The module may be seriously damaged if you do not.
- To remove the VideoCipher module from your old receiver,

you must first unscrew and remove the module cover on the back of the receiver. Then carefully slide out the VideoCipher module.

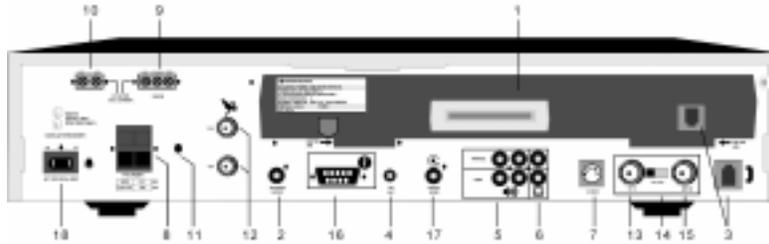
- Unscrew and remove the module cover on the back of your new DSR-922 receiver.
- Before you attempt to slide the VideoCipher module into the new DSR-922 receiver, pull out the ejector arms on the DSR-922's Back Panel. If you fail to pull out the ejector arms, you may damage the module.
- *Carefully* slide the VideoCipher module into the new DSR-922 receiver and secure the module cover in place.

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

3. Telco. This is a standard RJ-11 telephone jack connection. Because the digital channels of a 4DTV system are handled differently than the analog VideoCipher channels, there has to be a second telephone connection to enable reception of certain program offerings from your programming providers. The telephone line connection will not interfere with your telephone operation. The 4DTV IRD may use this connection to report Pay Per View digital purchases by briefly calling a toll free number. You can connect this port to the same phone line connected to your VCRS module.

- Included with your DSR-922 satellite receiver is a RJ-11 "pigtail" splitter. This is designed to plug into your VCRS module and the 4DTV's Telco port simultaneously and provide one convenient connection for the phone line. Also included is an extension phone line you can run to the wall jack, and a two-way phone line splitter to allow you to retain the use of a handset telephone or other Telco device.

Connecting Components



4. UHF ANT. This is the connection for the remote control antenna. Connect the remote control unit antenna to this terminal. If there is a signal interference, or if the effective range of the UHF remote control is insufficient, increased performance can be achieved by using a length of RG-59 coaxial cable to reposition the UHF antenna to an area with better reception.

5. Audio Out (Right and Left). These are audio outputs. The uppermost pair is "variable" output, that is, their output level is controlled by the DSR-922's internal volume control. The lowermost pair are "fixed" output, that is, their output level does not change. Use the left and right "variable" outputs to connect to the left and right (white and red cables on the audio/video interconnect supplied with the receiver) inputs of your television monitor or the appropriate inputs on your home theater system receiver. Use the left and right "fixed" outputs to connect directly to the left and right audio inputs of a video cassette recorder or other device where constant levels are desired.

6. Video Out. This is a standard composite video output terminal. Connect this port to the appropriate input on your television monitor or home theater system receiver using a 75-ohm video cable (the yellow cable on the audio/video interconnect supplied with your DSR-922). Both video ports provide on-screen displays.

7. S-Video Out. S-Video is an interface protocol that allows a video component to pass a video signal along to a monitor or recording device in a segregated chrominance (color) and luminance (black and white detail) format. This interface is very effective at eliminating "dot crawl" and other picture anomalies on

signals that are received from a component quality source. Digital channels on C-Band TV are a component quality source.

You can connect the S-Video Output to an appropriate S-Video input on your television monitor or home theater system receiver using a 5-pin mini-DIN S-Video cable (not supplied). The S-Video output is active on all channels, both digital and analog.

Connecting Your Satellite Dish

8. Polarizer (SKEW, CH/KV EXT, +5V, GND).

These terminals connect your receiver to the polarizer or, in some cases, to a coaxial relay switch - depending on the requirements of the feedhorn and other dish components.

- SKEW - Connect this terminal to the wire (usually white) that is connected to the feedhorn skew adjustment. "SKEW" is labeled "PULSE" on some models.
- CH/KV EXT - This connection is not normally used. It is designed for systems which utilize an external relay to switch between horizontal and vertical satellite transponder reception. A voltage pulse is present at this port every time you change from an odd to an even channel, triggering the external relay. Leave this connection blank unless your system uses an external relay switch.
- +5V - Connect this terminal to 5V polarizer wire (usually a red wire).
- GND - Connect this terminal to the polarizer ground wire (usually a black wire).

9. +5V, PULSE, GND. These terminals connect the receiver to the actuator. The opto-coupler installation uses all three terminals; the Reed Switch installation uses only pulse and ground terminals.

- +5V - Connect this terminal to the 5V wire in opto-coupler installations only. It supports actuator arms with an opto-coupler sensor or switch.
- PULSE - Connect this terminal to the wire that carries send/return pulse to/from the actuator sensor (for both opto-coupler and Reed Switch installations).
- GND - Connect this terminal to the ground wire (for

both opto-coupler and Reed Switch installations.

10. M1 M2. M1 M2 are motor terminals that supply power to the actuator jack in order to move the satellite dish from one satellite to another. *The circuit between these two terminals is capable of producing high voltage. Touching these terminals may result in an electrical shock. Do not make any connections to these terminals while the receiver is plugged into an AC wall outlet.*

- Connect M1 M2 to supply power to the actuator motor.
- After you connect these terminals, if the dish moves east when you press the ► key on the remote control (and west if you press the ◀ key), then the connections are backward. If the connections are backward, unplug the receiver and switch the connections.
- Once you have correctly connected these terminals, install the plastic safety cover.

11. Ground. This is a chassis ground terminal. Depending upon the specifics of your system installation and components you may achieve a higher level of actuator arm accuracy by attaching the ground wire (typically an unshielded drain in the satellite ribbon cable) from a grounding point on the actuator arm motor to this lug.

12. Input From LNB. This terminal receives LNB input.

- C/H - Connect the coaxial cable from the C-Band LNB of the satellite dish. If the satellite dish requires separate horizontal and vertical connections to the receiver, attach the horizontal (H) LNB cable to this terminal.
- K/V - Connect the coaxial cable from the Ku-Band LNB of the satellite dish. If the satellite dish requires separate horizontal and vertical connections to the receiver, attach the vertical (V) LNB cable to this terminal.

Other Connections

13. To TV. This supplies the VHF antenna signal to your television. Connect one end of coaxial cable (supplied with your DSR-922 receiver) to this terminal. Connect the other end to the antenna or auxiliary RF input of your television.

14. CH3 CH4. This switch determines the channel (3 or 4) to which you set your TV to receive satellite broadcasts. The setting

should be the same as the TV setting for use with your VCR (usually channel 3).

15. ANT IN. This is an antenna terminal. Connect it to your TV antenna or cable system lead wire.

16. MMAP Connection. The Multi Media Access Port is designed to connect to the HDD-200 High Definition Decoder. To receive HDTV signals, you will need a special HDTV monitor capable of displaying a 1080i television image and the HDD-200 decoder. You **must** use the HDD-200 decoder. You cannot connect the MMAP directly to any monitor or computer. Please contact your local dealer, or visit our web page www.4dtv.com on the Internet for more information about the HDD-200 decoder.

17. Digital Audio Out. If your entertainment center is enabled for Dolby® Digital AC-3 5.1 (six channel) surround sound, connect one end of the cable to this port and the other end of the cable to your surround processor.

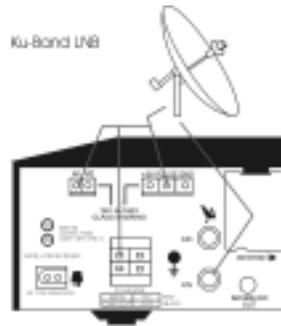
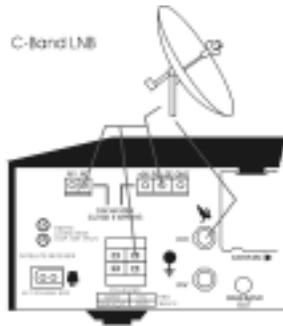
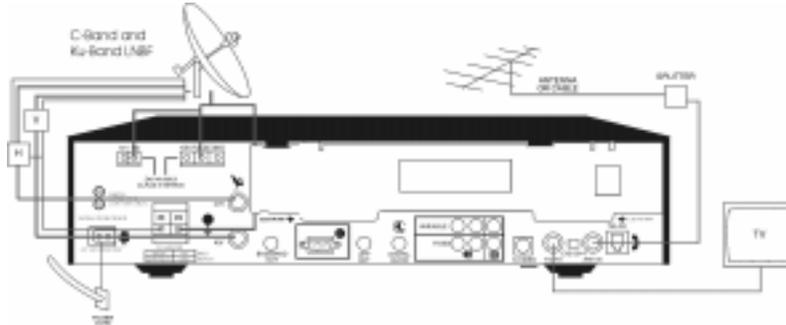
Plug in the Receiver

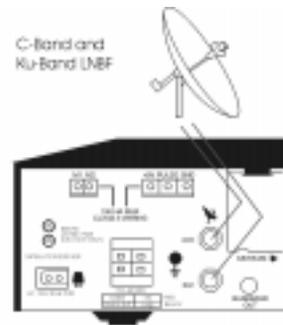
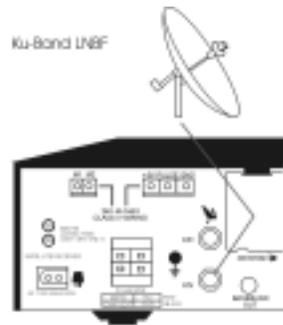
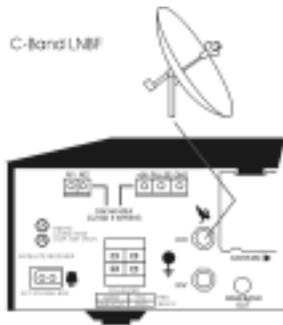
18. AC 120V 60 HZ 50 W. This is a 120V main connection. Connect the supplied power cord only to an outlet that accepts a polarized plug (one prong wider than the other, allowing insertion in *only* one position). *Do not plug in the DSR-922 receiver until after you complete all of the connections, installed the VCRS module, and replaced the VCRS cover.* When you plug the receiver in it will automatically enter a "warm up" mode. The receiver will not respond to remote control or front panel commands until it has completed the "warm up" mode. The front panel will indicate "WM UP" during this period.

Connection Diagrams

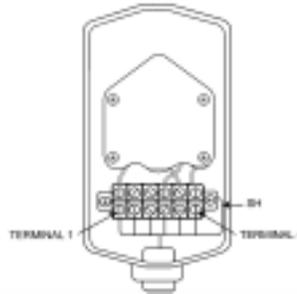
The following diagrams show the most common types of connections.

After plugging in your DSR-922, let it "warm up" for 30 seconds. Tune your TV to channel 3 or 4 (the channel you use for your VCR).

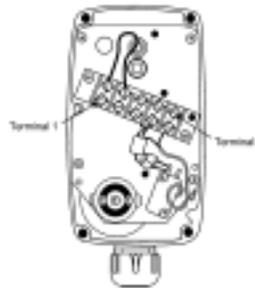




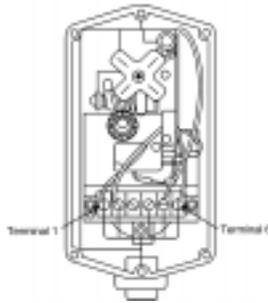
Actuator Wiring Diagrams



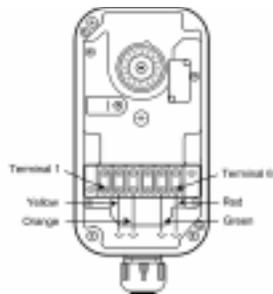
SAGINAW ACTUATOR (Actuator with Mechanical Position Sensor)			
Antenna Positioner Terminal Block	Cable Kit Wire (Color and Gauge)	Actuator Connection (Eastern)	Actuator Connection (Western)
+5	Orange, 22AWG	Terminal 4	Terminal 4
Pulse	Green, 22 AWG	Terminal 5	Terminal 5
Ground	Black, 22 AWG	Terminal 6	Terminal 6
SH	Uninsulated Drain Wire	As shown	As shown
M1	Red, 14 AWG	Terminal 2	Terminal 1
M2	White, 14 AWG	Terminal 1	Terminal 2



TRANSMISSION-TYPE DRIVE (Motor with Reed Switch Position Sensor)			
Antenna Positioner Terminal Block	Cable Kit Wire (Color and Gauge)	Actuator Connection (Eastern)	Actuator Connection (Western)
+5	No Connection	No Connection	No Connection
Pulse	Green, 22 AWG	Terminal 1	Terminal 1
Ground	Black, 22 AWG	Terminal 2	Terminal 2
SH	Uninsulated Drain Wire	Terminal 3	Terminal 3
M1	White, 14 AWG	Terminal 4	Terminal 5
M2	Red, 14 AWG	Terminal 5	Terminal 4



WARNER ACTUATOR (Actuator with Reed Switch Position Sensor)			
Antenna Positioner Terminal Block	Cable Kit Wire (Color and Gauge)	Actuator Connection (Eastern)	Actuator Connection (Western)
+5	Orange, 22AWG	No Connection	No Connection
Pulse	Green, 22 AWG	Terminal 1	Terminal 1
Ground	Black, 22 AWG	Terminal 2	Terminal 2
SH	Uninsulated Drain Wire	Terminal 4	Terminal 4
M1	Red, 14 AWG	Terminal 6	Terminal 5
M2	White, 14 AWG	Terminal 5	Terminal 6



GENERAL INSTRUMENT ACTUATOR (Actuator with Reed Switch Position Sensor)			
Antenna Positioner Terminal Block	Cable Kit Wire (Color and Gauge)	Actuator Connection (Eastern)	Actuator Connection (Western)
+5	Orange, 22AWG	No Connection	No Connection
Pulse	Green, 22 AWG	Terminal 2	Terminal 2
Ground	Black, 22 AWG	Terminal 3	Terminal 3
SH	Uninsulated Drain Wire	Terminal 4	Terminal 4
M1	Red, 14 AWG	Terminal 6	Terminal 5
M2	White, 14 AWG	Terminal 5	Terminal 6



Installing the Receiver

The following installation steps are directed at installations where the DSR-922 is replacing an existing TVRO IRD.

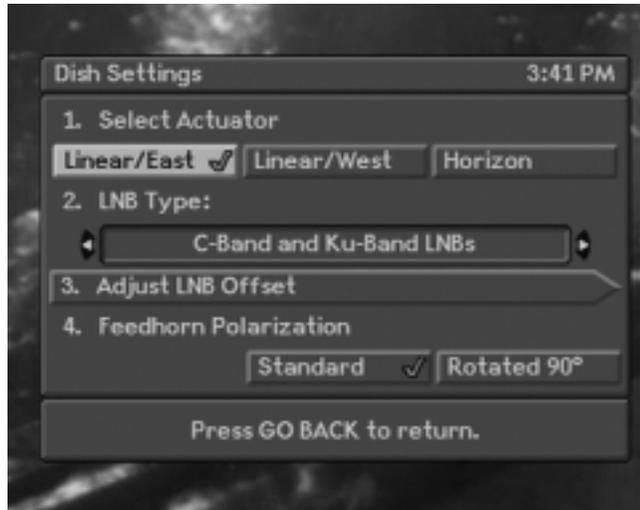
Initial Installation

Prior to disconnecting your old unit, position the dish to 123 degrees west - satellite Galaxy 10R. This is identified as G0. Following the directions in Chapter 3, install the VCRS® module and connect power and dish cables to the DSR-922. Turn on the DSR-922 and select the appropriate input on your television to view the on-screen menus. Press OPTIONS to



select option 6 (Change System Settings). Next, select option 4 (Change Installation Settings). Press option 1 (Allow Dish Moving for Updates). Select "Yes" and press ENTER. This will allow your DSR-922 4DTV receiver to move to the "homing" satellite (currently G0) at 2:00 AM, in your local time zone. Every night your satellite system will tune to a homing transponder and download information for the IPG and other instructions for your receiver. If the unit is in use at 2:00AM the system will standby to perform the download task until 4:00AM in your local time zone. If the unit is not turned off by 4:00AM, the DSR-922 will wait until the next night to perform this function.

Press OPTIONS to select option 6 (Change System Settings), option 4 (Change Installation Settings), and option 2 (Change Dish Settings) to

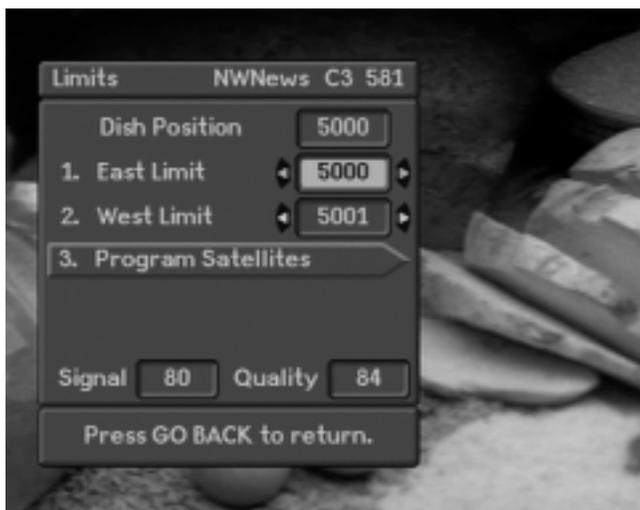


get to the Dish Settings screen. Place the check mark on the correct actuator type by using the ◀ ▶ keys and press the ENTER key. Set the correct LNB type by selecting option 2 (LNB Type) and using the ◀ ▶ keys. Select "Standard" Feedhorn Polarization (default). See Chapter 6 for more details on these settings.

Press GO BACK to return to the Installation Settings screen.

Installing the Receiver

Press 3 (Set Limits) to display the Limits screen. This screen will be used to set the final limits at the conclusion of the installation sequence.

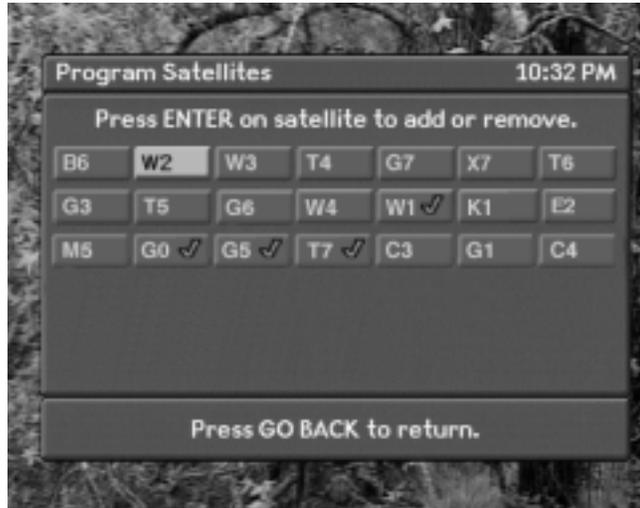


With the DSR-922, you may begin installing satellites prior to setting limits if you select option 3 (Program Satellites) from the Limits screen



as opposed to selecting option 4 (Program Satellites) from the Installation Settings screen.

Press 3 from the Limits screen to display the Program Satellites screen.



WARNING: *Programming satellites without setting the limits may cause damage to the dish, actuator, roof, etc. if your system does not have physical limits properly set at the dish.*

Programming

Use the  keys or the   keys to highlight the G0 tile. Press ENTER.

This is the Satellite Adjustment screen. Use the Channel Up and Channel Down buttons to select a "target" channel. A "target" channel is used to identify the satellite you are on and to provide an example of the image quality. Target channels should be both analog and free-to-air broadcasts. That is, they should not require a subscription nor the use of a VCRS module. At the time of this writing, transponder 24 on satellite G0 is a clear, strong and easily identifiable channel. The use of a current guide may help in identifying target channels and installing the DSR-922 receiver.



Press 2 for dish position control.

Use the ◀ ▶ to move the dish until you locate the desired signal. The dish should already be on G0 if it was left at that position before installation. If you are unable to locate G0 and are only finding opposite format satellites, you may need to adjust the skew ninety degrees to reverse the polarity. If you are using an LNBF you may need to switch the feedhorn setting to rotated 90 degrees and begin again.

Once you have found the correct "target" channel on the selected satellite, adjust the dish position to maximize signal strength.

Press ▼ to highlight skew for Skew Adjust. Adjust the skew to maximize signal strength. You may choose to use the auto skew feature by pressing "AutoPeak Skew" and pressing ENTER. You need to peak skew on both an odd channel and an even channel. The skew settings should be 90 degrees apart (if odd is -30 then even should be +60 for example).

Press GO BACK and then ENTER to save the settings. This will put you back on the satellite chart to select the next satellite position to be programmed. **Do not continue programming satellites at this time.**

Press EXIT. Change the channel to transponder 9. *Leave your DSR-922 on this transponder for a minimum of 10 minutes to retrieve all satellite updates before proceeding. See page 38, "Authorizing Your DSR-922 4DTV Receiver", for further information.*

Signal Strength and Quality

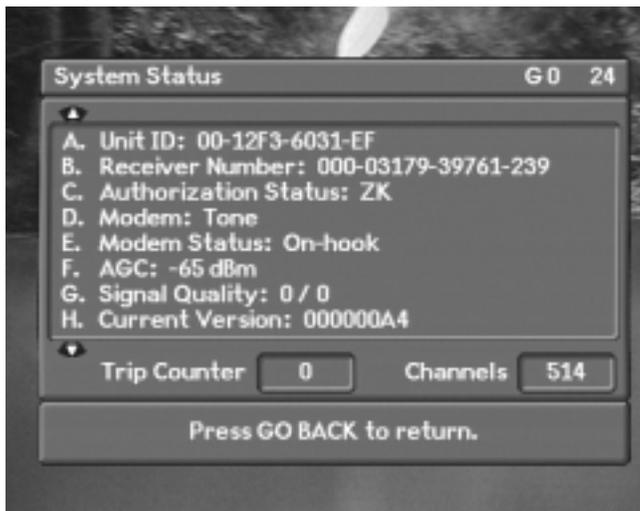
Press **OPTIONS** then option 5 (Adjust Picture). You should now see the Picture screen and a signal “Quality” box will appear next to the signal “Strength” indicator. Signal “Strength” measures the amount of signal being fed to your DSR-922 from the LNB. Signal “Quality” is an indicator of the ratio of signal-to-noise. If necessary, fine-tune the settings of your system until the level of the signal quality is at the maximum attainable value. Press **EXIT**.

For reception of digital channels to be possible it is necessary for the Quality reading to be greater than 12. From a Quality reading of 12 to 20, digital reception will be unreliable and you may experience “macroblocking” or other reception artifacts. Above a Quality reading of 20 your digital picture reception will become stable. It is possible to have a system that can capture a marginal signal usable for an analog transmission, but not a digital transmission. Under these circumstances it is necessary to service your satellite reception system and/or peak your satellite dish to attain a maximum signal quality reading on the digital transponders you wish to receive.

Authorizing Your DSR-922 4DTV Receiver

For proper operation, the DSR-922 receiver must be authorized for reception. When you authorize your programming your programming provider will automatically set the clock on your receiver and enable reception of any “Free Preview” channels being offered. In addition your programming provider will authorize your receiver to display any premium digital programming you have purchased or that is associated with the purchase of your analog channel selection.

Press OPTIONS, then option 6 (Change System Settings), and option 5 (Check System Status). At the bottom of the screen you should notice the



number in the box marked "Channels" increasing. Once the unit has stopped counting (currently there are over 4000 channel definitions) it has completed downloading the channel maps. It may take several minutes for the unit to completely download the channel maps. Do not move the dish or change other settings while the DSR-922 is performing this function.

Write down the numbers and letters on Line A: Unit ID. Your program provider will need this digital Unit ID number in order to authorize the IPG. The clock will be set based on your zip code. Please call your program packager now to authorize your programming selections. You can watch your packager authorization by noting the increase on the Trip Counter. *You may need to call more than one packager if you purchase programming from multiple providers.*

Programming the Remaining Satellites and Setting Limits

You are now ready to resume programming satellites by pressing OPTIONS. Press option 6 (Change System Settings), option 4 (Change Installation Settings), option 3 (Set Limits), and finally option 3 (Program Satellites).

Select the next satellite to the west to program, satellite G5. Select a target channel to identify the satellite (at the time of this writing transponder 3 is an analog clear channel) and repeat the same steps used

in programming G0. Adjust dish position and skew to peak performance on satellite G5. When reception is satisfactory, press GO BACK to save.

Continue programming the satellites to the west using the same sequence of commands until you reach the western-most satellite you can receive (usually C4 or C1). After saving your western-most satellite, press GO BACK again. This will take you back to the Set Limits screen.

Select option 2 (West Limit). Using the **▶** key, increase the value of the West Limit to match the current Dish Position. You may want to increase the value of the limit a little beyond the present position to allow adjustment space for fine-tuning. Your picture will become snowy as you move the dish off the satellite position.

Continue to program the remaining satellites to the east of G0. You may notice that Line 1- "Move Dish To"- is providing you with an approximate dish position for the desired satellite. You may select "Move Dish To" option and the system will automatically move the dish to the predicted position of the satellite. If your receiver does not accurately predict the position of the desired satellite, check your actuator type selection. Selecting Linear East when your system is, in fact, set up for a Linear West arm (for instance) can cause inaccuracy in the satellite position finder.

When you have programmed the eastern-most satellite your system can receive, press GO BACK to return to the Set Limits screen. The eastern-most satellite is typically B6 (Ku-Band) or W2 (C-Band) for a system with a linear actuator arm. The satellite name icons are programmed in order from east to west (top to bottom). Programming satellites east of B6 or west of C1 may require special equipment. Contact a qualified dealer for assistance in programming satellites I1 through P5.

Press EXIT. You have now completed the programming of your DSR-922 receiver.

Satellite Updates

From time to time, satellite updates will be downloaded to your receiver. These updates usually include changes in satellite configurations and channel lineups, as well as regular updates to the Interactive Program guide (IPG). The updates—which usually take a few minutes—will take place at the time of installation and late at night so that they will not disrupt your program enjoyment more than necessary. You may find that your satellite dish has been moved to a new position over night.

How to Remove a Satellite from the Satellite Select Screen



To remove a satellite from the Satellite Select menu, press **OPTIONS**, **6**, **4**, and **4** to go to the “Program Satellites” screen. Use the **◀ ▶** keys or the **▲ ▼** keys to highlight the satellite you wish to remove.

Press **ENTER**.

Select “Remove Satellite”

Press **ENTER**. Please note that you cannot remove a satellite’s settings from the Satellite Select menu if you are viewing that satellite.

Code Downloads

Your DSR-922 receiver has internal computer components which operate by using programs that are stored in the receiver’s read-only memory (ROM). Once or twice each year, code downloads are transmitted to your receiver. These code downloads may include changes to various screens, menus, and software to upgrade the performance of your receiver. The code downloads take about 15 minutes and will interrupt all other receiver functions including output of video, audio, and data. Code downloads are scheduled for late at night so that they will not disrupt your program enjoyment more than necessary. Do not unplug the power or other connections during this process. If a code download is



unsuccessful or you have problems operating your receiver, contact the hotline at 1-888-436-4678.

TvPass® Card

In the event of certain types of data security problems, your service provider may decide to utilize an authorization feature called TvPass® Card. This plastic card (smaller than a credit card) fits into a slot on the lower left corner of the DSR-922 receiver's Front panel.

5

Using Your Remote

The remote control that is provided with your new DSR-922 is set at the factory to control all of the receiver functions. The remote control can also be used to operate your TV, VCR and auxiliary/stereo components, but in order to use it, you will need to "program" it for the brand of TV, VCR and auxiliary components that you own. This process is called programming the remote control.

A Word About Modes. To enable the remote control to operate your receiver, your TV, and your VCR, it has four main modes of operation: SAT mode, TV mode, VCR mode and AUX mode. This means that when you press the SAT, TV, VCR or AUX keys on the remote control, you enable it to control each of these devices, one at a time. Naturally, some of the remote control keys have more than one function, depending upon which mode you are using at the time. Keep this in mind as you read the descriptions for each remote control key. Also keep in mind that some SAT functions are available only within SAT mode. Among these special functions are access to the DSR-922 menus through the OPTIONS key, use of the Interactive Program Guide (IPG) through the GUIDE key, and the ability to select a satellite by using the





SAT key. In addition, you can assume that if you see a key on the remote that you have never seen on a TV or VCR remote control, it is only useful for DSR-922 functions and can only operate when the remote is in satellite mode.

If You Misplace the Remote Control. If you ever misplace the remote control and need to use the various DSR-922 menus, just press the MENU key on the Front Panel and a special Menu screen will appear.

Key Functions

Power. To turn the component on or off.

AUX(mode). To change the remote to AUX mode so it can control the auxiliary components.

VCR(mode). To change the remote to VCR mode to control the VCR

TV(mode). To change the remote to TV mode so it can control the TV.

SAT(mode). To change the remote to SAT mode so it can control the receiver for viewing satellite and cable TV signals as well as the OPTIONS menu.

Source. To control the input source to your satellite receiver, your TV, your VCR or your auxiliary components.

- In SAT mode, it shifts between satellite or cable and antenna input.
- In TV mode, it shifts between auxiliary antenna and video sources.
- In VCR mode, it shifts between TV input and VCR input.
- In AUX mode, it allows input from auxiliary components.

SAT. Press this key to display the Satellite Select menu to select a satellite. If you press the SAT key when you are viewing the Channel Locks, Favorite Channels, Set Timer, IPG, a special menu with a satellite list will appear — allowing you to obtain information about the satellite without actually moving a dish.

Arrow Keys. To highlight selections from menu screens. Also used in the Browse banner to navigate between listings.

Enter. For convenience, there are two ENTER keys. If you are using a menu, press ENTER to select a highlighted option. In SAT mode press ENTER to tune in the channel whose numbers you have already pressed.

Go Back. To return to the previous menu.

Exit. To exit any menu and watch a program or to display a program information if you are already watching a program.

Guide. To display the Interactive Program Guide (IPG). Press it again to return to program viewing.

Interests. To exit any menu and display the Interests menu. Press it again to remove the Interests menu and return to watching a program.

Options. To exit any menu and display the Options menu.

Info. To display detailed information about the current program or a highlighted program in the Guide. Press it again to turn the information off.

Browse. To view program information for channels and times other than the current channel and time while continuing to view a program. Press GO BACK to return to watching a program. Press ENTER to go to the program located in the Browse banner.

Future. To display a program banner for what's on in the future while you are watching a program.

Vol. To raise or lower the volume level.

Mute. To mute the TV sound.

Last Ch. To return to the last channel viewed.

Chan. To change the channel. If you are using a menu, press to change channels without removing the menu. If you are using the Guide, press to move one screen up or down.

Number Keys. These keys operate in different ways, depending upon which mode you are in:

- If you are using the menus, press these keys to select a numbered option.
- If you are watching a program, press these keys and ENTER to change channels. If the channel has three

numbers, it will tune in immediately after you enter the third number. Generally speaking, cable TV channels (analog) are numbered 1-99, and satellite TV channels are assigned numbers 100 and above.

Help. To display the help screens. Press it again to turn off the help screens and return to watching a program.

Enter. For convenience, there are two ENTER keys. If you are using a menu, press ENTER to select a highlighted option. In SAT mode press ENTER to tune in the channel whose numbers you have already pressed.

VCR Keys. Some remotes have separate keys to operate the VCR's record, stop, pause, fast-forward, rewind, and play functions.

Programming the Remote Control

Follow these instructions to program the remote to control your TV, VCR and auxiliary (AUX) components.

1. Turn on the connected component for programming.
2. Use the table that appears later in this section (page 52) to find the brand of TV, VCR or auxiliary component.
3. After the manufacturer's brand name is a three-digit code number (or several three-digit codes).
4. Press and hold the TV, VCR or AUX key on the remote control for at least three seconds-until the light on your remote flashes.
5. If you are programming the TV or VCR key, continue with step 6. If you are programming the AUX key, first press AUX then press the SAT, TV or VCR mode key to specify the type of device to be controlled before proceeding with step 6.
6. When the light flashes (AUX light will remain steady), key in the first of the three-digit codes (listed in the table) for your component using the number keys on the remote control. Make sure to do this accurately and without a long delay. If programming the AUX key for a second satellite receiver use one of the following SAT

codes: 000, 001, 002, or 003.

7. If the remote control "accepts" the code, you will see several rapid flashes of the light. If it does not flash, repeat steps 4, 5 and 6. After the remote control accepts the code, press the POWER key on the remote control to make sure the remote control is able to turn your component off. This means it is functioning properly.
8. If your component does not respond to the remote control POWER key, even though it has "accepted" the manufacturer's code, repeat steps 4, 5, and 6 using the second three-digit code from the table. If this does not work, try the third code, etc., until the remote control accepts the code and your component responds to the remote control POWER key.

NOTE: Some cable box brands are also programmable using these instructions. Check the table that appears later in this section for applicable cable box brands and codes. You will press the TV key to program your cable box. Your remote can only accept a TV or cable box code for this programming step.

If Your Remote Control Cannot Find a Working Three-Digit Code in the Tables (Scanning)

If you try to program your remote control using the three-digit codes, and the remote control does not work correctly, you may be able to find a code that works by using the "scanning" process.

1. Turn on the TV or the VCR—depending upon whether you wish to program the remote control for your TV or for your VCR.
2. Press the TV key (or VCR key) for at least three seconds—until the LED blinks.
3. The following steps explain how to "scan" through the TV (or VCR) codes stored in your remote control using the  keys. (The LED will not be lit while the  keys are depressed.
 - While pointing the remote control at your TV (or VCR), press the  key to scan upward to the next code. (Use



the ▼ key to return to the previous code.)

- If the transmitted code is the correct one, your TV (or VCR) will turn off, responding as if its POWER key were pressed.
- If your TV (or VCR) does not respond, depress the ▲ key to try the next code. When your TV (or VCR) turns on or off as a result of the transmitted code, you will know that you have found the correct code.
- When you have found the correct code (power to your TV or VCR is toggled on or off), press the ENTER key. This will store the manufacturer's code. The LED will then flash rapidly several times and turn off.

NOTE: If your TV is not listed in the tables and/or the codes for your brand are not accepted by the remote, you will need to use the remote originally manufactured for your unit.

Volume Control Crossover

Your remote control unit is programmed from the factory to control the volume of your television set when you are using the remote control in the SAT mode. You can choose to have the SAT mode control the volume of your satellite receiver directly, instead. The AUX mode can also be programmed to control the audio from the TV or SAT device. To program your remote control for this function:

- Enter the programming mode using either the SAT mode key or the AUX mode key.
- While the SAT mode key or AUX mode key is flashing, press and release the SAT mode or TV mode key (depending on which device you want remote volume and mute control).
- The SAT mode key or the AUX mode key will light as you press and release the programming mode key, flash three times rapidly and extinguish.
- The remote control will now control the volume of the SAT device when in the SAT mode.

Programming the Master Power Feature

If you wish to control the power on/off function of your satellite receiver, VCR, TV, and all connected equipment with a single press of the POWER key on your remote control, you can enable the remote control's Master Power feature by following these steps:

- Press the SAT key on the remote control for at least three seconds-until the light on the key blinks.
- Press the POWER key on the remote. The light will remain on steady. Press the power key a second time, and the light on the remote will blink on and off briefly, which indicates that the remote has accepted the Master Power command.

If you wish to cancel the Master Power feature, just repeat the steps outlined above.

Verifying Your TV, VCR and AUX Mode

Codes

You can verify the accepted programming codes for each mode by following these steps.

1. Press the TV, VCR, AUX key for at least three seconds-until the LED blinks.
2. Press the "INFO" key.
3. The LED will blink, indicating the code of your TV, VCR or auxiliary component in the following sequence. For example, if your TV code is for a Tandy brand TV (code 105) the blink pattern will be:
 - Pause>long blink "1;"
 - Pause>short blink "0;"
 - Pause>long blink, long blink, long blink, long blink, long blink "5."

A zero in the code will always be represented by a short blink.

4. For the AUX mode only, after the code is verified the appropriate mode key will blink to indicate the component being controlled.

If You Have More Than One Satellite Receiver

If you have more than one 4DTV satellite receiver, you may want to prevent the remote controls from affecting the other receivers. This may also be important if your neighbor has a DSR-920 or DSR-922 4DTV receiver. To prevent this kind of interference, you must "pair" each remote control with one receiver. In order to do this, you will have to assign a new "address" to each pair of remote controls and receivers so that each pair functions independently of the others.

To assign a unique "address" to a pair of remote control and receivers:

- Press the POWER key on the receiver's front panel to turn it on.
- Press the  keys on the front of the receiver at the same time. The receiver will display two figures: first an "A", then a second number from 0 to 3. All together it looks like this: "A0". The second figure is also known as the "address" to which we referred earlier.
- Press the  keys on the receiver's front panel to change the address to 0, 1, 2, or 3.
- Press the ENTER key on the front panel to memorize the change. Failure to do this will cause the receiver to reset to the factory mode of "A0" the next time the power is cycled.
- Press the POWER key to exit this mode.
- On the remote control that you plan to use with the receiver, press and hold down the SAT key for about three seconds until the LED flashes.
- Enter the numbers "00" and the third number (the address) that you have already entered on the front panel of the receiver (either 1, 2, or 3). If the remote control accepts the new address, the LED will flash rapidly several times. The four possible address combinations are 000, 001, 002 or 003.

If desired the AUX key can be programmed to operate the second receiver. See page 46, Programming the Remote Control for instructions.

Replacing the Remote Control Batteries

When the remote control batteries are worn out (discharged), the remote will stop working. Replace the batteries as soon as possible to retain your programmed codes. Once you remove the batteries from the compartment, you must replace them within two hours to retain your programmable features. The remote control for this unit is powered by two AA batteries. Use only alkaline batteries. Remember to replace both batteries at the same time. To replace the batteries:

- Remove the cover by pressing down the Back Panel indentation and removing the panel off the remote control.
- Position each battery in the battery compartment so that the flat base (-) is against the spring and so that the raised contact (+) is against the terminal. Make sure the batteries are securely seated.
- Replace the cover.

"Remote Energy Saver"

If you misplace your remote (i.e., it is stuck in your couch), and a key is inadvertently pressed, the remote will automatically turn itself off after three minutes.



TV Codes (To program AUX, press TV mode key)

Admiral	018,090,125
A-Mark	120,224,225
Aiwa	090,251
Akai	000,032,070,149,172
Amstrad	033
Anam	005,009,021,041,120,121
Anam National	211
AOC	005,006,019,020,120,140,163,173
Archer	120
ASA	047
Audio Dynamics	234
Audiovox	120
Bell & Howell	018
Broksonic	005,144,172,173,174,219,226
Candle	006,022,023,025,163,213
Capehar	1019
Centurion	192,194
Citizen	006,016, 018,022,023,024,025,026,144, 163,202,213,224
Concerto	005,023,213
Contec	041,091,185,227
Coronado	224,225
Craig	021,041
Crown	026
Curtis Mathes	006,016,018,026,059,125,163,172,192,194,202,224,231
CXC	041
Daewoo	005,024,026,029, 030,031,032,130,172,214,215,224,233,252
Daytron	026,192,194,224
DBX	234
Dimensia	125
Dumont	047
Electrohome	026,149,224
Emerson	017,023,026,028,033,034,035,037,038,039,041,122,141,143, 144,172,176,187,203,204,205, 219,222,223,224,225,226,227,251,253
Envision	163
Fisher	042,090,099,216,217
Fujitsu	034,187
Funai	034,041,187,251
Futuretech	041
GE	003,008,009,023,043,044,125,130, 134,147,172,195,206,207,211,228,231
Goldstar	005,023,026,045,046,088,172,173,194, 213,223,224,225,230,234,254
Grundig	047
Hallmark	023
Harmon Kardon	234
Hinari	034,187
Hitachi	018,023,026,048,049,050,051,052,053 054,055,116,126,142,172,185,213,224,225,231,251
Infinity	010,066,151
JBL	010,066,151
JCPenny	003,005,006,014,016,026,043,044,096 125,134,163,172,194,206,207,223,224,231,232,234
Jensen	056
JVC	057,058,059,060,186,234
Kawasho	061
Kenwood	006,251
Kloss	022,110
KMC	224,225
KTV	026,039,041,172,224,225
Lloytron	224

Lodgenet	018
Logik	018
Luxman	023,213
LXI	003,010,066,090,117,125,129,131,134,172,173,194,223,251,254
Magnavox	000,006,008,010,017,020,025,027,028,066,067,068,110,144,151 154,163,164,167,172,173,175,192,194,218,224,225,231,251
Majestic	018
Marantz	006,010,066,068,088,149,163,172,234
Marta	223
Matsui	032,109
Memorex	018,032,090,223,232,251
MGA	004,005,006,023,034,071,072,149,163,172,187,192,194
Mitsubishi	004,005,023,034,070,071,072,122,123,149,172,173,187,192,194
MTC	005,006,016,023,031,163,202,213
NAD	002,117
NEC	005,006,007,023,028,090,144,163,172,173,191,192,194,213
National	011,151,190,195,196,211
Nikkai	113,118
Onwa	041
Optimus	232
Optonica	129
Orion	219,226
Osume	091
Panasonic	008,009,010,011,012,066,151,195,196,211,231,232
Philco	005,006,025,067,068,110,151,163,172,218,224,225,251
Philips	005,010,025,027,066,068,088,146,151 163,164,218,220,223,225,251
Pioneer	002,008,048,051,076
Portland	005,026,172,224,225
Proscan	125,147,172
Proton	006,013,019,023,026,172,224
Pulsar	001
Quasar	008,009,195,211,231,232
Radio Shack	026,041,112,141,173,194,224,229,230,232
RCA	003,005,008,014,048,078,079,080,082,084,085 086,087,125,130,134,147,172,210,231,251
Realistic	035,041,090,141,194,222,223,224,229,251
SAA	145
Saba	051,116,142
Saisho	032,033,109
Sampo	006,019,163,192,194
Samsung	005,006,016,023,026,032,088,112,163,172 173,192,194,202,213,221,224,225,229,233
Sansui	219
Sanyo	042,089,090,091,092,109,194,216,217
Scott	026,034,037,041,093,173,187,192,194,224,233
Sears	003,023,034,042,090,096,098,099,101,102,104,117 125,131,134,151,187,194,202,216,217,223,224,225
Sharp	026,091,129,141,200,224,225
Signature	018,251
Sony	000,109,119,122
Soundesign	023,025,041,172,251
Spectricon	120
SSS	005,041
Supra	022,023
Sylvania	006,010,025,066,068,110,112,151,163,172 173,192,194,229,251
Symphonic	132,179,251
Tandy	112,113,129,251
Tatung	009,211



Teac	251
Technics	008,032
Techwood	023,213
Teknika	004,005,016,018,022,023,024,025,026,034
	041,072,114,149,151,187,202,213,223,224,225,251
Telerent	018,224
Teletech	032
Thomson	051,116,142
TMK	023,172,213
Toshiba	016,017,047,090,096,117,118,131,180
	201,202,216,233
Totevision	026,223,224
Universal	043,044,206,207
Vector Research	006,234
Victor	057
Video Concepts	070,234,251
Vidtech	005,023,172,173
Viking	022
Wards	005,006,018,023,034,043,044,067,068
	119,125,141,151,163,172,173,187,192,194,206,207,224,251
Westinghouse	090
Yamaha	005,006,234,251
Yorx	192,194
Zenith	001,018,178,219,223,251
Zonda	120

VCR Codes (To program AUX, press VCR mode key)

Aiwa	088,202
Akai	008,013,,014,015,016,018,019,020,145,157,198,210
Alba	046
Amstrad	088,214
ASA	065
Audio Dynamics	030,093,210
Broksonic	008,059,148
Bush	089
Cannon	054
Canon	022,042,056,080,092,093
Capchart	043,046
Citizen	056,091,092,093
Craig	044,082,091
Curtis Mathes	054,092,105,184
Daewoo	034,046,093,150,204,206
Daytron	046,206
DBX	030,093,210
Dimensia	105
Dual	210
Dumont	049
Dynatch	088,214
Electrohome	109
Emerson	005, 006, 008, 009,010,011,012,059,068,088, 090,109 132,190,192,193,198,204,211,212,213,214
Ferguson	210
Finlandia	049
Finlux	049,065,088,214
Fisher	048,049,081,082,084
Funai	088,214
General Electric	025,050,051,052,053,054,091,105,133,184
Go Video	057,058,164,186
Goldstar	030,033,056,092,102
Goodmans	085,089
Graetz	210
Granada	049,081
Grundig	065
Harman/Kardon	030,069
Hinari	089
Hitachi	036,037,038,040,041,088,094,095,121,210,214
ITT	018,210
Instant Replay	184
JC Penney	030,052,054,080,081,091,093,094,184
JCL	184
Jensen	060,210
JVC	061,062,063,064,081,092,093,122,123,210
Kenwood	062,081,092,093,210
Lloyd	088,214
Logik	089
Luxor	018
Magnavox	027,034,054,065,088,111,130,134,136 137,138,139,141,142,143,158,159,184
Marantz	030,054,065,081,085,092,093,102,184
MEI	054,184
Memorex	033,049,054,066,081,082,085,088,184,214
MGA	067,068,109,183,211
Minolta	094
Mitsubishi	062,067,068,069,070,071,109,124 125,140,183,211



MTC	080,088,214
Multitech	088,089,091,214
NAD	073,153
National	184
NEC	030,031,032,062,081,092,093,100,102,127,128,160,210
Nordmende	210
Optonica	072,085
Orion	006
Panasonic	021,022,023,024,026,054,098,114,129,184
Pentax	037,092,094
Philco	054,111,184
Philips	054,065,085,154,155,184
Pioneer	062,073,074,075,076,093
Portland	046,093,206
Proscan	105
Pulsar	033
Quartz	081
Quasar	054,078,184
Radio Shack	081,082,084,085,109,184,188,214
RCA	025,026,027,028,037,091,105,146,147,162
Realistic	049,054,080,081,082,084,085,088,184,188,214
Saba	210
Saisho	006,212
Salora	067,081,183
Samsung	015,034,079,080,091,186,204
Sansui	032,062,093,210
Sanyo	044,049,081,082,083
SBR	065
Schaub Lorenz	210
Schneider	089
Scott	008,034,059,090,183,204,212,213
Sears	048,049,081,082,084,094
Sentra	046
Sharp	085,109,130,188
Sony	000,001,002,003
Sylvania	054,067,088,111,183,184
Symphonic	214
Tandy	081,082,084,085,088,109
Tashiko	088
Tatung	086,210
Teac	088,210,214
Teknika	054,087,088,184,214
Telefunken	210
Thomson	210
Thorn	210
TMK	006
Toshiba	034,035,067,084,090,183,204,210
Totevision	080,091
Unitech	080
Vector Research	030,092,093,183
Video Concepts	068,092,093
Videosonic	091
Wards	027,054,080,082,085,088,089,090,09, 109,156,161,184,188,214
Yamaha	030,081,092,093,210
Zenith	033,062

Cable Boxes (To program AUX, press VCR mode key)

General Instrument	235,236,238,241,242,243
Jerrold	235,236,237,238,241,242,243
Panasonic	249,250
Pioneer	244,245,246
Scientific Atlant	239,240
Spruce	249
Starcom	235
Tocom	241,242,243
Videoway	248
Zenith	247,248

DVD Codes (To program AUX, press VCR mode key)

Denon	222,223,224,239
Fisher	236
Funai	225
General Electric	249,250
Goldstar	221
Hitachi	226
Kenwood	227,253
Magnavox	228,229,230,231,232,252
Mitsubishi	228,230,233,234
NAD	228
Onkyo	230
Panasonic	235,236,237,238,239,240,241,242
Philips	229,230,231
Pioneer	228,243,244
Proscan	246,249,250,251
Quasar	236
RCA	245,246,247,248,249,250,251
Radio Shack	225
Samsung	230
Sharp	253
Sony	215,216,217,218,219,220
Technics	236,237,240
Toshiba	230,243,252,253
Yamaha	239,254,255
Zenith	221,230,252

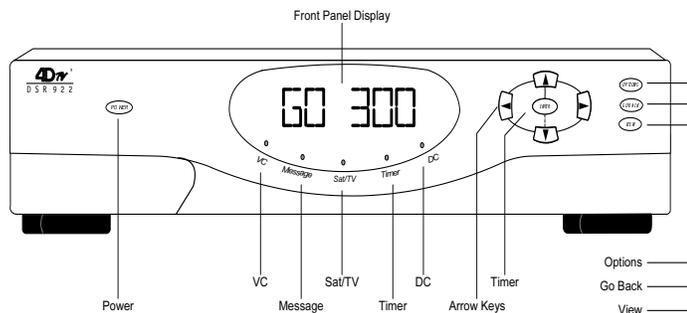




Using Your DSR-922

Most viewers find it more convenient to use the keys on the remote control rather than the keys on the front panel of the receiver. But even though there are far fewer keys on the receiver, they still allow you to control most DSR-922 functions. After plugging in your receiver, allow it to "warm up" for 30 seconds before using it.

Turn the power off (POWER key) when you are finished watching programs. The receiver can only move the dish to receive its nightly updates when the receiver is off.



Front Panel Key Descriptions

Front Panel Display. In addition to displaying the current time while not in use, this area displays the satellite name and current channel number while you are viewing programs. It also displays the letters SLP when the sleep timer is set, and if a timer is executing, two dashes

revolve in a clockwise direction. A period flashes each time you press a remote control key.

Power. Press this key to turn on the power to the DSR 922 receiver enabling you to watch programs.

VC. This indicator lights up when the unit is receiving a VideoCipher signal.

Message. This indicator lights up when there is a digital EPM (Electronic Personal Mail) message waiting for you. This light does not indicate a VCRS (VideoCipher Module) message - that messaging system uses an on-screen asterisk indicator. To learn how to access the digital mail system refer to Chapter 9 in this manual.

SAT/TV. This indicator lights up when the unit is set to receive satellite broadcasts (controlled by the SOURCE key on the remote control).

Timer. A steady light indicates the timer system is on. The indicator flashes when the timer system is within two minutes of being activated.

DC. This indicator lights up when the unit is receiving a DigiCipher®II signal.

Enter. Press this key to select a highlighted menu option.

Arrow Keys. Press the ◀ ◆ ▶ keys to highlight selections from menu screens. If you are watching a program in 4DTV mode, press the ◆ keys to fine tune the picture.

Menu. Press this key to display the Menu screen. Press it again to turn off the Menu and return to a 4DTV mode program. Press this key to control the receiver if you cannot find your remote control.

Go Back. Press this key to return to a previous menu or the last channel viewed.

View. Press this key to exit any menu and watch a program in 4DTV mode. If you are already watching a program in 4DTV mode, press this key to display program information.

How to Select Menu Options

As you use the many features and follow directions throughout this User Guide, you will display menus and be instructed to select various options. When you see the word select, it is important that you understand what to do—whether you use the remote control or whether you use the keys on the Front Panel of the receiver.

If you use the remote control, there are two ways to select a menu option:

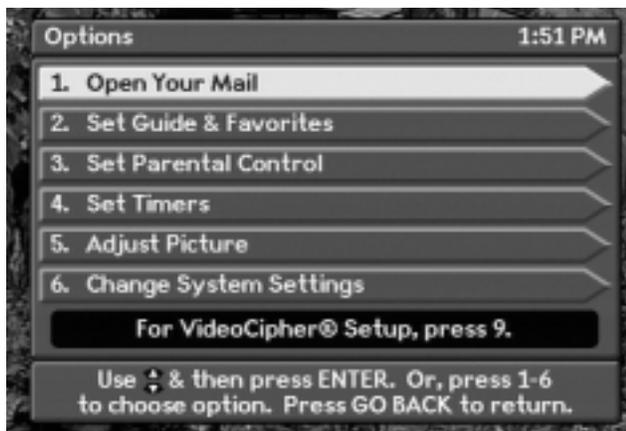
- Press the  keys or the   keys to highlight the option. Then press the ENTER key to select it.
- If the options are numbered, simply press the number key for an option. You do not have to press the ENTER key.

If you use the Front Panel of the receiver, there is only one way to select a menu option. Press the  keys or the   keys to first highlight an option. Then press the ENTER key to select the highlighted option.

If you Misplace the Remote Control. If you ever misplace the remote control and need to use the various DSR-922 system menus, just press the MENU key on the Front Panel, and a special Menu screen will appear. From this screen, you will have access to the other onscreen menus.

Configure the DSR-922 Receiver with Onscreen Menus

Most of the installation procedures take place by using a small group of onscreen menus. To use this group of menus, it is necessary to first display the Options menu. If you use the keys on the remote control to access the menus there are two ways to select a menu option (1) press the   keys or the  keys to highlight the option you wish to select. Press the ENTER key to select the highlighted option or (2) if the options are numbered, simply press the number key for the option.



- Press the **OPTIONS** key on the remote. The Options menu appears.
- From the Options menu, select option 6 (Change System Settings). The System Settings menu appears.
- From the System Settings menu, select option 4 (Change Installation Settings). The Installation Settings menu appears.

If you use the keys on the front panel of the receiver, there is only one way to select a menu option. Press the **MENU** key to first display the Menu screen. Then press the **◀** keys or the **▶** keys to highlight an option. Then press the **ENTER** key to select the highlighted option.



The Installation Settings menu will be the base point for your various changes to the installation settings.

Select Actuator (Dish Settings Menu)

It is important that your DSR-922 4DTV receiver settings accurately reflect the components of your satellite system. Of special importance is matching the actual Dish Actuator Arm type to the correct setting in the receiver's menu. Incorrect settings may cause the receiver to lose accuracy when initially programming the system or programming new satellites in the future.

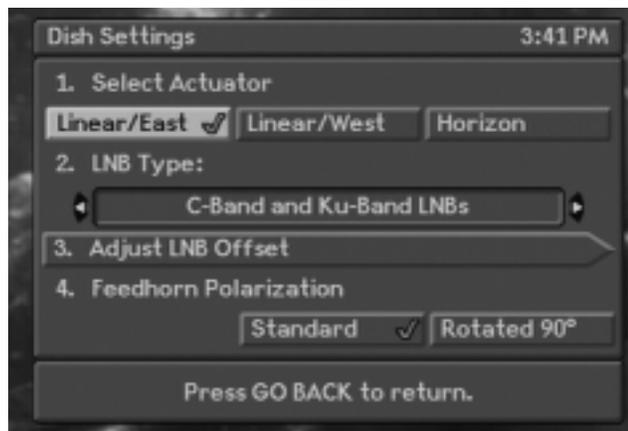
There are three possible types of actuator arms in use on most consumer systems: Linear East, Linear West, and Horizon-to-Horizon. It is easy to determine which type of actuator arm your system uses by looking at it.

Linear East. A Linear East configuration is most often used west of the continental Divide (west coast). If your actuator arm is mounted on the left side of the reflector dish as viewed from the rear you have a Linear East configuration.

Linear West. A Linear West configuration is most often used east of the continental Divide (east coast and Midwest). If your actuator arm is mounted on the right side of the reflector dish as viewed from the rear you have a Linear West configuration.

Horizon-to-Horizon. A Horizon-to-Horizon mount is typified by a large, square drive-motor attached near the center of the dish mount. This type of actuator allows nearly 180 degrees of travel for reception of AOR (Atlantic Ocean Region) and POR (Pacific Ocean Region) satellites. The Horizon-to-Horizon mount is rarely encountered on consumer installations using a reflector of less than ten feet in diameter. If you have a Horizon-to-Horizon actuator choose "Horizon" from the Dish Settings menu.

- From the Installation Settings menu, select option 2 (Change Dish Settings). the Dish Settings menu appears.



- Select option 1 (Select Actuator).
- Select appropriate type for your dish.

Select an LNB Type (Dish Settings Menu)

You must select an LNB type for your system to operate correctly. The default settings are for C-Band and Ku-Band LNB's. There are seven possible configurations available from this screen. Consult the table below for the configuration which best matches your system.

LNB Type	Reason	Indicator
C-Band LNB	C-Band Horz & Vert	The same LNB is used for both H&V transponders. The offset affects both.
Ku-Band LNB	Ku-Band Horz & Vert	The same LNB is used for both H&V transponders.
C-Band & Ku-Band LNBs	C-Band Horz & Vert or Ku-band Horz & Vert	Two LNBs: One for C-Band and one for Ku-Band transponders. Indicator changes according to which signal the system is receiving (i.e. which channel is tuned).
C-Band LNBF	C-Band Horz & Vert	One LNB controlling both H&V transponders without polarizer.

Ku-Band LNB	Ku-Band Horiz & Vert	One LNB controlling both H&V transponders without polarizer.
C-Band and Ku-Band LNBs	C0Band Horiz & Vert or Ku-Band Horiz & Vert	Two LNBs: One for C-Band and one for Ku-Band transponders. Indicator changes according to which signal the system is receiving (i.e. which channel is tuned).
Dual C-Band LNBs (no polarizer)	C-Band Horiz or C-Band Vert	Two LNBs: For receiving horizontal and vertical transponders.
Dual Ku-Band LNBs	Ku-Band Horizontal or Ku-Band Vertical	Two LNBs: One for receiving Ku-Band horizontal transponders and one for Ku-Band vertical transponders.

- From the Installation Settings menu, select option 2 (Change Dish Settings). The Dish Settings menu appears.
- Select option 2 (LNB Type) from the Dish Settings menu. Press the ◀ ▶ keys to display the different LNB types.
- The LNB type displayed in the window will be the setting that takes effect when you leave this menu.

Satellite Band and Polarity

When you select a satellite, the DSR-922 receiver will automatically select the settings for band (C or Ku) and polarity (normal or reverse). If your LNB was installed 90 degrees out of phase—affecting the normal/reverse polarity settings and scrambling the picture—refer to your satellite dish installation manual or the feedhorn installation manual.

LNB Offset Menu

This adjustment will allow you to correct for an off-frequency broadcast or drifting LNB. If your LNB has a tendency to drift you may experience problems with digital channel reception. A poorly performing LNB should be replaced to assure you are enjoying the maximum performance from your system.

- From the Installation Settings menu, select option 2 (Change Dish Settings). the Dish Settings menu appears.



- From the Dish Settings menu, select option 3 (Adjust LNB Offset). The LNB Offset menu will appear. A signal indicator, which is located just above the words "LNB Offset Adjust," displays the type of signal currently being acquired. It changes, depending upon the LNB type that has been selected. The previous chart shows which indicator is displayed for each LNB type and why the indicator is used.
- There is only one option (LNB Offset Adjust) in this menu. Press the ◀ ▶ keys to adjust the offset, and press the ENTER key to finish your selection. The range is from -5 MHz to +5 MHz. To use this option:
 - The receiver must be receiving an analog signal (channel 1-32). There is no adjustment for digital channels.
 - If you are tuned to a C-Band channel, you can only adjust the C-Band LNB—even if the selected LNB type (from the Dish Settings menu) is C-Band & Ku-Band.
 - If you are tuned to a Ku-Band channel, you can only adjust the Ku-Band LNB—even if the selected LNB type (from the Dish Settings menu) is C-Band & Ku-Band.
- Below the LNB Offset Adjust option is a display showing the current signal value and quality value of the satellite. Signal values range from 10-90. On digital channels only, the quality measurement has a range of 0-99.

Viewing and Language Settings

The Change Viewing and Language Settings option allows you to turn off the headers and banners, choose the language for subtitles and audio, and choose the size of the viewing area. To use this options, you will be using the onscreen menus.



- Press the OPTIONS key on the remote. The Options menu appears.
- Select option 6 (Change System Settings), and the System Settings menu appears.
- Select option 2 (Change Viewing and Language Settings). The Viewing & Language menu will be displayed.

Channel Information. The Channel Information option allows you to turn the header (top of screen) and banner (bottom of screen) on or off. Select the option of your choice, On or Off. The default settings is On.

Subtitles. The Subtitles option allows you to select the language for subtitles or keep them turned off. Select the option of your choice—None, English, Spanish, or French. The default setting is None.

Language. The Language option allows you to select the language of the audio for DigiCipher® II programs. Select the option of your choice—English, Spanish, or French. The default setting is English.

TV Viewing. The TV Viewing option allows you to select the size of the viewing area. Select the Normal option if your TV screen is a typical screen with 4:3 ratio of width to height. Select Wide if your TV screen is a wide screen with a 16:9 ratio. The default is Normal.

Audio Settings

To adjust the audio settings so that they are the correct ones for the type of equipment connected to your DSR-922 receiver, you will be using the onscreen menus.

- Press the Options key on the remote. The Options menu appears.
- From the Options menu, select option 6 (Change Systems Settings), and the System Settings menu appears.
- From the System Settings menu, select option 3 (Change Audio Settings), and an Audio Settings menu will appear. The appearance of the Audio Settings menu depends upon the type of channel to which you are tuned. These various menu types are reviewed in the following sections.

Audio Settings Menu for DigiCipher® II Broadcasts

If you are tuned to DigiCipher® II (digital) broadcast (channels above 100), only two options appear on the Audio Settings menu. The options are 1) Audio Connections, and 2) Audio Mode for DigiCipher II Channels.



- Select option 1 (Audio Connections), and you will be able to select either TV or Hi Fi (the default is TV). The TV setting engages a mild dynamic range compressor. What this means is that the loudest sounds of the program will be made a little softer, and the softest sounds will be made a little louder. This makes it easier for the small speakers in most televisions sets to reproduce all the details of the program sound track. Select TV if the DSR-922 4DTV receiver's outputs are connected directly to your television. If you are using the DSR-922 as part of a home theater system, and would like to enjoy the full dynamic range of a broadcast, select the Hi Fi setting.
- Select option 2 (Audio Mode for Digicipher II Channels) and you will be able to select from Mono, Stereo, Surround or Dolby® Digital (the default is Surround).
 - Mono - This selection sends a monaural signal to the left and right outputs. Choose Mono if you want a monaural signal sent to your television or home theater system.
 - Stereo - This selection sends stereo left and right signals to the audio outputs and PCM stereo digital information to the SPDIF output.
 - Surround - This selection sends stereo left and right signals to the audio outputs. This setting will allow your surround sound stereo receiver to process matrix sound tracks (often referred to as Dolby® Pro-Logic®). Choose this setting if you are using a surround sound receiver or stereo digital-to-analog converter (DAC). This setting should also be used to convert an AC-3 multi-channel broadcast to a pro-logic type stereo transport for playback on non 5.1 compliant audio systems.
 - Dolby® Digital - This selection sends a 5.1 channel AC-3 encoded signal to the digital SPDIF connection. Use this setting if you have a Dolby® Digital receiver and are viewing a 5.1 channel broadcast. The RCA connections (stereo left and right) will be muted when this setting is selected.

Audio Settings Menu for Analog Broadcasts

If you are tuned to an analog broadcast, the appearance of the menu will vary depending upon the selection for option 1 (Mode). Select option 1 (Mode), and you will be able to select either Mono, Stereo, or VideoCipher® Stereo (if the signal is present).



- If you select Mono for option 1, options 2 through 4 will be displayed.
 - Select option 2 to select either Narrow or Wide bandwidth.
 - Select option 3 to select On or Off for Seek. If you select On, the system will be able to scan when you select option 4 (Audio Mono) below.
 - Select option 4 and press the ◀ ▶ keys. If you selected On for Option 3 (Seek), the system will be able to scan for a subcarrier.
- If you select Stereo for option 1, options 2 through 5 will be displayed.
 - Select option 2 to select either Narrow or Wide bandwidth.
 - Select option 3 to select On or Off for Seek. If you select On, the system will be able to scan for a subcarrier when you select options 4 (Audio Left) and 5 (Audio Right) below.
 - Select option 4 (Audio Left) and press the ◀ ▶ keys to increase or decrease the value of the audio subcarrier. If you selected On for option 3 (Seek), the system will be

- able to scan for a subcarrier on this channel only.
- Select option 5 (Audio Right) and press the ◀ ▶ keys to increase or decrease the value of the audio subcarrier. If you selected On for option 3 (Seek), the system will be able to scan for a subcarrier on this channel only.
- If you select VideoCipher Stereo for option 1, no other options will be displayed for this menu. If it is not available, VideoCipher Stereo will not appear as an option.

How to Fine Tune a Channel

To fine tune a channel or satellite while you are watching a program in SAT mode:



- First press any of the ◀ ⬆ ▶ keys to display the Fine Tuning menu.
- Once the Fine Tuning menu appears, press the ◀ ▶ keys to highlight the field that you wish to modify.
- Press the ⬆ keys to tune in the channel by higher or lower MHz increments.
- All changes are saved unless Cancel button is selected.

Authorization Screens

Sometimes when you tune to a program, an Authorization screen will appear. It will fade to black after a short time, but if you press

the EXIT key it will re-appear. Follow the directions on the lower part of the screen. the Authorization screen may appear under the following circumstances:

- The channel, program, or satellite is locked out because of your parental control setting, which requires you to enter a password. (If you have not set a password, just press the ENTER key.)
- The receiver is not authorized.
- A subscription is required to receive the program.
- There is a program blackout in your area.
- There is a technical problem.
- You need to insert a TvPass® Card, or there are problems with your current TvPass Card.

Adjusting the Picture

Occasionally, you may wish to adjust the picture of a program you are watching in SAT mode. The Adjust Picture option allows you



to fine tune settings for both analog channels (channels below 100) and digital channels using the onscreen menus. To display the Picture menu:

- Press the OPTIONS key on the remote. The Options menu appears.
- Select option 5 (Adjust Picture), and the Picture menu appears.
- Select option 1 (Dish Settings) if you wish to fine tune the dish. Use the "arrow" keys to increase or decrease the skew setting

on the channel you are viewing. If you are on an analog channel then select option 3.

- If you are on an analog signal, option 2 (FineTune) will allow you to fine tune the LNB Offset. Select option 2 from the Picture menu when on an analog channel and use the "arrow" keys to increase or decrease the offset in 0.25 MHz increments. The new setting is automatically saved.
- If you are on an analog signal, option 4 (TI Filter) will allow you to set a 19MHz filter to minimize the effects of terrestrial interference. Use the "arrow" keys to highlight "On" or "Off" and press enter to make the selection.



- Undo Settings will return you to the settings that were in place before you used this menu.
- Press the GO BACK key to exit the menu. Changes are automatically saved as you select each setting.





Watching TV

Once you become accustomed to the various controls and features, you will spend most of your time enjoying the programs made available through 4DTV. The features described on this page will be available to you when the remote control is set to 4DTV mode.

How to Select Menu Options

As you use the many 4DTV menus, you will be asked to select various options. When you see the word *select*, it is important that you understand what to do—whether you use the remote control or the keys on the Front Panel of the receiver:

If you use the remote control, there are two ways to select a menu option:

1. Press the  keys or the   keys to highlight an option. Then press the ENTER key to select it.
2. If the options are numbered, simply press the number key for an option. You do not have to press the ENTER key.

If you use the Front Panel of the receiver, there is only one way to select a menu option. Press the  keys or the   keys to first highlight an option. Then press the ENTER key to select the highlighted option.

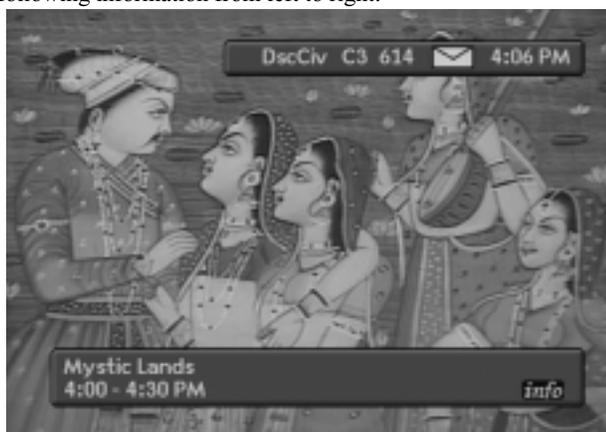
Screen Appearance: Digital vs. Analog

You will notice that when you are viewing analog (VideoCipher[®]) channels, some headers, banners, and menus may have a different appearance than they do when you are viewing a digital (DigiCipher[®] II)

channel. In general, analog video channels are from 1 to 99, digital video channels are 100 to 800, digital audio channels (no video) are 820 to 850, and subcarrier (analog) audio only channels are 950 to 999.

Headers

Your viewing screen displays a variety of information about the programs you are viewing or plan to view. When you tune in a channel, a header appears at the top of the screen. It displays the following information from left to right:



- Interests—Until you identify your viewing interests (covered later in this *User Guide*), nothing appears on the left side of the header. After you select an interest such as movies, sports, Pay Per View, or music/radio, the name of the interest you selected will appear on the left side of the header.
- Channel name—HBO-W, ENCORE, TBS, etc.
- Satellite—G5 for example.
- Channel number—A number from 1 to 999.
- Message—An envelope icon appears if a digital EPM message is waiting for you.
- Time—The current time automatically appears on the right side of the header.

Banners

Program banners appear at the bottom of the screen:

Program banner—When you tune in a channel or press the EXIT key, this banner displays the current program title, start and end times, and rating icon. Press EXIT to remove the banner.

Next banner—While you are viewing a channel, if you press the FUTURE key, the On Next Banner displays the next program's title, start and end times, and ratings icon. Press FUTURE to remove the banner.

During VideoCipher[®] broadcasts, the Program banner and Next banner appear in a box in the lower middle part of the screen. Your VCRS[®] module generates this banner. Wait 5 seconds for it to disappear.

Info Key

To obtain detailed information about the current program, press the INFO key.

To obtain detailed program information about the next program on a selected channel, press the INFO key and then press the FUTURE key or the ► key. If the Next Banner is already displayed at the bottom of your screen, just press the INFO key to display more detailed information about the next program. Press the ◀ key to return to the information display for the current program.

Power Off at Night

Turn the power off (POWER key) when you are finished watching programs because the receiver can only move the dish to receive its nightly updates for the Guide when it is turned off. Your DSR-922 4DTV receiver will automatically move your satellite dish to G0 at 2:00am local time and update the IPG, as well as receiving any firmware updates. If the receiver is in use at 2:00am, it will capture the soonest opportunity prior to 4:00am. If the unit is left on past 4:00am the receiver will cease attempts to download and wait for the next 2:00am period. Your DSR-922 4DTV receiver will not move to G0 or process IPG or firmware downloads if the sleep timer is activated (see page 87, "Sleep Timer").



How to Change Satellites

To change to a different satellite when you are watching a program, press the SAT key. The Satellite Select menu will appear, and the current channel name, satellite name, and channel number will be displayed near the top of the screen. The current satellite will be highlighted and have a check mark in the list of satellites in the middle of the screen.

To select a satellite, press the arrow keys to highlight the satellite you wish to select and then press the ENTER key. As the dish moves, the check mark in the list of satellites will track its progress. If you wish to clear the menu to view signal as the dish moves, press “View”.

If you press the SAT key when you are viewing the Channel Locks, Favorite Channels, Set timer, Guide or Mini-Guide, a special menu with a satellite list will appear—allowing you to obtain information about the satellite without actually moving the dish.

How to Remove a Satellite from the Satellite Select screen

To remove a satellite from the Satellite Select menu, press OPTIONS, 6, 4, and 4 to go to the “Program Satellites” screen. Use the  keys or the   keys to highlight the satellite you wish to remove.

Press ENTER.

Select “Remove Satellite”

Press ENTER.

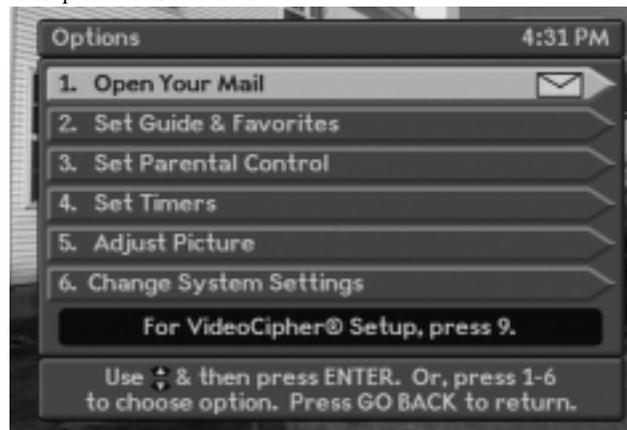
Please note that you cannot remove a satellite’s settings from the Satellite Select menu if you are viewing that satellite.



Options

How to Display and Use the Options Menu

There is one procedure for displaying the Options menu if you are using the remote control, and there is another if you are using the keys on the front panel of the receiver.



If you are using the remote control, press the **OPTIONS** key. The Options menu will appear.

If you are using the receiver, press the **MENU** key. When the Menu screen appears (see below), press the **◆** keys to highlight Options, and then press the **ENTER** key. The Options menu will appear.

The following list will give you a broad overview of these menu options and the features they control.

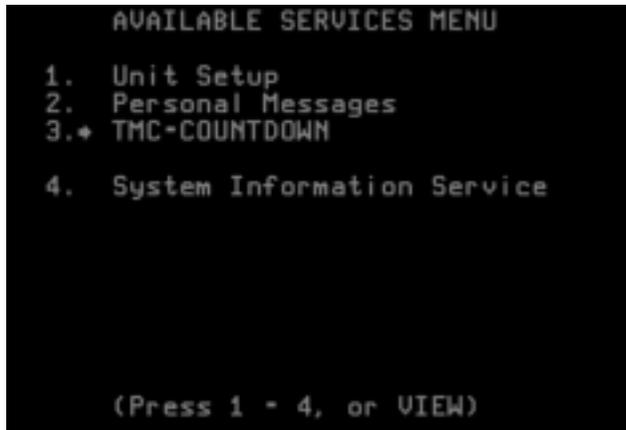
- 1. Open Your Mail.** This option lets you read personal, programming, or promotional messages. Look for the envelope icon on your viewing screen. This is for the digital EPM system only. Analog VCRS® messages are indicated by an on-screen asterisk. For information about accessing VCRS® messages, see your VideoCipher® owner's manual
- 2. Set Guide & Favorites.** This option allows you to create multiple lists of favorite channels that can be used for selective channel surfing and to limit the programs displayed on the IPG to a particular interest group.
- 3. Set Parental Control (and Passwords).** Parental Control features and passwords allow you to control the programs, channels, ratings and content level that can be viewed with the DSR-922 receiver.
- 4. Set Timers.** This option allows you to set timers to view (or tape) programs at a future time and day up to one year in advance.
- 5. Adjust Picture.** This option allows you to fine-tune both analog channels (channels below 100) and digital channels.
- 6. Change System Settings.** There are a variety of topics available through this menu option including Dish Settings, Satellite Band and Polarity, LNB Offset, Viewing and Language Settings, Audio Settings, Fine Tuning a Channel, Authorization Screens, Adjusting the Picture, Satellite Updates and Firmware Downloads.

How to View the Videocipher Setup Menu

This option allows you to display the VideoCipher® Setup menu. The VideoCipher® Setup menu allows you to change features that affect only VideoCipher® channels.

While you are on a VideoCipher® channel, press the 9 key. The Setup menu will appear. If you are not tuned to a VideoCipher® channel, a message screen will inform you about the nearest VideoCipher® channel.

You can also gain access to the VideoCipher® Setup menu through the following menus: Mailbox, Parental Control, List Purchases, and Set Timers.



Opening Your Mail

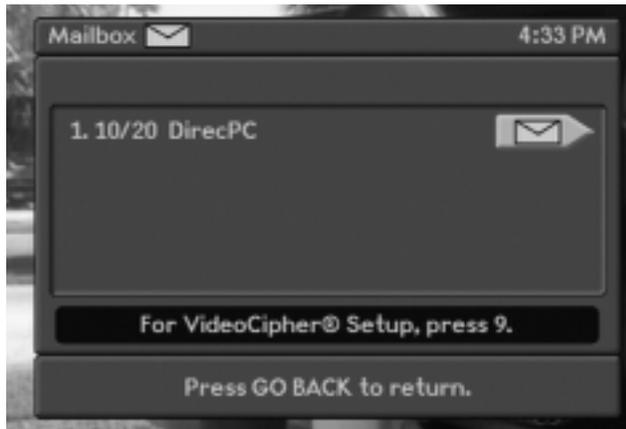
Your DSR-922 receiver is able to display a variety of messages that are sent to it. Some messages will be displayed on your screen as soon as they arrive, but others are stored in your mailbox for you to retrieve. If a message is waiting in your mailbox, the envelope icon will appear on your screen header while you are watching a program.

How to Display the Mailbox Menu

- Display the Options Menu.
- Select option 1 (Open Your Mail). The Mailbox menu appears.

Mailbox Menu

The Mailbox menu displays a list of numbered message titles, each with a date. If you wish to read the entire contents of a message, select the message (while the message is highlighted, press the ENTER key), and a Message screen will appear within the Mailbox menu.



Mailbox Message Screen

The Message screen contains the complete message. Once you read the message and wish to erase it, press either the ENTER key or the GO BACK key. An Erase Message prompt screen will appear. Some messages will be automatically erased after you read them. Such messages will have the following statement in the instructions at the bottom of the screen: "This message will erase after being read."



Erase or Keep Message Screen

When the Erase Message prompt screen appears within the Mailbox menu, it allows you to select from two options.

- Select Erase Message to erase the message and return to the Message List menu.
- Select Keep Message to save the message and return to the Message List menu.

Message Indicator for VideoCipher® Channel

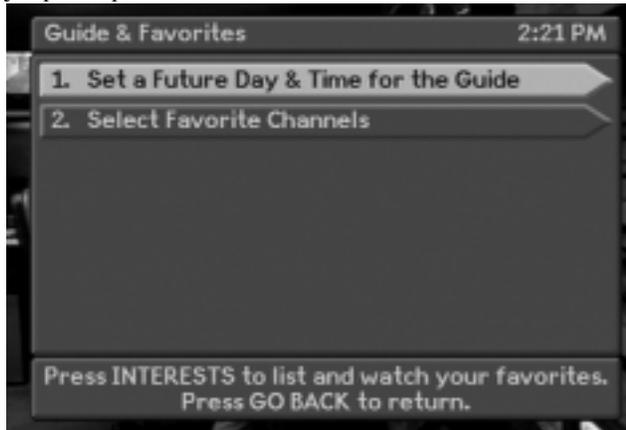
If you are watching a VideoCipher® channel, a * will appear at the top of the screen instead of the envelope symbol. To read the message display the VideoCipher® menu by pressing OPTIONS, then 9.

Setting Favorite Channels

With this option, you can create lists of favorite channels using the Favorite Channels menu. Once you create this list, you will be able to focus your channel surfing and find programs more quickly. Please note that if your receiver is in the Interests mode it will only channel up or channel down to the next selected channel in that interests group.

How to Display a Future Day and Time on the Guide

You can always scroll ahead with the Guide, but if you want to immediately look at program offerings for another day or a specific time, there are two ways you can jump ahead without scrolling. To jump to a specific date and time:



1. On the remote control, press FUTURE.
2. On the front panel of the DSR922:
 - Display the Options menu.
 - Select option 2 (Guide & Favorites). The Guide & Favorites menu appears.
 - Select option 2 (Set a Future Day & Time for the Guide). A choose Day menu appears.
 - Select which day of the guide you would like to display. A Choose Time menu will appear.
 - Select the time of day for the Guide programming you would like to view.
 - After you have finished reviewing the Guide information and

have returned to your program viewing, remember that the next time you press the GUIDE key, the Guide will always return to displaying the current day and time. If you press the GO BACK key, you will return to the previous screen or the program you were watching.

How to Display the Favorite Channels Menu

- Display the Options menu.
- Select Option 2 (Set Guide & Favorites). The Guide and Favorites menu appears.
- Select Option 2 (Set Favorite Channels). The Favorite Channels menu appears.

Favorite Channels Menu

The Favorite Channels menu allows you to assign channels to either the Favorite A, B, C or D list in the Interests menu (refer to the section entitled, "Viewing Interests and Favorites"). The Favorite Channels menu displays the following information:

- Running down the left side of the screen is a listing of channels available on the current satellite. For each channel listing (from left to right), you will see the name of the channel, the satellite



name, and the channel number. To the right of each channel name are boxes entitled A through D.

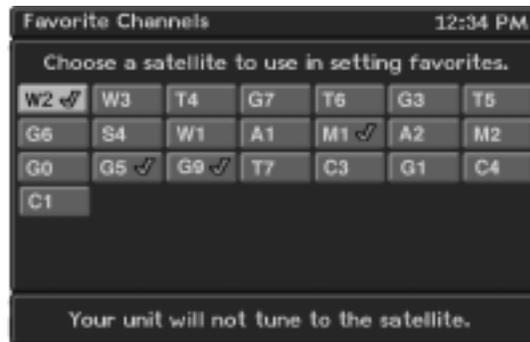
- Press the  keys to scroll through the list of channels.

To assign a channel to the Favorites A, B, C or D list:

- Scroll to the channel you wish to assign to the Favorites A, B, C or D list.
- Press the ◀ ▶ keys to highlight the box (Favorites A, B, C, or D) to which you will assign the channel.
- Then press the ENTER key. A check mark will appear in the box you select. Press the ENTER key again if you wish to remove the check mark.

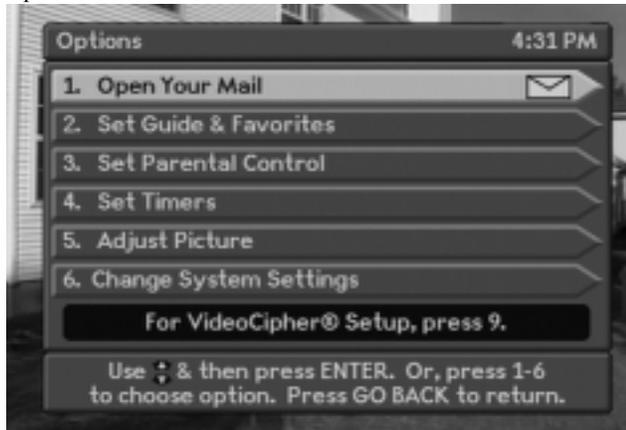
How to Set Favorite Channels from Other Satellites

If you wish to view channels available on another satellite, press the SAT key. A Favorites menu with a satellite list will appear. Select a satellite, and you will be returned to the Favorite Channels menu, where you can assign channels from the new satellite to the Favorites A, B, C or D lists. The dish will not move while changing satellites on the satellite list in the Set Favorite Channels screen.



Setting Timers

With timers, you can schedule your viewing up to one year in advance—whether you want to schedule one-time-only events or daily programs. Once you have set the timer, the DSR-922 receiver will automatically tune to the satellite and channel when the program begins (the front panel display of the receiver displays two dashes rotating in a clockwise direction while a timed program is in progress). You can change, erase, and review the timers whenever you wish. Make sure to set your VCR if you wish to make a tape since the DSR-922 will not automatically program your VCR to tape an event.



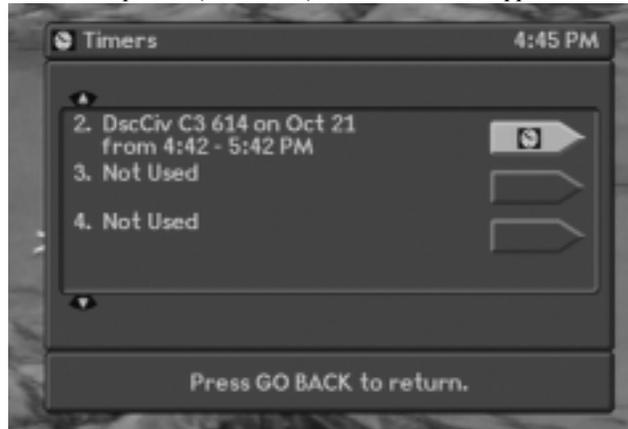
Sleep Timer. Sometimes when you are watching a program in SAT mode, you will want to automatically turn off the picture and sound because you plan to fall asleep after a certain amount of time.

To set the sleep timer:

- Display the Options menu (press the OPTIONS key on the remote control).
- Select option 6 (Change System Settings).
- Select option 6 (Sleep Timer) to highlight it.
- Press the ◀ ▶ keys to set the amount of time you wish to watch and hear a program until the sleep timer shuts off the picture and sound (shown in hours and minutes). The maximum time limit is 3 hours. Please note that your DSR-922 will not process IPG or firmware data downloads if the sleep timer is activated.

How to Display the Timers Menu

- Display the Options menu.
- Select Option 4 (Set Timers). the Timers menu appears.



How to Use the Timers Menu

The Timers menu has up to 25 timer listings. Each listing that has already been set includes the program name, the day and time it begins, and icons for parental controls and IPPV programs.

- Press the  keys to scroll up and down the listings.
- If you select a Not Used listing, a Set Timer menu will appear.
- If you select a listing that has already been set, the Change Timer/Erase Timers prompt screen will appear.

Change Timer/Erase Timer Prompt Screen

The Change Timer/Erase Timer prompt screen has two options:

- If you select the Change Timer option, the Set Timer menu will appear so that you can change the timer settings.
- If you select Erase Timer, The Timers menu will reappear, and the listing will be changed to Not Used.



A clock icon appears on the right side of the arrow-shaped box if the timer is set but the program has not yet begun.

Maximum Number of Timers

If all twenty-five timers have been set, a prompt screen will appear and ask you to erase a timer so a new one can be set.

Before a Timer Executes

Two minutes before a timer executes, the front panel timer LED will blink, and a countdown screen will appear. You may either: (1) press the GO BACK key to remove the countdown screen, (2) press the ENTER key to return to the Timers menu so that you can erase the timer, or (3) wait until the timer executes.

How to Use the Set Timer Menu

If you selected a Not Used listing in the Timers menu, the Set Timer menu appears. The Set Timer menu allows you to select the scheduled time (or times) for a program, the date, the beginning and ending times for the program, the satellite, and the channel.

Press the arrow keys to highlight the various options.

To set each option, press either the ◀ ▶ keys or the number keys

as indicated.

When you are finished setting all of the timer options, select the Confirm Timer arrow to display the Confirm Timer menu.

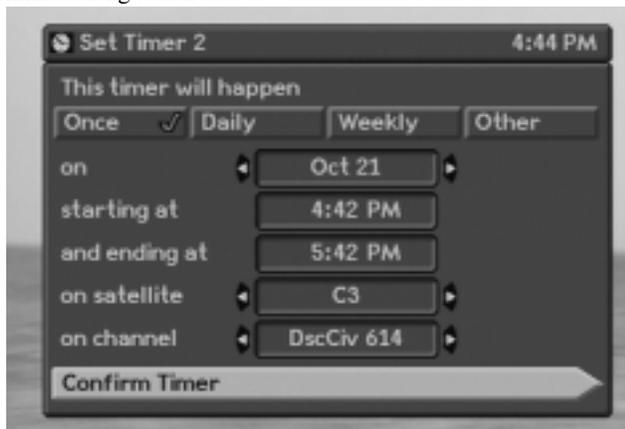
How to Set Each Timer Option

Press the arrow keys to display the day of the week or the program's frequency (for example, a weekly or daily program).

If Daily, Weekly or Other is selected, different screens will appear.

Press the ◀ ▶ keys to display the date.

Press the number keys to set the time. A timer must be at least 5 minutes long to activate.



You can select a satellite in either of two ways:

- Press the ◀ ▶ keys to display the correct satellite.
- Press the SAT key to display the Satellite Select menu. Then select a satellite from the list. You will automatically be returned to the Set Timer menu, which will now display the selected satellite.

Press the ◀ ▶ keys, or press the number keys to indicate the channel number.

Setting a Timer for Next Year

If you set the timer for a month and day that have already passed in the current year, the receiver will consider the setting to be for the next year on that date. For example, if it is December and you set a

timer for February, your timer will execute in February of the coming new year.

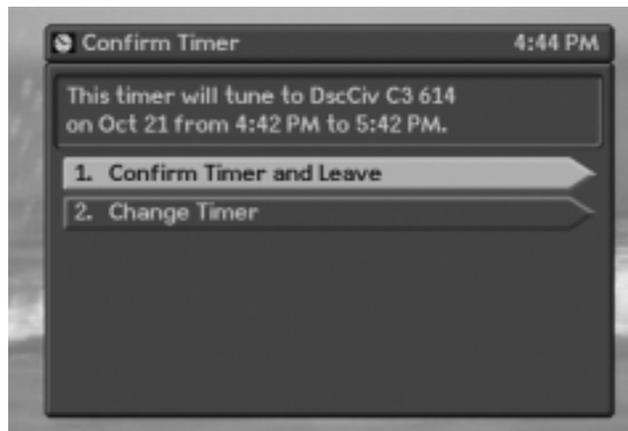
If You Press the GO BACK Key

If you press the Go BACK key from the Set Timer menu, a message screen will appear. It will instruct you to do either one of the following:

Cancel your changes by pressing the ENTER key.

- Press the GO BACK key again to return to the Set Timer menu.

How to Use the Confirm Timer Menu



The top portion of the Confirm Timer menu displays timer information followed by up to four options (the IPPV option does not appear if the program is not a subscription program).

1. Select option 1 (Confirm Timer and Leave) to complete your settings from the Set Timer menu and to return to the Timers menu to complete additional settings. Select this option only after you make sure the other options on this screen are correct.
2. Select option 2 (Change Timer) to return to the Set Timer menu and change the Timer option settings.
3. Option 3 (Approve Purchase?) allows you to pre-purchase a program before viewing time. This option only appears if your receiver is IPPV enabled. The program's price is not always displayed.

Select the Yes option to pre-purchase the program.

If you select the No option, the program will not be pre-purchased. The timer will be set for the program, but you will have to purchase the program at viewing time.

If the program cannot be taped, a no tape icon will appear.

If you have purchased a program or have used parental control features to lock out channels, satellites, or program content, a Password screen will appear. You will have to enter your password to finish setting the timer. Refer to the section entitled "Setting Parental Controls and Passwords".

Setting a Timer Using the Guide

To set a timer while you are using the Guide:

- Highlight a future program.
- Press the INFO key or the ENTER key.
- The Confirm Timer menu will appear (follow the instructions for the Confirm Timer menu).

How to Cancel a Timer

To cancel a timer while it is executing:

- Press the POWER key. For repeating timers (such as those used for daily or weekly programs), pressing the POWER key only cancels the currently executing event. The timer for the next repeating event (the timer for the next day or week) will be re-enabled at the start of the next day.
- Erase the timer on the Timers menu. This will cancel single-event and repeating event timers. Refer to the section entitled "Change Timer/Erase Timer Menu".

If New Settings Conflict with Previous Settings

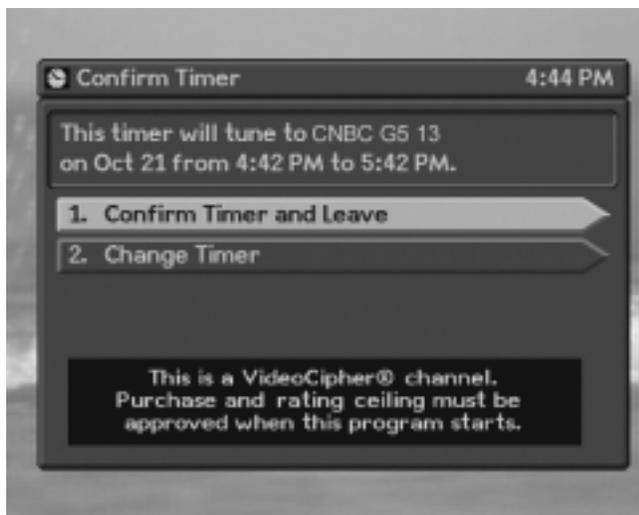
If your new timer settings conflict with a previously set timer (for example, if both are set for the same time), a message screen will appear. It will describe the conflict and ask you to do either one of the following:

- Press ENTER to replace the conflicting (previously set) timer with the new one.
- Press GO BACK so that you can retain the previously set timer and change the settings of the current timer so that they no

longer are in conflict.

Confirm Timer Menu for VideoCipher Channels

The Confirm Timer menu has a slightly different appearance and functions differently for VideoCipher® channels. You may set a timer, but you cannot pre-purchase an IPPV program or override a parental control rating ceiling from the Confirm Timer menu. You can approve an IPPV purchase and override a parental control rating ceiling from the VCRS® menu only when the program starts.



Confirm Timer Menu for VideoCipher Channels

Setting Parental Controls & Passwords

We all have opinions about the type of programming that we want in our homes. 4DTV's parental control features allow you to tailor your viewing to meet the specific needs of your household.

How to Display the Parental Control Menu

- Display the Options menu.
- Select Option 3 (Set Parental control). If a password has already been programmed, you will be asked to enter your password before you can have access to the Parental Control menu.



Parental Control Menu

The Parental Control menu enables you to set passwords, lock out certain satellites and channels, and lock out certain programs based on their rating or specific content. Access to various features may be limited.

- Locked out satellites and channels will not appear in the Guide.

1. Set Password. The Set Password option allows you to set a parental control password that prevents others from viewing certain satellites, channels, programs, and changing installation



settings. It also prevents them from purchasing IPPV programs.

- From the Parental Control menu, select option 1 (Set Password). The New Password screen appears.
- Use the number keys to enter a password of up to 8 numbers. An asterisk (*) will appear each time you add a number. Press the ◀ key to move to the left and change a number. When you are finished, press the ENTER key. The Confirm Password screen appears.
- Re-enter your password numbers and press the ENTER key. The Password Changed screen appears, letting you know that your password is now effective. Press the GO BACK key to return to the Parental Control menu.

To Set a New Password. If you wish to change your password in the future, you must first enter your current password to gain access to the Parental Control menu. From the Parental Control menu, select option 1 (Set Password). The New Password screen appears. Key in a new password, and press the ENTER key. When the Confirm Password screen appears, re-enter the new password. A Password Changed screen will confirm that your password has been changed.

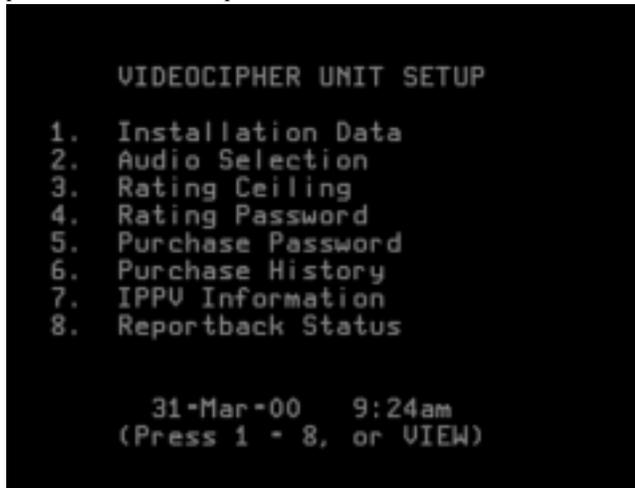
To Clear Your Password. If you wish to clear your password so that no passwords are required to purchase Pay Per View programs or view locked-out channels, satellites, or programs, you must first enter your current password to gain access to the Parental Control menu. From the Parental Control menu, select option 1 (Set Password). The New Password screen appears. Press the ENTER key without pressing in any numbers. When the confirm Password screen appears, press the ENTER key again without pressing in any numbers. A Password Changed screen will confirm that your password has been cleared.

To Reset Your Password. If you forgot your password you will need to contact your dealer/service provider for a password reset. You may be asked to validate certain information about your account, so you should be able to refer to the System Status menu (option 6 then option 4).



Setting Parental Controls & Passwords for VideoCipher Channels

Press the 9 key for menus and instructions to set parental control/ passwords for VideoCipher channels.



VideoCipher Parental Control Menu



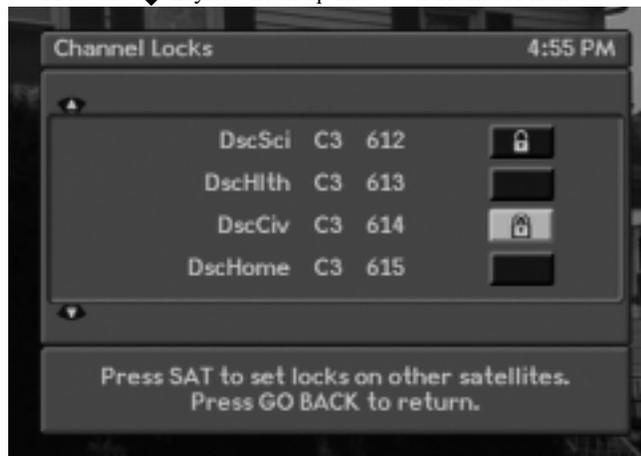
VideoCipher Rating Password Screen

2. Set Satellite Locks. The Set Satellite Locks option allows you to lock out specific satellites. Once a satellite is locked out, you must use the parental control password to view programs on the locked out satellite.

- Select option 2 (Set Satellite Locks). The Satellite Locks menu appears with a satellite list.
- Select the satellite you wish to lock out (press the arrow keys to highlight a satellite, and press the ENTER key to select it). A lock icon appears to the right of the satellite name.
- To unlock a locked satellite, press the ENTER key again, and the lock will disappear.
- When you are finished, press the GO BACK key to exit this menu.

3. Set Channels Locks. The Set Channel Locks option allows you to lock out specific channels without locking out an entire satellite. Once a channel is locked out, you must use the parental control password to view programs on the locked out channel.

- Select option 3 (Set Channel Locks). The Channel Locks menu appears. The Channel Locks menu displays a list of channel names for the current satellite with buttons next to each name. Press the \blacktriangle keys to scroll up and down the list of names.



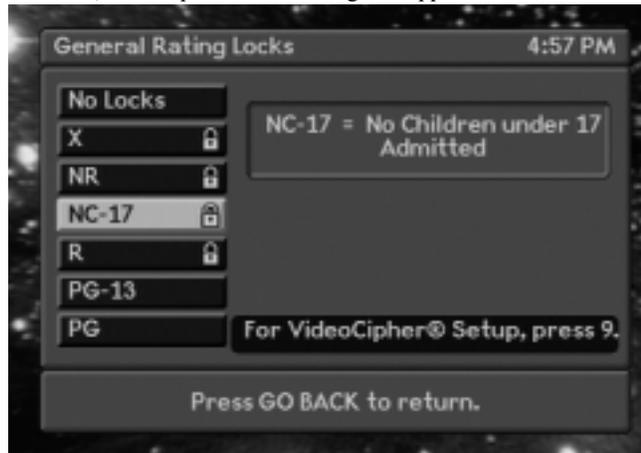
- Select a highlighted channel (press the ENTER key) to lock it out. A lock appears on the button. To remove a lock, select a

channel that is already locked (press the ENTER key when it is highlighted).

- To lock out channels on another satellite, press the SAT key to display a list of satellites. Select a satellite, and the Channel Lock menu will reappear, and you can select the channels you wish to lock out.
- When you are finished, press the GO BACK key to exit this menu. Changes are saved automatically each time you set a lock.
- When you are channel surfing, the 4DTV receiver will skip locked out channels. Additionally, locked channels will not appear in the IPG channel listings. If you try to directly enter the channel number of the locked-out channel while channel surfing, the following message will appear: "Channel is Locked Out."

4. Set General Rating Locks. The Set General Rating Locks option allows you to lock out programs based on their general rating—PG, R, NC-17, X, etc. Once you set a general rating limit, you must use the parental control password to view programs with that rating or a higher rating.

- Select option 4 (Set General Rating Locks). The General Rating Locks menu appears.
- If you highlight one of the rating boxes on the left side of the menu, a description of that rating will appear.



- Select a rating to lock out programs with that rating. All higher

ratings will also be automatically locked out. A closed lock symbol will appear. If you select a locked rating, it will be unlocked.

- You may also select No Locks to permit access.
- Press the Options key on the remote then press the 9 key for the Setup menu to set general ratings locks for VideoCipher system channels.

NOTE: General rating and content ratings are provided by the program provider and may not match the ratings in the Guide. Activation of Content Locks is determined by the program provider.

5. Set Content Rating Locks. The Set Content Rating Locks option allows you to lock out digital programs based on their specific content—violence, sexual material, or offensive language—regardless of their general rating. Once you set a content rating lock, you must use the parental control password to view programs that possess the locked-out content. The program broadcaster provides content rating information.

- Select option 5 (Set Content Rating Locks). The Content Rating Locks menu appears.
- Listed under each category (Violence, Sexual Material, or Language) are four boxes. For example, under the Violence category are No Locks, GV (graphic violence), V (violence), and (MV) mild violence. If you highlight one of the boxes, a full description of the category will appear.
- Select a rating to lock out programs with that rating. All higher ratings will be automatically locked out, and a closed lock icon will appear. If you select a locked rating, it will be unlocked.
- You may also select No Locks for each category.

6. Locks. The Locks option allows you to turn off all of the satellite, channel, and program locks so that you can view all of the locked out satellites, channels, and programs. If you set any new locks after Locks is set to Off, the Locks option automatically re-sets itself to On. Each time you press the POWER key to turn on the receiver, the Locks Option re-sets itself to On.

Setting Rating Ceilings for VideoCipher Channels

While on a VideoCipher® channel, press the 9 key for a menu and instructions on how to set rating ceilings for VideoCipher® channels.



VideoCipher Set Rating Ceiling Menu



Interactive Prog. Guide

The Guide gives you instant access to current and future program information—channel by channel—while you watch TV. It's an onscreen "window" that displays a 90-minute block of scheduled programs, and even a starting point for purchasing IPPV programs and setting timers.



How to Display the Guide

- Press the GUIDE key once for the Guide screen (displays 6 channels).
- Press the GUIDE key a second time or press the EXIT key to return to watching programs.
- Press the GO BACK key to return to the menu last viewed (or return to TV viewing).

How to Use the Guide

- Press the  keys to display different channels.
- Press the   keys to scroll backward and forward by half-hour increments.
- Enter a particular channel number to display that channel at the top of the screen.
- Press the ENTER key to tune to a current program that is highlighted. If you press the ENTER key on a future program, a detailed program information banner appears (discussed later in this section).
- Press the INFO key to display more detailed information.
- Press the SAT key to display a satellite list. Then select a satellite, and the Guide will display its programming schedule without moving the satellite dish.
- Press the CHAN  to page up and down through the Guide.

Guide Screen

The header (top of screen) displays the current Interests menu setting (sports, movies, etc.) on the left side and the date and time on the right. The line below the header displays the day of the program information being viewed. The rest of the screen displays the channel names, satellites, and numbers on the left and the program names on the right—along with information icons. The full Guide screen displays 6 programs.

How to Display a Future Day and Time on the Guide

You can always scroll ahead with the Guide, but if you want to immediately look at program offerings for another day or a specific time, there are two ways you can jump ahead without scrolling. To jump to a specific date and time:

1. On the remote control, press FUTURE.
2. On the front panel of the DSR922:
 - Display the Options menu.
 - Select option 2 (Guide & Favorites). The Guide & Favorites menu appears.
 - Select option 2 (Set a Future Day & Time for the Guide). A choose Day menu appears.
 - Select which day of the guide you would like to display. A

Choose Time menu will appear.

- Select the time of day for the Guide programming you would like to view.

After you have finished reviewing the Guide information and have returned to your program viewing, remember that the next time you press the GUIDE key, the Guide will always return to displaying the current day and time. If you press the GO BACK key, you will return to the previous screen or the program you were watching.

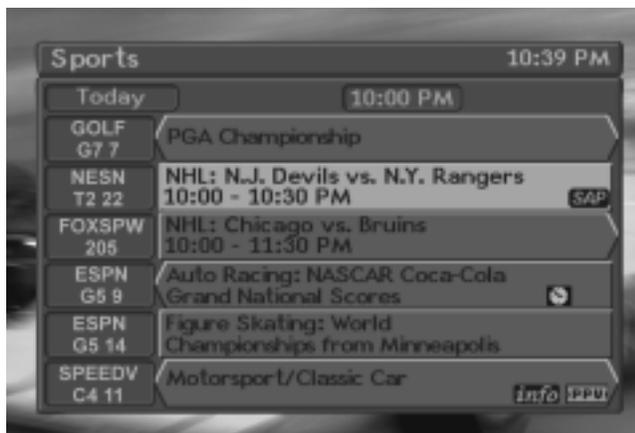
How to View the Guide by Interests

You can also focus the Guide to display a list of your favorite channels or to special programming interests (such as sports or movies). To select an interest:

- Press the INTERESTS key. The Interests menu will appear.



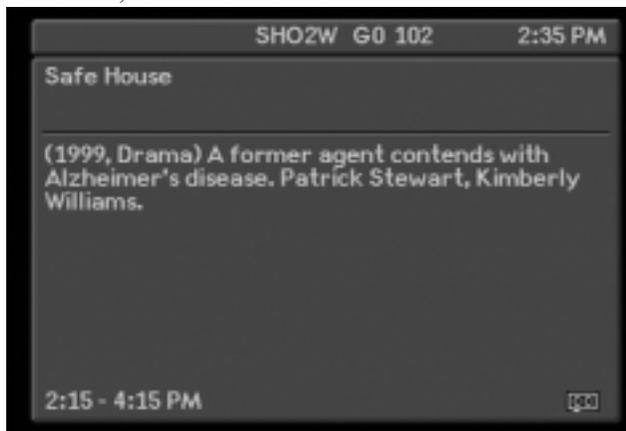
- Select an interest by highlighting one of them and pressing the ENTER key.
- The Guide will appear and display only programs that pertain to the interest (such as sports) you have selected. For example, if you selected a list of favorite channels (Favorites A, B, C or D), the Guide will display only the list of favorite channels you have selected.



(Refer to the section entitled "Setting Favorite Channels" to select the channels you want to include in your Favorites list.)

Detailed Program Information

Press the INFO key to display a program information banner that has a detailed description of the program, ratings, purchasing information, and information icons.



Set Timer for Future Program

Using the Guide, you can set a timer to automatically display a program at a future time and date. If you are viewing a programming list for a future date or time on the Guide, press the

Interactive Prog. Guide

ENTER key or the INFO key while a program is highlighted to display the detailed program information banner. This banner includes a Timer button. Select the Timer button by pressing the ENTER key to display a Confirm Timer screen. More information on timers is in the section entitled, "Options: Setting Timers." Press INFO again or the GO BACK key to turn off the detailed information and return to the Guide.



10

Interests and Favorites

You have the choice to scan every channel when you "channel surf." But to help you locate channels and shows of specific interest to you, 4DTV has an Interests menu that helps you to focus your channel surfing.

- By using the Interests menu, you can quickly locate programs according to a particular theme such as movies, sports, PPV, music/radio, news/education, or network series.
- You can also surf through four lists of favorite channels (Favorites A, B, C and D) and surf only the channels on these lists.



How to Display and Use the Interests Menu

- Press the INTERESTS key on the remote control. The Interests menu appears.

- To select an interest (for example, All Programs, Favorites A, B, C or D, Network Series, News/Education, Movies, Sports, Pay Per View, or Music/Radio), just highlight one of them and press the ENTER key. The Guide will appear and display channels or programs that pertain to the interest you selected. Remember that once you have selected one of the options (or interests) from the Interests menu:
 - A. The information you see in the Guide will be limited to programming that matches the interest you selected. If there is no programming that matches the selected interest, a message will appear.
 - B. Once you surf through the programming on one satellite you can switch to another satellite and continue surfing according to the interest you selected.
 - C. You will notice that while you are watching a program or channel, the left side of the header will display the interest you selected. If there is no programming matching the selected interest, a message will appear.
- Press the INTERESTS key again to display the Interests menu and change your selection.



1 All Programs. Each time you turn on the 4DTV receiver, it automatically returns to the All Programs setting. When this option is selected, you will be able to scan for all programs while channel surfing or when you are using the Guide.

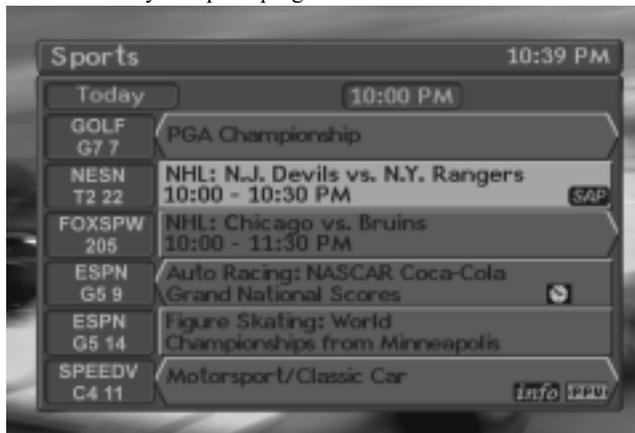
2 Favorites A, B, C, D. If you select Favorites A, B, C or D, you will be able to limit your channel surfing and the Guide

information listings to channels that are in the selected list. If you have not yet made a list of favorite channels, a message will instruct you to do so. (Refer to the section entitled "Options: Setting Favorite Channels," for instructions about how to create a list of favorite channels.)

3 Movies. If you select this interest, you will be able to channel surf exclusively for movies.

4 News/Education. If you select this interest, you will be able to channel surf exclusively for news/education programs.

5 Sports. If you select this interest, you will be able to channel surf exclusively for sports programs.



6 Music/Radio. If you select this interest, you will be able to channel surf exclusively for music/radio programs.

7 Network Series. If you select this interest, you will be able to channel surf exclusively for network series programs.

8 Pay Per View. If you select this interest, you will be able to channel surf exclusively for Pay Per View (PPV) programs.

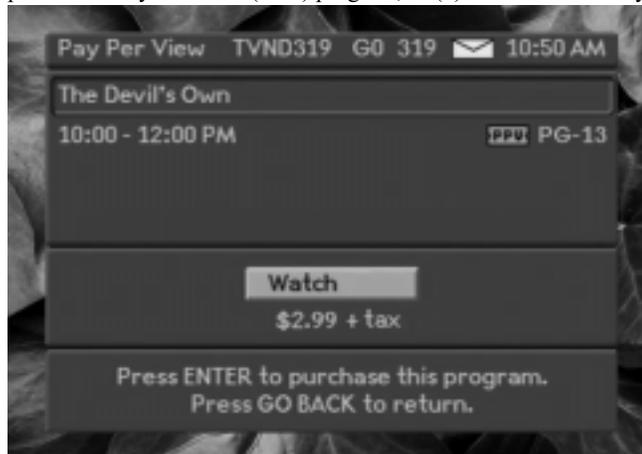


Pay Per View Events

Purchasing Pay Per View Events

NOTE: The events and prices shown in these examples are purely for demonstration.

With 4DTV, you have opportunities to purchase Pay Per View hit movies, concerts, live sporting events, or adult entertainment. You can make a purchase in two ways: (1) telephone ahead to the service provider to purchase a Pay Per View (PPV) program, or (2) use the Instant Pay Per



View (IPPV) screens to purchase a program through your 4DTV receiver, where available. This section explains how to purchase IPPV events. Your receiver must be connected to a telephone jack for IPPV to operate.

How to Purchase an IPPV Event

- Tune to a channel that displays IPPV programs.
- Follow the instructions on the Purchase menu.

Free Preview Period. There is a free preview period at the beginning of an IPPV event when you can watch the program without purchasing it. You can purchase a program or cancel your purchase anytime during the free preview period.

Passwords. You may be asked to enter your password before you can view the program. If you forget your password or the system does not accept it, you may have to call your program provider for assistance.

Videotaping Options. You may be unable to videotape some programs, or you may have the option of paying a higher price for the opportunity to tape the program on your VCR.

Purchase Screen. There are a variety of purchase screens, but most of them have the following elements:



- The header (top of screen) will have the screen name, viewing interest (if one is selected), channel name, satellite name, channel number, a mailbox (if you have an unread message), and the time.
- If the program is within the free preview period, video will appear in the middle of the screen.
- The screen will display the program name, the start and end

times, icons, ratings, and the price of the program.

- There will be a purchase button, instructions to press the ENTER key, or instructions to call the program provider.
- Follow any additional instructions. For example, you may need to enter a password, or you may be unable to purchase a program for another reason.
- A confirmation screen will appear so that you can verify your purchase. You may be asked to enter a password and press the ENTER key.

How to Cancel a Purchase

You may only cancel a purchased program (that has been confirmed) during the free preview period.

- Press the FUTURE key. A cancel screen will appear. Press the ENTER key to cancel the purchase.
- You may also cancel a program by changing the channel during the free preview period.

Purchase the Next Program

You will be unable to purchase a program if you miss a significant portion of it, but you may be able to purchase the next program. After you purchase the next program, a countdown timer displays how much time remains before the program begins.

Purchase a Future Program

You can pre-purchase a program that starts hours or days ahead by using timers that are explained in the section entitled "Options: Setting Timers".

Changes in Purchase Options

If a program provider changes the purchase options after you have pre-purchased a program using a timer, and if the change affects your purchase, your purchase will be canceled, and you must buy the program again.

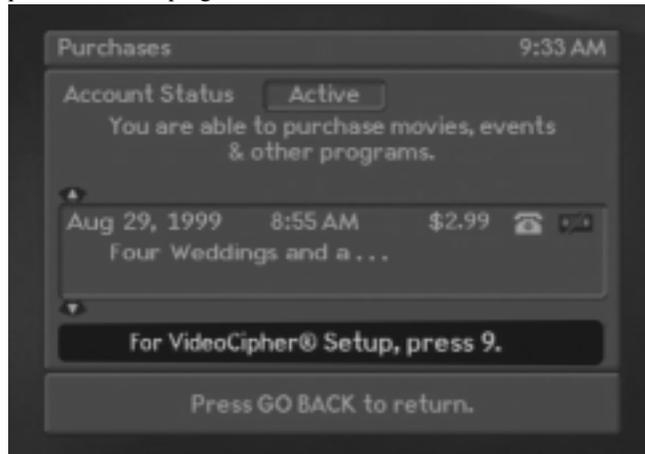
How to Purchase a Program While Viewing an IPPV Program

To purchase an IPPV program while you are viewing another IPPV program:

- Press the GUIDE key to display the Guide.
- Select the program you wish to purchase. If the selected show is currently on, the channel will switch to the selected program.
- Press the ENTER key, and a miniature Confirm Purchase screen will appear. Press the ENTER key to confirm your purchase.

How to Display Your Purchase History

The List Purchases option allows you to review a list of previously purchased IPPV programs.



- Display the Options menu (press the OPTIONS key on the remote control).
- Select option 6 (Change System Settings).
- Select option 1 (List Purchases). The Purchases menu will display a list of purchases. If it displays more than two programs, press the  keys to scroll through them. Press the GO BACK key to exit this menu.

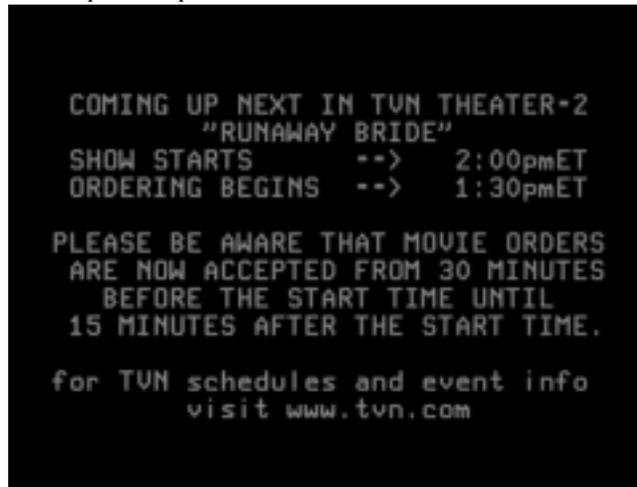
Purchase List

This list shows the date, time, cost, and name of each purchased program. The most recent purchase is at the top of the list. If you

wish to display previous purchases, press the  keys to scroll through the list. A telephone icon indicates that the purchase was reported to the service provider.

VideoCipher® System Purchases

The purchase list only displays DigiCipher® II system purchases. To obtain information about VideoCipher® system purchases, press 9 on the remote control. If you are currently tuned to a VideoCipher system channel, the VideoCipher Setup menu will appear. If you are not tuned to a VideoCipher system channel, follow the instructions on the screen that appears. Refer to the section entitled "Options: Overview of Options" for further instructions about the VideoCipher Setup menu.



VideoCipher® Next Program Purchase Screen

Account Status

If you are qualified to make IPPV purchases, the Account Status option will display the word "Active". If the word "Inactive" appears, you cannot purchase an IPPV program. You will need to call your program provider to discuss your account if it is Inactive.

Credit Message

Below the Account Status is a message that explains your credit status.





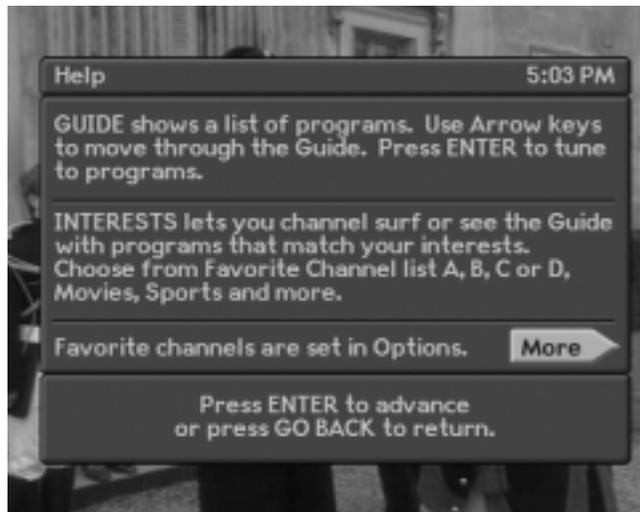
Help

Using Help

If you occasionally forget what an icon (symbol) means or how to use one of the DSR-922 features, just press the HELP key to display the Help messages. Press the ENTER key to display each successive Help screen.

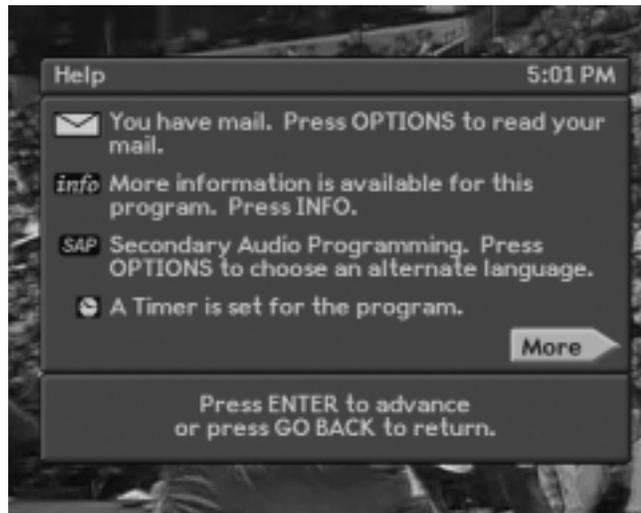
Explanations

Some screens provide explanations that help you to use the DSR-922 receiver features.



Icons

If you forget what certain keys or icons mean, just look them up by displaying the screen below.





Troubleshooting

Troubleshooting Your Receiver

In addition to the listed topics below, you can find the answers to many questions on the Internet at www.4dtv.com.

Timer did not come on as scheduled.

- Make sure timer is set correctly.
- Make sure that timed event is not in conflict with another event timer. Refer to the Timers Section in this Guide.

No power to receiver.

- Make sure receiver is plugged in. Press the POWER key.
- Make sure the receiver is not connected to a switched wall outlet that is set to off.

No picture or sound.

- Check all connections.
- Make sure the receiver, TV, and/or stereo have power.
- Make sure the MUTE key has not been pressed.
- If you are trying to view a Pay Per View channel, make sure you are authorized to receive it.
- Make sure the receiver and the TV are tuned to the same channel.
- Try another channel.
- Make sure the TV is operating correctly. Press the SOURCE key while the remote control is in SAT mode. This will switch the receiver between satellite/cable TV input and TV input.

Tiling and breakup on digital channels

- Check the Signal Quality (refer to Chapter 4, "Signal Strength and Quality"). Quality must be above 20 for consistent digital performance.
- Retune dish for peak performance.

TV displays "Please wait a moment, we are processing your request."

- Check to see if Digicipher® II Link is active (green LED above letters DC).
- Make sure you are viewing a program which you are authorized to receive.

Remote control does not work.

- Make sure keys light up on remote when you press a remote control key.
- Replace remote control batteries.
- Make sure the light on the fluorescent display on the Front Panel indicates the reception of a remote control command.
- Make sure that the UHF "whip" antenna is securely attached to the IRD.
- Make sure both the remote control and receiver are set to the same address (refer to Chapter 5, "If You Have More Than One Satellite Receiver").

Cannot change channels.

- Make sure the SAT/TV LED on the receiver's Front Panel is lit. (Press the SAT key on the remote control, and then press the SOURCE key to light the SAT/TV LED.)
- Check Parental Control menu (Options 3) to make sure channel is not locked.
- Make sure a timer is not active (timer light flashing and "racetrack" indicators around front panel time display).
- Try Front Panel controls and change remote batteries.

Cannot record program with VCR.

- Make sure the proper VCR manufactures code was programmed into the remote control.
- If you are watching a Pay Per View program, make sure taping is allowed.

TV displays "Program blacked out."

- Program not available in your geographical area.

TV displays "No subscription" or there is a black picture even if the SIGNAL LED is lit on the Front Panel.

- Call programmer to have the receiver authorized to receive the signal.

TV displays "authorization not available."

- Call dealer/service provider to have your Digital Entertainment Receiver system authorized to receive signal.

Lost password.

- Contact your dealer/service provider for a password reset. You may be asked to validate certain information about your account, so you should be able to refer to the System Status menu (Options 6,4).

System prompts for Guide information frequently

- Make sure you have allowed the dish to move automatically for updates (refer to Chapter 6, "Dish Settings Menu").
- Make sure the wall power to the receiver has not been interrupted. When power is lost to the receiver the IPG Guide data is also lost.

Clock is set incorrectly

- Call your dealer/service provider for authorization information.

Receiver skips a channel.

- Contact your programming provider for a clock reset.





Specifications

Input

L-Band Input

Input frequency	950 to 1550 MHz
Input impedance	75 ohm
Input level	-65 dBm to -25 dBm
Noise figure	12 dB minimum
No. of Channels	999
H/V input isolation	40 dBm
Demodulator	QPSK demodulator

Video

Output level	1 Vp-p into 75 ohm
De-emphasis	525 line CCIR Rec. 405-1

DigiCipher®II (Digital) System

Frequency response	1.0 kHz to 4.2 MHz +/- 1.0 dB (DCII video)
Differential gain	5.0% maximum
Differential phase	5 deg. typical maximum
Output impedance	75 ohm
S/N	56 dB minimum weighted

VHF Output

Impedance	75 ohm
Channel	Ch. 3 or 4
Level, Video	66 dBuV +/- 3 dB from VHF modulator
Audio	mono

Audio

Modes	Digital stereo, NTSC, subcarrier, VCII+digital
Volume control	Note: Fixed volume output has no volume control; volume control for TV only

DigiCipher®II (Digital) System

Frequency response	1.5 dB, p-p maximum, 20 Hz to 20 kHz
Harmonic distortion	0.4% maximum @ 1kHz
S/N	84 dB minimum

Remote Control

Transmitter	Infrared/UHF
Batteries	2 x AA type
Range	Up to a maximum of 200 ft.
Angle	+/- 22 deg.

Physical/Environmental

Temperature	0 deg. to 40 deg. C ambient
Humidity	95% relative
Dimensions	17" W x 4" H x 13 1/2" D
Weight	18 lbs
Power input	115V +/- 10% AC; 60 Hz nominal; 50W maximum
UL	Listed
CSA	Certified



Warranty & Service

Limited Warranty and Obtaining Services

To Original Consumer Purchaser at Retail

General Instrument 4DTV DSR-922 Series Decoder

Should you be leasing this equipment, contact your system operator for service.

General Instrument Direct-to-Home Satellite Television Systems and Components

General Instrument Corporation (“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

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.

If you desire warranty service, you must notify General Instrument within the applicable warranty period. See “How to Obtain Warranty Service,” below.

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.

This warranty does not cover charges for any assembly, installation, setup or removal, or adjustment of controls.

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.

GENERAL INSTRUMENT IS NOT RESPONSIBLE FOR DAMAGES CAUSED BY LIGHTNING, 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.

Limitations

GENERAL INSTRUMENT MAKES NO OTHER EXPRESS WARRANTIES ON HOME SATELLITE TELEVISION SYSTEMS AND COMPONENTS. TO THE EXTENT ALLOWED BY LAW, ANY WARRANTY BY GENERAL INSTRUMENT ON A SYSTEM OR COMPONENT (INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS) IS LIMITED TO THE WARRANTY PERIOD APPLICABLE TO THE AFFECTED COMPONENT UNDER THIS EXPRESS LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL GENERAL INSTRUMENT BE LIABLE FOR INDIRECT, EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS AND LOSS OF USE OR PAID TV TIME) BASED UPON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

NO AGENT, DEALER, DISTRIBUTOR, SERVICE CENTER, COMPANY, OR OTHER PERSON IS AUTHORIZED TO CHANGE, MODIFY, OR EXTEND THE TERMS OF THIS LIMITED WARRANTY IN ANY MANNER WHATSOEVER. This warranty gives you specific legal rights, and you may have other rights, which vary, from state to state.

Calling for Service

Before you call for service, review the chapters entitled, "Questions and Answers" and "Troubleshooting. If you still have a problem:

- Unplug your receiver from the AC outlet, wait one minute, plug the receiver back in, and try to use it again.
- Do not open the cover (enclosure) or attempt to repair the receiver. This will void the warranty.
- Call our Technical Response Center: 1-888-944-HELP between 8am-5pm, Mon - Fri, PST and choose the Satellite Products option.

How to Obtain Warranty Service

To obtain warranty service, you must call or write General Instrument Technical Assistance Center within the applicable warranty period at General Instrument Technical Assistance Center, 6450 Sequence Drive, San Diego, CA 92121, (858) 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. (If you write, be sure to include a copy of your sales receipt or other proof of purchase date, a copy of your warranty, your phone number, and return address.

If the General Instrument Technical Assistance 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.

©2000 Motorola, Inc. All rights reserved. General Instrument Corporation is a wholly owned subsidiary of Motorola, Inc.

General Instrument® and design, DigiCipher®, TvPass® and VideoCipher® are registered trademarks of Motorola, Inc. Dolby® and AC-3® are trademarks of Dolby Laboratories Licensing Corporation.

Covered under one or more U.S. patents: DES. 399840, DES. 407071, 4613901, 4634808, 4712238, 4792973, 4823399, 4864615, 4888592, 4908859, 4933898, 4975951, 5068724, 5081680, 5083293, 5091782, 5093720, 5111504, 5144664, 5216295, 5216374, 5216503, 5313215, 5345408, 5376968, 5398237, 5406228, 5485577, 5497112, 5517250, 5530400, 5537420, 5565922, 5566089, 5579348, 5580203, 5594794, 5598415, 5638128, 5671276, 5675387, 5699124, 5703877, 5717461, 5742623, 5754659, 5771239, 5801753, 5844620.

©Copyright 1990, 1991, 1992, 1993, 1996, 1997, 1998, 1999, 2000 Motorola, Inc. All rights reserved. © Copyright 1992 Dolby Laboratories Licensing corporation. All rights reserved. Dolby Digital audio system manufactured under license from Dolby Laboratories Licensing Corporation.

Warranty & Service



 **General Instrument®**

6450 Sequence Dr. San Diego, CA 92121
Publication #468478-001 Rev. B