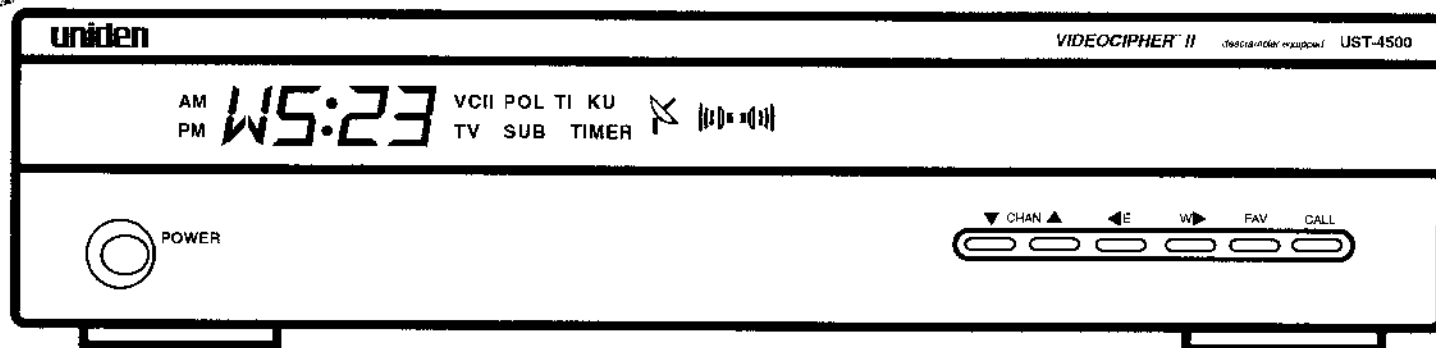


# Satellite Television System

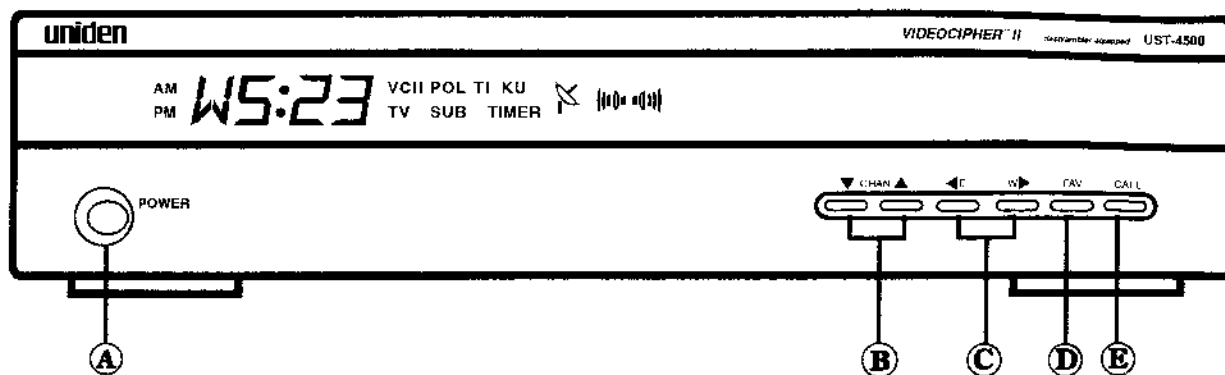
## UST-4500

### Operating Guide



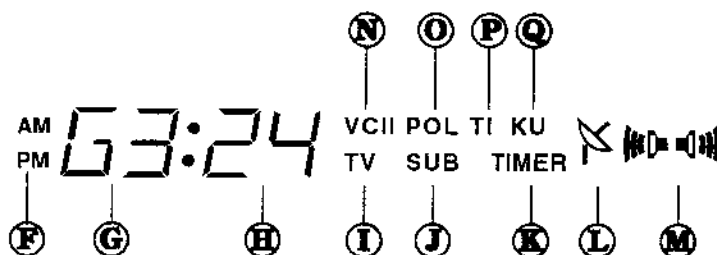
A complete guide to the installation and operation of the UST-4500 Integrated Receiver/Descrambler (IRD) system.

## Front Panel Controls



- A. POWER** — Press once to turn receiver on. Press again to turn receiver off. When the receiver is turned off, power will still be supplied to the microprocessor, the VideoCipher® II Plus descrambler, and components mounted on the antenna. It is normal for the top of the receiver to be slightly warm while the power is off. When the unit is turned off, all indicators are off.
- B. (CH▲) and (CH▼)** — Press once to move up or down a single channel. Press and hold for more than a half second to change channels rapidly. These buttons are also used for menu item selections and/or changes when using the built-in menu system. (See "Normal Operation" and "Using the Main Menu" in this Guide.)
- C. (E) and (W)** — Press to manually move the satellite dish East or West. While the dish is moving the Manual Dish Movement Screen is displayed. These buttons are also used for menu item selection and/or change when using the built-in menu system. (See "Normal Operation" and "Using the Main Menu" in this Guide.)
- D. (FAV)** — Press to display the **FAVORITE CH CALL** Menu. (See "Normal Operation" and "Using the Main Menu" in this Guide.)
- E. (CALL)** — Press to display the **SATELLITE CALL** Menu. When in the **SATELLITE CALL** Menu or the **FAVORITE CH CALL** Menu, press this button to move to the selected satellite. (See "Normal Operation" and "Using the Main Menu" in this Guide.)

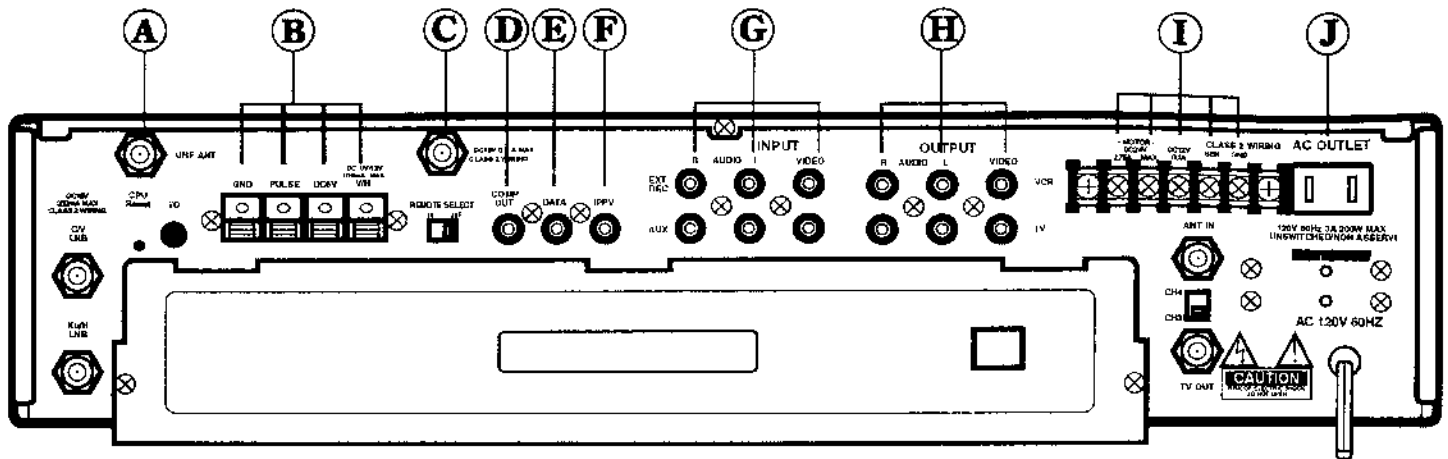
## Front Panel Indicators



These indicators will light only while the unit is turned on, and in the corresponding mode.

- F. AM/PM** — These are displayed only when the unit is off. When the clock is displayed, the upper dot ( • ) of the semicolon ( : ) flashes every second to indicate the first 30 seconds of a minute. The lower dot flashes every second to indicate the second half of the minute. Only one dot flashes at a time.
- G. Satellite Name** — Displays the 2-character designation of the current satellite (e.g., **G3** for Galaxy 3). When moving to a new satellite, displays each satellite as it moves through the arc.
- H. Channel Number** — Displays the current channel number.
- I. TV** — Indicates that the SAT/TV button has been pressed to pass the External VHF antenna through the modulator. (SAT/TV is described in the "Remote Control" section.)
- J. SUB** — Indicates that a Sub-Audio station is being received. A Sub-Audio station receives any subcarrier audio on a VCII channel, either Mono or Discrete.
- K. TIMER** — Indicates that the Timer has been set. This indicator will begin flashing if there has been an error in programming the events. It will also flash if a long-term power loss occurs causing the clock to lose its current time.
- L. Satellite Dish** — Indicates that the satellite dish is moving.
- M. Stereo** — Indicates that a stereo signal is being received, either VCII or DISC subcarrier.
- N. VCII** — Indicates reception of a VideoCipher encrypted channel.
- O. POL** — Indicates that the current polarity is Vertical. This indicator is off while on Horizontal channels.
- P. TI** — Indicates that the Terrestrial Interference filter is on.
- Q. KU** — Indicates that a Ku satellite is being received. When this indicator is off, a C-band satellite is being received.

## Rear Panel



**WARNING:** Do not use metallic objects to move the switches on the rear panel of the unit.

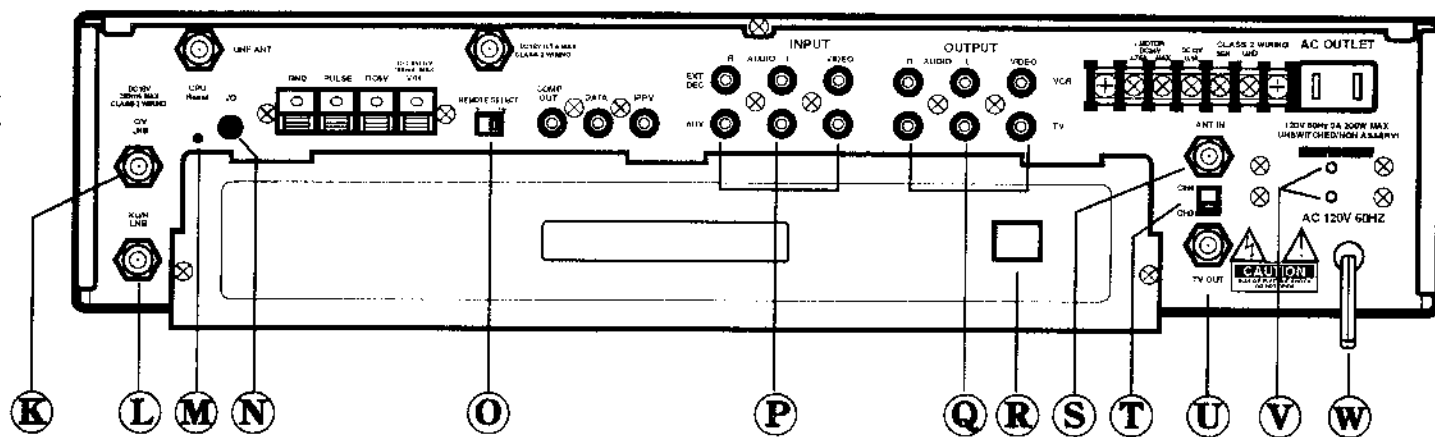
**WARNING:** Failure to observe proper polarity of connections may damage actuator and/or controller and void warranty.

- A. UHF REMOTE ANT** — Connect the supplied UHF antenna here for using the **UST 4500r** Remote Control in the UHF Mode. If you are using the Remote Control in the UHF Mode, be sure the **REMOTE SELECT (IR/UHF)** switch is in the UHF position. (See "O" on the next page.)
- B. GND, PULSE and DC6V Terminals** — These terminals provide power and control signals for a servo type polarization device. Power to the polarizer (+6V) is automatically disconnected after a polarity change.

**V/H Terminal** — For use with non-Uniden V/H switches. Control Signal provided is 0 VDC for vertical polarity and +12 VDC for horizontal polarity at 100 mA maximum current.

- C. **DC 18V** — This connector supplies +18 VDC, 250mA max, power for an optional UST-524 V/H switch.
- D. **COMP OUT** — Composite video output used with external descrambling devices or processors.
- E. **Data** — For connection with special external data equipment. (See your Uniden Satellite Dealer for more information.)

- F. IPPV** — For connection to an external VIDEOpal Recorder. (See your Uniden Satellite Dealer for more information about VIDEOpal Recorders.)
- G. EXTERNAL DECODER INPUT** — Two Audio inputs (Left and Right) and one Video input are provided for connecting an optional external decoder. (See 'External Decoder' in "Using the Main Menu.")
- H. VCR AUDIO/VIDEO OUT** — These phono jacks are provided for connection to your VCR. The **R** and **L** **AUDIO OUT** phono jacks provide stereo audio on most VideoCipher II® scrambled channels. Analog audio from Audio1 and/or Audio2 subcarriers is provided to these outputs when unscrambled channels are received, depending on the selected audio mode. The **VIDEO OUT** phono jack is for video output. This phono jack is equipped to block all on-screen messages (such as **MENU** selections) on a VideoCipher II® US Messages.
- I. CLASS 2 WIRING - Actuator Terminals** — Connect the wires from your actuator to these connectors. The connections are:
- |                  |                                                               |
|------------------|---------------------------------------------------------------|
| <b>A + and -</b> | 24V DC Motor Power (2.75A max.)                               |
| <b>B 12V</b>     | -12V DC Sensor Power<br>(no connection needed to the UST-706) |
| <b>SEN</b>       | Sensor Return                                                 |
| <b>GND</b>       | Sensor Ground                                                 |
- J. AC Outlet** — A non-switched, 120 VAC 200 watt outlet is provided for connecting any other additional accessories.



**K. C/V LNB** — This input accepts the 950-1450 MHz input from the C-band or Vertical LNB. Power for the LNB is supplied through this connector.

**L. Ku/H LNB** — This input accepts the 950-1450 MHz input from the Ku-band or Horizontal LNB. Power for the LNB is supplied through this connector.

**M. CPU Reset** — Press this button to reset the unit in case of a system lockup condition. After the reset has been pressed, the unit will turn off. Turn the unit back on to resume viewing. **Note: Pressing Reset does not erase any of the programming.**

**N. I/O** — This jack is used by the dealer to set up the programmed information (transfer from one unit to another) in your **UST-4500 IRD**.

**O. REMOTE SELECT Switch** — Set this switch to the proper position (UHF or IR) for operation of the **UST 4500r Remote Control**. If you are using the remote control in the UHF Mode, be sure the UHF Remote Antenna is installed. (See "A" on the previous page.)

**P. AUX INPUTS** — Two Audio inputs (Left and Right) and one Video input are provided for connecting external equipment, such as a VCR or a stereo, to the unit. These inputs are used for the PIP feature and Auxiliary feature.

**Q. TV OUTPUT** — These phono jacks are provided for connection to your stereo or stereo monitor. The **R** and **L AUDIO OUT** jacks provide stereo audio on most VideoCipher II® PLUS scrambled channels. Analog audio from Audio1 and/or Audio2 subcarriers is provided to these outputs when unscrambled channels are received, depending on the selected audio mode. The **VIDEO OUT** jack is for video output.

**R. RJ-11 Jack** — Connect the telephone line here if you have a VCII Modem-On-Module with built-in VIDEOpal. (See your Uniden Satellite Dealer for more information about the VCII and VIDEOpal.)

**S. ANT IN** — Connect this input to your external VHF antenna. When the receiver is turned off, the antenna will be connected to your TV set if you use the TV OUT connection to your TV set.

**T. Channel 3/4 Switch** — The receiver is shipped with the receiver set to operate on TV channel 3. Set this switch to 4 if there is a strong local TV transmitter on channel 3. Your TV set should match the setting of this switch to view satellite programming. **Note:** This switch setting is important only if you are using the TV OUT modulated RF output for connection to your TV set.

**U. TV OUT** — Connect this modulated RF output to the VHF input on your TV set if you do not use the direct connections to audio and video inputs.

**V. Circuit Breakers** — If unit display fails to come on when the power button is pressed, try checking the circuit breakers. One circuit breaker is for the unit AC power, the other is for the dish actuator power.

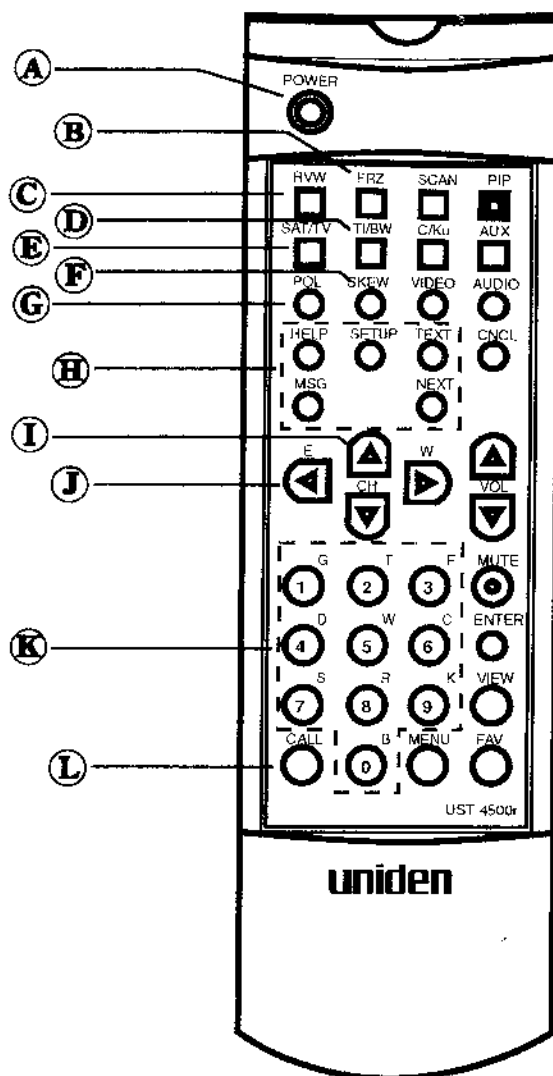
**W. AC Power Cord** — Connect to any 120V AC household outlet. Do not connect to an outlet controlled by a wall switch.

## Remote Control

**Note:** The UST 4500r Remote Control operates in both IR and UHF mode. Be sure to set the **REMOTE SELECT (IR/UHF)** switch on the rear panel of the receiver to the proper position for operation. In UHF mode, the Remote Control has a range of over 150 feet. The Remote Control takes 4 AAA Batteries.

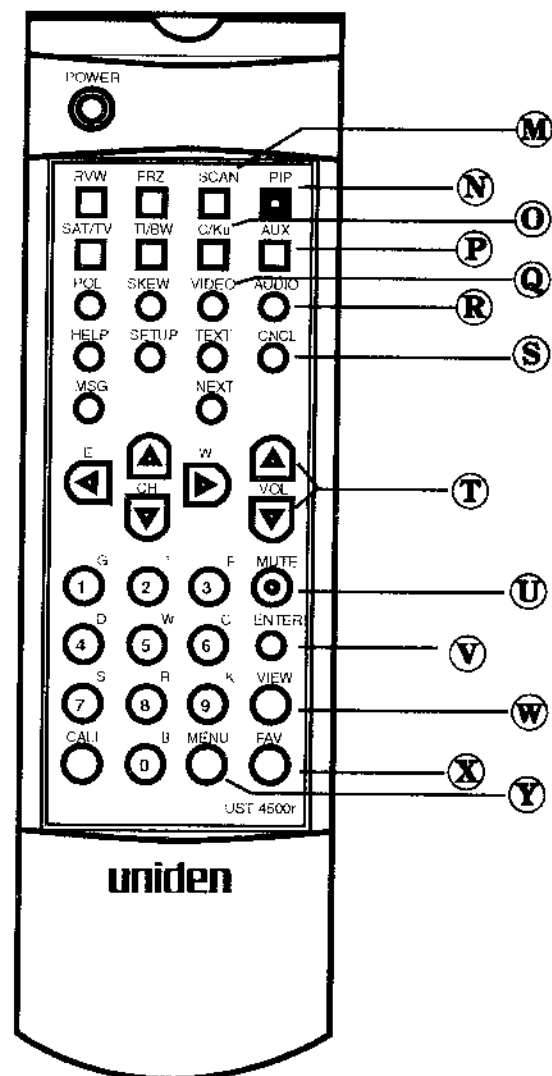
**Note:** Pressing any key a second time without pressing any other key first will return to normal video.

- A. **POWER** — Turns the satellite receiver On or Off.
- B. **(FRZ)** — Press this key to freeze the current video and display it for three seconds. Press and hold this key to begin the Strobe feature. (See 'Special Features' in the "Normal Operation" section.)
- C. **(RVW)** — Use this key to review the contents of video memory after the Freeze feature or Strobe feature. This feature displays the video memory for 30 seconds. (See 'Special Features' in the "Normal Operation" section.)
- D. **(T/BW)** — In C-band, use this key to switch the TI Filter on or off. In Ku-band, use this key to switch between **WIDE** or **NARROW**.
- E. **(SAT/TV)** — Press this key to toggle between SAT viewing and TV viewing for RF Output only. When in TV mode, all other keys cannot be used until you return to SAT mode. This key only affects the RF modulated output. It has no effect on the TV or VCR video output.
- F. **(SKEW)** — Press this key to display the **SKEW** screen for adjusting the skew position. While in the **SKEW** screen use **(CH▲)** and **(CH▼)** to adjust the skew in degree increments.
- G. **(POL)** — Press this key to change polarity. When **(POL)** is pressed, the current polarity is changed and the **POLARITY** screen appears.
- H. **VCII keys** — These keys are used only while the VCII front panel indicator is lit. See the section on VideoCipher II® PLUS descrambler operation for more details.
- I. **(CH▲)** and **(CH▼)** — Press once to move up or down a single channel. Press and hold for more than a half-second to change channels rapidly. These buttons are also used for menu item selections and/or changes when using the built-in menu system. (See "Using the Main Menu" in this Guide.)



- J. **(◀E)** and **(W▶)** — Press to manually move the satellite dish East or West. While the dish is moving, the **DISH LOCATION** screen is displayed. These buttons are also used for menu item selection and/or change when using the built-in menu system. (See "Using the Main Menu" in this Guide.)
  - K. **Numeric Keys (1 to 9, 0)** — Use these numeric keys for channel selection and menu selection.
- Letter Keys (G,T,F,D,W,C,S,R,K,B)** — Use these keys for direct satellite access.
- L. **(CALL)** — Press to display the **SATELLITE MENU**. When in the **SATELLITE MENU** or the **FAVORITE CH CALL** menu, press this button to move to the selected satellite and/or channel. It is also used for direct satellite access. (See "Using the Main Menu" in this Guide.)

- M. **(SCAN)** — Use this key to initiate the **SCAN** feature. While in **PIP** mode, press this key to move the PIP screen to one of the four positions on the screen. (See 'Special Features' in the "Normal Operation" section.)
- N. **(PIP)** — Use this key to display the picture-in-picture feature. Pressing this key while in PIP mode switches the Aux picture and the main satellite picture. (See 'Special Features' in the "Normal Operation" section.)
- O. **(C/Ku)** — Press this key to switch between C-band and Ku-band satellites. While the C-band satellite list is displayed, use this key to switch between C-band and Ku-band satellite lists.
- P. **(AUX)** — Press this key to immediately display the **AUX** inputs. Press **AUX** again to switch back to normal satellite viewing.
- Q. **(VIDEO)** — Press this key to display the **VIDEO TUNE** screen. At this screen you can adjust the video frequency in increments of 0.25 MHz.
- R. **(AUDIO)** — Press this key to display the **AUDIO TUNING** menu. Within this menu you can adjust the audio format for the current channel.
- S. **(CNCL)** — Press this key to return to video at any time. This key is also used for **VCII** descrambler setup and operation.
- T. **(VOL▲) (VOL▼)** — Use these keys to adjust the volume. When either key is pressed, the **VOLUME** screen appears.
- U. **(MUTE)** — Press this key to mute the audio. Press the key again to restore the audio. When **(MUTE)** is pressed, "MUTE" appears on the bottom of your screen. When the key is pressed again, the **VOLUME** screen appears.
- V. **(ENTER)** — This key is used in certain menus to save the changes. This key is also used for **VCII** descrambler setup and operation.



- W. **(VIEW)** — Press this key to display the current satellite and channel. This key is also used for **VCII** descrambler setup and operation.
- X. **(FAV)** — Press this key to display the **FAVORITE CH CALL** menu. Press and hold this key for at least 4 seconds to display the **FAVORITE CH STORE** menu.
- Y. **(MENU)** — Press this key to display the **MAIN MENU**. Press and hold this key for at least 4 seconds to display the **INSTALLATION MENU**.

## Normal Operation

This section of the Operating Guide takes you step-by-step through the most common procedures you need to perform. For typical operation, perform the procedures in order.

### Power On

Turn the power on the **UST-4500** with the remote control or the front panel button. When powered on, the clock on the front panel is no longer displayed, and the current satellite and channel now appear.

Next, turn on your television set and set it for either channel 3 or 4, depending on the switch setting on the back of your **UST-4500**.

**Note:** You can press **(CNCL)** at any time to cancel a selection and return to the program you were viewing or listening to.

### Channel Identification

You can tell what satellite and channel you're on by looking at the Front Panel Display. You can also press **(VIEW)** to see the satellite-channel information displayed on your screen.

GALAXY-1      G1    CH 15

### Select a Satellite

Press **(CALL)** on the remote control. The **SATELLITE MENU** will be displayed, with the current satellite identified by the cursor.

#### SATELLITE MENU

→G1 GALAXY-1  
F1 SATCOM-F1R  
T3 TELSTAR-303  
W5 WESTAR-5  
T1 TELSTAR-301  
G3 GALAXY-3  
F2 SATCOM-F2R

\*USE ↑,↓,←,→,CALL,CNCL

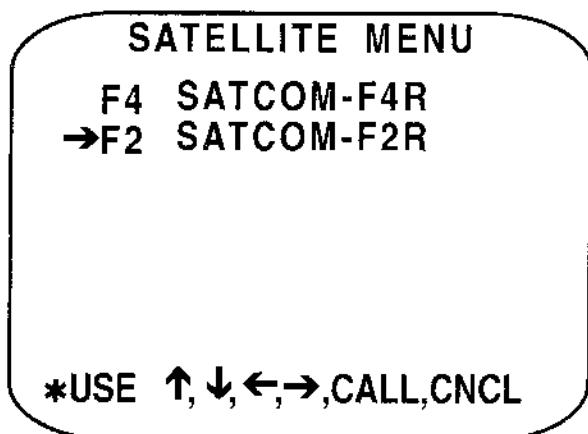
Use **(CH▲)** and **(CH▼)** to move the pointer to another available satellite. (If the satellite you want is not displayed on the screen, use **(W▶)** to move to the next page, or **(◀E)** to move to the previous page.)

#### SATELLITE MENU

→F4 SATCOM-F4R  
F2 SATCOM-F2R

\*USE ↑,↓,←,→,CALL,CNCL

When the arrow is pointing to the desired satellite, press **(CALL)**. The **UST-4500** will automatically position the dish antenna and tune to the selected satellite.



You can also select a satellite directly with the "Direct Satellite Access" keys, which are single remote keys programmed specifically to tune to the selected satellite. Later in this manual you will learn how to program additional single remote keys yourself for direct satellite access.

First, press **(CALL)** to display the **SATELLITE MENU**. Then press the Direct Satellite Access keys to select the desired satellite. (See the Appendix for a list of Direct Satellite Access keys.) Press **(CALL)** again to tune to that satellite.

**Example:** If Galaxy-3 is the default satellite for **(G)**, press **(G)** to select Galaxy-3. Then press **(CALL)**. To select a non-default satellite, use the two designated remote keys, such as **(G)(1)** to select Galaxy-1; then press **(CALL)**.

## Selecting Channels

Channels may be selected by using **(CH▲)** or **(CH▼)** on the front panel or on the remote. Simply press the appropriate key until the desired channel is reached.

The **UST-4500** provides several methods for changing channels. You can press the **(CH▲)** or **(CH▼)** keys on your remote to move the channel numbers up or down sequentially (1-2-3-4 ...-23-24), or skip in increments of two (2-4-6...-24-26). Or, you can use the Seek feature to scan the channels until an active channel is found. How to program your remote keys for these various methods is described later in "Using the Main Menu."

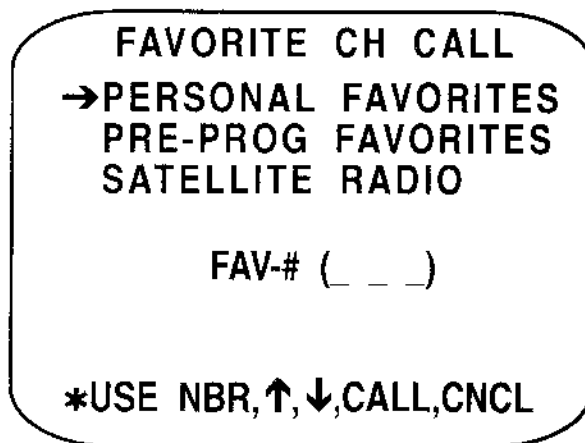
Still another method for selecting channels is by entering the channel number directly on your remote with the numeric keys. For channels with a single number (1 - 9), press zero (0) before the channel number to switch to that channel immediately. If you press only the single digit, it will take about 4 seconds to switch to the desired channel.

## Last Channel Recall

Press zero (0) or zero-zero (00) to recall the last satellite and channel you viewed.

## Selecting Favorite Channels

Up to 160 favorite stations can be programmed into memory for instant recall. To select a programmed favorite channel, press **(FAV)** to display the **FAVORITE CH CALL** menu.



**PERSONAL FAVORITES** are those programs you have entered yourself. (See the Programming section later in this Guide.) **PRE-PROG FAVORITES** are channels that were programmed into your **UST-4500** before you purchased it. **SATELLITE RADIO** are radio channels that were also pre-programmed into your unit.

To select the channel you want, press **(CALL)** with the arrow pointing to any of the three options on this menu. You will then see a list of programmed channels, as shown below.

For the example below, **PERSONAL FAVORITES** was selected at the **FAVORITE CH CALL** menu.

**PERSONAL FAVORITES**

→16 T1-10 ABC-EAST

17 T2-10 ABC-WEST

18 F2-07 ALL NEWS CH

19 F1-01 AMC

20 G1-12 ART and ENT

21 F1-24 BRAVO

22 E2-19 CBC NORTH

23 S2-05 CH AMERICA

\*USE ↑, ↓, ←, →, CALL, CNCL

If the channel you want is not on the list, use **(←E)** or **(W▶)** to see another list.

**Note:** The services are listed in alphabetical order.

When the correct channel list is displayed, use **(CH▲)** or **(CH▼)** to move the arrow to the desired channel.

You can also use the remote control numeric keys to enter the number of the favorite channel entry to move directly to this screen. Be sure to use three digits when entering the item number (e.g., **003** for entry 3, or **021** for entry 21, etc.).

**PERSONAL FAVORITES**

16 T1-10 ABC-EAST

17 T2-10 ABC-WEST

18 F2-07 ALL NEWS CH

19 F1-01 AMC

20 G1-12 ART and ENT

→21 F1-24 BRAVO

22 E2-19 CBC NORTH

23 S2-05 CH AMERICA

\*USE ↑, ↓, ←, →, CALL, CNCL

Press **(CALL)** to select the channel, and the **UST-4500** will automatically position the dish to the correct satellite and select the channel for you.

**SATCOM-F1R F1 CH 24**

**DISH MOVING TO**

**GALAXY-1 G1 CH 15**

## Parental Lock

The **UST-4500** has a special feature which will allow up to ten channels to be locked out or blocked from viewing. If you feel that a certain program is not suitable for viewing you can lock out that channel so that it cannot be seen.

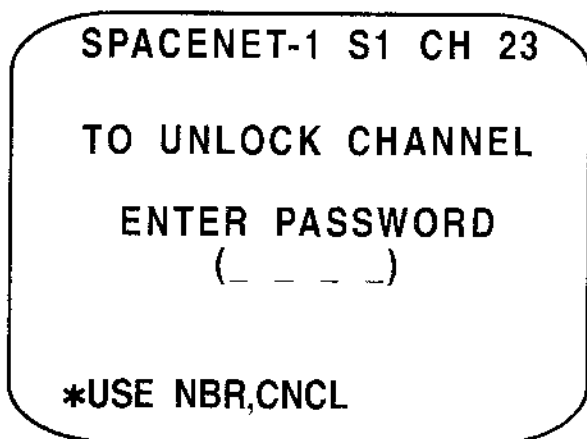
**Note:** When a channel has been locked out, it will not be possible to switch to the channel using **(CH▲)** or **(CH▼)** or **(FAV)**. You will need to use the remote control numeric keys to directly call the channel.

When you try to view a locked channel, the **P. LOCK** screen will be displayed. The audio will be muted. To unlock the channel, press **(MENU)** to display the **MAIN MENU**.

**SPACENET-1 S1 CH 23**

**P. LOCK**

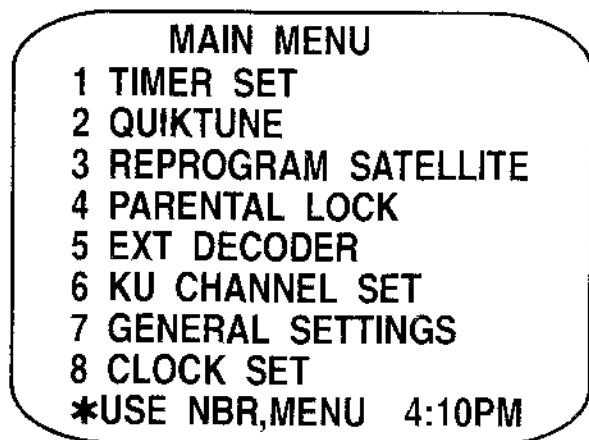
At the **MAIN MENU** press **(4)** to display the **UNLOCK** screen. The **UNLOCK** screen will appear as shown.



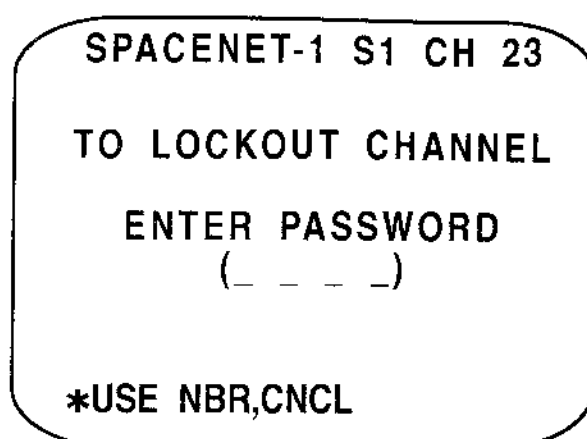
Enter the four-digit password using the remote control numeric keys.\* (The numbers will not appear on the screen.) If you enter the wrong password, the words "**WRONG PASSWORD**" will flash under the password, and you'll return to the **MAIN MENU**. When you enter the correct password, the channel will be unlocked. You can then view the program normally.

*\*Note: The factory preset P. LOCK code is "0000".*

When you have finished watching the program you can re-lock the channel. Press **(MENU)** to display the **MAIN MENU**.



At the **MAIN MENU** press **(4)** to display the **LOCK** screen.



Enter the four-digit password using the remote control numeric keys. (The numbers will not appear on the screen.) If you enter the wrong password, the words "**WRONG PASSWORD**" will flash under the password, and you'll return to the **MAIN MENU**. When you enter the correct password, the channel will be locked.

## Special Features

**PIP** — This feature is used to display the auxiliary video (connected to the **AUX INPUT**) in a small segment of the main picture. Press **(PIP)** to enter the PIP mode. While in PIP mode, press **(PIP)** to swap the two pictures.

*Note: If you have no video connected to the **AUX INPUT**, the small screen will be blank. When you swap the two pictures, the entire screen will be blank.*

The position of the PIP screen can be moved by pressing **(SCAN)** to start scanning, and pressing **(SCAN)** again to stop scanning.

**SCAN** — This feature is used to scan through all of the channels on a satellite. Press **(SCAN)** to enter the **SCAN** mode. Either 4 or 9 segments will be displayed, depending on the **SCAN DISPLAY** setting in the **GENERAL SETTINGS** menu. Each active video is displayed for 3 seconds. It then becomes a "still" picture, and the channel number is displayed in the upper right corner of the screen. The scan moves to the next segment and channel. After all the segments are filled with still pictures, the next channel is displayed in the first segment, replacing the picture that was there.

Press **(SCAN)** or **(VIEW)** at any time to display the current channel. The order of the channels is determined by the **SCAN TYPE** setting in the **GENERAL SETTINGS** menu. Either **NORMAL**, **SKIP**, or **SEEK** can be selected. **SEEK** simply means that only the active channels will be displayed.

**FRZ and RVW** — These features are used to freeze ("still" picture) and review an active video signal. Press **(FRZ)** to freeze the current video for 3 seconds and store that frame in video memory. Press **(RVW)** to display the video memory for 30 seconds. **RVW** does not work immediately after PIP mode. (PIP mode erases video memory.)

**STROBE** — The Strobe feature is started by pressing **(FRZ)** continuously for 3 seconds. At that time, the receiver is in strobe mode. This strobe feature is a video effect, and the speed of the effect can be adjusted by using the **(◀E)** and **(W▶)** keys. Pressing the **(◀E)** key slows down the **STROBE** feature while pressing the **(W▶)** key speeds it up.

**AUX** — Press **(AUX)** once to display the auxiliary video connected to the **AUX INPUT** on the rear panel. Press **(AUX)** again to return to satellite viewing. While the auxiliary video is displayed, the **FRZ/RVW** and **SCAN** features can still be used.

**TIMER** — This feature is used to pre-program up to 7 events over a two-week period. These events will automatically move to a desired satellite and channel at a specific time. See '1. TIMER SET' in the "Using the Main Menu" section.

## Tuning the UST-4500

There may be times when you'll need to adjust the tuning of your **UST-4500** because of changes in the satellite signal. You can fine tune the video and audio, turn the TI (Terrestrial Interference) Filter On or Off, and adjust the skew and polarity by using the appropriate keys on the remote control. Before using any of the following remote keys, select the satellite and channel you want to adjust.

### Video Fine Tuning

Press **(VIDEO)** to display the **VIDEO TUNING** screen.

SATCOM-F1R F1 CH 24

VIDEO TUNE( 0.00)MHz

\*USE ↑,↓,CNCL

Use the **(CH▲)** and **(CH▼)** keys to change the frequency in 0.25 MHz steps. (The maximum range is  $\pm 15$  MHz.)

SATCOM-F1R F1 CH 24

VIDEO TUNE(+ 0.25)MHz

\*USE ↑,↓,CNCL

### TI (Terrestrial Interference) Filter

If your picture is distorted, snowy or contains sparkles, you may be experiencing Terrestrial Interference. You may need to turn the TI Filter On for that channel. In C-band only, press **(TI/BW)** to switch the TI Filter On or Off. (The TI Filter setting will appear momentarily over the video.)

**Note:** In Ku-band only, press **(TI/BW)** to switch the bandwidth between **WIDE** and **NARROW**. (The bandwidth setting will appear momentarily over the video.)

### Audio Fine Tuning

SATCOM-F1R F1 CH 24

VIDEO TUNE( 0.00)MHz

\*USE ↑,↓,CNCL

Press **(AUDIO)** to display the **AUDIO TUNING** menu.

SATCOM-F1R F1 CH 24

AUDIO TUNING

1	FORMAT	(MONO)
2	AUDIO BW	(WIDE)
3	AUDIO SEEK	(OFF)
→ 4	L / R	(6.80)MHz

\*USE NBR,↑,↓,CNCL

**Note:** The Video Fine Tune, TI Filter status, Skew, and Audio Tuning information are remembered on a per-channel basis. No special commands are required to store any of the changes.

Press **(1)** to switch between the different audio formats (VCII, MONO, or DISC).

At the **MONO AUDIO TUNING** menu you can adjust **AUDIO BW** (audio bandwidth) by pressing **(2)** to switch between **NARW** (narrow) and **WIDE**.

**SATCOM-F1R F1 CH 24**

**AUDIO TUNING**

1	FORMAT	(MONO)
2	AUDIO BW	(NARW)
3	AUDIO SEEK	(OFF)
→ 4	L / R	(6.80)MHz

**\*USE NBR, ↑, ↓, CNCL**

Press **(3)** to turn **AUDIO SEEK (ON)** or **(OFF)**. When you turn **AUDIO SEEK (ON)**, the unit will attempt to locate audio subcarriers by scanning up or down, depending upon whether you press the **(CH▲)** or **(CH▼)** key.

**SATCOM-F1R F1 CH 24**

**AUDIO TUNING**

1	FORMAT	(MONO)
2	AUDIO BW	(NARW)
3	AUDIO SEEK	(ON)
→ 4	L / R	(6.80)MHz

**\*USE NBR, ↑, ↓, CNCL**

When you turn **AUDIO SEEK (OFF)**, the **(CH▲)** and **(CH▼)** keys adjust the frequency in 0.01 MHz steps.

**SATCOM-F1R F1 CH 24**

**AUDIO TUNING**

1	FORMAT	(MONO)
2	AUDIO BW	(NARW)
3	AUDIO SEEK	(OFF)
→ 4	L / R	(6.84)MHz

**\*USE NBR, ↑, ↓, CNCL**

At the **DISC AUDIO TUNING** menu you can adjust the audio bandwidth and turn **AUDIO SEEK (ON)** or **(OFF)** as in the **MONO AUDIO TUNING** menu. Press **[1]** so that **DISC** appears in the field beside **1 FORMAT** as shown below.

**SATCOM-F1R F1 CH 24**

**AUDIO TUNING**

1	FORMAT	(DISC)
2	AUDIO BW	(NARW)
3	AUDIO SEEK	(ON)
→ 4	LEFT	(6.77)MHz
5	RIGHT	(6.95)MHz

**\*USE NBR, ↑, ↓, CNCL**

With **DISC**, you adjust the frequency separately for each audio channel, (**LEFT** or **RIGHT**), by pressing **(4)** or **(5)** and then using the **(CH▲)** and **(CH▼)** keys.

**Note:** While tuning the **LEFT** channel, the **RIGHT** channel will automatically tune +0.18 MHz above the **LEFT** channel. This is done because the majority of the discrete (**DISC**) stereo signals are broadcast with a 0.18 MHz difference. For broadcasts that do not follow this standard, select **(5)** to tune the **RIGHT** channel only.

## Skew

If there is rotation in the position of a satellite, you may need to make small adjustments to the Skew. press **(SKEW)** to display the **SKEW** screen. You will see both the present **POLARITY** and **SKEW** displayed.

SATCOM-F1R F1 CH 24  
POLARITY (HORZ)

(SKEW -45)

\*USE ↑,↓,CNCL

Use the **(CH▲)** or **(CH▼)** key to adjust the Skew in one degree increments, to a maximum of -90 degrees to +90 degrees. Press any key (including **(CNCL)**) to exit this screen and save the changes. If you do not press any key for 25 seconds, the changes for that satellite are saved automatically, and the screen disappears.

## Polarity

The Polarity of a satellite channel (either horizontal or vertical) is established by the orientation of the satellite. Once your **UST-4500** is installed, you should not need to adjust this setting. (Changing the Polarity may cause loss of signal.)

If you do need to change the setting, press **(POL)**. The Polarity will change, and the **POLARITY** screen will be displayed.

SATCOM-F1R F1 CH 24  
SKEW (-45)

POLARITY (HORZ)

\*USE POL,CNCL

You will see both the present **POLARITY** and **SKEW**. Press any key (including **(CNCL)**) to exit this screen. Only **SKEW** changes are stored. **POLARITY** changes are not stored. If you do not press any key for four seconds, the screen disappears.

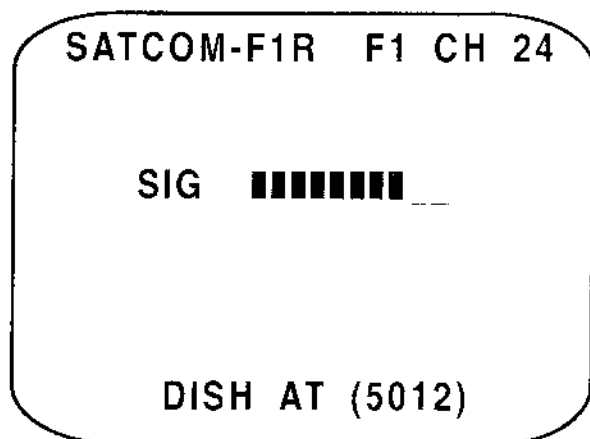
**Note:** If you change the Polarity and cannot get picture or sound, change it back by pressing **(POL)** again.

**Note:** If the Polarity needs to be stored for that satellite, change the Polarity so that a picture can be seen. Then reprogram that satellite (see "3. REPROGRAM SATELLITE" in "Using the Main Menu").

## Dish Antenna Tuning

Once your UST-4500 is installed, you should not need to adjust the dish antenna for a particular satellite and channel. If you do need to make a small change in the dish antenna position for better picture clarity, you should do so for the clearest possible picture before using the video or audio fine tuning.

Press **◀E** or **W▶** to adjust the dish position. The **DISH LOCATION** screen will appear, showing the current dish position.



Press either **◀E** or **W▶** to move the dish one count at a time. You can also hold the key down to move the dish more rapidly.

**Note:** Once you have moved the dish, **CNCL** will not cancel the move. You must move the dish back to the original position using **◀E** or **W▶**.

**Note:** If you want to store any of the above Dish Tuning adjustments, reprogram the satellite (see '3. REPROGRAM SATELLITE' in "Using the Main Menu").

## Using the Main Menu

Operating the **UST-4500** is easy with the built-in menu system. You use the **MAIN MENU** to:

1. Set the Program Timer.
2. Quickly tune a Satellite and Channel.
3. Reprogram a Satellite.
4. Turn Parental Lock On or Off.
5. Set the External Decoder.
6. Set a Ku Channel.
7. Access the General Settings menu in order to adjust the scan display, program remote keys to change channels, adjust the front panel display, change the password, or program a Direct Satellite Access key.
8. Set the Date and Time.

Press **(MENU)** to display the **MAIN MENU**.

Once in the **MAIN MENU**, press the appropriate numeric key to select the corresponding function.

### MAIN MENU

- 1 **TIMER SET**
- 2 **QUICKTUNE**
- 3 **REPROGRAM SATELLITE**
- 4 **PARENTAL LOCK**
- 5 **EXT DECODER**
- 6 **KU CHANNEL SET**
- 7 **GENERAL SETTINGS**
- 8 **CLOCK SET**
- \*USE NBR,MENU 4:10PM

### 1. TIMER SET

This function is used to pre-program up to 7 events over a two-week period. At the specified time, the receiver will automatically move to the desired satellite and channel. Press **(1)** at the **MAIN MENU** to display the **TIMER SET** screen.

### TIMER SET

- 1 **EVENT** (1)
- 2 **SAT** (--)
- 3 **CH** (--)
- 4 **START** (---:--)
- 5 **LENGTH** (---)MINUTE
- 6 **DAY** (-----)
- 7 **WEEK** (-----)

\*USE **↑**, **↓**, **ENTR**, **CNCL**, **MENU**

Press the number of the item to be changed. Then, use **(CH▲)** or **(CH▼)** to change or select an item. For some items, **(←E)** or **(W→)** are used to change the character position.

The **DAY** options include: **SUN**, **MON**, **TUE**, **WED**, **THU**, **FRI**, **SAT**, **MON-FRI**, **DAILY**.

The **WEEK** options include: **WEEK1**, **WEEK2**, **WEEKLY**.

When all of the information has been entered, press **(ENTER)** to store the event, or press **(CNCL)** to erase all of the changes.

**Note:** If an error is made in programming the event, the **Timer** indicator will begin flashing. Examples of errors include overlapping events and programming an event on a **Parental Locked** channel.

Also, if the clock has been reset, the **Timer** indicator will flash to indicate that the clock needs to be set in order for the **Timer** to work correctly.

**Important:** You may wish to set the time 1 or 2 minutes prior to the event. This will allow enough time for dish movement before the event starts.

## 2. QUIKTUNE

This feature automatically peaks the best picture and skew for the current satellite and channel. This is only done for the current channel (polarity). The Skew is automatically stored right after **QUIKTUNE**.

Press **2** at the **MAIN MENU** to use **QUIKTUNE**.

**SATCOM-F1R F1 CH 24**

**QUIKTUNE IN PROGRESS**

**SKEW (-45)**

**DISH AT (5002)**

**\*USE CNCL**

After peaking is complete, you can reprogram the satellite's position by pressing **ENTER**. If you want to cancel the position changes, press **CNCL**.

## 3. REPROGRAM SATELLITE

This function is used to store any adjustments (Polarity or Dish Position) you may have made to satellite information. Press **3** at the **MAIN MENU** to display the **REPROGRAM A SINGLE SATELLITE** screen.

**REPROGRAM A SINGLE  
SATELLITE**

**SAT NAME (F2)**

**\*USE ↑,↓,ENTER,CNCL**

If the satellite displayed on this screen is not the one you are reprogramming, use **CH▲** or **CH▼** to change to the desired satellite. Then press **ENTER** to store the changes, or **CNCL** to exit this screen without saving the changes.

## 4. PARENTAL LOCK

Up to ten channels can be locked out or blocked from viewing. To lock out a channel, first tune to the channel using any of the standard methods. Once you are at the channel, press **MENU** to display the **MAIN MENU**. Then press **4** to display the **LOCK** screen.

**SPACENET-1 S1 CH 23**

**TO LOCKOUT CHANNEL**

**ENTER PASSWORD**

**(1 0 0 0)**

**\*USE NBR,CNCL**

Enter the four-digit password using the remote control numeric keys. (The numbers will not appear on the screen.)

**SPACENET-1 S1 CH 23**

**TO LOCKOUT CHANNEL**

**ENTER PASSWORD**

**(\*\*\*\*)**

**\*USE NBR,CNCL**

If you enter the wrong password, the words "**WRONG PASSWORD**" will flash under the password, and you'll return to the **MAIN MENU**. When you enter the correct password, the channel will be locked.

When you try to view the locked channel, the **P. LOCK** screen will be displayed.

SPACENET-1 S1 CH 23  
P. LOCK

When a channel has been locked out, it is not possible to switch to the channel using (CH▲) or (CH▼) or (FAV).

To unlock a channel, use the remote control numeric keys to directly call the channel. Then press (MENU) to display the **MAIN MENU** and press (4) to display the **UNLOCK** screen.

SPACENET-1 S1 CH 23  
TO UNLOCK CHANNEL  
ENTER PASSWORD  
( \_ \_ \_ )

\*USE NBR,CNCL

Enter the four-digit password using the remote control numeric keys. (The numbers will not appear on the screen.) If you enter the wrong password, the words "**WRONG PASSWORD**" will flash under the password, and you'll return to the **MAIN MENU**. When you enter the correct password, the channel will be unlocked. You can then tune to and view the program normally. When you have finished watching the program you can re-lock the channel.

## 5. EXT DECODER

**EXT DECODER** is used to automatically switch to the **EXT DEC INPUT** for a specific satellite and channel. This feature is used in conjunction with an external decoder.

Press (5) at the **MAIN MENU** to display the **EXT DECODER** screen.

SATCOM-F1R F1 CH 24  
EXT DECODER (OFF)

\*USE ↑,↓,CNCL

Use (CH▲) or (CH▼) to turn the External Decoder On or Off.

## 6. KU CHANNEL SET

**KU CHANNEL SET** is used to relabel a Ku-band channel so that it matches the program channel shown in your viewing guide.

For example, you may want to relabel Channel 15 on Ku-band satellite Spacenet-1 as Channel 8 to match your viewing guide.

**Note:** Before you can use the **KU CHANNEL SET** function, you must already be at the correct Ku-band satellite and channel.

**To select the current satellite and channel:**

Press (C/Ku) on your remote to change from C-band to Ku-band.

**Note:** When you are on the Ku-band, **KU** lights up on the front panel display. (When you are on the C-band, the panel is blank.).

Tune to the Ku-band satellite and channel you wish to relabel using the 'Select a Satellite' and 'Selecting Channels' procedures described at the beginning of the "Normal Operation" section.

Press **(MENU)** to display the **MAIN MENU**.

Press **(6)** at the **MAIN MENU** to display the **KU CHANNEL SET** screen.

### KU CHANNEL SET

FROM: S1 CH 15

→TO: S1 CH (15)

**\*USE ↑,↓,ENTER,CNCL**

Use **(CH▲)** or **(CH▼)** to change the **TO:** channel to the number desired (8 is shown in the example).

### KU CHANNEL

FROM: S1 CH (15)

→ TO: S1 CH ( 8)

**\*USE ↑,↓,CNCL**

Press any other key to exit this screen and save the changes.

Now, when you select Channel 8, you get the same program as on Channel 15.

## 7. GENERAL SETTINGS

Press **(7)** at the **MAIN MENU** to use the **GENERAL SETTINGS** menu. This menu allows you to make additional adjustments to your satellite receiver. For details, refer to "Using the General Settings Menu," following the next feature.

### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (NORM)
- 3 FRONT PANEL (MED)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

**\*USE NBR,CNCL**

## 8. CLOCK SET

This feature is used to set the clock time. Upon initial power up and after a master reset, the clock defaults to 12:00 and remains flashing until the clock is set.

**Note:** During power loss, the clock time will be retained for up to ten minutes.

Press **(8)** at the **MAIN MENU** to display the **CLOCK SET** screen.

### CLOCK SET

- 1 DAY: (TUE)  
2 TIME: ( 1:12)(PM)

**\*USE ↑,↓,CNCL**

Press **(1)** to set the current DAY. Use **(CH▲)** or **(CH▼)** to scroll between the days.

Press **(2)** to set the current TIME. The hour digit will begin flashing.

**CLOCK SET**

1 DAY: (TUE)

→ 2 TIME: ( :12)(PM)

\*USE ↑,↓,CNCL

Use **(CH▲)** or **(CH▼)** to change the number. Then press **(W▶)** to set the minutes.

**CLOCK SET**

1 DAY: (TUE)

→ 2 TIME: ( 1: 2)(PM)

\*USE ↑,↓,CNCL

The *first* digit of the minutes will begin flashing.  
 Press **(CH▲)** or **(CH▼)** to change the number. Then, press **(W▶)** to move to the *second* digit and change the number. Depending on the hour you set, **AM** or **PM** will be adjusted automatically.

When you are finished, press **(CNCL)** to store the time and return to normal viewing.

## Using the General Settings Menu

Use the **GENERAL SETTINGS** menu to:

1. Set the Scan Display for viewing 4 or 9 channel screens at one time.
2. Set the Scan Type method for selecting channels.
3. Adjust the Front Panel Display brightness.
4. Change the unit's security password.
5. Program a remote key as a Direct Satellite Access key.

Press **7** at the **MAIN MENU** to display the **GENERAL SETTINGS** menu.

### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (NORM)
- 3 FRONT PANEL (MED)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

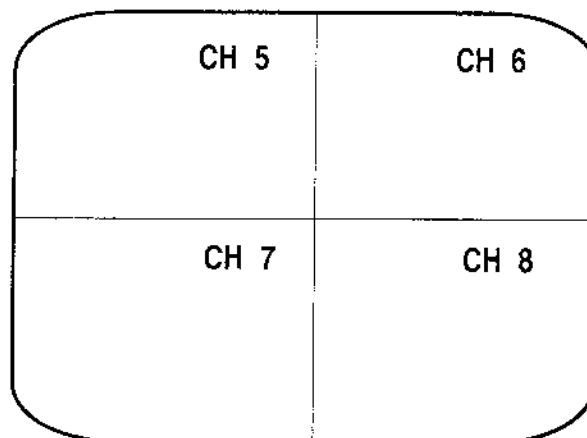
**\*USE NBR,CNCL**

### 1. SCAN DISPLAY

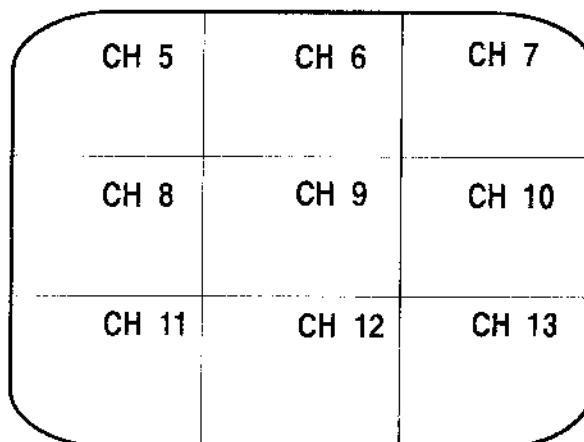
This feature is used to set screen viewing to either 4 or 9 picture segments at once when you use the **SCAN** feature to search for active satellite channels. For more information about this feature, see 'Special Features' in the "Normal Operation" section.

Press **1** at the **GENERAL SETTINGS** menu to set either **4** or **9** in the field beside **1 SCAN DISPLAY**.

Press **SCAN** to start scanning for active videos. If you selected **4**, four picture segments will now appear on your screen.



If you selected **9**, nine picture segments will now appear on your screen.



When you are finished, press **SCAN** again to stop scanning.

## 2. SCAN TYPE

In the **NORM** mode, changing channels using (CH▲) or (CH▼) will scroll through the channels sequentially (1-2-3-4-5...-23-24) during normal operation or in **SCAN** mode.

### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (NORM)
- 3 FRONT PANEL (MED)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

**\*USE NBR,CNCL**

If you press (2) at the **GENERAL SETTINGS** menu, you can change **SCAN TYPE** to **SKIP** or **SEEK**.

In the **SKIP** mode, pressing (CH▲) or (CH▼) will scroll through every *other* channel (1-3-5-7-9...-23-2-4-6...-24) during normal operation or in **SCAN** mode.

### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (SKIP)
- 3 FRONT PANEL (MED)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

**\*USE NBR,CNCL**

In the **SEEK** mode, pressing (CH▲) or (CH▼) selects only the active channels to be displayed during normal operation or in **SCAN** mode.

### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (SEEK)
- 3 FRONT PANEL (MED)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

**\*USE NBR,CNCL**

**Note:** *SKIP mode is recommended for systems using a single feed polarizer to prolong the life of the tiny servo motor located at the antenna.*

### 3. FRONT PANEL

You control the brightness of the Front Panel Display in the **GENERAL SETTINGS** menu. The brightness is shown in parenthesis beside **3 FRONT PANEL**.

**DIM:** Dim  
**MED:** Medium  
**BRT:** Bright

#### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (SKIP)
- 3 FRONT PANEL (MED)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

**\*USE NBR,CNCL**

Press **(3)** to change the setting from **MED** to **BRT**. Pressing **(3)** again will change the brightness from **BRT** to **DIM**, and so on.

#### GENERAL SETTINGS

- 1 SCAN DISPLAY (4)
- 2 SCAN TYPE (NORM)
- 3 FRONT PANEL (BRT)
- 4 CHANGE PASSWORD
- 5 DIRECT SAT KEY SET

**\*USE NBR,CNCL**

### 4. CHANGE PASSWORD

To change the password used only for Parental lock, press **(4)** at the **GENERAL SETTINGS MENU**. You will be asked to enter the old password.

#### CHANGE PASSWORD

ENTER OLD PASSWORD  
 ( \_ \_ \_ \_ )

**\*USE NBR,CNCL**

Enter the four-digit password using the remote control numeric keys. (The numbers will not appear on the screen.) If you enter the wrong password, the words **"WRONG PASSWORD"** will flash under the password, and you'll return to the **MAIN MENU**. When you enter the correct password, the word **"SUCCESSFUL"** will flash under the password, and you will see the next screen.

#### CHANGE PASSWORD

ENTER NEW PASSWORD  
 (\*\*\*\*)

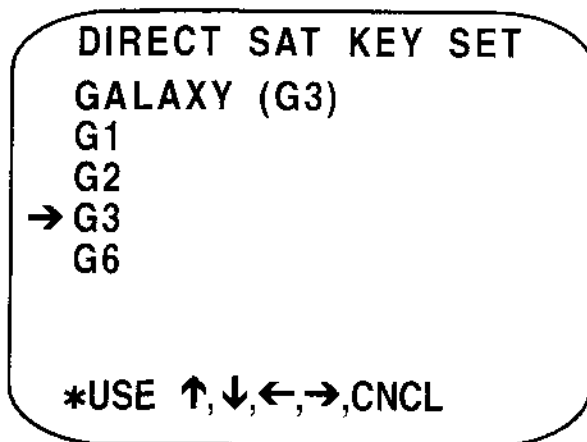
**SUCCESSFUL**

**\*USE NBR,CNCL**

Now enter the new four-digit password. As soon you have entered the password you'll be asked to re-type the new password. After you have entered it a second time, the word **"SUCCESSFUL"** will flash under the password. After a few seconds you will return to normal video.

## 5. DIRECT SAT KEY SET

Press **5** at the **GENERAL SETTINGS** menu to display a series of screens that display a satellite name and the available satellite numbers for Direct Satellite Access. The **DIRECT SAT KEY SET** screen enables you to program a single remote key as a default Direct Satellite Access key when you use **CALL** to tune to a satellite in normal operation. (Using the Direct Satellite Access Key to select a satellite is discussed in the "Normal Operation" section.)



To program a remote key, use **◀E** and **W▶** to access the satellite you want. Then use **CH▲** and **CH▼** to select the abbreviation you want to use for that satellite. When you are finished, press **CNCL** or **VIEW** to save the new settings and return to video. Be sure to write the satellite you have chosen for default in the Direct Satellite Access Keys list in the Appendix.

## Storing Favorite Channels

**FAVORITE STORE** is used to add your favorite satellite channels and satellite radio stations to the **PERSONAL FAVORITES** category. You can also change existing **PERSONAL FAVORITES**, **PRE-PROGRAMMED FAVORITES**, or **SATELLITE RADIO** selections.

### Adding a Personal Favorite

Use any of the procedures in the "Normal Operation" section to tune to the satellite and channel you wish to store as a personal favorite. When you are at the satellite and channel, make any necessary changes, such as fine tuning the video or selecting a different audio mode for receiving a satellite radio station. (For more information on these procedures, refer to the "Normal Operation" and "Tuning the UST-4500" sections.)

When all adjustments have been made, press and hold **(FAV)** for at least four seconds to display the **FAVORITE STORE** menu.

**Note:** If you press any other key before you press **(FAV)**, you may not retain the video and audio settings you just made.

You will see the **FAVORITE CH CALL** menu at first. Then the menu name will change from **FAVORITE CH CALL** to **FAVORITE CH STORE**. Be sure the cursor is at **PERSONAL FAVORITES**. (If not, use **(CH▲)** to move the cursor.)

**FAVORITE CH STORE**  
**→PERSONAL FAVORITES**  
**PRE-PROG FAVORITES**  
**SATELLITE RADIO**

FAV-# ( \_ \_ )

**\*USE NBR,↑,↓,CALL,CNCL**

Press **(CALL)** to move to the **PERSONAL FAV STORE** screen.

**PERSONAL FAV STORE**  
**→0 G1-15 WQXR**  
**1 G1-03 WFMT**  
**2 \*\*-\* \*\***  
**3 \*\*-\* \*\***  
**4 \*\*-\* \*\***  
**5 \*\*-\* \*\***  
**6 \*\*-\* \*\***  
**7 \*\*-\* \*\***  
**\*USE ↑,↓,←,→,SETUP,CNCL**

Use **(CH▲)** and **(CH▼)** to move to the first blank row (**\*\*\*\*\***).

**Note:** When a screen of entries is full, use **(←E)** and **(W▶)** to move to another set of **\*\*\*\*\*** for additional entries.

Press **(SETUP)**. The satellite and channel number are automatically entered, and the typing cursor ( \_ ) is at the first character position of the description.

**PERSONAL FAV STORE**  
**0 G1-15 WQXR**  
**1 G1-03 WFMT**  
**→2 G1-04 \_**  
**3 \*\*-\* \*\***  
**4 \*\*-\* \*\***  
**5 \*\*-\* \*\***  
**6 \*\*-\* \*\***  
**7 \*\*-\* \*\***  
**\*USE ↑,↓,←,→,ENTER,CNCL**

Use (CH▲) or (CH▼) to type in the first character (letter or number) of the name you want to use for this satellite and channel. (See "Character List" in the Appendix for a list of available characters.) Then use (←E) and (W▶) to move the cursor to the next position and enter the next character.

```

PERSONAL FAV STORE
0 G1-15 WQXR
1 G1-03 WFMT
→2 G1-04 DIS_
3 **-* *****
4 **-* *****
5 **-* *****
6 **-* *****
7 **-* *****
*USE ↑,↓,←,→,ENTER,CNCL
    
```

When all characters have been entered, press (ENTER) to store the new name change, or press (CNCL) to cancel the changes.

```

PERSONAL FAV STORE
0 G1-15 WQXR
1 G1-03 WFMT
→2 G1-04 DISNEY
3 **-* *****
4 **-* *****
5 **-* *****
6 **-* *****
7 **-* *****
*USE ↑,↓,←,→,SETUP,CNCL
    
```

When you are finished, press (VIEW) to exit the FAVORITE STORE mode.

To store additional favorite channels, repeat all the above procedures.

**Note:** Once you have stored an item you cannot delete it. However, you can change the entry at any time using the following procedure.

## Changing a Personal Favorite

You can easily replace a stored item with a new selection. Use the procedures for adding a Personal Favorite. At the FAVORITE STORE screen, use (CH▲) or (CH▼) to position the cursor at the entry type you want to change: PERSONAL FAVORITES or PRE-PROG FAVORITES. Then press (CALL).

```

FAVORITE CH STORE
→PERSONAL FAVORITES
PRE-PROG FAVORITES
SATELLITE RADIO

FAV# ( _ _ )

*USE NBR,↑,↓,CALL,CNCL
    
```

Note: If you know the number of the stored item you are replacing (the number in the left column on the PERSONAL FAV STORE or FAVORITE CH STORE screen, you can enter it directly with the numeric keys on the remote. Be sure to use three digits when entering the item number (e.g., 03 for entry 3, or 021 for entry 21, etc.).

When you are at the screen with the entry you are changing, use (CH▲) or (CH▼) to position the cursor at the correct line.

```

PERSONAL FAV STORE
0 G1-15 WQXR
→1 G1-03 WFMT
2 G1-04 DISNEY
3 G1-03 SOFT MUSIC
4 G3-17 MTV
5 F3-13 HBO
6 F4-11 SPORTS
7 T3-23 FOX
*USE ↑,↓,←,→,SETUP,CNCL
    
```

Press **SETUP**. The satellite and channel will change to the new entry, and the first character of the description will begin blinking.

**PERSONAL FAV STORE**  
 0 G1-15 WQXR  
 →1 F2-02 FMT  
 2 G1-04 DISNEY  
 3 G1-03 SOFT MUSIC  
 4 G3-17 MTV  
 5 F3-13 HBO  
 6 F4-11 SPORTS  
 7 T3-23 FOX  
 \*USE ↑,↓,←,→,ENTER,CNCL

Use **CH▲** or **CH▼** to type in the first character (letter or number) of the name you want to use for this satellite and channel. (See "Character List" in the Appendix for a list of available characters.) Then use **←E** and **W▶** to move the cursor to the next position and enter the next character.

**PERSONAL FAV STORE**  
 0 G1-15 WQXR  
 →1 F2-02 WBBM  
 2 G1-04 DISNEY  
 3 G1-03 SOFT MUSIC  
 4 G3-17 MTV  
 5 F3-13 HBO  
 6 F4-11 SPORTS  
 7 T3-23 FOX  
 \*USE ↑,↓,←,→,SETUP,CNCL

When all characters have been changed, press **ENTER** to store the new name change, or press **CNCL** to cancel the changes.

When you are finished, press **VIEW** to exit the **FAVORITE STORE** mode.

To change other entries, repeat the above procedures.

**Note:** PRE-PROGRAMMED FAVORITES and SATELLITE RADIO can be changed as well.

# VCRS Module Operating Instructions

## Features

The VCRS module represents the state of the art in satellite TV descrambling technology. Your VCRS module will also allow you to view the new and expanding world of pay-per-view programming as well as all of the subscription and "clear" programs you currently enjoy.

Other key features include additional data and audio channels for future services as well as greatly expanded on-screen displays (OSDs). These new displays can provide you with more helpful information about your system and the types of satellite programming you watch.

If your receiver is equipped with a built-in VIDEOpal Order Recorder, you can also access pay-per-view programming options each month.

## Renewable Security With The TvPass Card

Assures a rapid, easy upgrade of security in the event that it becomes necessary. If necessary, this "smart card" will be sent to you by your program provider (it is not included in this initial shipment). At that time, you will be instructed to slide the TvPass Card into the back of your VCRS module. This process will change the level of subscription security.

## Non-Scrambled, "Clear" Programming

These services will work with or without your VCRS module installed. These "clear" program services are not scrambled and you may enjoy the programs as you have in the past. Non-scrambled services may be viewed at any time they are broadcast and do not require subscription authorization.

## Module Authorization

After your dealer has installed your new VCRS module, you or your dealer must follow the steps below.

1. Tune to a VideoCipher<sup>®</sup> scrambled channel. At this time the VideoCipher<sup>®</sup> signal LED should be illuminated on the front panel of your UST-4500.
2. Press **(SETUP)**, **(1)**, **(1)** to display the **INSTALLATION DATA** screen. The Unit ID will appear in two formats on the screen in lines number 1 and 2.

Please write the numbers down in the spaces provided:

Unit ID: \_ \_ \_ \_ \_

Phone ID: \_ \_ \_ \_ \_

These lines contain your unique unit identification numbers and are used by your program providers to authorize you for subscription program reception.

**Note:** The information on your screen may be different from that in the illustrations in this Operating Guide.

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

* INSTALLATION DATA *		
VideoCipher RS Descrambler		
1) Unit ID:	0400-3057-FF4E	
2) Phone ID:	0100-0060-2577-7516	
3)		
4) Version:	Module 1.0	
5) IRD S:	Subscribed	
6) VIDEOpal	not enabled	
7) Provider ID		153
8) Signal Quality		100
9) Trip Counter		1
10) Message Rate		10
11) Category		CO-4F
12) Location		Set
(Press VIEW to exit)		

4. Call the programmer(s) who provided subscription services on the old module. This is necessary to transfer your subscription programs to your new module. Programmers may ask for the Unit ID that appeared on your most recent billing statement(s), or on the back of the older module. Your Programmers will also require the ID numbers noted in item 2 above. These numbers are also used for all new subscription purchases.

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

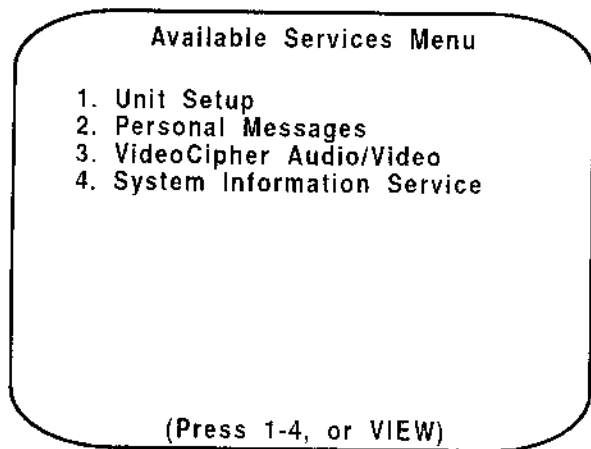
5. After initiating or transferring services, leave the receiver tuned to a VideoCipher scrambled channel until the module receives authorization and you are able to view the programs you ordered. If you view the Setup 1, 1 screen again, you will notice that your trip counter number has increased.

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

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

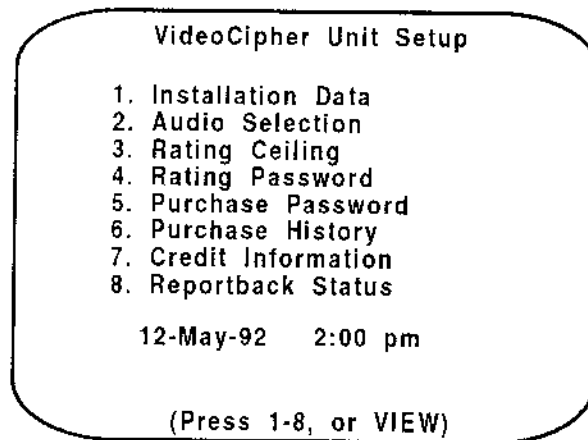
## Available Services Menu

Press **SETUP** to display the **Available Services Menu**. This menu has four available choices. If you wish to return to normal television viewing at any time, press **VIEW**.



### 1. Unit Setup

Press **1** to display the **VideoCipher Unit Setup** menu. This menu contains eight different choices. Choices 1 through 4 are used for normal operation of the module; choices 5 through 8 relate to instant pay-per-view operation. Press **VIEW** to leave this menu and resume normal viewing.



### 2. Personal Messages

Press **2** or **MSG**, to view the **Personal Messages** screen. Unless your programmer has sent you a message, this screen will read **No Personal Messages**. Press **HELP** for additional information on the **Personal Messages** screen. Press **VIEW** to leave this screen and return to normal viewing.

**Note:** Your VCRS module cannot be disabled from receiving messages. Read messages (to remove the blinking message indicator) by pressing **MSG**. Press **VIEW** to leave this screen and resume normal viewing.

### 3. VideoCipher Audio/Video

Press **3** to view the programming currently offered on the VideoCipher channel that you have selected. Pressing **VIEW** is the same as pressing **3** at the **Available Services Menu**.

### 4. System Information Service

Press **4** to view the **Systems Information Service** screen. This screen is intended for broadcast text messages and will be headed by the title VideoCipher Text Service. This text service is broadcast at the programmer's option and may not be available on many channels.

Press **(HELP)** for further information on the **Systems Information Services** screen. Press **(VIEW)** to leave this screen and return to normal viewing.

## Other Functions

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

### HELP

This key provides any additional information available for the screen you are viewing.

### MSG

This key allows you to view any personal messages you may have.

### NEXT

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

### VIEW

This key allows you to see information about the current program. This may include the program name and how much time is left in the program. In addition, it returns you to normal viewing from any other on screen display. The information displayed disappears after 5 seconds if the key is not pressed again.

**Note:** Not all programmers broadcast **(VIEW)** or **(AUX)** information.

## VideoCipher Unit Setup

Press **(SETUP)** **(1)** to display the **VideoCipher Unit Setup** menu.

### 1. INSTALLATION DATA

Press **(1)** at the **VideoCipher Unit Setup** menu to see the **INSTALLATION DATA** screen.

* INSTALLATION DATA *	
VideoCipher RS Descrambler	
1) Unit ID:	0400-3057-FF4E
2) Phone ID:	0100-0060-2577-7516
3)	
4) Version:	Module 1.0
5) IRD S:	Subscribed
6) VIDEOpal	not enabled
7) Provider ID	153
8) Signal Quality	100
9) Trip Counter	1
10) Message Rate	10
11) Category	CO-4F
12) Location	Set
(Press VIEW to exit)	

This screen provides information about unit and system operation. Press **(HELP)** for additional information on the **INSTALLATION DATA** screen. Press **(VIEW)** to leave this screen and continue normal viewing, or press **(ENTER)** to return to the **VideoCipher Unit Setup** menu.

**Lines 1 and 2** contain your unique unit identification number, used by the programmer to authorize you for subscription programming.

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

**Note:** The TvPass Card is not included in this initial shipment of the VCRS module.

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

**Note:** The numbers shown on your screen may be different than the ones shown above. The TvPass Card version will only show up if one is installed.

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

MODEL TYPE	SCRAMBLING STATUS	AUTHORIZED STATUS
DES = Module inserted into a stand-alone scrambler	F = Fixed Key	Subscribed
IRD=Module inserted into an integrated receiver descrambler	P=Processed, Unscrambled	Purchased
	S=Scrambled	Not Subscribed

**Line 6** shows if your new module has been authorized for instant pay-per-view operation. This line will read, "VIDEOpal enabled" if the module is authorized for instant pay-per-view.

**Line 7** contains the unique Programmer ID code for each channel.

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

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

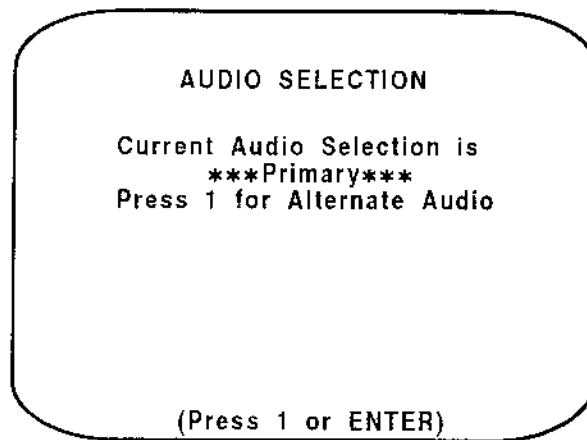
**Line 10** shows if your module is receiving a clear signal from your satellite dish. The clearest signal will be a 10.

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

**Line 12** shows that the programmer has your unit identification number stored properly enabling you to receive the programming you have ordered.

## 2. AUDIO SELECTION

Press **(2)** to see the **AUDIO SELECTION** screen.



This screen displays the current **AUDIO SELECTION**. You can set the audio on scrambled channels to either **\*\*\*Primary\*\*\*** or **\*\*\*Alternate\*\*\***. The normal setting will be **\*\*\*Primary\*\*\***. Scrambled channels may or may not broadcast an **\*\*\*Alternate\*\*\*** audio feed. Pressing **(1)** will change the module setting to **\*\*\*Alternate\*\*\***. (Alternate could be a second language transmission.) Press **(VIEW)** at any time to resume normal viewing.

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

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

1. Check all connections and make sure that the power is ON to all components.
2. Make certain that your satellite system is tuned to the correct satellite and channel. Note: Weather conditions and your geographical location may affect signal quality.
3. Check a program guide to make certain that the program you're interested in is available for pay-per-view and can be ordered with the VIDEOpal system.
4. Make certain your account is current (press **SETUP**, **(1)**, **(7)** for possible on-screen directions).

## Installation

Because of the complex nature of TVRO systems, the placement and adjustment of the dish antenna and satellite system components is critical. Therefore, it is recommended that you do not attempt to install the system yourself. Your dealer can perform a professional installation that will provide you with the best reception possible.

When you install the **UST-4500** in a TVRO system you must first make all connections between the components. After you connect all the components, you must program the **UST-4500**.

**Caution:** Do not connect the **UST-4500** to AC power until you make all the proper connections to the dish antenna. Failure to do so may cause receiver damage and void the warranty.

**Important:** You must use the **UST 4500r** remote control when installing this satellite system.

Install the dish antenna according to the manufacturer's installation instructions and orient it in the proper direction. Use the manufacturer's template to adjust the feedhorn until it is on the polar axis. The dish antenna must be able to point at the satellites in the Clarke orbit belt without obstruction. If you are replacing an existing receiver and antenna controller with the **UST-4500**, do not disconnect the original receiver or antenna controller completely before you connect the **UST-4500**.

Place the **UST-4500** next to the existing receiver and antenna controller. Remove one wire at a time from the original receiver and antenna controller and connect it to the proper terminal on the back of the **UST-4500**.

If you are installing the **UST-4500** in a new system, you may want to use the **UST-4500** and a TV set or monitor at the dish antenna location to adjust the dish antenna. With this setup, you can immediately see the results of adjustments to the dish antenna as you make them. When using an extension cord outdoors during installation, be sure it is protected by a ground-fault circuit interrupter.

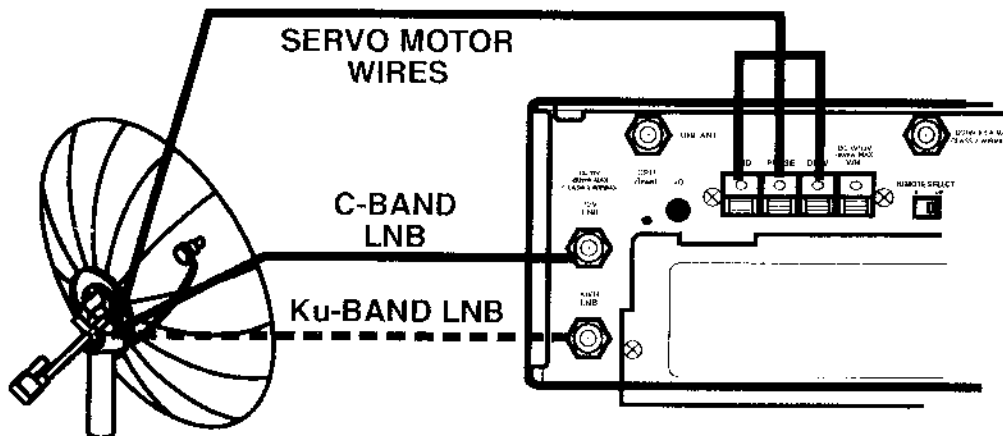
When installing the receiver indoors consult the customer about the location. Select a location that assures adequate ventilation for the sophisticated electronics. The ideal location is close to both the television set and an unswitched AC power outlet. It should also offer a clear view of the front panel displays of the **UST-4500** from the desired viewing position.

Use the table in the Appendix to determine the type of cables to use when you connect the dish antenna to the **UST-4500**. Make sure to protect all connections from moisture to ensure long and trouble free operation.

## Single Receiver Installation

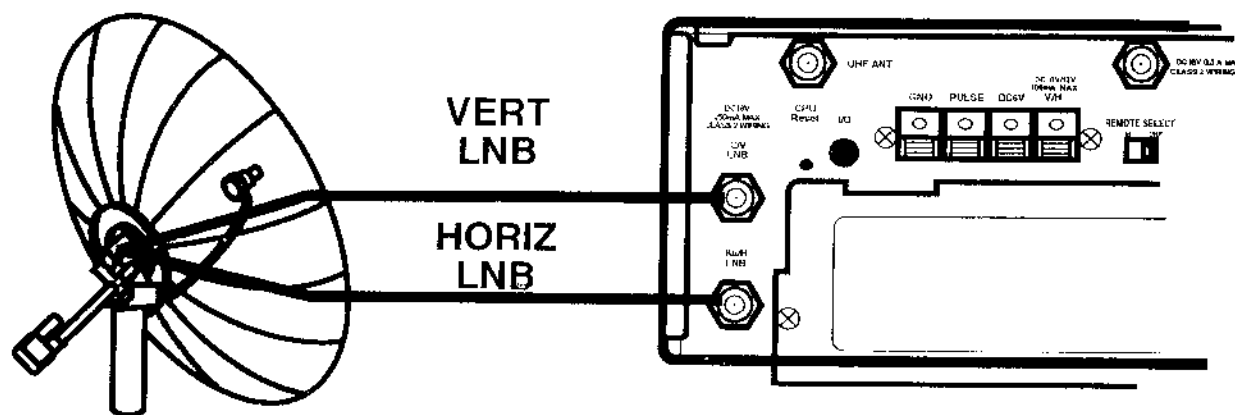
### Single Feed (C-band and Ku-band)

A single feed system uses an LNB (Low Noise Block) downconverter attached to the feedhorn, and a single feed polarizer. The **UST-4500** has internal circuitry that prolongs the life of the tiny motor installed at the antenna to provide polarity selection. This circuitry limits the travel distance of the probe that selects polarity.



1. Use the cable recommended in the Appendix to connect the LNB directly to the corresponding input on the **UST-4500** rear panel. You can connect both the C-band and Ku-band directly to the receiver without using an external switch.
2. Since you are using a servo-type polarizer, you must run three additional lines to control it. Wire the polarizer to the terminal block on the back of the receiver according to the manufacturer's instructions. The normal color codes used are:
  - Red to DC6V.
  - White to Pulse.
  - Black to GND.
3. Using the manufacturer's template, adjust the feedhorn until it is on the polar axis. If the proper polarity is not indicated on the front panel of the receiver (odd channels vertical on Telstar type satellites, odd channels horizontal on Galaxy type satellites), change polarity by pressing **(POL)**.
4. If the picture is recognizable but snowy, press **(SKEW)** to display the **SKEW** screen. Then use **(CH▲)** and **(CH▼)** to adjust for the best reception.
5. If you select a new channel and the picture is recognizable for just a moment, then disappears, rotate the feedhorn 90 degrees, or until the **UST-4500** receives a clear picture.
6. When you get the best picture, tighten the feedhorn bolts until you cannot rotate the feedhorn. After you re-tighten the feedhorn, press **(SKEW)** to display the **SKEW** screen. Then use **(CH▲)** and **(CH▼)** to adjust for the best reception.

## Dual Feed (C-band or Ku-band)



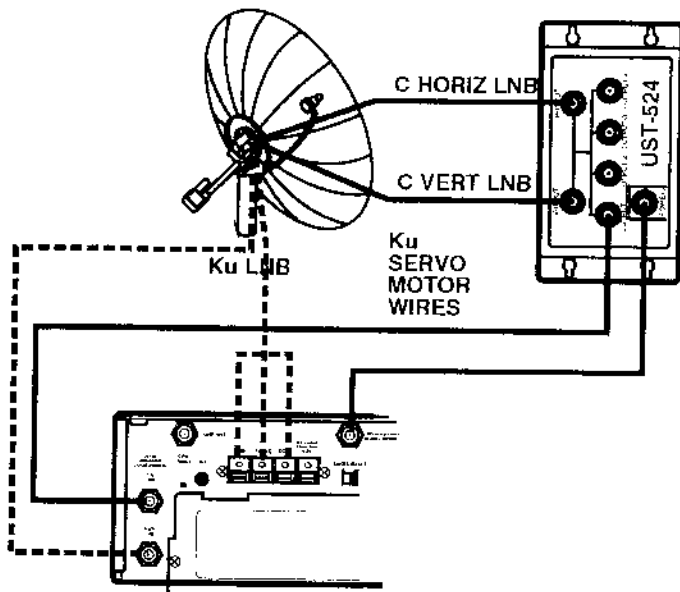
If you are connecting two LNBs and a dual feed polarizer to provide a dual feed, the **UST-4500** has two inputs that allow the customer to view both horizontal and vertical signals without an external switch.

1. Connect the horizontal and vertical LNBs directly to their corresponding inputs on the back of the receiver.
2. Move the dish antenna to the highest position.
3. Rotate the feedhorn until one of the LNBs is parallel to the polar axis and tighten the feedhorn bolts until you cannot rotate the feedhorn.
4. If the proper polarity is not indicated on the front panel of the receiver (odd channels vertical on Telstar type satellites, odd channels horizontal on Galaxy type satellites), change polarity by reversing the C/V and Ku/H coaxial cables on the back of the **UST-4500**.

## Dual C-band Feed with Single Ku-band Feed

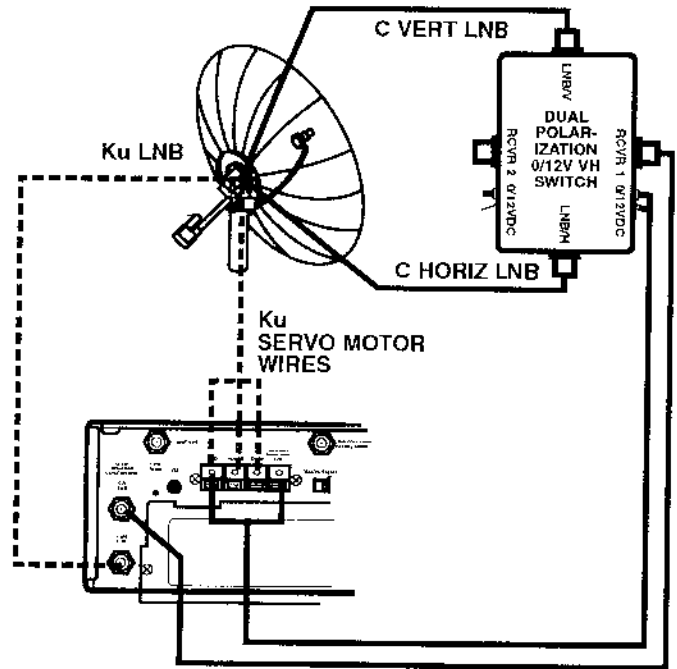
An external switch is required to install a dual C-band feed with a single Ku-band feed. You can use two types of switches when you install this type of system: Uniden's UST-524 or a standard 0/12 Volt V/H switch.

### Wiring the Dual C-band Feed using a UST-524



1. Use a coaxial cable to connect the Power connector of the UST-524 to the C-band DC18V source on the back of the receiver. This provides power to the UST-524 switch.
2. Connect the horizontal and vertical LNBs for the C-band to their corresponding inputs on the UST-524.
3. Connect one of the outputs of the UST-524 to the C-band input on the back of the receiver. The UST-524 does the horizontal and vertical switching.

### Wiring the Dual C-band Feed using a Standard 0/12 Volt V/H Switch



You must take special care when you decide what type of V/H switch to use. There are two common switches available: a 0/12 Volt V/H switch and a -12/12 Volt V/H switch. The **UST-4500** is designed to use the more common 0/12 Volt V/H switch.

1. Connect the horizontal and vertical LNBs for the C-band to their corresponding inputs on the V/H switch.
2. Connect the output of the V/H switch to the C-band input on the back of the receiver.
3. Two additional wires are required to control V/H switching. These connect to GND and V/H on the four-terminal strip on the back of the receiver.
4. Follow the manufacturer's instructions to connect the switch. The V/H terminal switches between 0 and 12 VDC to switch between vertical and horizontal channels.

## Wiring the Single Ku-band Feed

1. Connect the Ku-band LNB to its corresponding input on the back of the receiver.
2. Since you are using a servo-type polarizer, you must run three additional lines to control it. Wire the polarizer to the terminal block on the back of the receiver according to the manufacturer's instructions.

The normal color codes used are:

- Red to DC6V.
- White to Pulse.
- Black to GND.

## Dual C-band Feed with a Dual Ku-band Feed

An external switch is required to install a dual C-band feed with a dual Ku-band feed. You can use two types of switches when you install this type of system: Uniden's UST-524 or a standard 0/12 Volt V/H switch.

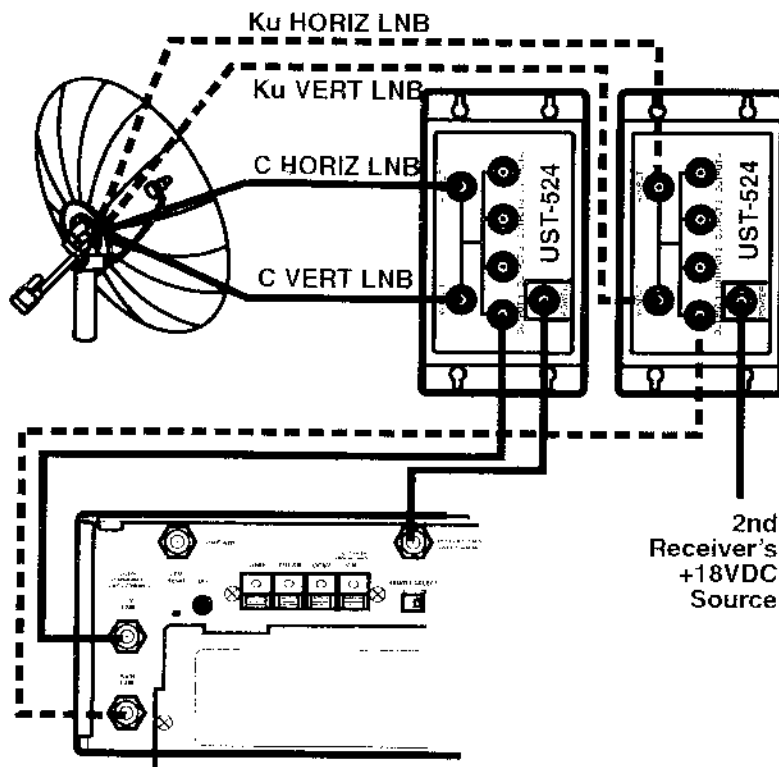
### Wiring the Dual Feed Using a UST-524

Each band that uses a UST-524 switch requires its own switch (one for C-band and one for Ku-band).

1. Connect the horizontal and vertical LNBs to their corresponding inputs on the UST-524.
2. Connect one of the outputs of the UST-524 to the corresponding input on the back of the receiver. The UST-524 does the horizontal and vertical switching.

3. Use coaxial cable to connect the Power connector of the UST-524 to the C-band DC18V source on the back of the receiver. This provides power to the UST-524 switch.

*Note: If you use two UST-524 switches, the second UST-524 requires an external power source: +18 VDC, 250 mA maximum.*



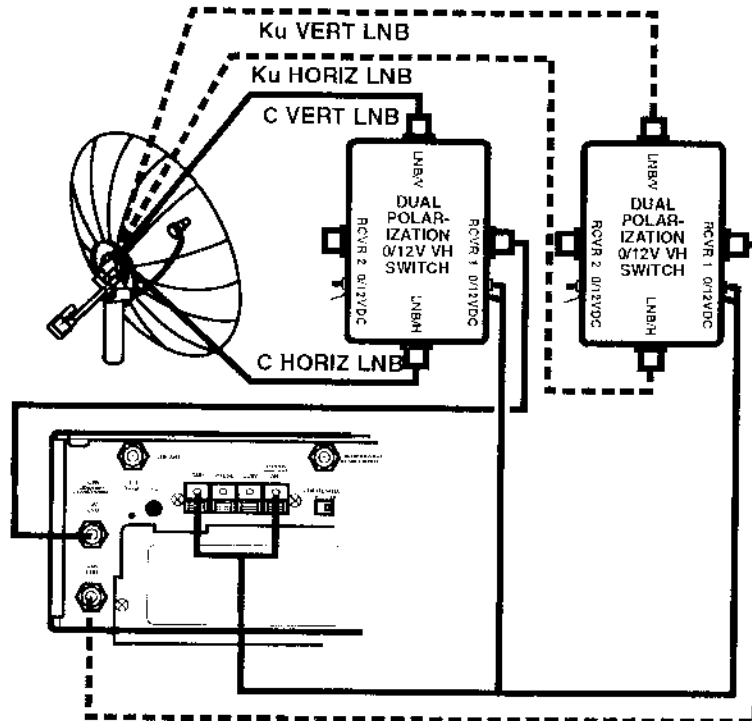
## Wiring the Dual Feed using a Standard 0/12 Volt V/H Switch

Each band that uses a 0/12 Volt V/H switch requires its own switch (one for C-band and one for Ku-band).

1. Connect the horizontal and vertical LNBs to their corresponding inputs on the V/H switch.
2. Connect the output of the V/H switch to the corresponding band input on the back of the receiver.
3. Two additional wires are required to control the switching. These connect to GND and V/H on the four-terminal strip on the back of the receiver.

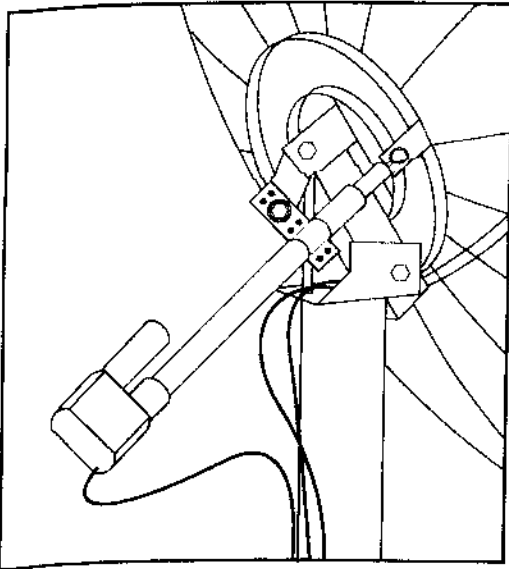
4. Follow the manufacturer's instructions to connect the switch. The V/H terminal switches between 0 and 12 VDC to switch between horizontal and vertical channels. Repeat this process for each band that uses this type of switch.

**Warning!** Dual switches may draw more current than provided by the UST-4500. An external power supply may be required, or two LNBs may be powered through a second receiver.



## Actuator Installation

You can use the UST-706 actuator arm with most mesh dish antennas up to 10 feet in diameter. If the dish antenna is larger or you notice improper counting of the satellite positions, you may need a heavy-duty actuator jack.



### Notes:

1. For proper installation, retract the actuator arm fully retracted and locate the motor casing above the arm.
2. Secure the clamp and pivot socket bolts tightly.
3. If you install the antenna west of the Rocky Mountains, reverse the actuator position (install it on the left instead of the right.). Reverse the + and - wires only on the back of the **UST-4500**. Then press the **(W▶)** key to extend the actuator just beyond the westernmost satellite you want to receive (Satcom C1 usually). Watch the antenna carefully during this step so that it does not tip over. You may need to adjust the limit cam inside the actuator to reach the satellite.

### Assembly

Assemble the actuator as follows:

1. Unpack the actuator and the parts kit.
2. Find the tube clamp and attach it to the right side of the metal plate on the antenna mount (for locations east of the Rocky Mountains) so that it extends downward.
3. Position the actuator through the clamp so the motor is up on top of the arm. The two small holes in the actuator case should point down for proper drainage.
4. Slide the actuator outer tube in the clamp until you can view all satellites from horizon to horizon.
5. Tighten the bolt on the clamp to hold the arm in place.
6. Pull the antenna down so that the end of the actuator arm attaches to the metal plate on the hub of the mount.
7. Use a 1/2-inch bolt to attach the pivot socket to this plate. Make sure that you fasten the lock washer and nut securely and that the connection is very tight.

## Actuator Connections

Connect the actuator to the **UST-4500** as follows:

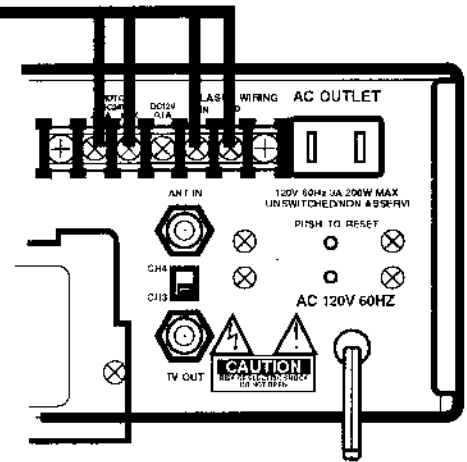
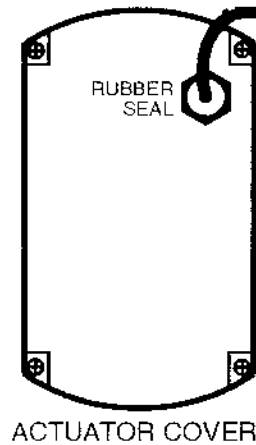
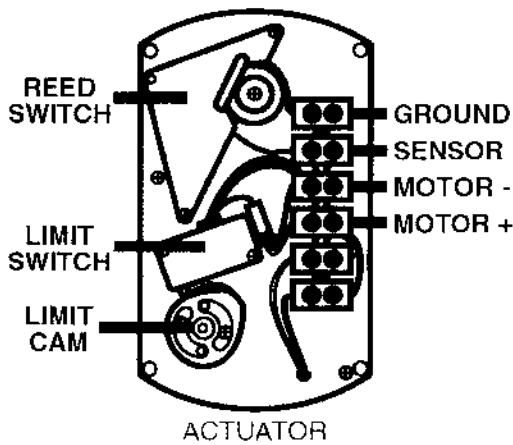
1. Remove the back cover of the actuator motor.
2. Route the cable through the rubber seal.
3. Connect the appropriate cable wires to the connectors on the terminal strip inside the casing. Make sure you use the cables recommended in the Appendix.

4. Connect the cable wires from the actuator to the screw terminals on the rear on the **UST-4500**.

**Important:** Improper connections can cause permanent damage to the satellite system.

5. If the mechanical limit switches are set, put the case back on the motor. Make sure you position the gasket properly to assure a watertight seal.

If the mechanical limit switches are not set, continue with the next section.



## Actuator Mechanical Limit Settings

The mechanical limit settings prevent damage to the dish antenna by restricting the distance the actuator arm can travel. Use the following procedure to set the east and west mechanical limits:

1. Remove the back case of the actuator motor housing.
2. Set the west limit as follows:
  - a. Move the dish antenna all the way west until the bottom cam activates the limit switch.
  - b. Loosen the bolts on the collar and slide the actuator arm downward such that the dish antenna is pointed just beyond the westernmost satellite. Tighten the collar bolts.
- or ...

Remove the bolt that attaches the inner arm of the actuator to the dish antenna and rotate the inner arm clockwise until the antenna is pointed just beyond the westernmost satellite. Replace and tighten the bolt that attaches the inner arm of the actuator to the dish antenna.

**Note:** Make sure that all bolts are attached securely to prevent actuator arm slippage.

3. Set the east limit as follows:
  - a. Move the dish antenna to a point just beyond the easternmost satellite.
  - b. Loosen the two screws that secure the top limit cam.
  - c. Rotate top limit cam until the limit switch is activated.
  - d. Tighten the screws that secure the top limit cam.

**Important:** Make sure the cam screws are tight before you replace the actuator case. If the actuator limit cam is not secure, it may cause permanent damage to the actuator.

4. Put the case back on the motor. Make sure that you position the gasket properly to assure a watertight seal.
5. Use the (◀ E) and (W ▶) keys to move the actuator arm back and forth. Make sure that the satellite dish can reach the satellite farthest west and the satellite farthest east before the limit switch stops the travel of the arm.

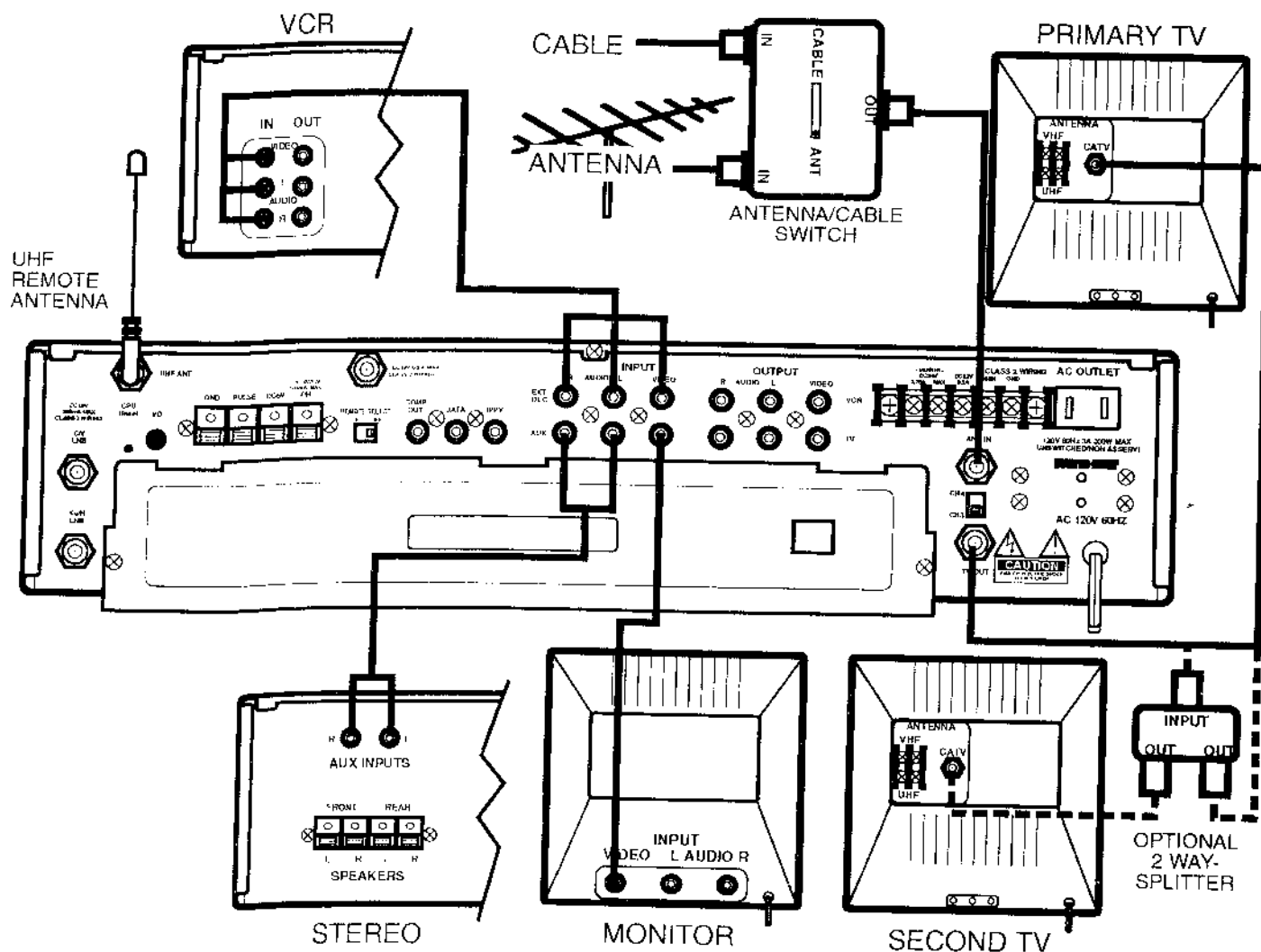
**Note:** The mechanical limit switches eliminate the possibility of damaging the dish antenna through extreme actuator movement. Also program the east and west limits from the receiver as an added precaution when you program the other receiver functions.

## Connecting the TV set and Other Components

The **UST-4500** has two video inputs and two sets of stereo audio inputs. There are also two video outputs and two sets of stereo audio outputs. These connections provide a variety of ways to customize the complete home entertainment center.

The video outputs and stereo audio outputs are intended for a TV set or monitor, stereo amplifier, and/or a VCR.

One set of inputs can be used for connecting auxiliary input such as the output of a VCR, videodisc player, or another satellite receiver. The other set of inputs is for an optional external decoder. (See 'External Decoder' in the "Using the Main Menu" section.)



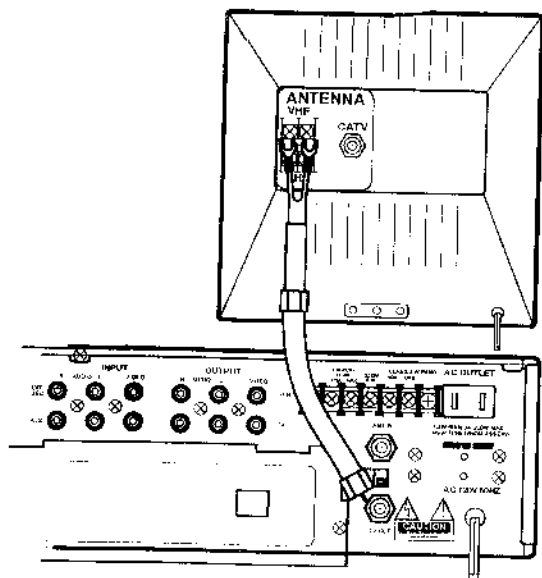


## TV Set with Screw Terminals

If the TV set does not have a coaxial antenna connector, you will need an adaptor that matches the impedance (75Ω) of the **UST-4500 TV OUT** coaxial connector.

Connect a coaxial cable from the **TV OUT** coaxial connector on the **UST-4500** to the F connector on the adaptor.

Connect the two leads of the adaptor to the screw terminals on the rear of the TV set.



If the TV set has separate UHF inputs, connect the broadcast UHF antenna directly to the TV set.

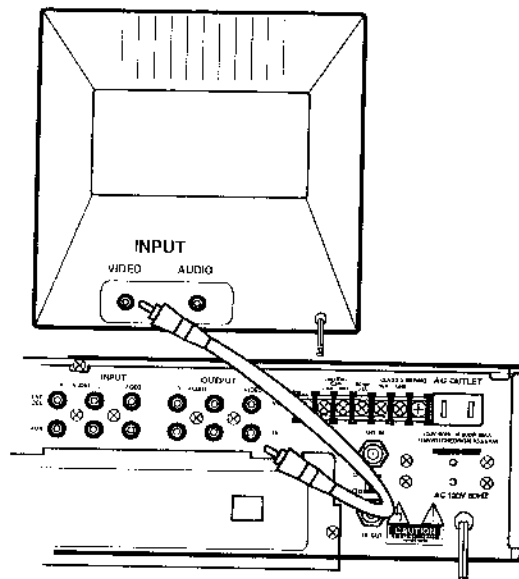
## Tuning the TV Set

Tune the TV set to channel 3 or 4, whichever corresponds to the setting on the 3/4 switch on the back of the **UST-4500**. If you are unable to get good reception on one channel, change the setting on the 3/4 switch of the **UST-4500** and change the channel on the TV set to match the new setting. If there is no reception or reception is poor, you may need to adjust the fine tuning on the TV set. During satellite TV viewing, the TV set must stay on the channel set on the 3/4 switch on the **UST-4500**. This channel number should be recorded in the **UST-4500 System Information** on page 2 of this Manual.

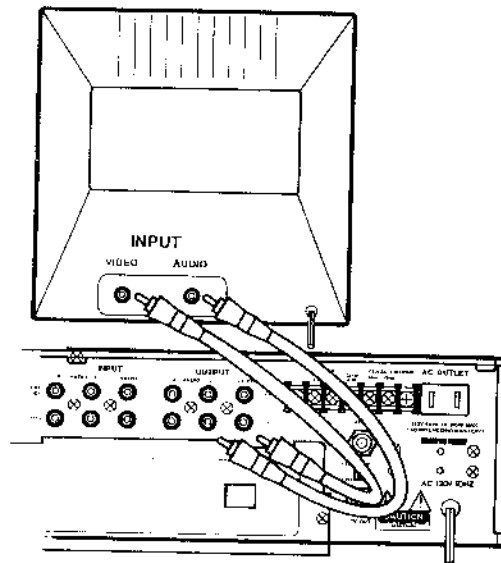
## Connecting a Monitor

You may be using a monitor for your satellite viewing instead of a TV set. If so, follow these directions for connecting it to your **UST-4500** receiver.

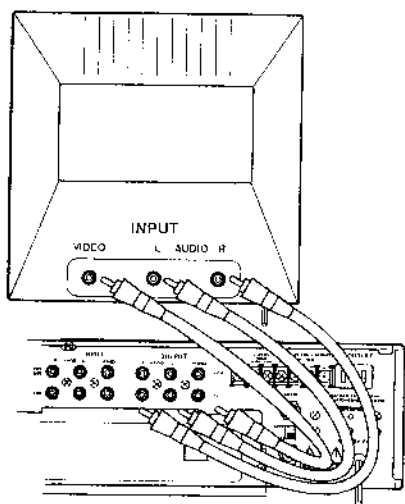
Connect an RCA cable from the **VIDEO OUTPUT (TV)** connection on the back panel of the **UST-4500** to the **VIDEO** input of the monitor.



For a monitor with mono sound, connect an RCA cable from the **Left AUDIO OUTPUT (TV)** connection on the back panel of the **UST-4500** to the **AUDIO** input of the monitor.

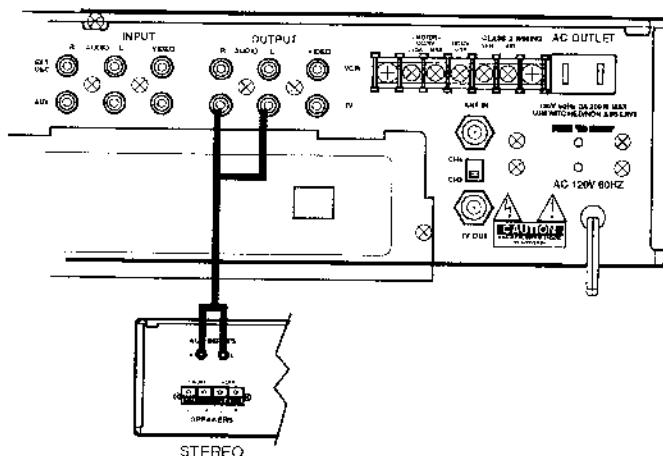


For a monitor with stereo sound, connect an RCA cable from the Left **AUDIO OUTPUT (TV)** connection on the back panel of the **UST-4500** to the Left **AUDIO** input of the monitor. Connect an RCA cable from the Right **AUDIO OUTPUT (TV)** connection on the back panel of the **UST-4500** to the Right **AUDIO** input of the monitor.



## Connecting Stereo Audio Equipment

To attain the full dynamic sound of satellite television, connect the left and right TV audio outputs of the **UST-4500** to the auxiliary left and right inputs of a stereo system. Many satellite channels and audio services provide left and right audio signals for full reproduction of the sound.

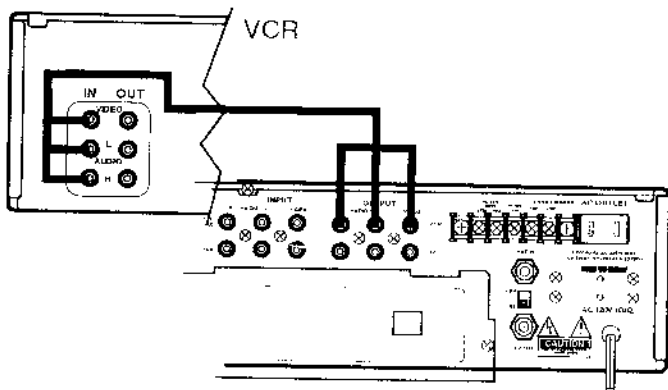


## Connecting the VCR

Connect RCA cables from the **VCR OUTPUT** audio and video RCA jacks on the **UST-4500** to the audio and video inputs on the VCR.

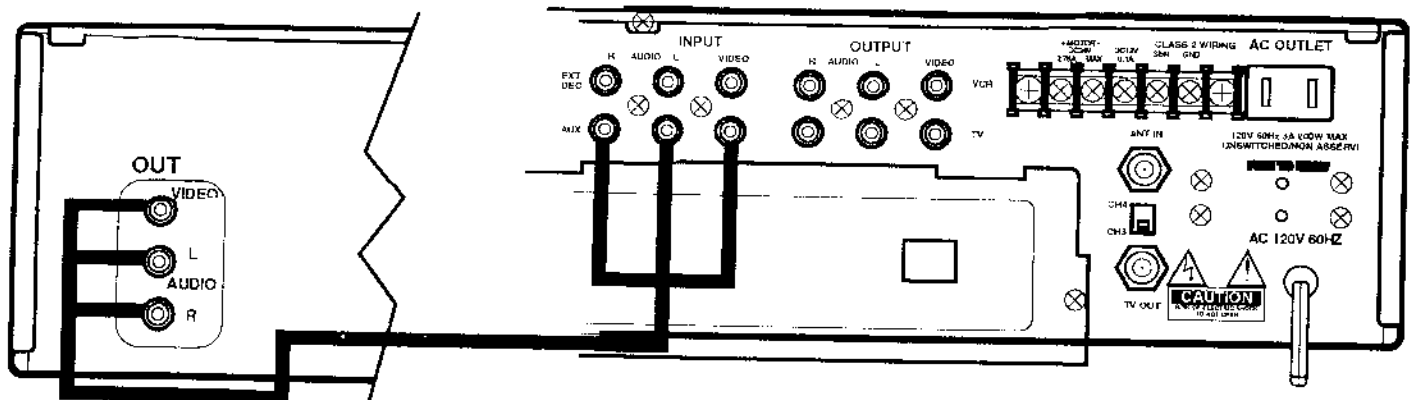
Or ...

Connect the VCR to the **TV OUT** output on the back of the **UST-4500** using a coaxial cable.

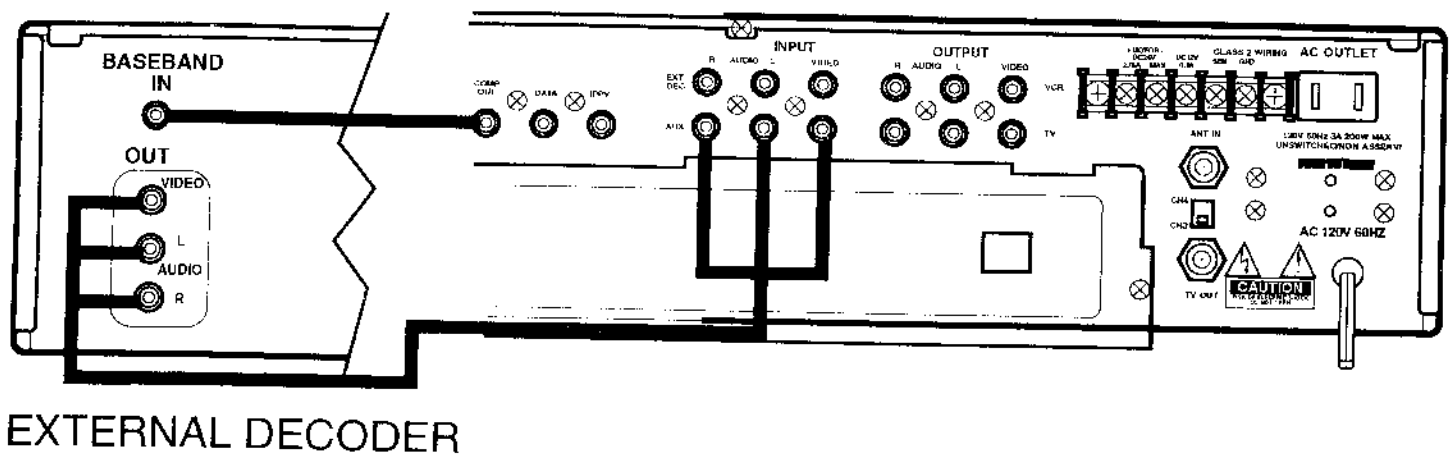


## Connecting the Auxiliary Source

### VIDEO DISK



## Connecting the External Decoder



## Installation Menu Functions

**Note:** These functions are normally used by the Dealer for installation and setup.

Use the **INSTALLATION MENU** to:

1. Program Satellites.
2. Set the RF Configuration of Receivers and Switches.
3. Set Global Shift.
4. Load Programmed Information into Another Receiver.
5. Perform a Master Reset.

To display the **INSTALLATION MENU**, press and hold **(MENU)** for at least 4 seconds.

**Note:** You can exit this menu by pressing **(MENU)**. You can also return to this menu by pressing **(MENU)** from any submenu within the **INSTALLATION MENU**.

Once in the **INSTALLATION MENU**, press the appropriate numeric key to select the corresponding function.

### INSTALLATION MENU

- 1 PROGRAM SATELLITE
- 2 RF CONFIGURE
- 3 GLOBAL SHIFT
- 4 RECEIVER LINK
- 5 MASTER RESET

\*USE NBR,MENU

### 1. PROGRAM SATELLITE

At the **INSTALLATION MENU**, press **(1)** to move to the **PROGRAM SATELLITES** menu.

#### PROGRAM SATELLITES

- 1 PROGRAM A SATELLITE
- 2 CLARKARK
- 3 ADD/UPDATE SATELLITE
- 4 DELETE SATELLITE
- 5 RESYNC SATELLITES
- 6 SET DISH LIMITS

\*USE NBR,CNCL

Press **(1)** to move to the **SATELLITE STORE** menu.

#### SATELLITE STORE

- C5 AURORA-2
  - C1 SATCOM-C1
  - G1 GALAXY-1
  - F1 SATCOM-F1R
  - A1 ASC-1
  - T3 TELSTAR-303
  - W5 WESTAR-5
- \*USE ↑,↓,←,→,CALL,CNCL

The **SATELLITE STORE** menu lists all pre-programmed satellites. The satellites already programmed into memory are identified by a ■ to the left of the name. Use **(←E)** and **(W→)** to page forward and back to find the list with the satellite you want to program.

**Note:** Ku-band satellites are listed following the C-band satellites. To store Ku-band satellites, use the following procedure, substituting Ku for C.

**SATELLITE STORE**

→ T1 TELSTAR-301  
 G3 GALAXY-3  
 S3 SPACENET-3  
 T2 TELSTAR-302  
 F4 SATCOM-F4R  
 G2 GALAXY-2  
 F2 SATCOM-F2R

\*USE ↑,↓,←,→,CALL,CNCL

Once at the correct list of satellites, use **(CH▲)** and **(CH▼)** to move the cursor next to the satellite name.

**SATELLITE STORE**

T1 TELSTAR-301  
 G3 GALAXY-3  
 S3 SPACENET-3  
 T2 TELSTAR-302  
 F4 SATCOM-F4R  
 G2 GALAXY-2  
 → F2 SATCOM-F2R

\*USE ↑,↓,←,→,CALL,CNCL

Press **(CALL)** to start looking for that satellite. The Program Satellite screen will appear. Use **(←E)**, **(W→)**, **(CH▲)**, **(CH▼)**, **(POL)**, **(VIDEO)**, **(SKEW)** and the numeric keys to locate and tune in the satellite.

Press and hold **(CH▲)** or **(CH▼)** for a few seconds to start channel scanning. Press **(CH▲)** or **(CH▼)** to stop scanning.

**SATCOM-F2R F2 CH 24**  
**SKEW (+45)**  
**POLARITY (VERT)**

**SIG ■■■■■■**  
**PROGRAM SATELLITE**

**DISH AT 5000**  
 \*USE ←,→,ENTER,CNCL

Once you have tuned in the satellite, press **(ENTER)** to store the satellite, or press **(CNCL)** to return to the **SATELLITE STORE** menu without programming the satellite. If you store the satellite, a ■ will now appear to the left of the name.

When you have finished programming satellites, press **(MENU)** to return to the **PROGRAM SATELLITES** menu.

## CLARKARK

This feature is used to automatically program all of the satellites in the arc after the first two satellites have been programmed. Before you can go into this screen, the Dish Limits must be set. This has to be done to avoid any mechanical damage to the system. After the limits have been set, go to the **CLARKARK** menu.

### CLARKARK

- 1 BAND ( C )
- 2 SET FIRST SAT (\*\*)
- 3 SET SECOND SAT (\*\*)
- 4 START CLARKARK

\*USE NBR,CNCL

**BAND** is used to select which satellite band is going to be attempted, C-band or Ku-band.

**SET FIRST SAT** and **SET SECOND SAT** are used to program the first two satellites in the arc. It is important that special care is taken in programming the first two satellites because ClarkArk determines the direction of the automatic tracking from the order of the first two satellites programmed. For example, if the first satellite is T1 and the second satellite is G3, then the direction is West to East. However, if the first satellite is G3 and the second satellite is T1, then the direction is East to West.

**START CLARKARK** starts automatically programming the satellites.

## ADD/UPDATE SATELLITE

This feature allows the dealer to change any of the satellite's information including the name, abbreviation, longitude and polarity format. Once the item is selected, a list of the satellites appears in the following format:

### ADD/UPDATE SATELLITE

C-BAND

→ G1	GALAXY-1	139.0 N
F1	SATCOM-F1R	137.0 I
T3	TELSTAR-303	133.0 I
W5	WESTAR-5	131.0 N
T1	TELSTAR-301	128.0 I
G3	GALAXY-3	125.0 N
F2	SATCOM-F2R	122.5 I
*USE ↑,↓,←,→,SETUP,CNCL		

- The first column is the satellite abbreviation.
- The second column is the full satellite name and number.
- The third column is the longitude in degrees.
- The fourth column is the polarity format (Normal/Inverted)

Definition: Inverted Galaxy-type satellite  
Normal Telstar-type satellite

Use **CH▲** and **CH▼** to select which satellite is to be added or updated. Press **SETUP** to start changing the information. After all of the changes have been made, press **ENTER** to store the changes or **CNCL** to exit without saving the changes.

**Note:** A longitude of "\*\*\*\*" should only be used for satellites that are no longer active.

## Delete A Satellite

If you want to delete a programmed satellite from memory, you must first tune to the desired satellite.

At the **INSTALLATION MENU**, press **(1)** to display the **PROGRAM SATELLITES** menu.

### PROGRAM SATELLITES

- 1 PROGRAM A SATELLITE
- 2 CLARKARK
- 3 ADD/UPDATE SATELLITE
- 4 DELETE SATELLITE
- 5 RESYNC SATELLITES
- 6 SET DISH LIMITS

**\*USE NBR,CNCL**

Press **(4)** at the **PROGRAM SATELLITES** menu to delete the satellite. A warning screen will appear asking you to confirm that the current satellite should be deleted.

SATCOM-F2R F2 CH 24

DELETE THIS SATELLITE  
ARE YOU SURE ?

**\*USE ENTER,CNCL**

Press **(ENTER)** to delete the satellite, or **(CNCL)** to exit without deleting the satellite. If you delete a satellite, you will return to the **INSTALLATION MENU**.

## Resync Satellites

First, choose a satellite and use **(◀E)** and **(W▶)** to find the best picture. At the **PROGRAM SATELLITES** menu, press **(5)** to display the **RESYNC SATELLITES** screen.

### RESYNC ALL SATELLITES AROUND

SAT NAME (F2)

**\*USE ↑,↓,ENTER,CNCL**

Use **(CH▲)** and **(CH▼)** to select the key satellite to re-align with. Then press **(ENTER)** to resync. Afterwards, the word "SUCCESSFUL" will flash on the screen, and you will return to view mode.

## Dish Limits

Use **(◀E)** to move the dish to the East limit. At the **PROGRAM SATELLITES** menu, press **(6)** to display the **DISH LIMIT SET** menu.

### DISH LIMIT SET

- 1 EAST LIMIT (\*\*\*\*)
- 2 WEST LIMIT (\*\*\*\*)
- 3 CLEAR EAST LIMIT
- 4 CLEAR WEST LIMIT

DISH AT (4792)

**\*USE NBR,CNCL**

Press **(1)** at the **DISH LIMIT SET** menu to set the current limit as the East limit. As soon as you press the key, the position appears in the brackets next to **EAST LIMIT**.

## DISH LIMIT SET

- 1 EAST LIMIT (4792)
- 2 WEST LIMIT (\*\*\*\*)
- 3 CLEAR EAST LIMIT
- 4 CLEAR WEST LIMIT

DISH AT (4792)

**\*USE NBR,CNCL**

To set the West limit, follow the same procedure, pressing **(2)** to set the limit. If you need to clear either limit, press **(3)** or **(4)**.

After you make any changes, press **(CNCL)** to exit this screen and save the changes.

## 2. RF CONFIGURE

Press **(2)** at the **INSTALLATION MENU** to display the **RF CONFIGURE** menu.

## RF CONFIGURE

- 1 C BAND ( DUAL )
- 2 Ku BAND (SINGLE)
- 3 C V/H SW (EXT)
- 4 C V/H TYPE (524)

**\*USE NBR,CNCL**

- 5 V/H SW: <EXT>, <INT>
- 6 KU V/H TYPE: <524>, <STD>

*Note: Item 4 appears only when C V/H SW: is set to <EXT>. Items 5 and 6 appear only when Ku BAND: is set to <DUAL>.*

Press **(MENU)** to store the configuration and return to the **INSTALLATION MENU**.

## GLOBAL SHIFT

- 1 C V LNB( 0.00)MHz
- 2 C H LNB( 0.00)MHz
- 3 Ku LNB( 0.00)MHz

**\*USE NBR,↑,↓,CNCL**

Press the appropriate key to change the setting in each of the items. The selections are:

- 1 C BAND: <SINGLE>, <DUAL>, <NO>
- 2 Ku BAND: <SINGLE>, <DUAL>, <NO>
- 3 C V/H SW: <EXT>, <INT>
- 4 C V/H TYPE: <524>, <STD>

#### 4. RECEIVER LINK

When the **UST-4500** is linked to another **UST-4500** via the I/O jack, the programmed unit can send its information to a non-programmed receiver. To set up the receiving unit, press and hold the **(FAV)** and **(CALL)** buttons on the front panel of the receiver as the unit is plugged in. When the receiving unit is ready to receive the data, press **(4)** at the **INSTALLATION MENU** of the transmitting unit. At the **RECEIVER LINK** screen, press **(CALL)** to begin transferring information. While loading information, "LOADING" appears on the receiving unit's screen. When the link is completed, "SUCCESSFUL !" flashes on the screen.

**RECEIVER LINK**  
**CONNECT THE RECEIVERS.**  
**TO SET UP RECEIVING**  
**UNIT, PRESS AND HOLD**  
**(FAV) AND (CALL) ON**  
**THE FRONT PANEL WHILE**  
**PLUGGING IN AC. PRESS**  
**(CALL) TO START.**  
**\*USE CALL, CNCL**

#### 5. MASTER RESET

Master Reset is used to erase all the receiver memory. Press **(5)** to display the **MASTER RESET** screen.

##### MASTER RESET

**ENTER PASSWORD**  
**(3 5 7 3)**

**\*USE NBR,CNCL**

You must then enter a special password to continue. If you enter the wrong password, "WRONG PASSWORD" flashes. You then return to the **INSTALLATION MENU**.

## General Information

### Helpful Hints

To make sure you get the most out of satellite television viewing we offer the following information. The sophisticated engineering required to tune in satellite signals from about 22,300 miles away can be as mysterious as space itself. We hope that this information will take some of the mystery out of this technology, making it even more enjoyable for you.

### Terrestrial Interference

The most common cause of interference for a satellite television system is Terrestrial Interference. It is caused by local telephone or data microwave links. If your antenna is located close to, or in the path of a microwave tower you may experience snowy video, sparkles or a distorted picture. This kind of interference is usually not constant and may appear to increase and decrease at different times of the day. If you experience terrestrial interference, turn the TI filter on. If the problem still exists you may need to relocate your antenna or use more sophisticated filters. Contact your Uniden dealer for more information.

### Solar Outage

Another cause of interference is the biannual solar outage. Due to the seasonal changes of the earth's axis the satellite belt moves between the earth and the sun. When the satellite belt moves directly between the sun and your antenna, the satellite transmissions will be overpowered by the natural radio transmissions of the sun. This kind of satellite eclipse occurs twice a year around the spring and fall equinox. As the satellite eclipse approaches you may notice a gradual, daily increase in interference. It will peak for about 10 - 30 minutes with a completely distorted picture. As the eclipse decreases so will the amount of interference until the picture is back to clear, normal operation. The degree of interference and the timing of this phenomenon varies with the satellite, your geographical location and the size of your antenna. Unfortunately the only solution is to tune to a satellite that is east of the sun's position until it has passed the satellite you were watching.

### Other Sources of Interference

All electrical equipment is susceptible to interference from other electrical devices. The **UST-4500** is an extremely sensitive unit and may pick up interference from any household appliance. If you experience temporary audio or video interference you should check other equipment in your house. Appliances such as refrigerators, washers/dryers, microwave ovens, pumps, power tools, hair dryers, etc. may cause a variety of annoying interference. Also, radio transmitters such as CBs or shortwave radios may be a source of interference. Try plugging the **UST-4500** into another outlet, or isolated circuit. Check with your Uniden dealer for other ways to control this type of interference.

Aircraft passing over or near to your antenna may cause some temporary interference as it blocks or reflects the satellite signal. This type of interference is momentary and cannot be filtered.

## Troubleshooting

If your **UST-4500** is not performing up to your expectations, please try the simple steps listed below. If you cannot get satisfactory results after following these steps, contact your local Uniden dealer.

**Note:** Over 80% of the problems occurring with satellite TV systems are related to cable trouble. If you are experiencing any problem with your system, first check all cables and connections carefully. If the problem still exists, try the following steps:

**Problem: The indicator lights on the receiver are not working. No video or audio.**

1. Check the Power switch to make sure it is on.
2. Check the AC power cord to make sure it is plugged into an outlet that is not controlled by a wall switch.
3. Check the main circuit breaker on the back of the unit.

**Problem: The indicator lights are on but no TV picture or audio.**

1. Check the power switch on the TV. Check the cable between the RF Out connector on the back of the unit and the VIF In on the TV set. Make sure both connections are secured.
2. Check the channel selector on the TV to be sure it is set to 3 or 4 and that the 3/4 switch on the back of the unit is set to the same number.
3. Parental Lock may be engaged. Check another channel or satellite.
4. Check another channel on the satellite. The current one may not have any programming.
5. Check the alignment of the antenna. Press the (◀E) and (W▶) keys momentarily to align the antenna for the best picture.

**Problem: There are ghost images or wavy lines on the TV screen.**

1. Check polarization by pressing (POL). Adjust the Skew by pressing (SKEW) and use (CH▲) or (CH▼).
2. Check the channel fine tune adjustment on the TV and the channel selector to make sure it is on 3 or 4.
3. Fine tune antenna by pressing (◀E) or (W▶) momentarily so that satellite position counter changes up to  $\pm 10$  counts.
4. Check the alignment of the antenna.
5. External interference. See 'Helpful Hints' in the "General Information" section about interference.

**Problem: Picture is full of snow or sparkles. Weak picture.**

1. Check all cables for proper connection.
2. Make sure that the feedhorn is properly positioned. Check the feedhorn instructions.
3. 1 GHz cable is too long or improper cable used for length required. Check cable chart. Check with your Uniden dealer about a line amplifier.

**Problem: Distorted audio or no audio.**

1. Check volume of receiver and TV. Check Mute control.
2. Check program guide to make sure the correct audio frequency is tuned. Press (AUDIO) to tune to a different frequency.
3. Check audio mode and band. Try a different band setting by using the **AUDIO TUNING** function.
4. If you are using the Audio Out jacks, check to make sure cables are properly connected.

**Problem:** The channel number displayed does not correspond to your program guide. The video is weak or has superimposed images. The polarity indicated in the program guide does not correspond to the setting on the receiver.

1. Change the polarity by pressing (**POL**).
2. If Ku band, verify the Ku channel set.

**Problem:** Remote control will not work, works erratically.

1. Weak batteries. Replace with 4 AAA size batteries.
2. Remote is not pointed directly at remote window on receiver.
3. Remote window on receiver blocked. Check and clear any obstructions.
4. Out of range. Remote will work within 20 feet of receiver as long as there is nothing between it and the receiver. Make sure the UHF/IR switch on the back of the receiver is set correctly.

**Problem:** Cannot receive scrambled channels.

1. You have not subscribed to the service.
2. The program is blacked out in your area.
3. Signal strength is too low.
4. Parental Lock is engaged for the channel
5. Rating ceiling is set too low.

**Problem:** Cannot select the desired satellite from memory.

1. Satellite not programmed.

**Problem:** Antenna will not move. Antenna movement is erratic.

1. Check actuator breaker on back of receiver.
2. Actuator improperly installed or binding. Check actuator installation and antenna mount to make sure nothing is obstructing movement.
3. Check actuator cable for proper connections at both the motor and back of receiver.

4. Antenna is too heavy for actuator. Check with your Uniden dealer about a heavy duty antenna kit.