Supra
Integrated Receiver/Descrambler

Owner’s Guide

uniden®
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Important!

1. Warning! Uniden America Corporation does not represent this receiver to be waterproof. To reduce the risk of electrical shock, fire hazard, or damage to the unit, do not expose to rain or moisture.

2. In 1984 Congress passed the Cable Telecommunications Act (Public Law 98-549), which completely legalized the home reception of satellite TV signals.

3. Caution! To prevent electrical shock, do not use the SUPRA power cord and polarized plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted to prevent blade exposure. When using an extension cord outdoors, be sure it is protected by a ground-fault circuit interrupter.

4. Important: For added protection of this product before a lightning storm, or when it is to be unused for a long period, such as during a vacation, it is suggested that you unplug the power cord and the phone cord from your system. Do not attempt to unplug your system during a lightning storm, but only when it is safe to do so. These precautions will prevent damage to the receiver from lightning surges on the power or phone lines.

5. Notice: This consumer unit is intended for the authorized descrambling for personal use of those satellite television signals using the VideoCipher® RS scrambling format. Ownership or possession of this integrated Receiver/Descrambler does not entitle (nor enable) the owner or possessor hereof to receive descrambled VideoCipher® RS signals. To enable the satellite descrambler and obtain proper authorization for descrambling, the customer must separately contract with the appropriate programming providers or their agents.

6. It is important to fill out and return the enclosed product registration card. This card gives our service department a record of the purchase and warranty duration of your SUPRA. It also allows us to keep you updated on technological improvements to your system.

7. Note: The illustrations in this Guide 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 SUPRA was installed and configured.

Features, Specifications, and availability of Optional Accessories are all subject to change without notice.

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

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

Congratulations for selecting the SUPRA and welcome to the new frontier of satellite television. You have selected one of the most sophisticated satellite television receiver systems available. Your new SUPRA will open your home to the universe of satellite television viewing. The Uniden SUPRA Integrated Receiver/Descrambler (IRD) System is designed to be one of the most user-friendly satellite systems available anywhere. The separate, sometimes incompatible components that were previously required to receive television programming via satellite have been combined into a compact, easy-to-use system that provides the ultimate in home video entertainment. Over 200 television programs transmitted to earth from satellites 22,300 miles over the equator are now at your fingertips. Sophisticated microcomputer technology works to bring in crystal clear audio and video from these satellites with a minimum of user effort. The integrated VideoCipher® RS descrambler makes receiving pay-TV services easy and convenient. Just call the program supplier with your authorization number and billing information, and within a few minutes you're watching all of your programs. See the VCRS Module Operating Instructions section of this manual for more information on receiving pay-TV services.

To insure that you get the most enjoyment from the many SUPRA features, be sure to read this Guide before installing and operating the unit. Whether you have just purchased your first satellite receiver, or you are upgrading your system, we are confident that you will be proud to own this fine Integrated Receiver/Descrambler system. If you have any questions or comments about the SUPRA, please contact your dealer.

SUPRA System Information

Please take a moment to write down the following information. This will serve as a quick reference to all the equipment installed in your system.

SUPRA Serial Number: ____________________________

SUPRA VideoCipher® RS Descrambler Authorization Number: ____________________________

Date of purchase: ____________________________

Uniden Dealer name: ____________________________

Address: ____________________________

City: ____________________________ State: ____________________________ Zip: ____________________________

Phone: ____________________________

Date of installation: ____________________________

Important information about installation: ____________________________

________________________________________

________________________________________

________________________________________

________________________________________

Note: You must have this number for all correspondence about your integrated receiver/descrambler, and to obtain authorization for receiving VCRS (VideoCipher® RS) scrambled programming. Follow directions on page 39, VideoCipher Unit Setup, to see your authorization number. Write all 12 characters of the number in the space provided.

VCRS, VideoCipher® II, VideoCipher® II Plus, VideoCipher® RS, and VIDEOpal® are all registered trademarks of General Instrument Corporation.
The TVRO System

A typical TVRO system incorporating the SUPRA consists of the following components:

**Dish Antenna**

The antenna system receives and concentrates the extremely weak signal.

**Actuator**

The actuator extends and retracts to aim the dish antenna at the orbiting satellites. The SUPRA controls the actuator when it selects satellites during receiver operation. The actuator positions are programmed into the SUPRA so it can recall the exact location of each satellite.

**Feedhorn and Polarizer**

The feedhorn and polarizer, mounted above the center of the dish antenna, collects the concentrated satellite signal. There are various types of polarizers. A single feed polarizer, either C-band or Ku-band, feeds the satellite signal to one LNB downconverter. In this configuration the receiver selects the polarity. A dual feed polarizer, either C-band or Ku-band, feeds the satellite signal to two LNBs. One LNB receives the horizontal signal and the other receives the vertical signal. The type of polarizer required depends upon the system configuration you select.

**LNB**

The satellite signal is extremely weak by the time it reaches your dish antenna. The LNB (Low Noise Block downconverter) amplifies the signal over 1,000 times and converts it to a lower frequency. This allows you to use less expensive coaxial cable to carry the signal to your receiver.

You can install from one to four LNBs in your system. The number and types of feedhorns you install determine how many LNBs you need. One LNB is required if you install a single C-band feed. The single feed polarizer selects either the vertical or horizontal polarity, depending on the desired channel.

The dual feed polarizer selects both vertical and horizontal signals simultaneously and requires two LNBs. Use this feed in multiple receiver systems to allow different receivers to access channels of either polarity simultaneously.

Your SUPRA is also equipped to receive Ku-band transmissions. Usually you can use the same antenna to receive C-band and Ku-band transmissions. However, you must add a special feedhorn and LNB. Like C-band, the Ku-band polarizer can be single feed or dual feed.

Another type of LNB is the new LNB which allows polarization switching via one coaxial cable only. The polarization is switched by the DC voltage on the coaxial cable. This type of LNB reduces the number of wires required to control the polarization.

**Receiver**

The SUPRA is a complete satellite reception system capable of storing the positions of the satellites as well as the tuning details for each channel. You can also store the satellite and channel number for up to 160 of your favorite channels.

**Video Display**

You can connect either a TV set or monitor to the SUPRA for video display. If the video display unit has direct input, the SUPRA has separate video output and Left and Right audio outputs. For standard TV receivers, the SUPRA provides a VHF signal (Channel 3 or Channel 4).

The SUPRA has a video output and Left and Right audio outputs for a VCR. If your TV set is not stereo, you can attach a stereo amplifier to the SUPRA audio outputs for broadcast stereo sound, where available.

**Remote Control**

You can use the SUPRA remote control included with the SUPRA to operate all functions of the receiver without leaving the comfort of your chair. This remote uses both infrared and UHF signals.
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.

FP-2. **FAV** — Press to display the FAVORITE CALL Menu. Press and hold this key for at least 4 seconds to display the Favorite Store menu. (See “Normal Operation,” page 10, and “Using the Main Menu,” page 21.)

FP-3. **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,” page 10, and “Using the Main Menu,” page 21.)

FP-4. **EAST and WEST ◀ 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. These buttons are also used for menu item selection and/or change when using the built-in menu system. (See “Normal Operation,” page 10, and “Using the Main Menu,” page 21.)

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,” page 10, and “Using the Main Menu,” page 21.)

FP-6. **Actuator Circuit Breaker** (on the bottom of the receiver) — If the dish antenna does not move, check this breaker. Press to reset.
Front Panel Indicators

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

DIS-1 **Channel Number** — Displays the current channel number.

DIS-2 **VER** — Indicates that the current polarity is vertical.

DIS-3 **C** — Indicates that the SUPRA is configured to receive a C-band satellite.

DIS-4 **Timer** — Indicates that the Timer has been set. This indicator will begin flashing if there has been an error in programming the events. It will also flash if a power loss occurs causing the clock to lose its current time.

DIS-5 **VCRS** — Indicates reception of a VideoCipher encrypted channel.

DIS-6 **Ku** — Indicates that the Supra is configured to receive a Ku-band satellite.

DIS-7 **HOR** — Indicates that the current polarity is horizontal.

Controls and Indicators
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.

B-1. 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.)

B-2. 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

B-3. UHF REMOTE ANT — Connect the supplied UHF antenna here for using the SUPRA Remote Control.

B-4. 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.

B-5. 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.

B-6. DATA — For connection with special external data equipment. (See your Uniden Dealer for more information.)

B-7. 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.

B-8. 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.

B-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.

B-10. AC Outlet — A non-switched, 120V AC, 200 watt outlet is provided for connecting any additional accessories.
B-11. 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.

B-12. 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.

B-13. IR/UHF Remote Switch — Set this switch to receive either IR or UHF signals from the remote control.

B-14. 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.

B-15. COMP OUT — Composite video output used with external descrambling devices or processors like Scientific Atlanta, B-Mac, and others.

B-16. IPPV — For connection to an external VIDEOpal Recorder. (See your Uniden Dealer for more information about VIDEOpal Recorders.)

B-17. TV OUTPUT — These phono jacks are provided for connection to a stereo TV. 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 TV OUT jack is for video output.

B-18. RJ-11 Jack — Connect the telephone line here if you have a VCRS Modem-On-Module with built-in VIDEOpal. (See your Uniden Dealer for more information about the VCRS and VIDEOpal.)

B-19. Channel 3/4 Switch — The receiver is shipped with this switch set to operate on 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.

B-20. AC power Cord — Connect to any 120V AC household outlet. Do not connect to an outlet controlled by a wall switch.
Remote Control

The Remote Control 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. VideoCipher Keys — These keys are used only while the VCRS front panel indicator is lit. (See "VCRS Module Operating Instructions," page 36, for more details.)

R-3. SETUP — This key is used in some receiver menus to set up satellite information or favorite names. This key is also for VideoCipher operation while the VCRS indicator is on. (See "VCRS Module Operating Instructions," page 36, for more details.)

R-4. TUNE/ADJUST — These keys are used to display the receiver tuning options for both audio and video. (See "Tuning the SUPRA," page 15, for more details.)

R-5. C/K — Press this key to switch between C-Band and Ku-band satellite reception.

R-6. 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," page 21.)

R-7. 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," page 21.)

R-8. 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-9. 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 "Normal Operation," page 10.)
Remote Control

R-10. **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 “VCRS Module Operating Instructions,” page 36, for more details.)

R-11. **ENTER** — This key is used in some receiver menus to store changes. This key is also for VideoCipher operation while the VCRS indicator is on. (See “VCRS Module Operating Instructions,” page 36, for more details.)

R-12. **TIMER** — Press this key to access the Sleep Timer Option. (See page 32.)

R-13. **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-14. **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-15. **NEXT** — This key is for VideoCipher operation while the VCRS indicator is on. (See “VCRS Module Operating Instructions,” page 36, for more details.)

R-16. **VIEW** — While viewing a channel, this key can be used to display the current satellite and channel. This key is also used for VideoCipher operation when the VCRS indicator is on. (See “VCRS Module Operating Instructions,” page 36, for more details.)

R-17. **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.

R-18. **MENU** — Press this key to display the MAIN MENU.
Normal Operation

This section of the Owner’s Guide takes you step-by-step through the most common procedures you need to perform after your SUPRA has been properly installed by a Uniden Dealer. For typical operation, use the remote control and perform the procedures in order.

Power On

1. Turn power on to the SUPRA with the remote control or the front panel button. When powered on, the current satellite channel appears.

2. 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 SUPRA. 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 channel you’re on by looking at the Front Panel Display.

— OR —

Press (VIEW) to display satellite-channel, day, and time on your screen.

Select a Satellite

Using the SATELLITE CALL Menu

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

Note: If your system is configured and programmed with Ku-band satellites, then press (CKU) to switch between the C-band satellite list and Ku-band satellite list. Otherwise, only the C-band satellites will appear.

2. Press (CHA) or (CHV) to move the pointer to another available satellite. Example: Galaxy-3

(If the satellite you want is not displayed on the screen, use (WF) to move to the next page, or (LE) to move to the previous page.) There are 44 satellites preprogrammed in the SUPRA.

Note: To see the Ku-band satellite list, press (CKU).

Operation
3. Press [CALL] when the arrow is pointing to the desired satellite. The SUPRA will automatically position the dish antenna and tune to the selected satellite.

The top of the screen displays information for other preprogrammed satellites while the dish antenna moves to the new position.

Using Direct Access

1. Press [CALL] to display the SATELLITE CALL menu.

2. To select a satellite (for example Galaxy-5) press [5].

3. Then press [5].
Selecting Channels

The SUPRA provides several methods for changing channels.

1. Use CH↑ or CH↓ on the front panel or on the remote. Simply press the key until the desired channel is reached.

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

   **Note:** For channels with a single number (1 - 9), press 0 before the channel number to switch to that channel immediately. If you press only the single digit, it will take about three seconds to switch to the desired channel.

3. Turn on the Seek feature to scan the channels until an active channel is found, or Skip, to skip channels in increments of two (2-4-6...22-24). To program your remote keys for these various methods, see "Using the Main Menu," page 21.

4. Change channels while the dish antenna is moving between satellite positions. Use CH↑, CH↓, or Direct Access.

Last Channel Recall

Press 0 or 0 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.

**PERSONAL FAVORITES** are those programs you have entered yourself. (See "Storing Favorite Channels," page 33.) MOVIES, PAY-PER-VIEW, SPORTS, etc., are channels that were programmed into your SUPRA before you purchased it.

2. Press CH↑ or CH↓ to move the arrow to the category you want.

   **Example:** NEWS
3. Press (CALL). You will then see a list of programmed channels.

If the channel you want is not on the list, use (←) or (→) 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.).

5. Press (CALL) to select the channel. The SUPRA automatically positions the dish to the correct satellite and selects the channel for you.

---

**Receiving Radio Channels:**

In addition to television transmissions, many satellites transmit AM and FM signals and other audio services from radio stations around the world. Your SUPRA has been preprogrammed with some of these frequencies. To hear these radio transmissions:

1. Press (FAV) to access the FAVORITE CALL screen.

2. From the FAVORITE CALL screen, press (→). The first six categories of radio stations preprogrammed in the SUPRA appear in alphabetic order. Press (→) again to see more categories.

3. Use (CH▲) or (CH▼) to move the cursor to select a radio category.

**Example:** Classical
4. Press \textit{CALL} to see the listing for that category. Select a station with the cursor.

5. Press \textit{CALL} to receive the station.
Tuning the SUPRA

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

Note: Careful adherence to these instructions can help avoid problems with the operation of your SUPRA.

Video Tuning Options for C-band Satellites

The following options can be tuned using the TUNE key: Video Fine Tune, Skew, Polarity, and TI Filter.

VIDEO FINE TUNE

1. Press TUNE to display the VIDEO TUNING screen.

   The cursor appears at option 1, VIDEO FINE TUNE.

2. Use CH▲ and CH▼ to change the frequency in 0.25 MHz steps. (The maximum range is ± 15 MHz.)

   GALAXY-5 G5-10
   VIDEO TUNING
   ▶ 1 FINE TUNE (+ 0.00)MHZ
   2 POLARITY (HORZ)
   3 SKEW (-45.0)
   4 TI FILTER (OFF)
   *USE #,▲,▼,VIEW

   GALAXY-5 G5-10
   VIDEO TUNING
   ▶ 1 FINE TUNE (+ 0.25)MHZ
   2 POLARITY (HORZ)
   3 SKEW (-45.0)
   4 TI FILTER (OFF)
   *USE #,▲,▼,VIEW

POLARITY

The Polarity of a satellite channel (either horizontal or vertical) is established by the orientation of the satellite. Once your SUPRA 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 2 while in the VIDEO TUNING menu.

   Note: The cursor will not move when you press 2.

2. Press VIEW to exit this screen.

   Note: If you change the Polarity and cannot get picture or sound, change it back by pressing 2 while in the VIDEO TUNING screen. 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' page 22).
SKEW

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

1. Press (3) while in the VIDEO TUNING screen to move the cursor next to SKEW. The present SKEW is displayed.

2. Use the (CH▲) or (CH▼) key to adjust the Skew in 1.5 degree increments, to a maximum of -90 degrees to +90 degrees.

   **Note:** If the SKEW setting is a negative number, pressing (CH▲) decreases the setting.

   **Example:** -45.0 will change to -43.5

3. Press (VIEW) to exit this screen.

   **Note:** Skew changes are not stored automatically. You must reprogram the satellite to store any SKEW changes. (See "REPROGRAM SATELLITE," page 22.)

**TI (Terrestrial Interference) Filter**

If your picture is distorted, snowy or contains sparkles, you may be experiencing Terrestrial Interference. You may need to turn the TI FILTER on for that channel.

Press (4) while in TUNING OPTIONS to switch the TI FILTER ON or OFF. (For more information on Terrestrial Interference, see page 76.)

   **Note:** TI FILTER works only for C-band satellites. For Ku-Band satellites, see the next section.
Video Tuning Options for Ku-band Satellites

If your system is configured for Ku-band satellite reception, press (CPU) to switch between C-band and Ku-band satellites. Choose a Ku-band satellite (for example, Satcom-K2), then press (TUNE) to display the VIDEO TUNING menu.

FINE TUNE

1. Press (TUNE) to display the VIDEO TUNING screen. The cursor appears at option 1, VIDEO FINE TUNE.

2. Use (CH▲) and (CH▼) to adjust the frequency in 0.25 MHz steps. The maximum range is ±15 MHz.

Note: A pre-programmed center channel frequency is displayed as a reference for adjusting the frequency.

POLARITY

The Polarity of a satellite channel (either horizontal or vertical) is established by the orientation of the satellite. Once your SUPRA 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 (2) while in the VIDEO TUNING menus.

Note: The cursor does not move.

2. Press (VIEW) to exit this screen. SKEW and POLARITY changes are not stored during normal tuning. If you do not press any key for 25 seconds, the screen disappears.

Note: If you change the Polarity and cannot get picture or sound, change it back by pressing (2) while in 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," page 22.)
SKEW

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

1. Press \( \text{3} \) while in the VIDEO TUNING screen to move the cursor next to SKEW. The present SKEW is displayed.

2. Use the \( \text{CH} \) or \( \text{CH} \) key to adjust the Skew in 1.5 degree increments. The maximum range is ±90 degrees.

   **Note:** If the SKEW setting is a negative number, pressing \( \text{CH} \) decreases the setting.

3. Press \( \text{VIEW} \) to exit this screen. If you do not press any key for 25 seconds, the screen is replaced by normal video. You must reprogram the satellite to store any Skew changes. (See "REPROGRAM SATELLITE," page 22.)

BANDWIDTH

If your picture is distorted, snowy, or contains sparkles, you may be experiencing Terrestrial Interference. Press \( \text{4} \) to switch the bandwidth between WIDE and NARROW. (For more information on Terrestrial Interference, see page 76.)

Also, some Ku-band satellites transmit in a 1/2 transponder mode. Switching between WIDE and NARROW bandwidth may improve picture quality.
Audio Tuning Options

Note: Audio Tuning information is remembered on a per-channel basis. No special commands are required to store any of the changes.

1. Press [AUDI0] to display the AUDIO TUNING menu.

2. Press [1] to switch between three different audio formats:
   VCRS
   MONO
   DISC

Note: VCRS appears only when tuned to a VCRS channel.

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 in .01 MHz steps for both audio channels, (LEFT and RIGHT), using the [CH▲] and [CH▼] keys.

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

3. Adjust AUDIO BW (audio bandwidth) by pressing [2] to switch between (NARW) (narrow) and (WIDE).

4. With AUDIO SEEK, the SUPRA looks for audio subcarriers by scanning up or down the frequency range.

   Press [CH▲] to scan higher frequencies, or [CH▼] to scan lower frequencies.
Dish Antenna Tuning

Once your SUPRA is installed, major adjustments to the dish antenna for a particular satellite and channel should not be necessary. 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 \( \text{← E} \) or \( \text{→ W} \) to adjust the dish position. The DISH AT screen will appear, showing the current dish position.

2. Press \( \text{← E} \) or \( \text{→ W} \) to move the dish one count at a time. You can also hold the key down to move the dish more rapidly.

Note: Once you have moved the dish, \( \text{CNCL} \) will not cancel the move. Use \( \text{← E} \) or \( \text{→ W} \), or press \( \text{CALL CALL} \) to move the dish back to the original position.

Note: To store any of the above Dish Tuning adjustments, reprogram the satellite (see "REPROGRAM SATELLITE," page 22).
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 SUPRA was installed and configured.

Operating the SUPRA 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. Set the Timer.
5. Set the Scan type.
7. Installation.

Press (MENU) to display the MAIN MENU. Once in the MAIN MENU, press the appropriate numeric key to select the corresponding function.

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.

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.
2. REPROGRAM SATELLITE

Skew, Polarity and Dish Position are not stored automatically. REPROGRAM A SINGLE SATELLITE stores any adjustments you may have made.

1. Press [MENU].

2. Press \(2\) at the MAIN MENU to display the REPROGRAM A SINGLE SATELLITE screen.

If the satellite displayed on this screen is not the one you are reprogramming, use \(\text{CH } \uparrow\) or \(\text{CH } \downarrow\) to change to the desired satellite.

3. Then press [ENTER] to store the changes. The screen will flash SUCCESSFUL! Or, press [CACL] to exit this screen without saving the changes.

Note: If no key is pressed for 25 seconds, the screen returns to normal video without saving any changes.

3. LOCK/UNLOCK CHANNEL

The SUPRA 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.

To lock out any channel:

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

2. Press [MENU] to display the MAIN MENU.
3. Press 3 to display the LOCK CHANNEL screen.

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.”

Note: If you forget your password, contact your Uniden dealer for assistance.

Note: When a channel has been locked out, it will not be possible to switch to the channel using CH A or CH V. You will need to use the remote control numeric keys to directly call the channel.

To unlock the channel for viewing:

1. Tune to the locked channel.

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

3. Press (3) to display the UNLOCK CHANNEL screen.
4. 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).

If you enter the wrong password, the words "WRONG PASSWORD" will flash four times and you return to the MAIN MENU. Try re-entering the password. The correct password unlocks the channel. You can then view the program normally.

4. TIMER SET
This function is used to program up to four events over a two-week period. At the time you set, 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. To erase your entries, press [CNCL].

1. Press [MENU] to display the MAIN MENU.


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

4. 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.
5. 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 A SATELLITE," page 70.)

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

7. Press (4) to enter the starting time for the event. Use (CH▲) or (CH▼) to set the start hour. The AM and PM indicator alternates each time the hour digits show 12. Then press (W▲). The minutes spaces begin flashing. Use (CH▲) or (CH▼) to set the start minute.

   Note: If you are programming an "IPPV" event, please read "Setting Up the IPPV Option," page 26, BEFORE setting the START TIME for the event.

8. Press (5) to enter the length of the event. Use (CH▲) or (CH▼) to enter the total running time (in MINUTES) for the event. You can set a maximum of 499 minutes.

9. 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.
10. Press \[ \text{} \] to select WEEK, and use \( \text{CH} \uparrow \) or \( \text{CH} \downarrow \) to enter the week of the event. The WEEK options include: WEEK 1, WEEK 2, WEEKLY.

To program an event during the first week, use the WEEK 1 option. If the event is broadcast during the next week, use the WEEK 2 option. If the event is on both weeks, use the WEEKLY option.

11. When all of the information has been entered, press \( \text{ENTER} \) to store the event. The MAIN MENU appears and the TIMER indicator on the SUPRA’s front panel comes on.

**Note:** If you try to program events that overlap (for example, on different channels at the same time), the SUPRA gives priority to the event most recently programmed.

To program an event on a locked channel, first unlock the channel, then follow the above steps.

If the clock has been reset, the Timer indicator will flash indicating 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 red TIMER WARNING screen appears, announcing that the event is about to begin, and asks you for a confirmation. To continue with the event, press \( \text{ENTER} \). To cancel the event, press \( \text{CNCL} \), and you will remain on the current satellite and channel.

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

During the event, if you press any key (except \( \text{VOL}\uparrow \), \( \text{VOL}\downarrow \), and \( \text{VIEW} \)) a reminder screen appears.

### 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 record an IPPV event on your VCR for viewing later. To enable 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 the steps on the next page:
1. Press **8** while in the TIMER SET menu to select IPPV.

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

   **Note:** This password must be the same as your VideoCipher Purchase Password. (See “VCRS Module Operating Instructions,” page 36, for details.)

3. After the password has been keyed in, press **ENTER** 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 **ENTER** to continue.

4. At the TIMER SET screen, press **ENTER** to store the program settings (or **CNC**L to erase the changes).

   **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 **ENTER** (or do nothing) to continue with the event. To cancel the event, press **CNC**L 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.
5. CHANNEL SCAN

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.

If you press 5 at the MAIN MENU, you can change SCAN TYPE to SKIP or SEEK.

In the SKIP mode, pressing CH↑ or CH↓ will scroll through every other channel (1-3-5-7-9...-21-2-4-6...-24) during normal operation.

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.

6. GENERAL SETTINGS

1. BLUE SCREEN

This option changes the Blue Screen setting for most of the standard viewing menus. (The default setting is ON.)

Press 1 to toggle between the OFF and ON setting.

When you turn BLUE SCREEN OFF, you'll see the menu superimposed over video.

Note: If you are tuned to a channel without active video, press MENU 6 1 to turn the Blue Screen option ON.
2. CHANGE PASSWORD

To change the Channel Lock password:

1. Press 2 at the GENERAL SETTINGS menu.
   You will be asked to enter the old password.

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

   Note: If you enter the wrong password, the words
   "WRONG PASSWORD" will flash under the password.
   Try re-entering the password.

3. Now enter the new four-digit password.

4. As soon as you have entered the password you'll be asked to
   retype the new password.

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

   After a few seconds you will return to the
   GENERAL SETTINGS menu.

Operation
3. LANGUAGE SELECT

This setting changes the language from English to Spanish in all the programming and information screens.

1. Press 3 at the GENERAL SETTINGS menu.

2. Press 2 to change the screens to Spanish.

4. CLOCK SET

Normally, the clock is set by the dealer when your satellite system is installed. If you need to change the settings, follow these steps:

1. Press 4 at the GENERAL SETTINGS menu to display the Clock Set Screen.

2. Press 1 to change the DAY setting. Use (CH▲) or (CH▼) to select the current day.

3. Press 2 to set the current TIME. Use (W>) to select hours or minutes. Use (CH▲) or (CH▼) to increase or decrease the number.

Note: The AM/PM setting changes automatically each time the hour passes 12. Make sure you have set AM/PM correctly.

4. When you are finished, press (MENU) to store the settings and return to the GENERAL SETTINGS menu.

7. INSTALLATION

See the Installation Section of this guide, page 55, for detailed instructions.
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, page 81, 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 “Normal Operation,” page 10, and “Tuning the SUPRA,” page 15.)

When all adjustments have been made:

1. Press and hold FAV for at least four seconds to display the FAVORITE STORE menu. You will see the FAVORITE CALL menu at first.

Then the screen changes color and the menu name changes from FAVORITE CALL to FAVORITE STORE. Be sure the cursor is at PERSONAL. (If not, use CH↑ or CH↓ to move the cursor.)

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

2. Press CALL to display the PERSONAL STORE screen.

3. If needed, use CH↑ and CH↓ to move to the first blank row.

Note: When a screen of entries is full, use CH← and CH→ to move to a new screen 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.

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," page 81.) Then use (E) and (W) to move the cursor to the next position and enter the next character.

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

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. See the next section.

Changing a Favorite

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

1. Tune to the new selection. (See "Select a Satellite," page 10.)

2. Press and hold FAV.

The FAVORITE CALL screen appears, followed by the FAVORITE STORE screen.
3. 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.

   (For example: MUSIC)

4. Press **CALL**.

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

   --- OR ---

   Enter the item number (for example, 78).

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

7. 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,” page 81, for a list of available characters.) Then use (< or>) and (X or ) to move the cursor to the next position and enter the next character.

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

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

   To change any other entries, 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. This 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 SUPRA.

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

2. Since you are using a servo-type polarizer, you must run three additional lines to control it. Wire the polarizer to the terminal block on the back of the receiver according to the manufacturer's instructions. The normal color codes used are:

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

3. Using the manufacturer's template, adjust the feedhorn until it is on the polar axis. If the proper polarity is not indicated on the front panel of the receiver (odd channels vertical on Telstar type satellites, odd channels horizontal on Galaxy type satellites), change polarity by pressing TUNE, then 2.

4. If the picture is recognizable but snowy, press TUNE, then 3 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 SUPRA 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, then 3 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," page 73.
Single Feed Using LNBF (C-band or Ku-band)

LNBFs are a new type of feedhorn that allow polarity switching without the three control wires typically associated with the standard feedhorn. An LNBF switches polarity by changing the DC voltage on the coaxial cable. Long cable runs may decrease the switching voltage, causing polarity problems. LNBF systems 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 SUPRA 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 2.

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 SUPRA 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 SUPRA 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 SUPRA.

Note: To set the RF Configuration, refer to "RF CONFIGURE," page 73.
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 SUPRA is designed to use the more common 0/12 Volt V/H switch.

1. Connect the horizontal and vertical C-band LNBs 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,” page 73.

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.
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," page 73.

Warning! Dual switches may draw more current than provided by the SUPRA. An external power supply may be required, or two LNBS may be powered through a second receiver.
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 SUPRA 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 M-1 and M-2 wires only on the back of the SUPRA. 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 SUPRA 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 SUPRA.

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 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 the 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 ◄ and ► 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 switch eliminates 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 SUPRA 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.
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 adapter with an F-type connector.

Connect the UHF antenna for the SUPRA remote control to UHF ANT connector on the back of the SUPRA.

Note: Keep the UHF remote antenna in a vertical position for best performance from your SUPRA remote control.
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 SUPRA 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 SUPRA 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 a 300/75Ω adapter that matches the 75Ω impedance of the SUPRA TV OUT coaxial connector.

Connect a coaxial cable from the TV OUT coaxial connector on the SUPRA to the F connector on the adapter.

Connect the two leads of the adapter 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 SUPRA. If you are unable to get good reception on one channel, change the setting on the 3/4 switch of the SUPRA 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 SUPRA.

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 SUPRA receiver.

Connect an RCA cable from the VIDEO OUTPUT (TV) connection on the back panel of the SUPRA 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 SUPRA 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 SUPRA 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 SUPRA 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 SUPRA to the audio and video inputs on the VCR.

— OR —

Connect the VCR to the TV OUT output on the back of the SUPRA 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 SUPRA 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.
Installation Menu Functions

Note: The Installation screens have a lavender background, since the functions are different than the operation screens. These functions are normally used by the Dealer for installation and setup. For best results, switch the IR/UHF Remote switch on the receiver's back panel to IR.

Use the INSTALLATION MENU to:

1. Program a Satellite.
2. Delete a Satellite.
3. Resync Satellites.
4. RF Configure.
5. Global Shift.
6. Set Dish Limits.
7. Perform a Master Reset.

To access the INSTALLATION MENU:

1. Press **MENU**.

2. Press **7**.

3. Enter the Installation Password.

4. Once in the INSTALLATION MENU, press a number key to select the function.

Note: To exit, press **MENU**. To return to the INSTALLATION MENU, press **MENU** from any submenu.
1. PROGRAM A SATELLITE

1. Press 1 while in the INSTALLATION MENU to move to the SATELLITE STORE 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 〈 〈 → 〉 to page forward and back to find the list with the satellite you want to program.

Note: Press 〈 CKU 〉 to switch between C-band and Ku-band satellite lists. To store Ku-band satellites, use the following procedure substituting Ku for C.

2. Once you're at the correct list of satellites, use 〈 CH 〉 and 〈 CH 〉 as needed to move the cursor next to the satellite you want to program.

3. Press 〈 CALL 〉 to start looking for that satellite. The PROGRAM SATELLITE screen will appear. Use 〈 〈 → 〉, 〈 CH 〉, 〈 CH 〉, and the numeric keys to locate and tune in the satellite.

Note: If the screen goes blank, just press 〈 VIEW 〉 to turn the background screen ON.

4. Once you have tuned in the satellite, press 〈 ENTER 〉 to store the satellite. A ■ appears to the left of the name. Or press 〈 CNCL 〉 to return to the SATELLITE STORE menu without programming the satellite.

5. When you have finished programming, press 〈 MENU 〉 to return to the INSTALLATION MENU.
Updating Programmed Satellites

You may need to update the name of a programmed satellite. (For example, if a satellite is replaced and the name is changed.)

1. From the SATELLITE STORE menu, press SETUP. The first character starts flashing.

2. Use (<<) and (>>) to select a character.

3. Use (CH↓) and (CH↑) to change the character.

4. Press ENTER to store the changes or (CHCLR) to exit without storing. To tune in the satellite, see "Tuning the SUPRA," page 15.

2. DELETE A SATELLITE

You can delete any programmed satellite from the SUPRA's memory.

1. Tune to the desired satellite.

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

3. Press (?).
4. Enter the password to access the INSTALLATION MENU.

5. At the INSTALLATION MENU, press 2.
   A warning screen appears asking you to confirm that the current satellite should be deleted.

6. Press ENTER to delete the satellite, or CNCL to exit without deleting the satellite. If you delete a satellite, SUCCESSFUL! flashes twice and you return to the INSTALLATION MENU.

If you delete a satellite preprogrammed at the factory, the satellite name stays on the list, but doesn’t appear in the CALL or FAVORITES menus. All tuning information is erased.

If you delete a user-programmed satellite, the satellite name is erased along with all tuning information.

3. RESYNC SATELLITES

1. Choose a satellite and use ← and → to find the best picture.

2. Bring up the INSTALLATION MENU.
3. At the INSTALLATION MENU, press \( \text{3} \) to display the RESYNC SATELLITES screen.

4. Use \( \text{CH} \uparrow \) and \( \text{CH} \downarrow \) to select the key satellite to realign with.

5. Then press \( \text{ENTER} \) to resync. Afterwards, the word "SUCCESSFUL" will flash on the screen, and you will return to the INSTALLATION MENU.

4. RF CONFIGURE

1. Press \( \text{4} \) to display the RF CONFIGURE menu.

2. 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), (LNBF)
   5 Ku V/H SW: (EXT), (INT)
   6 Ku V/H TYPE: (STD), (LNBF)
This example shows a receiver configured for the following:

Dual C-band and Single Ku-band feed using an external V/H switch.

The steps for configuring the receiver in this manner are:

1. Display the INSTALLATION MENU.
2. Press 4 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 SW set to (EXT), since the V/H switch is an external switch.
6. Press 4 to set V/H TYPE to LNBF.
7. Press MENU to store the configuration and return to the INSTALLATION MENU.

5. GLOBAL SHIFT

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

1. Press 5 at the INSTALLATION MENU to display the GLOBAL SHIFT screen.
2. Use CH▲ and CH▼ to adjust the frequency in 0.25 MHz steps.
3. Press MENU to store the configuration and return to the INSTALLATION MENU.
6. DISH LIMITS

1. Use \(<\text{E}\) to move the dish to the East limit.

2. At the INSTALLATION MENU, press \(<\text{6}\) to display the DISH LIMIT SET menu.

3. Press \(<\text{1}\) at the DISH LIMIT SET menu to set the current limit as the East limit. As soon as you press the key, the position appears in the parentheses next to EAST LIMIT.

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

5. After you make any changes, press \(<\text{MENU}\) to exit this screen and save the changes.

7. MASTER RESET

Master Reset is used to erase all the receiver memory.

1. Press \(<\text{7}\) at the Installation Menu to display the MASTER RESET screen.

2. You must then enter the Master Reset password to continue. If you enter the wrong password, "WRONG PASSWORD" flashes. You then return to the INSTALLATION MENU.