UNIDEN SQ SERIES

SQ590

Integrated Receiver/Descrambler

uniden®

Owner's Guide

Front Panel Controls

FP-1   FP-2   FP-3   FP-4 FP-5
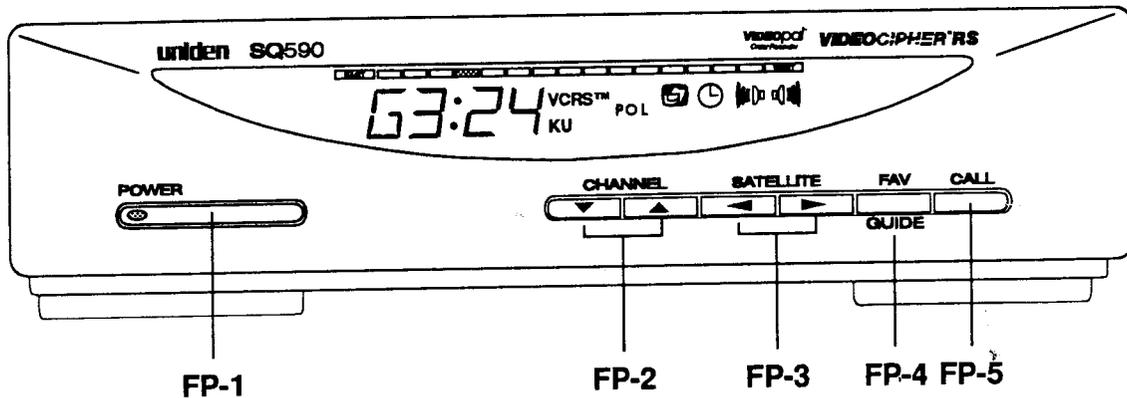
FP-1. **POWER** — Press once to turn receiver on. Press again to turn receiver off. When the receiver is turned off, power will still be supplied to the microprocessor, the VideoCipher® RS descrambler, and components mounted on the antenna. It is normal for the top of the receiver to be slightly warm while the power is off. When the unit is turned off, the current time will be displayed.

FP-2. **CHANNEL** ▲ and ▼ — 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.)

FP-3. **SATELLITE** ◀ and ▶ — Press to manually move the satellite dish East or West. While the dish is moving the Manual Dish Movement Screen is displayed on your TV. Also, the Dish Position Indicator on the front panel changes according the movement of the antenna. 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.)

FP-4. **FAV** — Press to display the **FAVORITE CALL** Menu. Press and hold this key for at least 4 seconds to display the Favorite Store menu. If the optional On-Screen Programming Guide module (**SQ501**) is installed, this key is used for Guide operation. For further explanation of this function, please refer to the On-Screen Programming Guide's Instruction Manual included with the Guide kit. (See "Normal Operation" and "Using the Main Menu" in this Guide.)

FP-5. **CALL** — Press to display the **SATELLITE CALL** Menu. When in the **SATELLITE CALL** Menu or the **FAVORITE 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
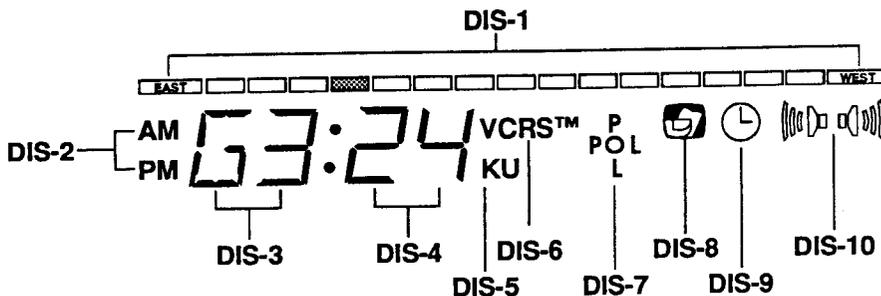
These indicators will light only while the unit is turned on, and in the corresponding mode. The time is displayed while the unit is off

DIS-1. Dish Position Indicator — Indicates the current position of the antenna. While the antenna is moving, the segments will flash indicating which direction the antenna is moving. The scale is referenced from the electronic East and West limits.

DIS-2. AM/PM — These are displayed only when the unit is off. When the clock is displayed, the upper dot (•) of the colon (:) 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.

DIS-3. Satellite Name — Displays the 2-character designation of the current satellite (e.g., **G5** for Galaxy 5) When moving to a new satellite, displays each satellite as it moves through the arc. While power to the unit is off, the display shows the hours of the current time.

DIS-4. Channel Number — Displays the current channel number. While power to the unit is off, this displays the minutes of the current time.

DIS-5. KU — Indicates that a Ku satellite is being received. When this indicator is off, a C-band satellite is being received.

DIS-6. VCRS — Indicates reception of a VideoCipher encrypted channel.

DIS-7. POL — Indicates the current polarity. When the word POL is read from left to right, then the polarity is horizontal. If the word POL is read from top to bottom, the polarity is vertical.

DIS-8. VideoPal Indicator —Indicates that a VIDEOpal descrambler is being used with the receiver.

DIS-9. Timer Icon — 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.

DIS-10. Stereo — Indicates that a stereo signal is being received, either VCRS or DISC subcarrier.

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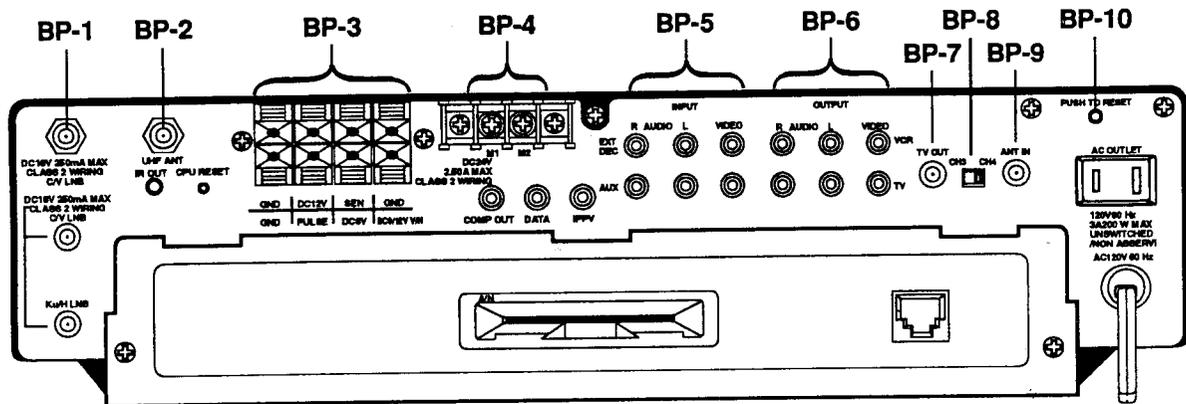
WARNING: *Do not use metallic objects to move the switches on the rear panel of the unit.*

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

BP-1. **DC 18V** — This connector supplies +18 VDC, 500mA max, power for an optional UST-524 V/H switch. Up to four additinal receivers can be connected with this switch. Contact your Uniden **SQ** Dealer for more information.

BP-2. **UHF REMOTE ANT** — Connect the supplied UHF antenna here for using the **SQ590** Remote Control.

BP-3. **Actuator Sensor Terminals** — Connect the sensor wires from your actuator to these connectors. The connections are:

GND	Ground
DC 12V	+ 12V DC Sensor Power
SEN	Sensor Return
GND	Ground

BP-4. **Actuator Motor Terminals** — Connect the motor wires from your actuator to these connectors. The connections are:

M1	Motor Power (2.50A max.)
M2	Motor Power (2.50A max.)

BP-5. **EXT DEC** (External Decoder Input) —Two audio inputs (Left and Right) and one video input are provided for connecting an optional external decoder.

BP-6. **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® RS 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 audio level for the VCR audio output is not affected by the volume control. The **VIDEO OUT** phono jack is for video output. This phono jack is equipped to block all on-screen messages (such as **MAIN MENU** selections) except VideoCipher® RS messages.

BP-7. **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.

BP-8. **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.

BP-9. **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.

BP-10. **Circuit Breaker** — If unit display fails to come on when the power button is pressed, try checking this circuit breaker.

Note: *The actuator circuit breaker is located on the bottom of the receiver. If the dish does not move, check this breaker.*

SQ590

BP-12 BP-11 BP-14 BP-13 BP-15 BP-16 BP-17 BP-18 BP-19 BP-21 BP-20 BP-22 BP-23 BP-24 BP-25
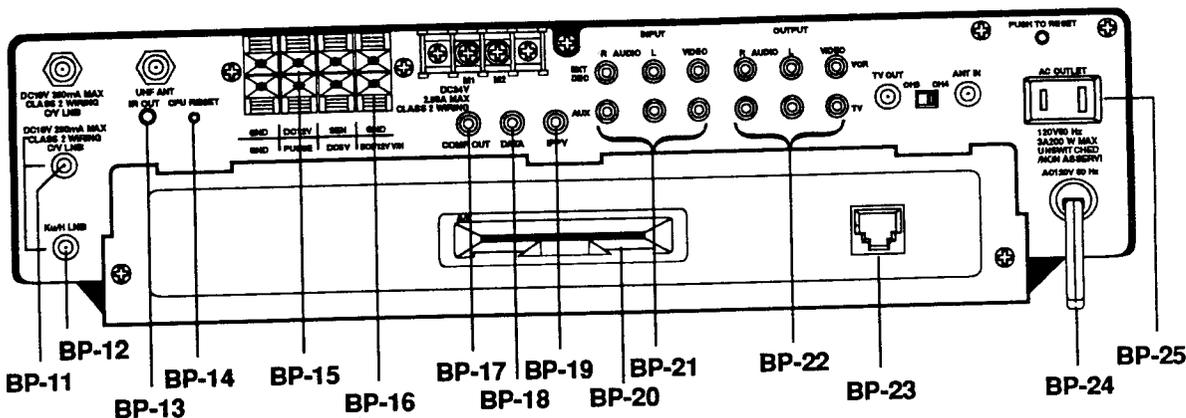
P-11. C/V LNB — This input accepts the 950-1450 MHz input from the single C-band LNB or Vertical LNB in a dual feed system. Power for the LNB is supplied through this connector.

P-12. Ku/H LNB — This input accepts the 950-1450 MHz input from the single Ku-band LNB or Horizontal LNB in a dual feed system. Power for the LNB is supplied through this connector.

P-13. IR Out —This jack is used when an optional On-Screen Programming Guide module (**SQ501**) is inserted into the receiver. This port allows automatic operation of your VCR. (See On-Screen Programming Guide Manual included with the **SQ501**.)

P-14. 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 receiver programming.**

P-15. 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.

P-16. 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.

P-17. COMP OUT — Composite video output used with external descrambling devices or processors like Scientific Atlanta, B-Mac, and others.

P-18. Data — For connection with special external data equipment. (See your Uniden **SQ** Dealer for more information.)

BP-19. IPPV — For connection to an external VIDEOpal Recorder. (See your Uniden **SQ** Dealer for more information about VIDEOpal Recorders.)

BP-20. TvPass Card Slot — Exists only if the descrambler (such as VCRS) requires additional security ID. This slot may not be present with other descrambler modules.

BP-21. AUX (Audio / Video Input) Two audio inputs (Left and Right) and one video input are provided for connecting external equipment, such as a VCR or a video disc player, to the unit. These inputs provide a source for the PIP feature and Auxiliary feature.

BP-22. 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 ® RS 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. These audio levels can be controlled by the volume control. The **VIDEO OUT** jack is for video output.

BP-23. RJ-11 Jack — Connect the telephone line here if you have a VCRS Modem-On-Module with built-in VIDEOpal. (See your Uniden **SQ** Dealer for more information about the VCRS and VIDEOpal.)

BP-24. AC Power Cord — Connect to any 120V AC household outlet. Do not connect to an outlet controlled by a wall switch.

BP-25. AC Outlet — A non-switched, 120V AC 200watt outlet is provided for connecting any other additional accessories.

Remote Control

The Remote Control has a range of over 150 feet and is powered by 2 AAA Batteries. Computers, microwave ovens, and other electrical devices can cause interference with operation of the remote control.

Note: *Pressing (VIEW) while in most menus will return to normal video.*

R-1. **POWER** — Turns the satellite receiver On or Off.

R-2. (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.

R-3. (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.

R-4. (SCAN) — Use this key to initiate the Channel Scan feature. While in PIP mode, press this key to move the PIP screen to one of the four positions on the screen.

R-5. (PIP) — Use this key to display the picture-in-picture feature. Pressing this key while in PIP mode switches the auxiliary source and the main satellite source.

R-6. (ENTER) — This key is used in some receiver menus to store changes. Ths key is also for VideoCipher operation. It can be used for VideoCipher operation while the VCRS indicator is on. (See the section on VideoCipher® RS descrambler operation for more details.)

R-7. (SETUP) — This key is used in some receiver menus to set up satellite information or favorite names. This key is also used for VideoCipher operation. It can be used for VideoCipher operation when the VCRS indicator is on. (See the section on VCRS Module Operating instructions for more details.)

R-8. (CNCL) — This key is used in some receiver menus to cancel changes. This key is also for VideoCipher operation. It can be used for VideoCipher operation while the VCRS indicator is on. (See the section on VCRS Module operating instructions for more details.)

R-9. (AUX) — Press this key to immediately display the auxiliary source. Press this key again to switch back to normal satellite viewing.
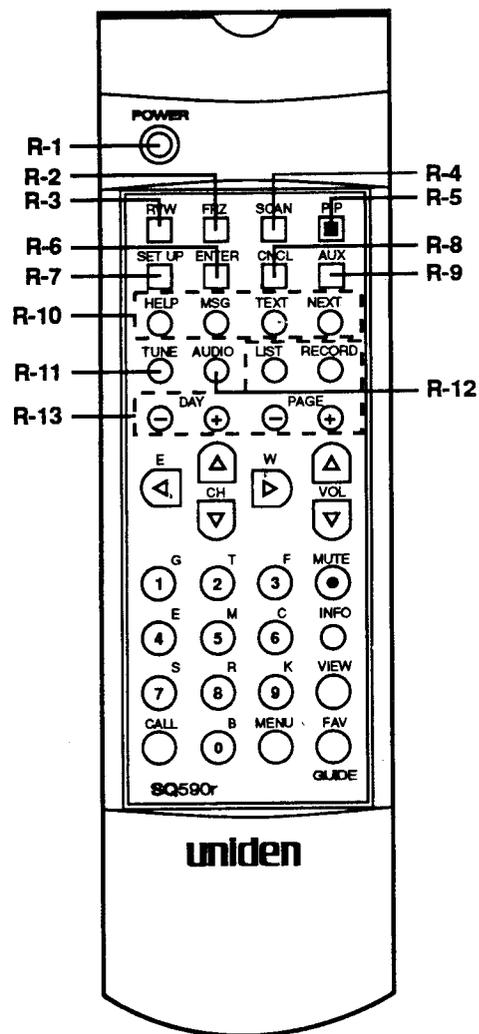
R-10. **VideoCipher Keys** — These keys are used only while the VCRS front panel indicator is lit. (See the section on VCRS Module Operating Instructions for more details.)

R-11. (TUNE) — This key is used to display the receiver tuning options. The options included in this menu are Video Fine Tune, Skew, Polarity, TI Filter, External Decoder, and Satellite Band. (See the Tuning Section for more details.)

R-12. (AUDIO) — Press this key to display the Audio Tuning Menu. Within this menu, you can adjust the audio format and frequencies for the current channel.

R-13. (LIST), (RECORD), (-DAY), (DAY+), (-PAGE), (PAGE+) — Used only when an optional On-Screen Programming Guide module (**SQ501**) is installed. For further explanations of these keys, please refer to the On-Screen Programming Guide's Instruction Manual included with the **SQ501**.

R-14. ◄E and W► — Press to manually move the satellite dish East or West. While the dish is moving, the **DISH LOCATION** screen is displayed on your TV. Also, the dish position indicator on the front panel changes according to the movement of the antenna. 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.)

R-15. 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.)

R-16. VOL▲ and VOL▼ — Use these keys to adjust the volume. When either key is pressed, **VOLUME** appears on your screen with an indicator bar.

R-17. **Numeric Keys (1 to 9, 0)** — Use these numeric keys for channel selection and menu selection.

Letter Keys (G,T,F,E,M,C,S,R,K,B) — Use these keys for direct satellite access.

R-18. 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.

R-19. INFO —This key is used only when an optional On-Screen Programming Guide module (**SQ501**) is installed. For further explanation of this key, please refer to the On-Screen Programming Guide's Instruction Manual included with the Guide kit.

R-20. VIEW — This key is used to return to video at any time. While viewing video, this key can be used to display the current satellite and channel. This key is also used for VideoCipher operation. It can only be used for VideoCipher operation when the VCRS indicator is on. (See the section on VCRS Module Operating Instructions for more details.)

R-21. CALL — Press to display the **SATELLITE CALL** menu. When in the **SATELLITE CALL** menu or the **FAVORITE CALL** menu, press this button to move to the selected satellite
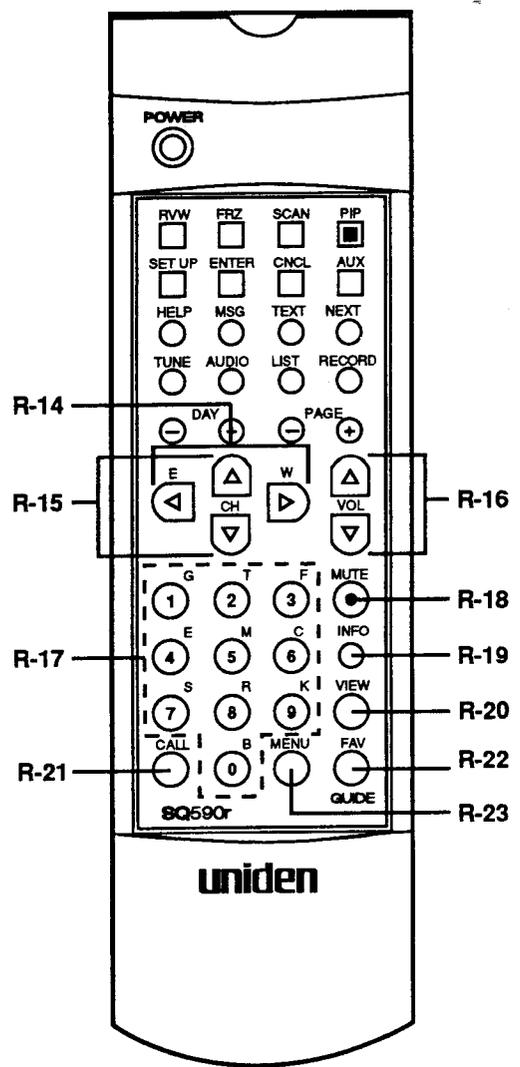
and/or channel. It is also used for direct satellite access. (See "Using the Main Menu" in this Guide.)

R-22. FAV — Press this key to display the **FAVORITE CALL** menu. Press and hold this key for at least 4 seconds to display the **FAVORITE STORE** menu. If the optional On-Screen Programming Guide module (**SQ501**) is installed, this key is used for Guide operation. For further explanation of this function, please refer to the On-Screen Programming Guide's Instruction Manual included with the Guide kit.

R-23. MENU — Press this key to display the **MAIN MENU**. Press and hold this key for at least 4 seconds to display the **INSTALLATION MENU**.

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SQ569mr Mini Remote Control

This mini-remote operates the basic functions of the
SQ590.

Note: *The **SQ569mr** uses only infrared signals. Be
sure to point it directly at the front of the receiver.*

MR-1. POWER — Turns the satellite receiver On or Off.

MR-2. (VOL▲) and (VOL▼) — Use these keys to adjust
the volume. When either key is pressed,
VOLUME appears on your screen with an
indicator bar.

MR-3. (MUTE) — Press this key to mute the audio.
Press the key again to restore the audio.

MR-4. (◄ E) and (W ►)— Press to manually move the
satellite dish East or West. While the dish is
moving, the **DISH LOCATION** screen is
displayed on your TV screen. 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.)

MR-5. (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.)

MR-6. (CALL) — Press to display the **SATELLITE
CALL** menu. When in the **SATELLITE CALL**
menu or the **FAVORITE CALL** menu, press
this button to move to the selected satellite
and/or channel.

MR-7. (FAV)— Press this key to display the
FAVORITE CALL menu. If the optional
On-Screen Programming Guide module
(**SQ**501) is installed, this key is used for Guide
operation.
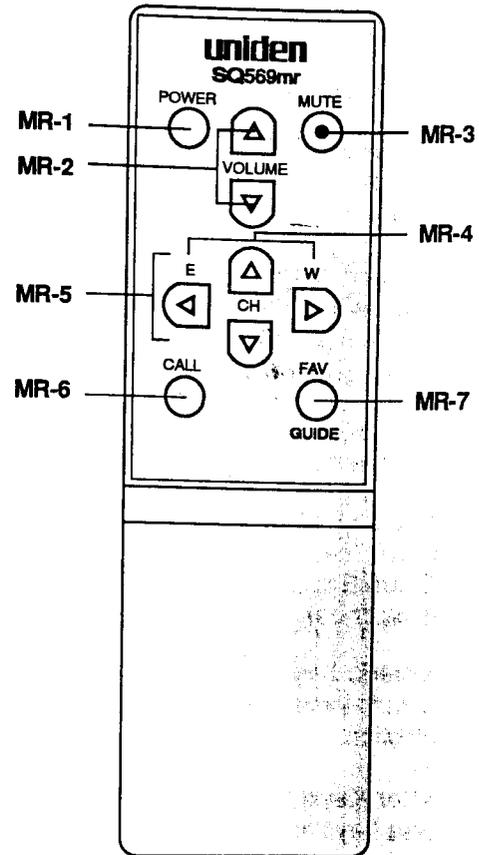
Normal Operation

This section of the Operating Guide takes you step-by-step through the most common procedures you need to perform after your **SQ590** has been properly installed by an **SQ** Dealer. For typical operation, perform the procedures in order.

Power On

Turn the power on the **SQ590** 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 **SQ590**. If your system is connected through the Video Output, then set your television for the proper video source.

> **Note:** *While in the receiver menus, you can press* (VIEW) *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.

— OR —

Press (VIEW) to see the satellite-channel information displayed on your screen.

```
┌─────────────────────────────┐
│ GALAXY-5          G5- 4      │
│                             │
│                             │
│                             │
│                             │
│                             │
└─────────────────────────────┘
```
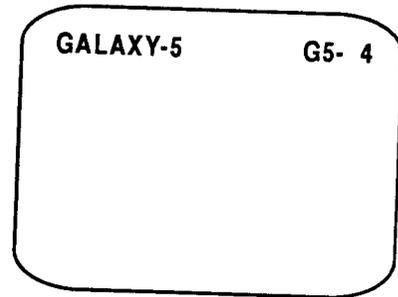
Select a Satellite

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

   > **Note:** *If your system is configured and programmed with Ku-band satellites, they will appear in the SATELLITE CALL menu. Otherwise, only the C-band satellites will appear.*

```
┌─────────────────────────────┐
│      SATELLITE CALL          │
│   F1  SATCOM-C1              │
│   F4  SATCOM-C4              │
│   G1  GALAXY-1               │
│   F3  SATCOM-C1              │
│   A1  ASC-1                  │
│   A1  ASC-1        KU        │
│ ► G5  GALAXY-5               │
│ *USE ▲,▼,◄,►,CALL, CNCL      │
└─────────────────────────────┘
```
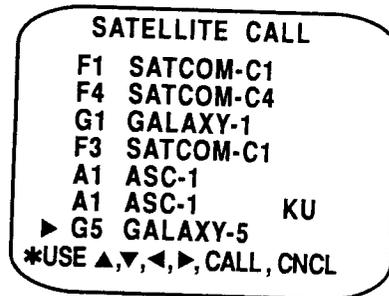
2. Press (CH▲) or (CH▼) to move the pointer to another available satellite. (If the satellite you want is not displayed on the screen, use (W►) to move to the next page, or (◄E) to move to the previous page.)

```
┌─────────────────────────────┐
│      SATELLITE CALL          │
│ ► R2  GSTAR-2      KU        │
│   B5  SBS-5        KU        │
│   T3  TELSTAR-3             │
│   M2  MORELOS-2   KU        │
│   M2  MORELOS-2             │
│   M1  MORELOS-1             │
│   M1  MORELOS-1   KU        │
│ *USE ▲,▼,◄,►,CALL,CNCL       │
└─────────────────────────────┘
```
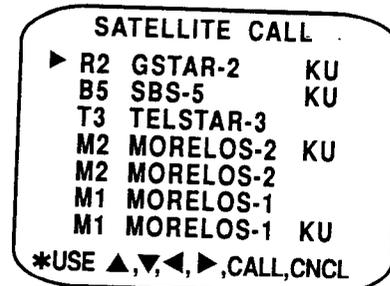
3. Press (CALL) when the arrow is pointing to the desired satellite. The **SQ**590 will automatically position the dish antenna and tune to the selected satellite.

```
  SATELLITE CALL
  R2  GSTAR-2     KU
  B5  SBS-5       KU
► T3  TELSTAR-3
  M2  MORELOS-2   KU
  M2  MORELOS-2
  M1  MORELOS-1
  M1  MORELOS-1   KU
*USE ▲,▼,◄,►,CALL,CNCL
```

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.

1. Press (CALL) to display the **SATELLITE CALL** menu.

2. Press the Direct Satellite Access keys to select the desired satellite. (See the Appendix for a list of Direct Satellite Access keys.)

3. Press (CALL) again to tune to that satellite.

   Example: *If Galaxy-3 is the default satellite for G:*

   1. Press (CALL) to display the SATELLITE CALL MENU.

   2. Press (G) to select Galaxy-3.

   3. Press (CALL).

To select a non-default satellite:

1. Press (CALL) to display the **SATELLITE CALL** menu.

2. Press the two designated remote keys, such as (G)(1) to select Galaxy-1.

3. 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 **SQ**590 provides several methods for changing channels.

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...-22-24).

   — OR —

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."

   — OR —

Enter the channel number directly on your remote with the numeric keys.

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Note: *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 ⟨0⟩ or ⟨0⟩ ⟨0⟩ 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.

1. Press ⟨FAV⟩ to display the **FAVORITE CALL** menu.

```
     FAVORITE  CALL
 ▶ PERSONAL
   MOVIES
   PAY-PER-VIEW  (PPV)
   SPORTS
   NEWS
   SUPERSTATIONS
   MUSIC
   SPECIAL  INTEREST
*USE #,◀▶,▲▼, CALL , CNCL
```
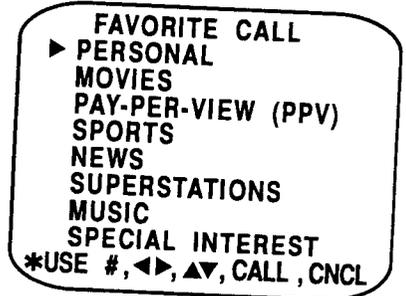
PERSONAL FAVORITES are those programs you have entered yourself. (See the Programming section later in this Guide.) **MOVIES, PAY-PER-VIEW, SPORTS**, etc., are channels that were programmed into your **SQ**590 before you purchased it.

2. Press ⟨CH▲⟩ or ⟨CH▼⟩ to move the arrow to the category you want.

3. Press ⟨CALL⟩. You will then see a list of programmed channels. For this example, **PERSONAL** was selected at the **FAVORITE CALL** menu.

```
PERSONAL
  0  G1-16  Z  TV
  1  F2-23  CMN
  2  G5- 3  TBN
  3  F4-21  DISCOVERY
  4  **-**  ***********
  5  **-**  ***********
  6  **-**  ***********
  7  **-**  ***********
*USE ▲,▼,◀,▶,CALL,CNCL
```
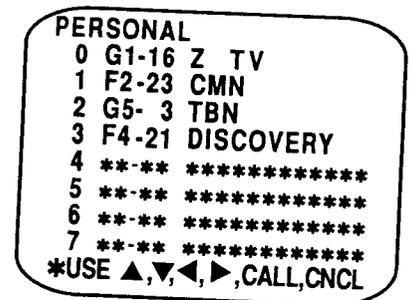
If the channel you want is not on the list, use ⟨◀E⟩ or ⟨W▶⟩ to see another list.

4. 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                │
│   0  G1-16  Z  TV       │
│   1  F2-23  CMN         │
│   2  G5- 3  TBN         │
│ ►3  F4-21  DISCOVERY    │
│   4  **-**  ***********  │
│   5  **-**  ***********  │
│   6  **-**  ***********  │
│   7  **-**  ***********  │
│ *USE ▲,▼,◄,►,CALL,CNCL  │
╰─────────────────────────╯
```

5. Press (CALL) to select the channel, and the **SQ590** will automatically position the dish to the correct satellite and select the channel for you.

```
╭─────────────────────────╮
│ GALAXY-5          G5- 4 │
│                         │
│      MOVING  TO         │
│                         │
│ SATCOM-C4         F4-21 │
│                         │
│      DISH  AT  4933     │
│ E────────────I────W    │
╰─────────────────────────╯
```

To select radio channels :

1. From the **FAVORITE CALL** menu, press (W►). The first 6 categories of pre-programmed radio stations are listed in alphabetic order. Press (W►) again to see more categories.

```
╭─────────────────────────╮
│ FAVORITE  RADIO  CALL   │
│ ►RADIO-CLASSICAL        │
│  RADIO-CONTEMPORARY     │
│  RADIO-COUNTRY/WESTERN  │
│  RADIO-EASY  LISTENING  │
│  RADIO-INTERNATIONAL    │
│  RADIO-JAZZ             │
│                         │
│ *USE #,◄►,▲▼, CALL ,CNCL│
╰─────────────────────────╯
```

2. Press (CH▲) or (CH▼) to move the cursor to select a radio category.

3. Press (CALL) call to see the listing for that category. Select a station with the cursor.

```
╭─────────────────────────╮
│          RADIO          │
│ CLASSICAL               │
│ ►100  G5- 7  WFMT-CHICAGO│
│  101  F4-15  WQXR-NEWYORK│
│  102  G5-21  SUPER/CLASS │
│  103  E2-16  CBC  RADIO  │
│  104  E2-22  CBC-RADIO   │
│                         │
│ *USE ▲,▼,◄,►,CALL,CNCL  │
╰─────────────────────────╯
```

4. Press (CALL) call to receive the station.

Special Features

RVW and FRZ

These features are used to freeze ("still" picture) and review an active video signal.

1. Press (FRZ) to freeze the current video for 3 seconds and store that frame in video memory.

2. Press (RVW) to display the video memory for 30 seconds.

> **Note:** Since PIP mode erases video memory, RVW does not work immediately after PIP mode.

3. Press (VIEW) to return to normal video.

SCAN

With this feature, you can set the **SQ590** to display four or nine picture segments on your screen to make a visual scan through all the channels on a satellite. Active video is displayed for 3 seconds in each segment. 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.

1. Press (SCAN) to start scanning for active channels.

2. When you are finished, press (SCAN) again to stop scanning.

STROBE

Press and hold (FRZ) for 3 seconds to begin the STROBE feature. At that time, the receiver is in strobe mode. The speed of this video 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.

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.

While in PIP mode, the PIP screen can be positioned in one of four places on your screen.

1. Press (SCAN). The PIP screen will rotate counterclockwise through four positions around your TV screen.

2. Press (SCAN) again to stop the rotation when the PIP screen reaches the desired position on your TV screen. Now when you press (PIP), the PIP screen will appear there until you select a different position.

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.

Tuning the **SQ**590

There may be times when you'll need to adjust the tuning of your **SQ**590 because of changes in the satellite signal. You can fine tune the video and audio, adjust the Skew and Polarity, turn the External Decoder option On, or turn the TI (Terrestrial Interference) Filter On or Off by using the appropriate keys on the remote control. Also in the **AUDIO TUNING** menu, you can adjust the SCPC Tuning to receive an additional 200 satellite audio services. Before using any of the following remote keys, select the satellite and channel you want to adjust.

> Note: *Careful adherence to these instructions can help avoid problems with the operation of your* **SQ**590*.*

The TUNE Options

The following options can be tuned using the (TUNE) key: Video Fine Tune, Skew, Polarity, External Decoder, TI Filter, and Satellite Band.

Video Fine Tuning

1. Press (TUNE) to display the Tuning Options.

```
GALAXY-5              G5- 4
        VIDEO TUNING
1 VIDEO FINE TUNE
2 SKEW
3 POLARITY          (VERT)
4 EXTERNAL DEC      (OFF)
5 C/KU              (C)
6 TI FILTER         (OFF)
*USE #,VIEW
```
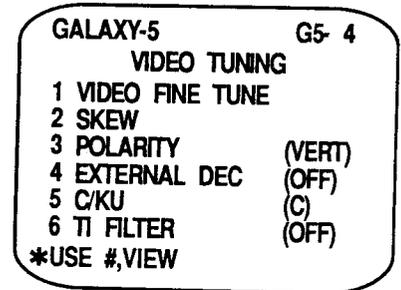
2. Press (1) to display the **VIDEO TUNING** screen.

```
GALAXY-5              G5- 4


VIDEO TUNE(+ 0.00)MHz



*USE ▲,▼,VIEW
```
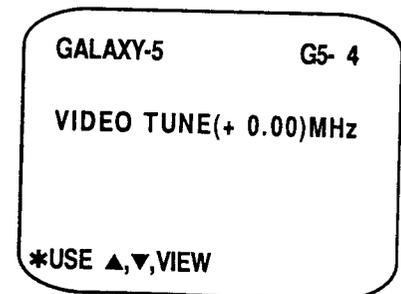
3. Use the (CH▲) and (CH▼) keys to change the frequency in 0.25 MHz steps. (The maximum range is ±15 MHz.)

```
GALAXY-5              G5- 4


VIDEO TUNE(+ 0.25)MHz



*USE ▲,▼,VIEW
```
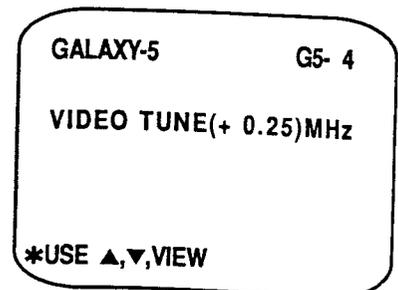
Skew

If there is rotation in the position of a satellite, you may need to make small adjustments to the Skew.

1. Press ⟨2⟩ while in the Tuning Options menu to display the **SKEW** screen. You will see the present **SKEW** displayed.

```
┌─────────────────────────────┐
│  GALAXY-5            G5- 4   │
│                             │
│                             │
│        SKEW (-45)           │
│                             │
│                             │
│ *USE ▲,▼,VIEW               │
└─────────────────────────────┘
```
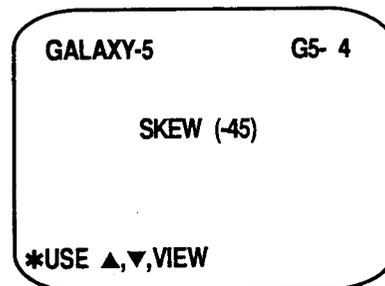
2. Use the ⟨CH▲⟩ or ⟨CH▼⟩ key to adjust the Skew in one degree increments, through a range of -90 degrees to +90 degrees.

3. Press ⟨VIEW⟩ 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 **SQ590** is installed, you should not need to adjust this setting. (Changing the Polarity may cause loss of signal.)

To change the polarity setting:

1. Press ⟨3⟩ while in the Tuning Option menus. The Polarity will change, and the **POLARITY** screen will be displayed.

```
┌─────────────────────────────┐
│ GALAXY-5            G5- 4    │
│        VIDEO TUNING         │
│ 1 VIDEO FINE TUNE           │
│ 2 SKEW                      │
│ 3 POLARITY         (VERT)   │
│ 4 EXTERNAL DEC     (OFF)    │
│ 5 C/KU             (C)      │
│ 6 TI FILTER        (OFF)    │
│ *USE #,VIEW                 │
└─────────────────────────────┘
```
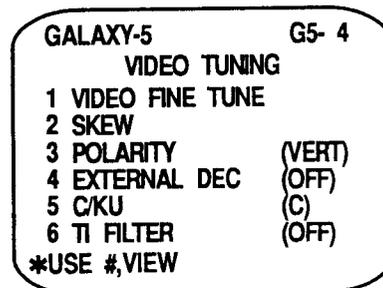
2. Press ⟨VIEW⟩ to exit this screen.

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 ⟨3⟩ while in the Tuning Options. 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 'REPROGRAM SATELLITE' in "Using the Main Menu").*

External Decoder

This feature is used in conjunction with an external decoder (not included) connected to the **SQ**590. You can connect an external decoder for viewing a specific satellite and channel that uses a descrambling system other than VideoCipher®.

1. Tune to the satellite and channel appropriate for the external decoder.

2. Press (TUNE) to display the Tuning Options menu.

3. Press (4) to turn EXTERNAL DEC **(On)** or **(Off)**.

With EXTERNAL DEC **(On)**, the **SQ**590 receiver automatically switches to the **EXT DEC INPUT** every time that channel is accessed.

```
GALAXY-5              G5- 4
        VIDEO TUNING
1 VIDEO FINE TUNE
2 SKEW      -
3 POLARITY           (VERT)
4 EXTERNAL DEC       (OFF)
5 C/KU               (C)
6 TI FILTER          (OFF)
*USE #,VIEW
```

C/Ku

Note: *This option allows you to switch between C-band and Ku-band satellites if your system is set up to receive Ku-band satellite transmissions. Check with your Uniden* **SQ** *Dealer for details.*

If your system is configured for Ku-band satellite reception, press (5) while in the tuning options to switch between C-band and Ku-band satellites.

Note: *When you switch from C-band to Ku-band, tuning option 6 changes from TI Filter to Bandwidth. Also, a seventh option is added, called Ku-band channel set.*

TI (Terrestrial Interference) Filter/Ku Channel Bandwidth

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 (6) while in Tuning Options to switch the TI Filter On or Off. (For more information on Terrestrial Interference, see page 80.)

Note: *In Ku-band only, press (6) to switch the bandwidth between* **WIDE** *and* **NARROW**.

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 5 on Ku-band satellite Satcom K2 as Channel 8 to match your viewing guide.

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

To select the current satellite and channel:

1. 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.

Note: *When you are on the Ku-band,* **KU** *lights up on the front panel display.*

2 Press (TUNE) to access the Tuning Options menu.

```
GALAXY-4          KU  G4- 4
          VIDEO TUNING
1 VIDEO FINE TUNE
2 SKEW
3 POLARITY          (VERT)
4 EXTERNAL DEC     (OFF)
5 C/KU              (KU)
6 BANDWIDTH         (WIDE)
7 KU CHANNEL SET
*USE #,VIEW
```

3. Press (7) to enter the **KU CHANNEL SET** menu.

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

```
        KU  CHANNEL  SET

    FROM: K2 CH  5
    TO:   K2 CH( 8)


*USE ▲,▼,VIEW
```

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

6. Now, when you select Channel 8, you get the same program as on Channel 5.

Audio Tuning

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

```
GALAXY-5              G5- 4
          AUDIO TUNING
  0  SCPC
  1  FORMAT      (MONO)
  2  AUDIO BW    (WIDE)
  3  AUDIO SEEK  (OFF)
► 4  L / R       (6.80)MHz
*USE #,▲,▼,VIEW
```

Note: *The settings for Video Fine Tune, TI Filter status, External Decoder, Audio BW status, and Audio Tuning are stored automatically for each channel separately. No special commands are required to store any changes. However, for those channels that have VCRS encryption, you must store audio tuning for subcarriers as a Personal Favorite. (See "Storing Favorite Channels" on page 33.)*

1. The **SQ502** module allows the **SQ590** receiver to tune audio services using Single Channel Per Carrier audio carriers. To tune in to a SCPC service, press ⓪ while in the **AUDIO TUNING** menu.

   To adjust the frequency, use the (CH▲) and (CH▼) keys.

   To change the frequency continuously, press and hold the (CH▲) or (CH▼) key. Or, press ⑤ to change to the 50MHz range, ⑥ to change to the 60MHz range, etc.

   By using the sweep option, the receiver will adjust the frequency until a carrier is reached. Turn on the sweep option by pressing ②.

   To "lock in" a carrier for continuous listening, press ③ to turn on the AFC.

   Note: *When tuning a carrier, the frequency may not match your guide's printed frequency. This is possibly due to the frequency drift in either the LNB and/or the tuner. Tuning, however, should be relatively close to the printed frequency.*

   Note: *The SCPC frequency is not remembered for each channel. There is no provision for storing the frequencies into a favorite location for future recall.*

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

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

4. 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.

```
         SCPC TUNING

  1  FREQUENCY    (50.00)MHz
  2  SWEEP        (OFF)
  3  AFC          (OFF)

       SIG ████████__

 *USE #,▲,▼,VIEW    10:32AM
```

```
  GALAXY-5              G5- 4
           AUDIO TUNING
   0  SCPC
   1  FORMAT        (DISC)
   2  AUDIO BW      (NARW)
   3  AUDIO SEEK    (OFF)
  ►4  LEFT          (6.80)MHz
   5  RIGHT         (6.98)MHz
  *USE #,▲,▼,VIEW
```

```
  GALAXY-5              G5- 4
           AUDIO TUNING
   0  SCPC
   1  FORMAT        (DISC)
   2  AUDIO BW      (NARW)
   3  AUDIO SEEK    (ON)
  ►4  LEFT          (6.77)MHz
   5  RIGHT         (6.95)MHz
  *USE #,▲,▼,VIEW
```

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

```
┌─────────────────────────────┐
│  GALAXY-5           G5- 4    │
│         AUDIO  TUNING        │
│   0   SCPC                   │
│   1   FORMAT       (DISC)    │
│   2   AUDIO  BW    (NARW)    │
│   3   AUDIO  SEEK  (OFF)     │
│ ►4   LEFT         (6.85)MHz  │
│   5   RIGHT        (7.03)MHz │
│ *USE #,▲,▼,VIEW              │
└─────────────────────────────┘
```

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. In **DISC**, you adjust the frequency for both audio channels, (**LEFT** and **RIGHT**), by pressing ⒸⒽ④ and using the ⒸⒽ▲ and ⒸⒽ▼ 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, press* ⑤ *and use* ⒸⒽ▲ *or* ⒸⒽ▼

Dish Antenna Tuning

Once your **SQ590** 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.

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

```
┌─────────────────────────────┐
│  GALAXY-5           G5- 3    │
│                             │
│                             │
│   SIG ■■■■■■■__              │
│                             │
│      DISH  AT  4933          │
│ E──────────────────L────W   │
└─────────────────────────────┘
```

2. Press either ◄Ⓔ or Ⓦ► 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,* ⒸⓃⒸⓁ *will not cancel the move. You must move the dish back to the original position using* ◄Ⓔ *or* Ⓦ► *, or by calling the original position.*

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

Using the Main Menu

Note: *The illustrations in this Chapter are representative of typical satellite screens seen on this receiver, and are shown for information only. The actual screens may vary from those shown here, depending upon how your SQ590 was installed and configured.*

Operating the **SQ590** is easy with the built-in menu system. You use the **MAIN MENU** to:

1. Quickly tune a Satellite and Channel.

2. Reprogram a Satellite.

3. Turn Channel Lock On or Off.

4. Change the password.

5. Adjust the front panel display.

6. Set the Scan type.

7. Select the Scan Display.

8. Set the Program Timer for normal or Pay-Per-View programming.

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 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT PANEL      (MED)
  6 SCAN TYPE        (NORM)
  7 SCAN DISPLAY     (4)
  8 TIMER SET
 *USE #,VIEW         10:32AM
```
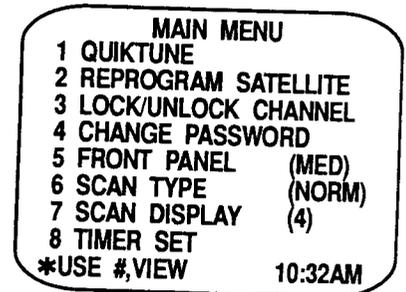
1. QUIKTUNE

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 (1) at the **MAIN MENU** to use **QUIKTUNE**.

After peaking is complete, the reprogram screen automatically appears. If you want to store the position changes, press (ENTER). If you want to cancel the position changes, press (CNCL).

```
 GALAXY- 5              G5- 4

    QUIKTUNE IN PROGRESS

        SKEW (-45)

       DISH AT (4926)

 *USE CNCL
```
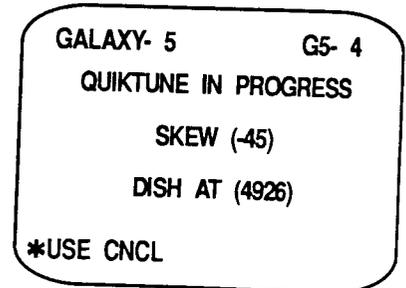
2. REPROGRAM SATELLITE

This function is used to store any adjustments (Polarity or Dish Position) you may have made to the programmed satellite. Press ⟨ 2 ⟩ at the **MAIN MENU** to display the **REPROGRAM A SINGLE SATELLITE** screen.

```
╭─────────────────────────╮
│   REPROGRAM A SINGLE    │
│        SATELLITE        │
│                         │
│      SAT NAME (G4)      │
│                         │
│                         │
│ *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.

> **Note:** *If no key is pressed for 30 seconds, the screen disappears and you return to normal video.*

3. LOCK/UNLOCK CHANNEL

The **SQ590** has a special feature which allows selected 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:** *If you forget your password, contact your Uniden **SQ** Dealer for assistance.* ⋅

To lock out any channel:

1. Tune to the channel using any of the standard methods.

2. Press ⟨MENU⟩ to display the **MAIN MENU**.

```
╭─────────────────────────────╮
│        MAIN MENU            │
│ 1 QUIKTUNE                  │
│ 2 REPROGRAM SATELLITE       │
│ 3 LOCK/UNLOCK CHANNEL       │
│ 4 CHANGE PASSWORD           │
│ 5 FRONT PANEL      (MED)    │
│ 6 SCAN TYPE        (NORM)   │
│ 7 SCAN DISPLAY     (4)      │
│ 8 TIMER SET                 │
│ *USE #,VIEW        10:32AM  │
╰─────────────────────────────╯
```

3. Press ⟨ 3 ⟩ to display the **LOCK/UNLOCK CHANNEL** screen.

```
╭─────────────────────────────╮
│ SATCOM-C4          F4- 3    │
│                             │
│    TO LOCK CHANNEL          │
│                             │
│    ENTER PASSWORD           │
│       (_ _ _ _)             │
│                             │
│ *USE #,CNCL                 │
╰─────────────────────────────╯
```
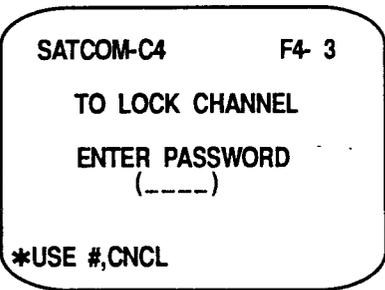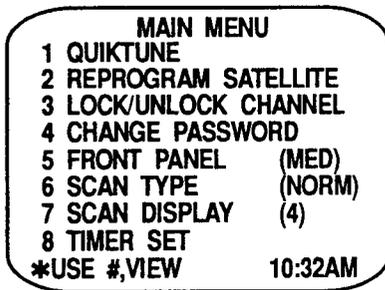
4. Enter a four-digit password using the remote control numeric keys. (The numbers will **not** appear on the screen.) *The factory preset code is "0000."*

SQ590

```
SATCOM-C4          F4- 3

  TO LOCK CHANNEL

  ENTER PASSWORD
      (***_)

*USE #,CNCL
```

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.*

```
SATCOM-C4          F4- 3


  LOCKED CHANNEL
```

To unlock the channel for viewing:

1. Tune to the locked channel.

```
SATCOM-C4          F4- 3


  LOCKED CHANNEL
```

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

```
          MAIN MENU
  1 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT PANEL      (MED)
  6 SCAN TYPE        (NORM)
  7 SCAN DISPLAY     (4)
  8 TIMER SET
*USE #,VIEW          10:32AM
```

3. Press ⌷3⌷ to display the **LOCK/UNLOCK CHANNEL** screen.

```
SATCOM-C4          F4- 3

  TO UNLOCK CHANNEL

  ENTER PASSWORD
      (____)

*USE #,CNCL
```

Enter the four-digit password using the remote control numeric keys. *The factory preset code is "0000".*
(The numbers will not appear on the screen).

```
SATCOM-C4            F4- 3

   TO UNLOCK CHANNEL

    ENTER PASSWORD
        (***_)


*USE #,CNCL
```

If you enter the wrong password, the words "**WRONG PASSWORD**" will flash under the password, and you'll return to normal video.

```
SATCOM-C4            F4- 3

    TO LOCK CHANNEL

    ENTER PASSWORD
        (____)

    WRONG PASSWORD

*USE #,CNCL
```

The correct password unlocks the channel. You can then view the program normally. When you have finished watching the program you can re-lock the channel.

1. From the **MAIN MENU** screen, press ⟨ 3 ⟩ to display the **LOCK/UNLOCK CHANNEL** screen.

```
SATCOM-C4            F4- 3

    TO LOCK CHANNEL

    ENTER PASSWORD
        (____)


*USE #,CNCL
```

2. Lock the channel by entering the four-digit password with the remote control numeric keys.

```
SATCOM-C4            F4- 3



    LOCKED CHANNEL



```

4. CHANGE PASSWORD

To change the password used only for Channel Lock:

1. Press ④ at the **MAIN MENU**

```
        MAIN MENU
  1 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT PANEL    (MED)
  6 SCAN TYPE      (NORM)
  7 SCAN DISPLAY   (4)
  8 TIMER SET
 *USE #,VIEW        10:32AM
```
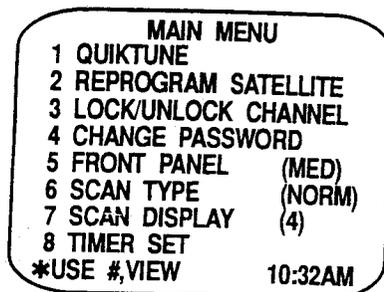
You will be asked to enter the old password.
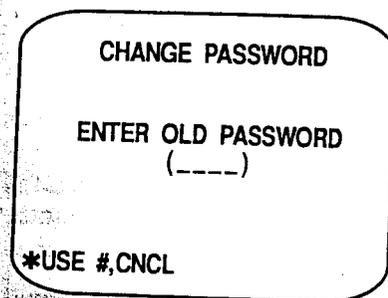
```
      CHANGE PASSWORD


   ENTER OLD PASSWORD
        (____)



 *USE #,CNCL
```

2. Enter the four-digit password using the remote control numeric keys. (The numbers will **not** appear on the screen.) *The factory preset code is "0000."*

```
      CHANGE PASSWORD


   ENTER OLD PASSWORD
        (**--)



 *USE #,CNCL
```
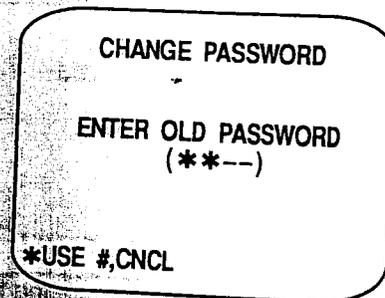
Note: *If you enter the wrong password, the words "*WRONG PASSWORD" will flash under the password, and you'll return to normal video.*

3. Now enter the new four-digit password.

```
      CHANGE PASSWORD


   ENTER NEW PASSWORD
        (____)



 *USE #,CNCL
```
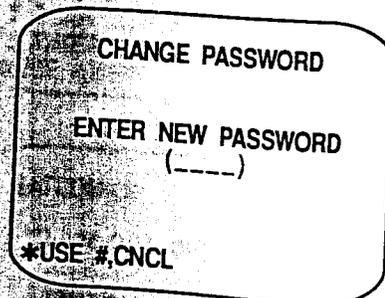
4. As soon you have entered the password you'll be asked to retype the new password.

```
CHANGE PASSWORD

RETYPE NEW PASSWORD
      (****)




*USE #,CNCL
```

5. After you have entered the password a second time, the word "SUCCESSFUL" will flash under the password.

```
CHANGE PASSWORD

RETYPE NEW PASSWORD
      (****)

    SUCCESSFUL


*USE #,CNCL
```

After a few seconds you will return to normal video.

5. FRONT PANEL

You control the brightness of the Front Panel Display with this option. At the MAIN MENU, the brightness is shown in parenthesis beside **5 - FRONT PANEL**.

Press ⑤ to change the setting from **MED** to **BRT**.

Pressing ⑤ again will change the brightness from **BRT** to **DIM**, and so on.

```
       MAIN MENU
  1 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT PANEL    (MED)
  6 SCAN TYPE      (NORM)
  7 SCAN DISPLAY   (4)
  8 TIMER SET
 *USE #,VIEW       10:32AM
```

6. 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.

```
       MAIN MENU
  1 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT PANEL    (MED)
  6 SCAN TYPE      (NORM)
  7 SCAN DISPLAY   (4)
  8 TIMER SET
 *USE #,VIEW       10:32AM
```

If you press ⑥ at the **MAIN MENU**, you can change **SCAN TYPE** to **SKIP** or **SEEK**.

SQ590

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.

```
        MAIN  MENU
  1 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT  PANEL    (MED)
  6 SCAN TYPE       (SKIP)
  7 SCAN  DISPLAY   (4)
  8 TIMER SET
 *USE #,VIEW           10:32AM
```

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.*

In the **SEEK** mode, pressing (CH▲) or (CH▼) selects only channels
actively receiving signals to be displayed during normal operation.

```
        MAIN  MENU
  1 QUIKTUNE
  2 REPROGRAM SATELLITE
  3 LOCK/UNLOCK CHANNEL
  4 CHANGE PASSWORD
  5 FRONT  PANEL    (MED)
  6 SCAN TYPE       (SEEK)
  7 SCAN  DISPLAY   (4)
  8 TIMER SET
 *USE #,VIEW           10:32AM
```
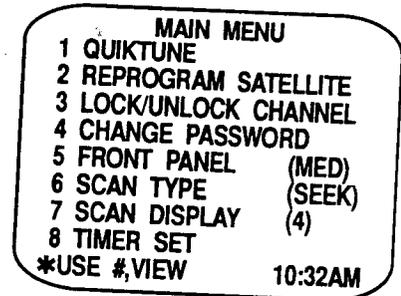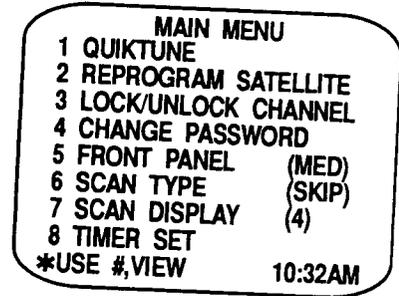
7. SCAN DISPLAY

This feature is used to set screen viewing to either four or nine picture
segments at once when scanning for active satellite channels. Active video
is displayed for 3 seconds in each segment. It then becomes a "still"
picture, and the channel number is displayed in the upper right corner of the
screen.

1. Press (7) at the Main Menu to change the scan display from four to
   nine segments or from nine to four segments as appropriate.

2. Press (SCAN) to start scanning for active channels.

   Note: *You can use the scan function anytime while viewing normal
   video without going through the Main Menu.*

If you select **(4)**, four picture segments appear on your screen.

```
  +---------+---------+
  |  CH 5   |  CH 6   |
  |         |         |
  +---------+---------+
  |  CH 7   |  CH 8   |
  |         |         |
  +---------+---------+
```
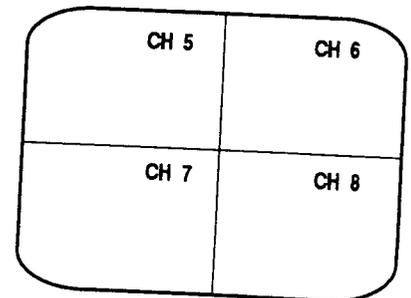
If you select (9), nine picture segments appear on your screen.

CH 5	CH 6	CH 7
CH 8	CH 9	CH 10
CH 11	CH 12	CH 13

8. TIMER SET

This function is used to 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. Use this feature together with a VCR to set up timed recording of programs.

1. Press (8) 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        (-------)
   8 IPPV        (OFF)
 *USE ▲,▼,ENTR,CNCL,VIEW
```

2. Determine the movie or other event to be programmed. (See your satellite or IPPV viewing guide for information.)

3. Press (1) to enter the event number. (1) appears next to the item indicating the first event to be programmed in the Timer. If you are programming more than one event, use (CH▲) or (CH▼) to select the number for the next event. (**Note:** *The programming order does not matter as long as the events do not overlap.*)

```
            TIMER SET
 ►1 EVENT       (1)
   2 SAT         (--)
   3 CH          (--)
   4 START       (--:--)
   5 LENGTH      (---)MINUTE
   6 DAY         (--------)
   7 WEEK        (-------)
   8 IPPV        (OFF)
 *USE ▲,▼,ENTR,CNCL,VIEW
```

4. Press (2) to enter the satellite for the desired event. Use (CH▲) or (CH▼) to scroll through the list of programmed satellites. (**Note:** *If the satellite is not on the list, you will need to program that satellite before setting the timer. For information, see " Program Satellite" in the Installation Menu Functions section.*)

```
            TIMER SET
   1 EVENT       (1)
 ►2 SAT         (G5)
   3 CH          (--)
   4 START       (--:--)
   5 LENGTH      (---)MINUTE
   6 DAY         (--------)
   7 WEEK        (-------)
   8 IPPV        (OFF)
 *USE ▲,▼,ENTR,CNCL,VIEW
```

5. Press (3) to enter the channel number for the event. Use (CH▲) or (CH▼) to select the correct number.

```
        TIMER  SET
    1  EVENT      (1)
    2  SAT        (G5)
  ▶ 3  CH         (03)
    4  START      (--:--)
    5  LENGTH     (---)MINUTE
    6  DAY        (-------)
    7  WEEK       (-------)
    8  IPPV       (OFF)
  *USE ▲,▼,ENTR,CNCL,VIEW
```

6. Press (4) to enter the starting time for the event. Use the (CH▲) or (CH▼) key to set the start time. The AM and PM indicator alternates each time the hour digits show 12.

```
        TIMER  SET
    1  EVENT      (1)
    2  SAT        (G5)
    3  CH         (03)
  ▶ 4  START      (12:30)(AM)
    5  LENGTH     (---)MINUTE
    6  DAY        (-------)
    7  WEEK       (-------)
    8  IPPV       (OFF)
  *USE ▲,▼,ENTR,CNCL,VIEW
```

Note: *If you are programming an "IPPV" event, please read "Setting Up the IPPV Option" (following this section) BEFORE setting the START TIME for the event.*

7. Press (5) to enter the length of the event. Use (CH▲) or (CH▼) to enter the total running time (in **MINUTES**) for the event.

```
        TIMER  SET
    1  EVENT      (1)
    2  SAT        (G5)
    3  CH         (03)
    4  START      (1:30)(PM)
  ▶ 5  LENGTH     (030)MINUTE
    6  DAY        (-------)
    7  WEEK       (-------)
    8  IPPV       (OFF)
  *USE ▲,▼,ENTR,CNCL,VIEW
```

8. Press (6) to enter the day of the event. Use (CH▲) or (CH▼) to select a day of the week for the event. The **DAY** options include: **SUN, MON, TUE, WED, THU, FRI, SAT, MON-FRI, DAILY.**

```
        TIMER  SET
    1  EVENT      (1)
    2  SAT        (G5)
    3  CH         (03)
    4  START      (1:30)(PM)
    5  LENGTH     (030)MINUTE
  ▶ 6  DAY        (DAILY)
    7  WEEK       (-------)
    8  IPPV       (OFF)
  *USE ▲,▼,ENTR,CNCL,VIEW
```

9. Press (7) to select **WEEK**, and use (CH▲) or (CH▼) to enter the week of the event. The **WEEK** options include: **WEEK1, WEEK2, WEEKLY.**

To program an event during the first week, use thw **WEEK1** option. If the event is on during the next week, use the **WEEK2** option. If the event is on both weeks, use the **WEEKLY** option.

```
        TIMER  SET
    1  EVENT      (1)
    2  SAT        (G5)
    3  CH         (03)
    4  START      (1:30)(PM)
    5  LENGTH     (030)MINUTE
    6  DAY        (DAILY)
  ▶ 7  WEEK       (WEEK 1)
    8  IPPV       (OFF)
  *USE ▲,▼,ENTR,CNCL,VIEW
```

10. 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 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: For non-IPPV events, 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.

WARNING Screen

About 25 seconds before show time, the Timer **WARNING** screen appears, announcing that the event is about to begin, and asks you for a confirmation.

```
        WARNING

 THE TIMER IS ABOUT
 TO START. PRESS
 (ENTER) TO CONTINUE
 OR PRESS (CNCL) TO
 CANCEL THE EVENT.

*USE ENTER,CNCL
```

To continue with the event, press (ENTER). To cancel the event, press (CNCL), and you will remain on the current satellite and channel.

> **Note:** *If no button is pressed, the Event continues as normal.*

Setting Up the IPPV Option

> **Note:** *THE FOLLOWING INFORMATION DEALS WITH IPPV (INSTANT-PAY-PER-VIEW) PROGRAMMING. IF YOU ARE NOT SETTING THE TIMER FOR A PAY-PER-VIEW EVENT, SKIP THIS SECTION.*

Item 8 on the **TIMER SET** screen, **IPPV**, refers to the Instant-Pay-Per-View option. When set to ON, this option enables you to automatically purchase an IPPV program (that is, a movie or other pay event) for viewing at a specific time. The convenience is that you don't have to be home, waiting just before the event starts to make your purchase. This is especially convenient when you are away from home and using a VCR to record an IPPV event for viewing later. To enable instant-pay-per-view (IPPV) programming and automatic purchase of an event, enter the program information for the first seven items on the **TIMER SET** screen, as previously described. Then follow these steps:

1. Press (8) while in the **TIMER SET** menu to select **IPPV**.

```
 IPPV PASSWORD MENU
 PLEASE ENTER THE IPPV
 PASSWORD AND PRESS
 (ENTER) TO CONTINUE
 OR (CNCL) TO EXIT.

 PASSWORD  (_____)

*USE #,CNCL,ENTER
```

2. Use the numeric keys to enter your IPPV purchase password.

   Note: *This password must be the same as your **VideoCipher** Purchase Password. (See the VCRS Module Operating section for details.)*

3. After the password has been keyed in, press ⒺⓃⓉⒺⓇ to continue, and you will return to the **TIMER SET** screen. **(ON)** now appears beside the IPPV item. **(Note:** If no purchase password is used, simply press ⒺⓃⓉⒺⓇ to continue.)

4. At the **TIMER SET** screen, press ⒺⓃⓉⒺⓇ to store the program settings (or ⒸⓃⒸⓁ to erase the changes).

Now, you are all set up for IPPV and automatic program purchase.

   Note: *Like normal event programming, the Timer **WARNING** screen appears shortly before the IPPV event takes place, confirming that the program is about to start. Press ⒺⓃⓉⒺⓇ (or do nothing) to continue with the event. To cancel the event, press ⒸⓃⒸⓁ and you will not be billed for the event.*

IMPORTANT!

The IPPV Timer option is designed to handle the majority of IPPV purchases; however, some IPPV services are handled in a unique way requiring that the Timer be programmed slightly different. Special care must be taken to ensure that the **preceding** event is not purchased accidentally.

For Action Pay Per View, Cable Video Store, Viewer's Choice, TVN, and Request TV, the Timer can be programmed normally.

For other services, the **START TIME** on the **TIMER SET** menu should be set a few minutes *past* the scheduled start time to ensure that the correct event is purchased. For example, if the IPPV event starts at 2:00 pm, enter the **START TIME** as 2:02 pm.

BILLING DISCLAIMER

IF AN INCORRECT EVENT IS PURCHASED DUE TO THIS IPPV FEATURE, UNIDEN ACCEPTS NO RESPONSIBILITY FOR THE ADDITIONAL BILLING TO YOUR ACCOUNT. IF YOU HAVE A DISPUTE, PLEASE CONTACT YOUR PAY SUBSCRIPTION SERVICE.

Storing Favorite Channels

FAVORITE STORE is used to add your favorite satellite channels and satellite radio stations to the **PERSONAL FAVORITES** category. You can use the remote control keys to enter a name up to 12 characters long for your favorite channels. The "Available Characters List" in the Appendix of this Guide shows characters available for naming your favorite channels.

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 **SQ**590" sections.)

When all adjustments have been made:

1. 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.*

```
╭─────────────────────────────╮
│      FAVORITE  STORE        │
│ ► PERSONAL                  │
│   MOVIES                    │
│   PAY-PER-VIEW  (PPV)       │
│   SPORTS                    │
│   NEWS                      │
│   SUPERSTATIONS             │
│   MUSIC                     │
│   SPECIAL  INTEREST         │
│ *USE #,◄►,▲▼, CALL , CNCL   │
╰─────────────────────────────╯
```
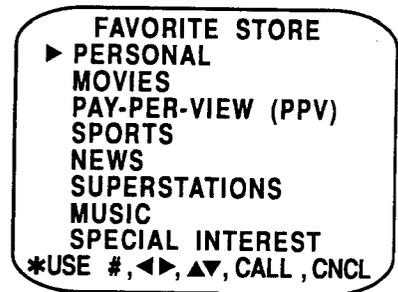
You will see the **FAVORITE CALL** menu at first. Then the menu name will change from **FAVORITE CALL** to **FAVORITE STORE**. Be sure the cursor is at **PERSONAL**. (If not, use (CH▲) or (CH▼) to move the cursor.)

2. Press (CALL) to display the **PERSONAL STORE** screen.

```
╭─────────────────────────────╮
│ PERSONAL        STORE       │
│ ►0 G1-16 Z  TV              │
│  1 F2-23 CMN                │
│  2 G5- 3 TBN                │
│  3 F4-21 DISCOVERY          │
│  4 **-** ************       │
│  5 **-** ************       │
│  6 **-** ************       │
│  7 **-** ************       │
│ *USE ▲,▼,◄,► ,SETUP,CNCL    │
╰─────────────────────────────╯
```
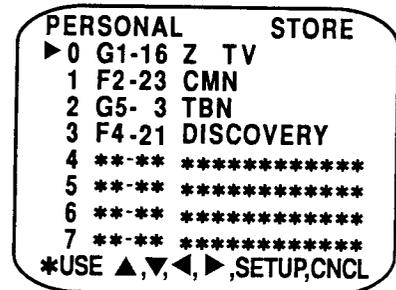
3. Use (CH▲) and (CH▼) to move to the first blank row of ************.

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

4. Press (SETUP). The satellite and channel number are automatically entered, and the typing cursor (_) is at the first character position of the description.
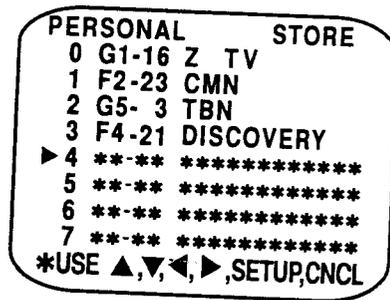
```
┌─────────────────────────┐
│ PERSONAL        STORE   │
│   0  G1-16  Z  TV       │
│   1  F2-23  CMN         │
│   2  G5- 3  TBN         │
│   3  F4-21  DISCOVERY   │
│ ▶ 4  **-**  *********** │
│   5  **-**  *********** │
│   6  **-**  *********** │
│   7  **-**  *********** │
│ *USE ▲,▼,◀,▶,SETUP,CNCL │
└─────────────────────────┘
```

5. Use (CH▲) or (CH▼) to select the first character (letter or number) of the name you want to use for this satellite and channel. (See the "Available Character List" in the Appendix.) Then use (◀E) and (W▶) to move the cursor to the next position and enter the next character.

```
┌─────────────────────────┐
│ PERSONAL        STORE   │
│   0  G1-16  Z  TV       │
│   1  F2-23  CMN         │
│   2  G5- 3  TBN         │
│   3  F4-21  DISCOVERY   │
│ ▶ 4  G5- 1  _           │
│   5  **-**  *********** │
│   6  **-**  *********** │
│   7  **-**  *********** │
│ *USE ▲,▼,◀,▶,ENTER,CNCL │
└─────────────────────────┘
```
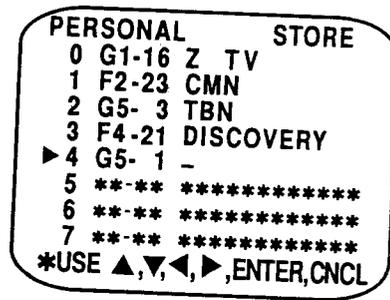
6. When all characters have been entered, press (ENTER) to store the new name change, or press (CNCL) to cancel the changes.

```
┌─────────────────────────┐
│ PERSONAL        STORE   │
│   0  G1-16  Z  TV       │
│   1  F2-23  CMN         │
│   2  G5- 3  TBN         │
│   3  F4-21  DISCOVERY   │
│ ▶ 4  G5- 1  DISNEY      │
│   5  **-**  *********** │
│   6  **-**  *********** │
│   7  **-**  *********** │
│ *USE ▲,▼,◀,▶,ENTER,CNCL │
└─────────────────────────┘
```
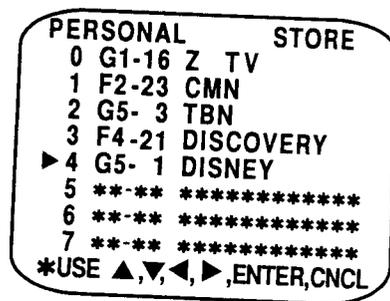
7. When you are finished, press (VIEW) to exit the **FAVORITE STORE** mode.

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 Favorite

You can easily replace a stored item with a new selection. Use the procedures for adding a Personal Favorite.

1. In the **FAVORITE STORE** screen, use (CH▲) or (CH▼) to position the cursor at the entry type you want to change: **PERSONAL , MOVIES, PAY-PER-VIEW, SPORTS,** etc.

```
┌───────────────────────────┐
│     FAVORITE STORE        │
│ ▶ PERSONAL                │
│   MOVIES                  │
│   PAY-PER-VIEW (PPV)      │
│   SPORTS                  │
│   NEWS                    │
│   SUPERSTATIONS           │
│   MUSIC                   │
│   SPECIAL INTEREST        │
│ *USE #,◀▶,▲▼,CALL ,CNCL   │
└───────────────────────────┘
```

SQ590
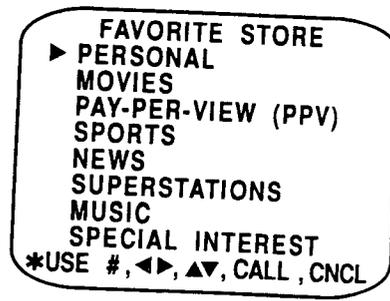
2. Press (CALL).

> **Note:** *If you know the number of the stored item you are replacing (the number in the left column on the PERSONAL 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., 003 for entry 3, or 021 for entry 21, etc.).*

3. 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        STORE
   0  G1-16  Z  TV
 ►1  F2-23  CMN
   2  G5- 3  TBN
   3  F4-21  DISCOVERY
   4  G5- 1  DISNEY
   5  **-**  ************
   6  **-**  ************
   7  **-**  ************
 *USE ▲,▼,◄,►,ENTER,CNCL
```
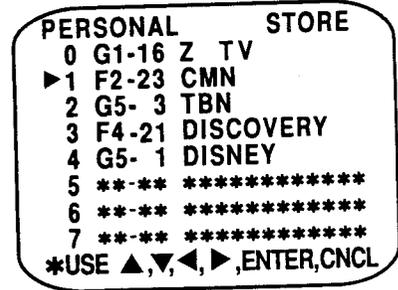
4. Press (SETUP). The satellite and channel will change to the new entry, and the first character of the description will begin blinking.
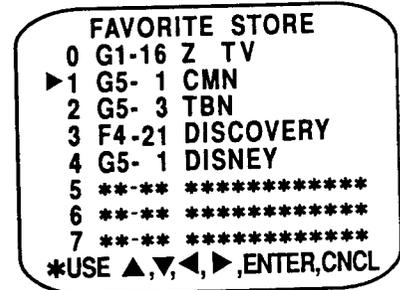
```
   FAVORITE  STORE
   0  G1-16  Z  TV
 ►1  G5- 1  CMN
   2  G5- 3  TBN
   3  F4-21  DISCOVERY
   4  G5- 1  DISNEY
   5  **-**  ************
   6  **-**  ************
   7  **-**  ************
 *USE ▲,▼,◄,►,ENTER,CNCL
```

5. Use (CH▲) or (CH▼) to select 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.

```
   FAVORITE  STORE
   0  G1-16  Z  TV
 ►1  G5- 1  DISNEY
   2  G5- 3  TBN
   3  F4-21  DISCOVERY
   4  G5- 1  DISNEY
   5  **-**  ************
   6  **-**  ************
   7  **-**  ************
 *USE ▲,▼,◄,►,SETUP,CNCL
```
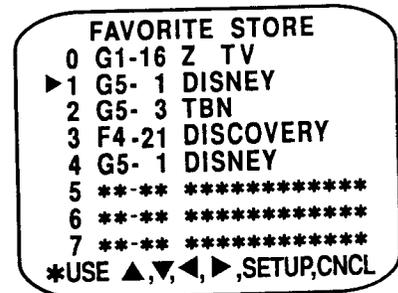
6. When all characters have been changed, press (ENTER) to store the new name change, or press (CNCL) to cancel the changes.

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

To change any other entry, repeat the above procedures.

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® scrambled channel. At this time the VCRS indicator should be illuminated on the front panel of your **SQ590.**

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 Owner's 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.
4) use the Instant Pay-Per-View features of you 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).

```
    Available Services Menu

 1.  Unit Setup
 2.  Personal Messages
 3.  VideoCipher Audio/Video
 4.  System Information Service




          (Press 1-4, or VIEW)
```

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 **SQ590** 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 **SQ590** rear panel. You can connect both the C-band and Ku-band directly to the receiver without using an external switch.

C-BAND LNB

Ku-BAND LNB

SERVO MOTOR WIRES

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.
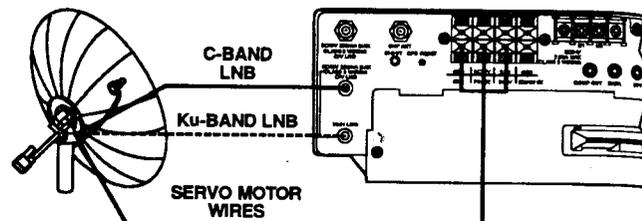
   White to Pulse.

   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 (TUNE), then (3).

4. If the picture is recognizable but snowy, press (TUNE), then (2)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 **SQ590** 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 (TUNE) to display the **SKEW** screen. Then use (CH▲) and (CH▼) to adjust for the best reception.

   Note: *To set the RF Configuration, refer to RF CONFIGURE under Installation Menu Functions.*

## Single Feed using LNBF (C-band or Ku-band)

LNBFs are a new type of feedhorn that allows polarity switching without the three control wires typically associated with the standard feedhorn. An LNBF swicthes polarity by changing the DC voltage on the coaxial cable. Long cable runs may decrease the switching voltage causing polarity problems. LNBFs should be limited to about 300 feet.

1. Use the cable recommended in the Appendix to connect the LNBF directly to the corresponding input on the **SQ590** rear panel. You can connect both the C-band and Ku-band directly to the receiver without using an external switch.

2. 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 (TUNE), then (3).

3. If the picture is recognizable but snowy, the feedhorn should be rotated manually on the antenna until the picture is clear.

4. 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 **SQ590** receives a clear picture.

5. When you get the best picture, tighten the feedhorn bolts until you cannot rotate the feedhorn.

Dual Feed (C-band or Ku-band)

If you are connecting two LNBs and a dual feed polarizer to provide a dual feed, the **SQ590** 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 **SQ590**.
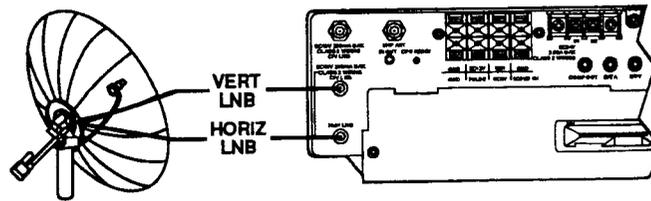
   Note: *To set the RF Configuration, refer to RF CONFIGURE in Installation Menu Functions.*

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: a dual V/H 4-way splitter such as 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.
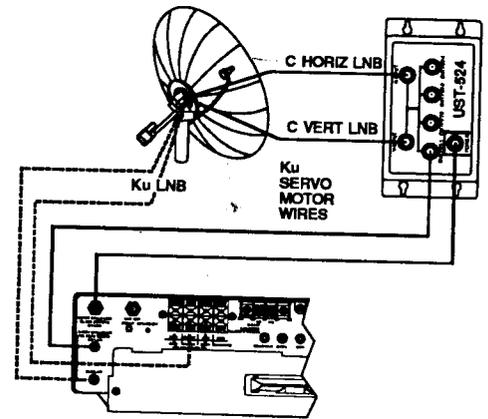
Note: *To set the RF Configuration, refer to RF CONFIGURE in Installation Menu Functions.*

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 **SQ590** 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.
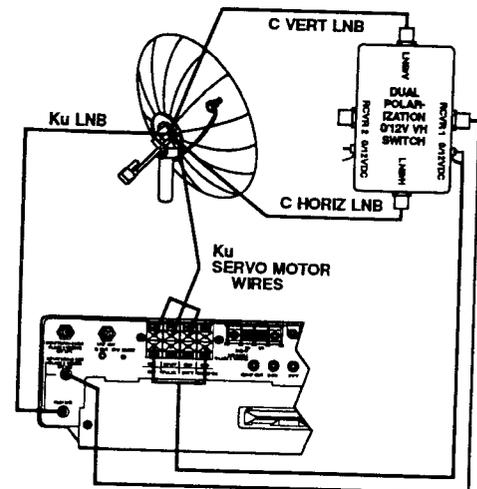
Note: *To set the RF Configuration, refer to RF CONFIGURE in Installation Menu Functions.*

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 DC 6V.**
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.
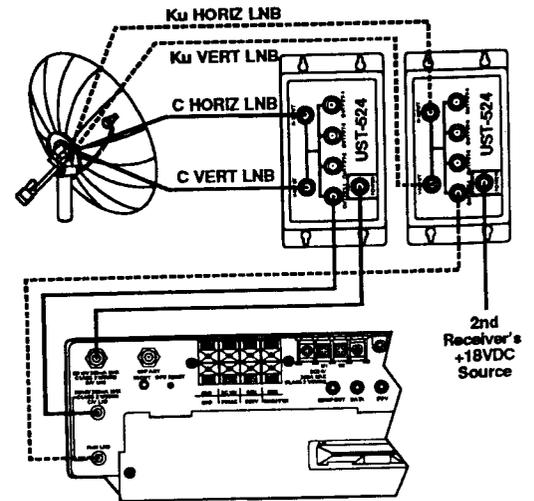
3. Use coaxial cable to connect the Power connector of the UST-524 to the C-band DC18V source on the back of the receiver. This provides power to the UST-524 switch.

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

Note: To set the RF Configuration, refer to RF CONFIGURE in Installation Menu Functions.

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.
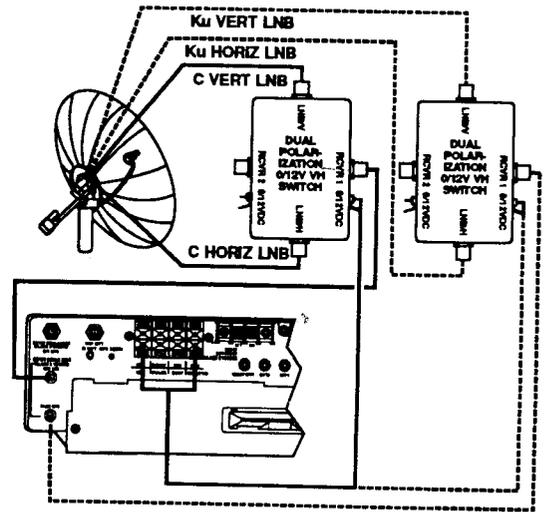
2. Connect the output of the V/H switch to the corresponding band input on the back of the receiver.

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.

    Note: *To set the RF Configuration, refer to RF CONFIGURE in Installation Menu Functions.*

    Warning! *Dual switches may draw more current than provided by the* **SQ**590. *An external power supply may be required, or two LNBs may be powered through a second receiver.*

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Multiple Receiver Installation

The **SQ**590 is specifically designed to operate in a variety of satellite system configurations. The ideal multiple receiver installation uses the **SQ**590 for the master. When you use a receiver that does not have dual inputs, you must use external switches. You wire both the C-band and Ku-band identically for multiple receiver installation.

Note: *The following diagram illustrates any of the configurations on the next page.*
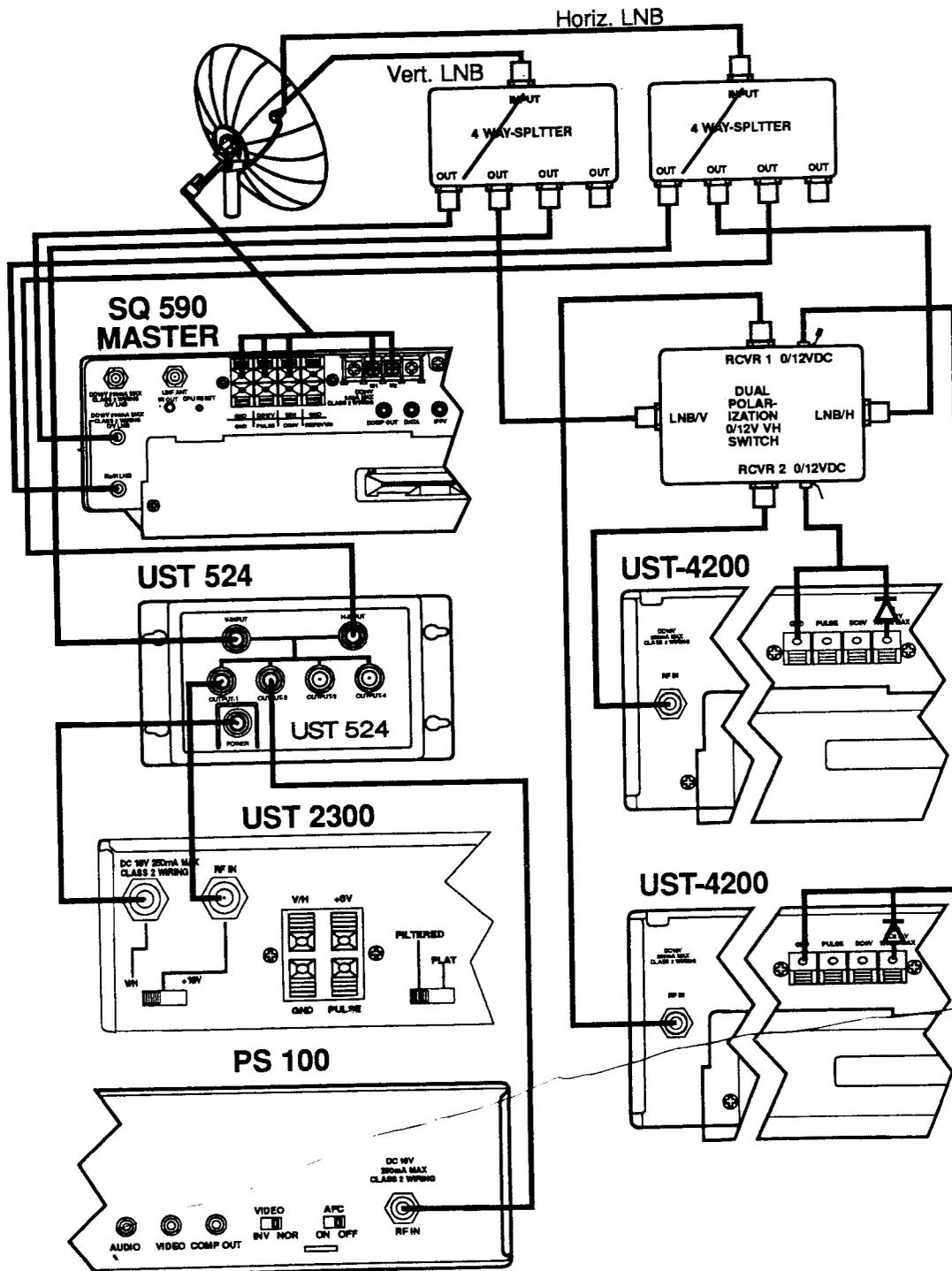
Dual C-band Using UST-524 Compatible Receivers as Slaves

The UST-524 provides switchable signals for a master receiver and up to three slave receivers.

1. Use coaxial cable to connect the power connector of the UST-524 to the C-band 18 VDC source on the back of the master **SQ**590 or the slave receiver. This coaxial line provides +18 VDC to the switch, the horizontal LNB, and the vertical LNB.

2. Connect the horizontal and vertical LNBs to their corresponding inputs on the UST-524.

3. Connect the signal outputs of the UST-524 to the C-band input on the back of each slave receiver.

Dual Feed Using Other 0/12 Volt V/H Switches

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 **SQ**590 is designed to use the more common 0/12 Volt V/H switch.

Other switches have a horizontal and vertical LNB input, two IF outputs, and a controller for each IF output.

1. Connect the signal and controller lines from the switch to the appropriate connnection on the back of each receiver.

2. Follow the manufacturer's instructions for each installation.

Actuator Installation

You can use an 18 inch acme or ball 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.

Note: The SQ590 *has been designed for use with the following types of actuator sensors:*

Hall effect
Reed
Optical
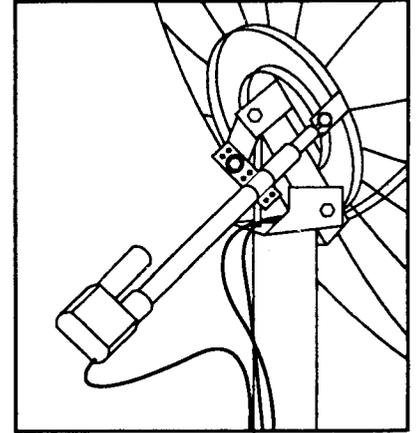
Assembly

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 positioned up. 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.

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 M1 and M2 wires only on the back of the SQ590. 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.*

Actuator Connections

Connect the actuator to the **SQ**590 as follows:
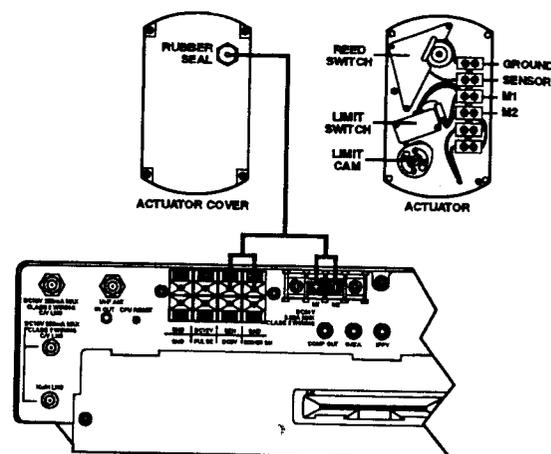
1. Remove the back cover of the actuator motor.

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 **SQ**590.

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 below 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

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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 **SQ**590 has 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.

VCR   PRIMARY TV   SECOND TV

OPTIONAL
2 WAY-
SPLITTER

UHF
REMOTE
ANTENNA

ANTENNA

CABLE

ANTENNA/CABLE
SWITCH

STEREO   MONITOR
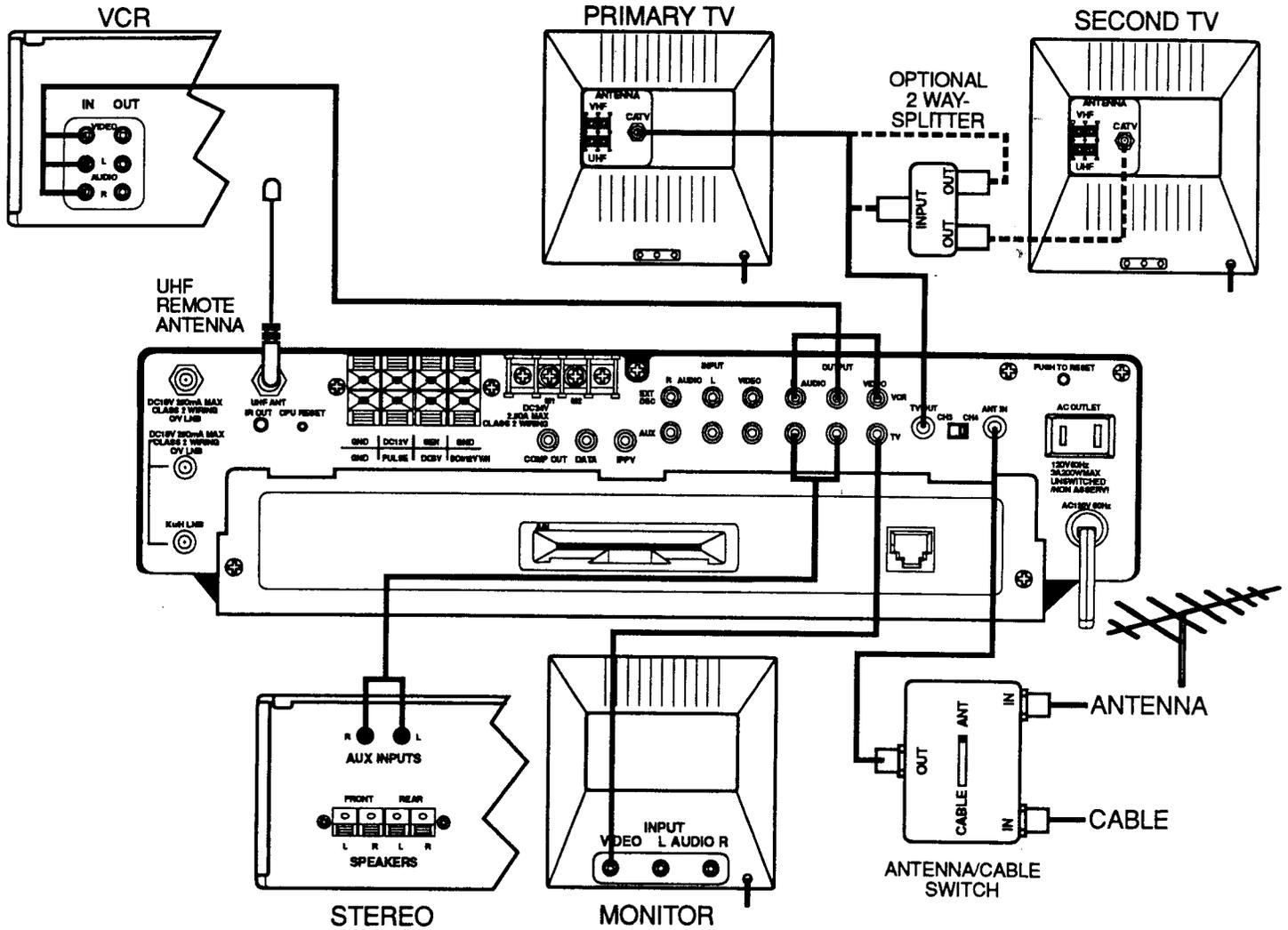
Connecting the Antennas

Note: *The TVRO antenna system should be connected by a qualified installer.*

Connect the broadcast VHF antenna or cable decoder output to the **ANT IN** coaxial connector on the back of the receiver.
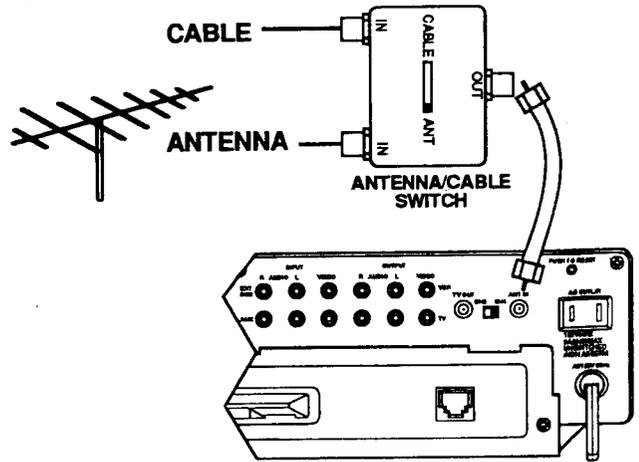
Note: *Additional grounding may be required to avoid electrical damage caused by lightning.*

Note: *If the broadcast antenna cable is not coaxial cable, you will need to attach an adaptor with an F-type connector.*

Connect the UHF antenna for the **SQ590r** remote control to **UHF ANT** connector on the back of the **SQ590**.
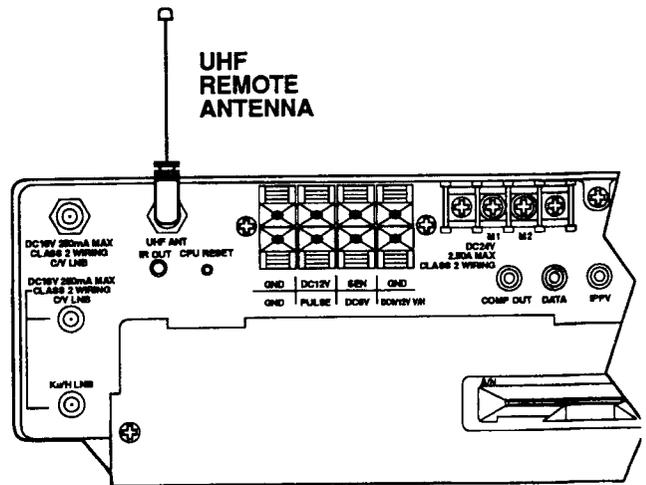
Connecting a TV Set

TV Set with Separate Audio And Video Inputs

Connect RCA cables from the **TV OUTPUT** audio and video RCA jacks on the **SQ590** to the audio and video inputs on the TV set.
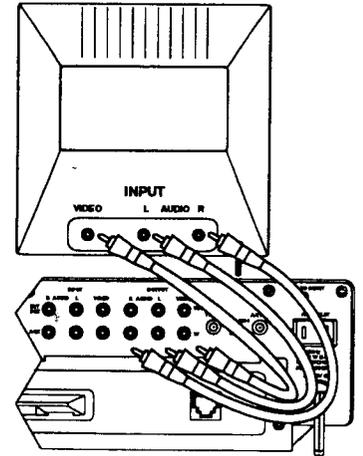
TV Set with Single Coaxial Input

Connect a coaxial cable from the **TV OUT** coaxial connector on the **SQ590** to the VHF input on the back of the TV.
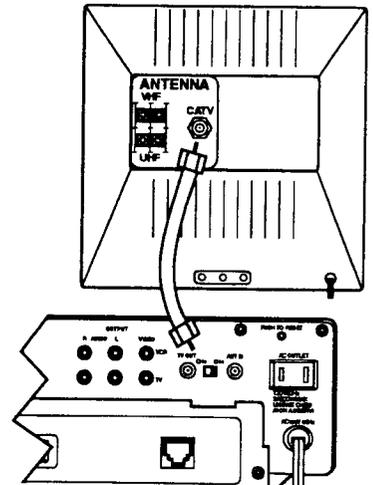
TV Set with Screw Terminals

If the TV set does not have a coaxial antenna connector, you will need an adaptor that matches the impedance (75/300Ω) of the **SQ590 TV OUT** coaxial connector.

Connect a coaxial cable from the **TV OUT** coaxial connector on the **SQ590** 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.
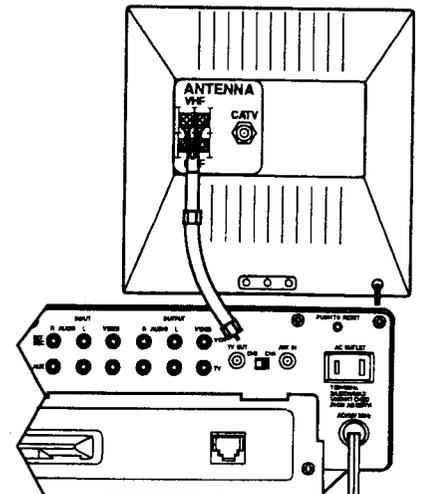
Tuning the TV Set

Tune the TV set to channel 3 or 4, whichever corresponds to the setting on the 3/4 switch on the back of the **SQ590**. If you are unable to get good reception on one channel, change the setting on the 3/4 switch of the **SQ590** 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 **SQ590**.

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 **SQ590** receiver.

Connect an RCA cable from the **VIDEO OUTPUT (TV)** connection on the back panel of the **SQ590** to the **VIDEO** input of the monitor.
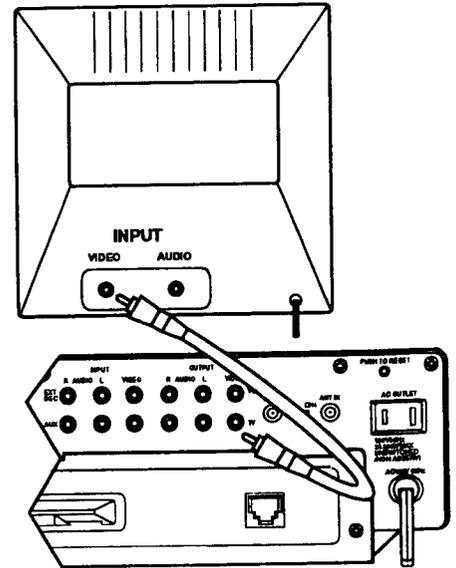
For a monitor with mono sound, connect an RCA cable from the Left **AUDIO OUTPUT (TV)** connection on the back panel of the **SQ590** to the **AUDIO** input of the monitor.
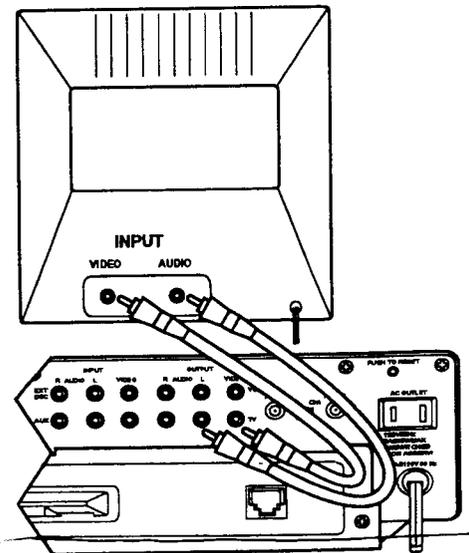
For a monitor with stereo sound, connect an RCA cable from the Left **AUDIO OUTPUT (TV)** connection on the back panel of the **SQ590** to the Left **AUDIO** input of the monitor. Connect an RCA cable from the Right **AUDIO OUTPUT (TV)** connection on the back panel of the **SQ590** to the Right **AUDIO** input of the monitor.
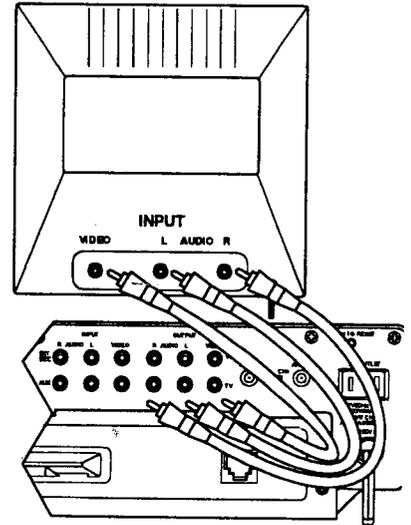
Connecting the VCR

Connect RCA cables from the **VCR OUTPUT** audio and video RCA jacks on the **SQ590** to the audio and video inputs on the VCR

— OR —

Connect the VCR to the **TV OUT** output on the back of the **SQ590** using a coaxial cable.
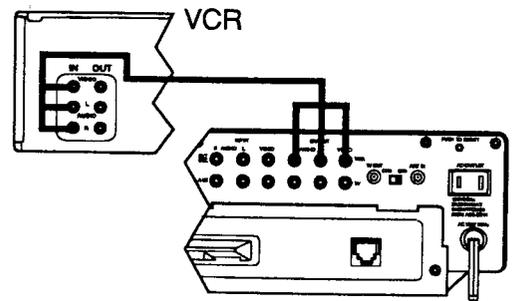
Connecting Stereo Audio Equipment

To attain the full dynamic sound of satellite television, connect the left and right TV audio outputs of the **SQ590** 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.
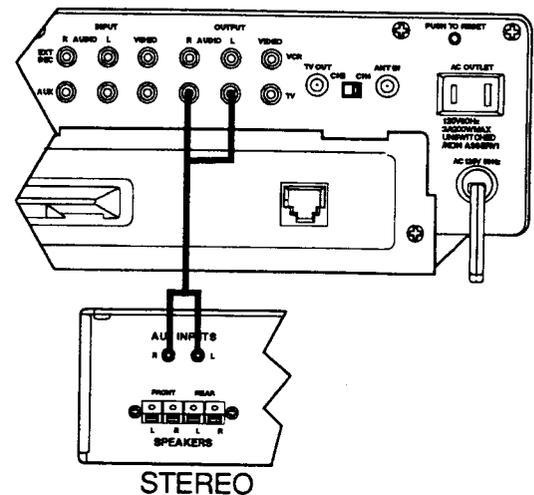
## Connecting the Auxiliary Source

Connect the Video Out and Audio Out from the Auxiliary Source to the AUX Audio and Video Inputs on the rear of the receiver. Auxiliary sources can include a second VCR, a VideoDisc player, a TV Game system or a video camera.

VIDEO DISK
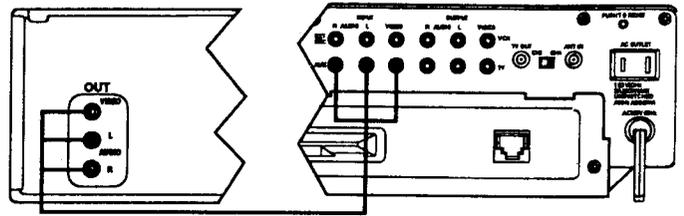
Connecting the External Decoder

Connect the Video Out and Audio Out from the Decoder Source to the EXT DEC Audio and Video Inputs on the rear of the recevier. The external decoder signal will now pass through the **SQ**590 to your TV. This feature eliminates the need for connecting an external decoder directly to the TV.
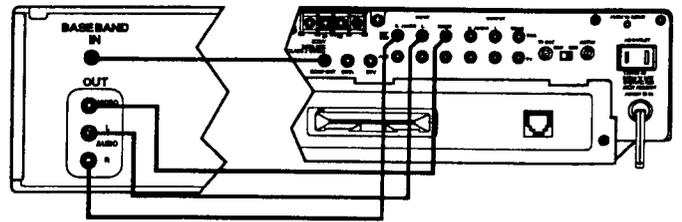
EXTERNAL DECODER

Installation Menu Functions

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

Note: *The Installation screens are designated by the color green. This is used to indicate at a glance the function of the menus.*

Use the **INSTALLATION MENU** to:

1. Program Satellites.
2. Set the RF Configuration of Receivers and Switches.
3. Set Global Shift.
4. Set the Electronic Dish Limits.
5. Set the Defaults for Direct Satellite Access.
6. Perform a Master Reset.
7. Set the Clock.

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 SATELLITES
    2 RF CONFIGURE
    3 GLOBAL SHIFT
    4 SET DISH LIMITS
    5 DIRECT SAT KEY SET
    6 MASTER RESET
    7 CLOCK SET
   *USE #,VIEW
```

1. PROGRAM SATELLITES

At the **INSTALLATION MENU**, press (1) to move to the **PROGRAM SATELLITES** menu. The Program Satellites menu consists of five programming options:

```
      PROGRAM SATELLITES
    1 ADD/UPDATE SATELLITES
    2 PROGRAM A SATELLITE
    3 CLARKARK
    4 DELETE SATELLITE
    5 RESYNC SATELLITES


   *USE #,MENU
```

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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
C5  AURORA-2    139.0  N
F1  SATCOM-C1   137.0  I
F4  SATCOM-C4   135.0  N
G1  GALAXY-1    133.0  I
F3  SATCOM-C3   131.0  N
A1  ASC-1       128.0  I
G5  GALAXY-5    125.0  I
*USE ▲,▼,◄,►,CALL,MENU
```

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.

Program a Satellite

Press (2) while in the Program Satellites menu to move to the SATELLITE STORE menu.

```
SATELLITE STORE
►■T3  TELSTAR-3
 ■M2  MORELOS-2
 ■M1  MORELOS-1
 ■E1  ANIK-E1
 ■E2  ANIK-E2
 ■S4  SPACENET-4
  G4  GALAXY-4
*USE ▲,▼,◄,►,CALL,MENU
```

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

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

```
┌─────────────────────────┐
│    SATELLITE STORE       │
│ ■ T3 TELSTAR-3           │
│ ■ M2 MORELOS-2           │
│ ■ M1 MORELOS-1           │
│ ■ E1 ANIK-E1             │
│ ■ E2 ANIK-E2             │
│ ■ S4 SPACENET-4          │
│ ▶  G4 GALAXY-4           │
│ *USE ▲,▼,◀,▶,CALL,MENU   │
└─────────────────────────┘
```

Press (CALL) to start looking for that satellite. The Program Satellite screen will appear. Use (◀E), (W▶), (CH▲), (CH▼), and the numeric keys to locate and tune in the satellite.

> **Note**: *If you select a satellite that has already been programmed, a warning appears asking if the satellite should be reprogrammed.*

```
┌─────────────────────────┐
│ GALAXY-4         G4- 18  │
│       SKEW (+45)         │
│     POLARITY (VERT)      │
│                          │
│   SIG ■■■■■■■■──          │
│  PROGRAM SATELLITE       │
│                          │
│     POSITION (4973)      │
│ E──────────────L──W      │
│ *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 and all satellite settings are current, go to the **CLARKARK** menu.

```
┌─────────────────────────┐
│       CLARKARK           │
│                          │
│ 1 FIRST SAT      (**)    │
│ 2 SECOND SAT     (**)    │
│ 3 START CLARKARK         │
│                          │
│                          │
│ *USE #,▲,▼,MENU          │
└─────────────────────────┘
```

FIRST SAT and **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 S2 and the second satellite is F2, then the direction is East to West. However, if the first satellite is C1, and the second satellite is C4, then the direction is West to East.

START CLARKARK starts automatically programming the satellites.

SQ590

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 ADD/UPDATE SATELLITES    │
│  2 PROGRAM A SATELLITE      │
│  3 CLARKARK                 │
│  4 DELETE SATELLITE         │
│  5 RESYNC SATELLITES        │
│                             │
│                             │
│ *USE #,MENU                 │
└─────────────────────────────┘
```

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.

```
┌─────────────────────────────┐
│ GALAXY-5            G5-18    │
│   ARE YOU SURE YOU          │
│   WANT TO DELETE            │
│   THIS SATELLITE?           │
│    (ENTER) FOR YES          │
│    (CNCL) FOR NO            │
│                             │
│ *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 SATELLITE       │
│        AROUND               │
│                             │
│   SAT NAME (G1)             │
│                             │
│                             │
│                             │
│ *USE ▲,▼,ENTER,CNCL         │
└─────────────────────────────┘
```

Use ⬚CH▲⬚ and ⬚CH▼⬚ to select the key satellite to realign with. Then press ⬚ENTER⬚ to resync. Afterwards, the word "SUCCESSFUL" will flash on the screen, and you will return to view mode.

UNIDEN SQ SERIES

2. RF CONFIGURE

Press ⟨ 2 ⟩ at the **INSTALLATION MENU** to display the **RF CONFIGURE** menu.

Press the appropriate key to change the setting in each of the items. The selections appear in this order:

1 C BAND: (SINGLE), (DUAL), (NO)
2 Ku BAND: (NO), (SINGLE), (DUAL),
3 C V/H SW: (EXT), (INT)
4 C V/H TYPE: (STD), (524), (LNBF)
5 V/H SW: (EXT), (INT)
6 KU V/H TYPE: (STD), (524), (LNBF)

> **Note:** *Item 4 appears only when* **C V/H SW** *is set to* **(EXT)**. *If Ku-band is set to* **(DUAL)**, *items 5 and 6 will appear.*

This example shows a receiver configured for the following:

Dual C-band and Single Ku-band feed using an external UST-524 switch.

```
    RF  CONFIGURE

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


*USE #,CNCL
```
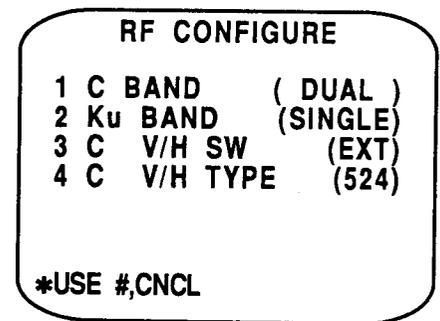
The steps for configuring the receiver in this manner are:

1. Press and hold ⟨MENU⟩ for at least four seconds to display the **INSTALLATION MENU**.

2. Press ⟨ 2 ⟩ to display the **RF CONFIGURE** menu.

3. Press ⟨ 1 ⟩ to set **C BAND** to **(DUAL)**.

4. Press ⟨ 2 ⟩ to set **Ku BAND** to **(SINGLE)**.

5. Leave **C V/H** set to **(EXT)**, since the UST-524 is an external switch.

6. Press ⟨ 4 ⟩ to set **V/H SW** to **(524.)**

7. Press ⟨MENU⟩ to store the configuration and return to the **INSTALLATION MENU**.

3. GLOBAL SHIFT

Global Shift is used to adjust the frequency of any or all of the LNBs connected to your receiver, depending upon the RF Configuration. This is used to compensate for any frequency drift in the LNB electronics.

Press ③ at the **INSTALLATION MENU** to display the **GLOBAL SHIFT** screen. Then press the number of the LNB to be adjusted.

Use (CH▲) and (CH▼) to adjust the frequency in 0.25 MHz steps. 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 #,▲,▼,MENU
```

4. DISH LIMITS

Use (◄ E) to move the dish to the East limit. At the **PROGRAM SATELLITES** menu, press ④ 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 (4973)

 *USE #,MENU
```

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 parentheses next to **EAST LIMIT**.

```
        DISH LIMIT SET

 1 EAST  LIMIT   ( 4 9 7 3 )
 2 WEST  LIMIT   (****)
 3 CLEAR EAST  LIMIT
 4 CLEAR WEST  LIMIT

     DISH AT (4973)

 *USE #,MENU
```

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 (MENU) to exit this screen and save the changes.

5. DIRECT SAT KEY SET

Press ⟨ 5 ⟩ at the Installation Menu to set the default 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.)

```
DIRECT SAT KEY SET

GALAXY   G(5)


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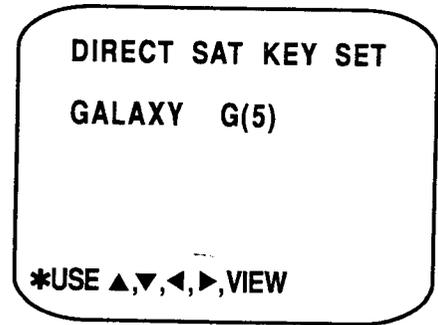
To program a remote key, use ⟨◄ E⟩ and ⟨W►⟩ to access the satellite you want. Then use ⟨CH▲⟩ and ⟨CH▼⟩ to select the abbreviation you want to use for that satellite. When you are finished, press ⟨MENU⟩ or ⟨VIEW⟩ to save the new settings and return to video. Be sure to write the satellite you have chosen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

6. MASTER RESET

Master Reset is used to erase all the receiver memory. Press ⟨ 6 ⟩ at the Installation Menu to display the **MASTER RESET** screen.

3573

```
MASTER RESET


ENTER PASSWORD
(***-)



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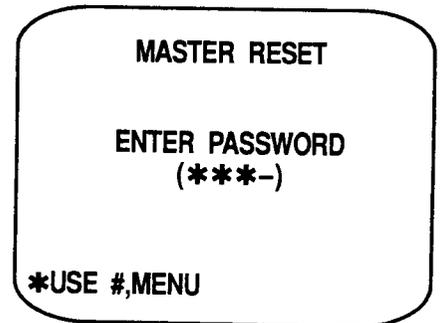
You must then enter a special password to continue. If you enter the wrong password, "**WRONG PASSWORD**" flashes. You then return to the **INSTALLATION MENU.**

7. 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.

1. Press ⟨ 7 ⟩ at the Installation Menu to display the Clock Set Screen.

```
CLOCK SET
►1 DAY:     (TUE)
  2 TIME:   ( 1:12)(PM)




*USE #,▲,▼,MENU
```
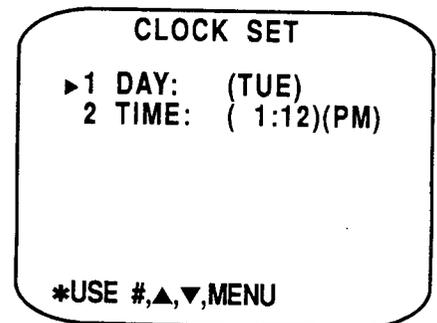
2. Press ⟨ 1 ⟩ to set the current DAY. Use ⟨CH▲⟩ or ⟨CH▼⟩ to scroll between the days.

3. Press ⟨ 2 ⟩ to set the current TIME. The hour digit will begin flashing.

```
┌─────────────────────────┐
│       CLOCK  SET        │
│                         │
│   1  DAY:    (TUE)      │
│  ▶2  TIME:  (   :12)(PM) │
│                         │
│                         │
│                         │
│  *USE #,▲,▼,MENU        │
└─────────────────────────┘
```
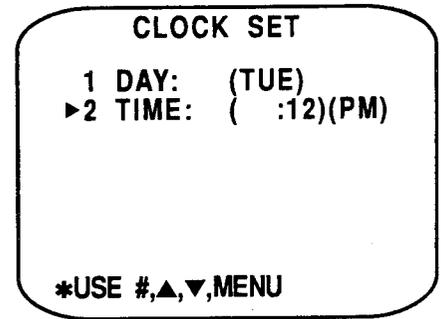
4. Use ⟨CH▲⟩ or ⟨CH▼⟩ to change the number. Then press ⟨W▶⟩ to set the minutes. The first digit of the minutes will begin flashing.

5. 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.

```
┌─────────────────────────┐
│       CLOCK  SET        │
│                         │
│   1  DAY:    (TUE)      │
│  ▶2  TIME:  ( 1: 2)(PM) │
│                         │
│                         │
│                         │
│  *USE #,▲,▼,MENU        │
└─────────────────────────┘
```
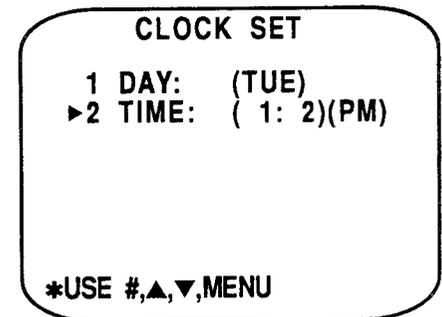
6. When you are finished, press ⟨MENU⟩ to store the time and return to the Installation Menu.

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 **SQ** 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 **SQ**590 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 **SQ**590 into another outlet, or isolated circuit. Check with your Uniden **SQ** 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 **SQ**590 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 **SQ** 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 VHF 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. Channel 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 the polarization. To adjust the Skew, press the TUNE button to display the tune options, then press 2 to select Skew. While in the Skew screen, use the CH▲ or CH▼ keys to adjust the polarization.

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 ±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 **SQ** 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. To change the polarity, press (TUNE) to display the Tuning screen. Press (3) to change the polarity.

2. If Ku-band, verify the Ku channel set.

Problem: Remote control will not work, works erratically.

1. Weak batteries. Replace with 2 AAA size batteries.

2. UHF Remote antenna is loose or not attached to the input on the rear panel.

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. Channel 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 bottom 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 **SQ** Dealer about a heavy duty antenna kit.

Specifications

IF Specifications

IF Frequency	0.95 - 1.45 GHz
IF Impedance	75Ω
2nd IF Bandwidth	27 MHz at 3 dB
2nd IF Frequency	479.5 MHz
Threshold	6 dB C/N minimum
Memory Capacity	160 Favorite Channels 56 Satellite Names 44 Pre-programmed, 12 extra
Memory Backup Time	3 years

Video Specifications

De-Emphasis	CCIR 405-1, 525 lines defeatable
Frequency Response	±1dB 30 Hz to 3.58 MHz ±3dB 3.58 MHz to 4.2 MHz
Output Level	1 volt p-p
Output Impedance	75Ω
Output Polarity	Negative sync.

Audio Specifications

Subcarrier Frequency	5 to 8.5 MHz selectable, 6.8 MHz preset
Frequency Response	50 Hz to 15 KHz, ±3dB typical
Harmonic Distortion	Less than 3%
Audio Separation	20 dB min.
Output Impedance	Less than 1KΩ
Output Level	3 dBs into 10KΩ load

RF Re-Modulator

Channels	3 or 4 switchable
RF Output	70 dBμ max.
RF Impedance	75Ω
Frequency Stability	Quartz controlled

Composite Out

Output Level	1V p-p
Frequency Response	±0.3 dB at 30 Hz - 3.58 MHz ±0.7 dB at 3.58 MHz - 4.2 MHz
DG	5% max.
DP	5° max.

Polarization Control

Interface	Servo motor Adjustment Continuously controllable from SKEW
Polarity	TELSTAR or GALAXY polarity switchable (V to H)

Power Specifications

Actuator	24 VDC 2.50 A max. circuit breaker controlled
Sensor	12 VDC 100 mA
Polarity Motor	6 VDC 250 mA max.
Main Unit	120 VAC 140 W circuit breaker controlled

Dimensions

Receiver	14-7/8"W x 15"D x 3-3/4"H
Receiver	15-1/4"W x 13-3/4"D x 3-3/8"H
Remote Control	2-1/4"W x 5/8"D x 81/2"H