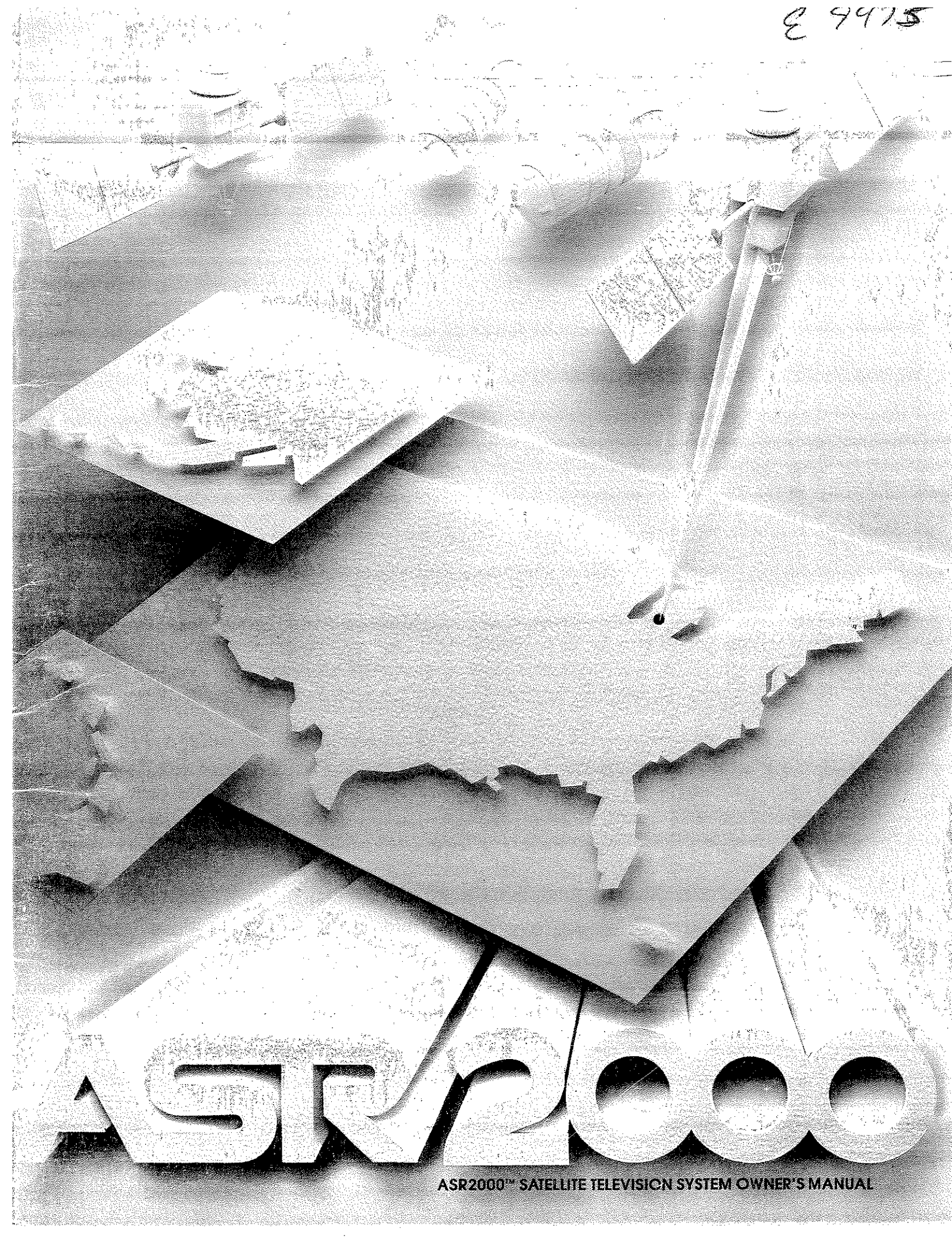


Q 9975



# ASR2000

ASR2000™ SATELLITE TELEVISION SYSTEM OWNER'S MANUAL



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Please read this manual carefully and save for future reference.



## ASR2000™ SATELLITE TELEVISION SYSTEM INTRODUCTION

In order to easily receive the full benefits of your ASR2000 System, it is important to read this manual carefully. The System is designed to be "user-friendly" and will be easy to use if you follow the step-by-step instructions.

After reading this introduction, turn the page to begin learning how to operate the System. We cannot stress enough the importance and necessity of reading and fully understanding this manual.

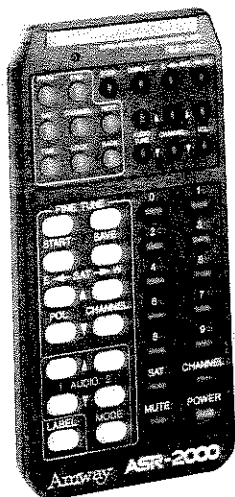
For simple operation and to eliminate confusion, we recommend a second person join you in learning how to operate the ASR2000 System. The ideal situation is for one person to read the manual out loud to a second person who will operate the command center keypad.

You are now ready to learn how simple it is to operate the ASR2000 Satellite System. Soon you can sit back and enjoy the very best that satellite television has to offer. The ASR2000 Satellite Television System is brought to you by Amway . . .

**WE DELIVER THE BEST.**



## ASR2000 SATELLITE SYSTEM COMPONENTS

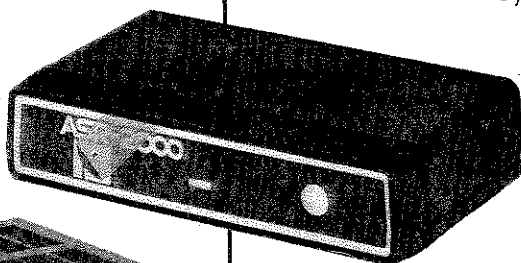


The ASR2000 System is designed exclusively with you in mind. A combination of computer and satellite technology brings you an intelligent, microprocessor-based system without a lot of bulky boxes. The receiver and power supply can be easily located in the basement or closet out of sight. The COMMAND CENTER KEYPAD and small ASR EYE are the only components which need be in the television viewing area. These two components give you automatic control of the System's capabilities.

**THE ASR2000 SATELLITE SYSTEM COMES FACTORY SET TO OPERATE ON VHF CHANNEL 4. CHANNEL 3 CAN BE SELECTED BY CHANGING THE POSITION OF THE MODULATOR SWITCH ON THE FRONT PANEL OF THE RECEIVER.**

### ASR2000 COMMAND CENTER KEYPAD

The handheld COMMAND CENTER KEYPAD controls the operating parameters of the System and gives the user full control of the System.



### ASR2000 EYE

The ASR EYE receives the commands from the COMMAND CENTER KEYPAD and transmits them to the receiver via one coaxial cable (RG59).



### ASR2000 RECEIVER

The RECEIVER is the brains of the ASR2000 System. The RECEIVER is controlled by the COMMAND CENTER KEYPAD.

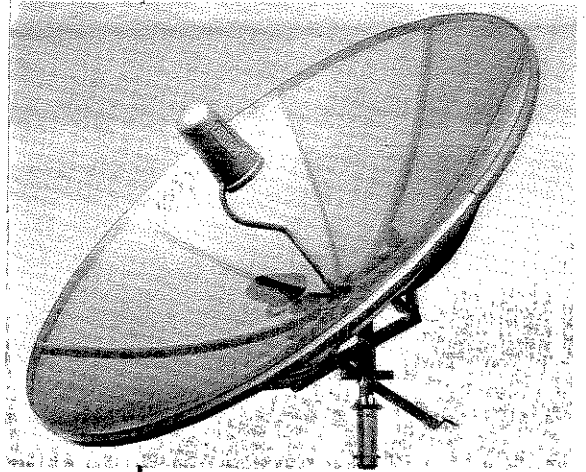


### ASR2000 POWER SUPPLY

The POWER SUPPLY supplies the correct voltages to the RECEIVER, ACTUATOR, and FEEDHORN, and controls the ACTUATOR and POLARIZER movement.

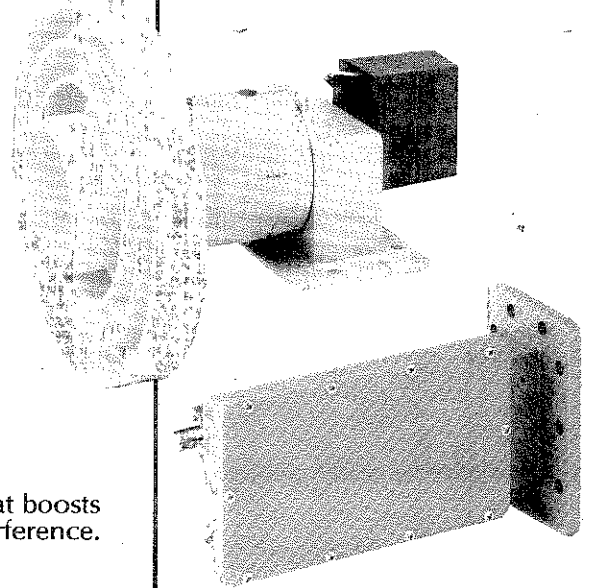
### **DISH ANTENNA**

The **DISH ANTENNA** is a dish-shaped reflector that collects and focuses satellite signals to the **FEEDHORN**.



### **FEEDHORN**

The **FEEDHORN** is located at the focal point of the dish. It gathers the signal and sends it to the LNB.

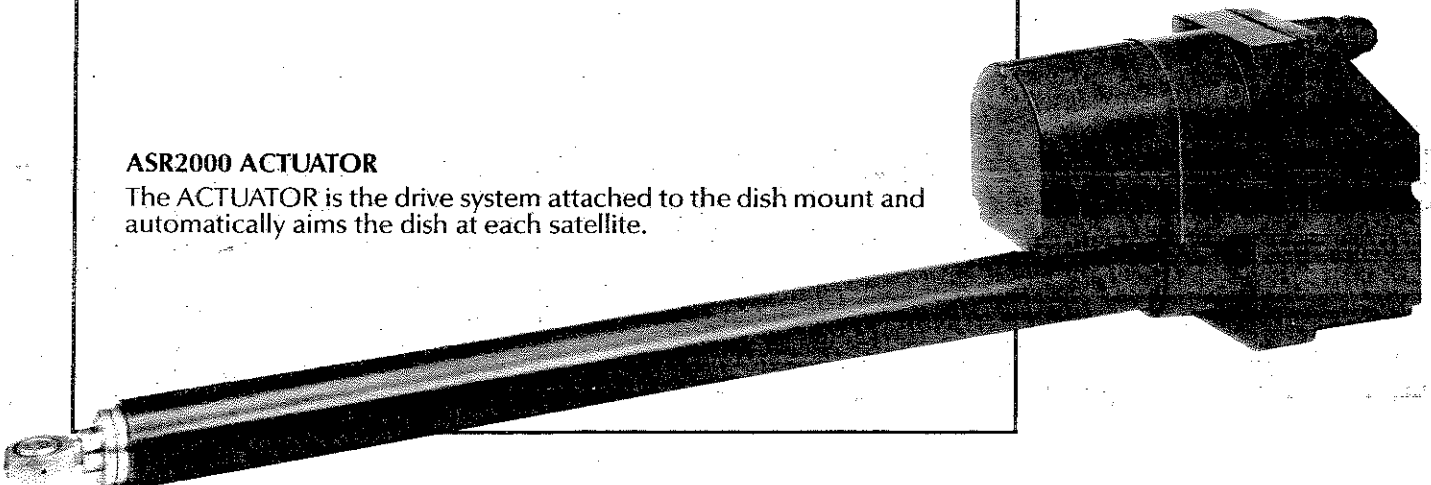


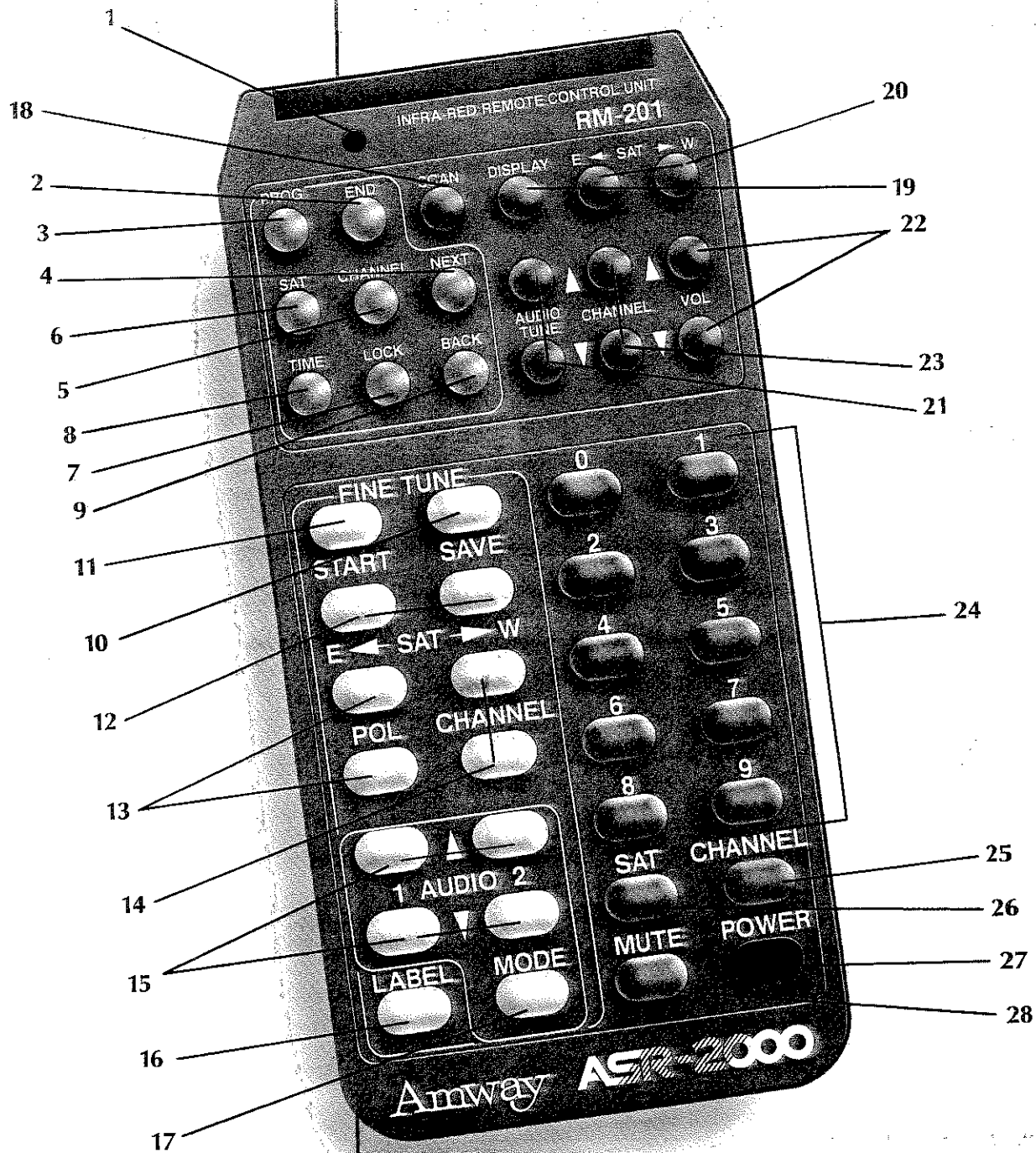
### **LNB (Low noise block downconverter)**

The LNB is a special amplifier attached to the **FEEDHORN** that boosts a satellite's signal strength with a minimum of "noise" or interference.

### **ASR2000 ACTUATOR**

The **ACTUATOR** is the drive system attached to the dish mount and automatically aims the dish at each satellite.







## ASR2000 COMMAND CENTER KEYPAD

1. **RED LED**—Flashing red light when keys are pressed
2. **END**—Exits you from certain routines
3. **PROG**—Entry key for AUTOMATIC FUTURE VIEWING
4. **NEXT**—Advances you through selection of characters to make changes on screen
5. **CHANNEL**—Used to select channel name for AUTOMATIC FUTURE VIEWING programs
6. **SAT**—Used to select satellite name for AUTOMATIC FUTURE VIEWING PROGRAMS
7. **LOCK**—Used to bypass PARENTAL LOCK-OUT
8. **TIME**—Used to select time for AUTOMATIC FUTURE VIEWING programs
9. **BACK**—Reverses you through selection of characters to make changes on screen
10. **SAVE**—To save information on various displays and exit many routines
11. **START**—Used to enter System SETUP and to exit certain displays
12. **E-SAT-W**—Used to optimize dish position
13. **POL**—Used to optimize channel polarity
14. **CHANNEL**—Selects channels (forwards or backwards) in the FINE TUNE section and optimizes picture while viewing
15. **1 AUDIO 2**—Used to set AUDIO 1 and AUDIO 2 frequencies for each channel
16. **LABEL**—Moves cursor forwards and backwards for character selection while entering information on screen
17. **MODE**—Used for selection of 7 special System functions and in the FINE TUNE section, this key is used for the selection of 16 different AUDIO MODES.
18. **SCAN**—Causes receiver to scan all channels on a given satellite, stopping briefly on each channel
19. **DISPLAY**—Used to display general information (i.e.—satellite, channel, date, time, signal strength)
20. **E-SAT-W**—Moves antenna east or west, from satellite to satellite, one satellite at a time
21. **AUDIO TUNE**—Used for selection of NORMAL AUDIO or ENHANCED AUDIO
22. **VOL**—Controls volume on Audio Out Adj.
23. **CHANNEL**—Channel selection up and down through CHANNEL LIST
24. **0-9**—Used for channel and satellite selection. Also used for selection and entry of various information throughout the ASR2000 System
25. **CHANNEL**—Displays the list of channel names for individual satellites
26. **SAT**—Displays names of satellites programmed into the System
27. **POWER**—Power on and off
28. **MUTE**—Mutes audio

Keys 2 through 9 are used primarily to PROGRAM your ASR2000 System for future viewing or video taping with a VCR.

Keys 10 through 17 are used primarily to SETUP your ASR2000 System.

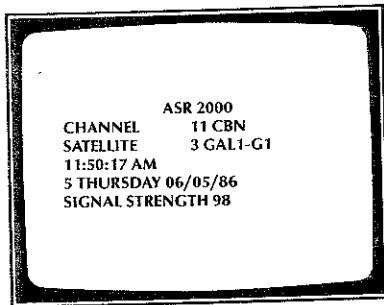
Keys 18 through 28 are used primarily for DAILY VIEWING.

**NOTE:** While operating the System, there will be a brief time delay whenever a single digit 1 or 2 is entered. To avoid this brief delay, simply enter "0" before entering key #1 or #2.

**NOTE:** While using the keys on the handheld COMMAND CENTER KEYPAD, remember that holding down the keys will speed up the process, and to tap or press the keys allows you to progress at your own speed.

**BE CAREFUL NOT TO LET YOUR COMMAND CENTER KEYPAD COME IN CONTACT WITH LIQUIDS.** Use a clean dry cloth to clean the keys. The keypad uses one nine-volt battery. It is best to aim the keypad straight at the eye. If aimed through glass, the keypad's energy is reflected or bounced off. Thus, the command is not detected by the ASR EYE. Commands can be bounced off light-colored walls and mirrors. Occasionally this reflected energy may cause an erroneous response to a keystroke. If this happens, simply repeat the command.





**NOTE:** To set the time and date on the display screen, press the DARK GRAY [TIME] KEY, and follow the routine by answering the questions at the bottom of the screen.

**NOTE:** The on-screen displays used throughout this manual are for the purpose of illustration only. The screens which your System displays may not be identical to the ones shown in the manual. As satellites and programming services change, every effort will be made to include the very latest information at the time of manufacture. Refer to pages 14 and 15 of this manual for instructions on how to change satellite and channel information on the on-screen displays.

**NOTE:** Will not control channel 3/4 sound level.

**NOTE:** To add or delete information on the CHANNEL LIST, see page 15.



## DAILY VIEWING KEYS

These are your EVERYDAY VIEWING CONTROL KEYS. Their markings are self-explanatory. A little practice, and you will find them very easy to use.

### POWER

**RED [POWER] KEY** located in the bottom right corner of your keypad. This key turns the ASR2000 System on and off.

The personalized power on display will appear. No commands will be accepted during this time.

### DISPLAY

This **SMALL BLACK KEY** is located in the top row of keys.

When you press the [DISPLAY] KEY, the DISPLAY LIST will appear on your screen with this information;

channel number  
channel name  
satellite number  
satellite name  
time  
date  
signal strength

You may press the **BLACK [DISPLAY] KEY** as often as you like. It will simply alternate from INFORMATION DISPLAY to your SATELLITE TELEVIEWED PROGRAM.

### E-SAT-W

These keys are the **SMALL BLACK KEYS** located at the top right of the keypad. Do not confuse them with the **LARGE LIGHT GRAY E-SAT-W KEYS** which are used for FINE TUNE.)

The E-SAT-W KEYS are used only to move the dish to another satellite on either side of the one you are now on. The movement will be either east or west, depending on which key you press.

### AUDIO TUNE

The **AUDIO TUNE KEYS** allows you to change the Audio instantly on any channel, with a selection from 3 Audio Sources.

The **TOP AUDIO TUNE KEY** goes back and forth from NORMAL AUDIO to ENHANCED AUDIO as you press it repeatedly.

The **BOTTOM AUDIO TUNE KEY** goes back and forth from NORMAL AUDIO to EXTERNAL AUDIO as you press the key repeatedly.

The **EXTERNAL AUDIO** allows you to listen to an external source that you may wish to connect to the ASR2000 System.

### VOLUME

Controls audio volume when ASR2000 (audio out adjustable jacks) is connected to a stereo system.

Press **TOP VOLUME KEY** to INCREASE volume.

Press **BOTTOM VOLUME KEY** to DECREASE volume.

### CHANNEL

These are the **SMALL BLACK KEYS** located near the top right of the keypad.

Press the **TOP CHANNEL KEY** and the channel advances to the next higher numbered channel.

Press the **BOTTOM CHANNEL KEY** and the channel drops to the next lower numbered channel.

Channel will change continuously if either key is held down.



### NUMBER KEYS

These are the **LARGE BLACK KEYS** numbered 0 through 9. These keys are used to control various functions of your ASR2000 System. For daily viewing use, the **BLACK NUMBER KEYS** are used to select channel and satellite numbers.

To enter a double digit number, you must enter the second digit within a three second time limit, or the unit will automatically enter the single number pressed.

### CHANNEL

This is the **LARGE BLACK KEY** located above the **RED (POWER) KEY** at the bottom right of the keypad.

Press the (**CHANNEL**) KEY and the **CHANNEL LIST** appears.

If you wish to change channels, simply press the numbered keys for that channel.

### SCAN

This **SMALL BLACK KEY**, located in the top row of keys on your keypad, causes the ASR2000 System to automatically change from channel to channel continuously.

Press the **BLACK (SCAN) KEY** to begin scanning channels. There will be a brief pause on each channel. To stop scanning, simply press the (**SCAN**) KEY again.

### SAT

This is the **LARGE BLACK KEY** to the left of [**CHANNEL**] KEY located near the bottom center of the keypad.

Press [**SAT**] KEY once and it shows the **SATELLITE LIST**.

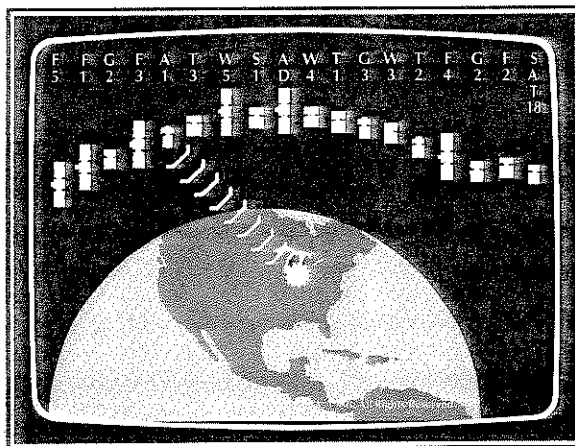
After pressing the [**SAT**] KEY you may now change satellites. Simply select the proper number for the desired satellite, and press those keys.

The unit will automatically find the satellite you have selected. The TV screen graphic display will show you the actual movement of the dish to the new satellite.

This is the graphics display of satellites that will show on your screen.

### SATELLITE NAMES

1. SAT5-F5
2. SAT1-F1
3. GAL1-G1
4. SAT3-F3
5. ASC1-A1
6. TEL3-T3
7. WES5-W5
8. SPA1-S1
9. ANID-AD
10. WES4-W4
11. TEL1-T1
12. GAL3-G3
13. WES3-W3
14. TEL2-T2
15. SAT4-F4
16. GAL2-G2
17. SAT2-F2
18. SAT18



### MUTE

This is a **LARGE BLACK KEY** located near the bottom-center of the keypad.

Press [**MUTE**] and sound from the audio-out adjustable jacks is muted.

Press [**MUTE**] again, and audio returns.

CHANNEL 11 CBN SATELLITE 3 GAL1-G1		
1 HBO E-5	9 ESPN	17 PTL
2 NASHVILL	10 MOV E-5	18 WTBS ATL
3 WGN CHI	11 CBN	19 MAX E-5
4 DISNEY E	12 REQ TV-5	20 GALAVISN
5 SHOW E-5	13 C-SPAN 1	21 USA E
6 SIN	14 MOV W-5	22 DISCOVERY
7 CNN	15 WOR NF-5	23 HBO E-5
8 CNN HD-5	16 VIEW 2-5	24 DISNEY W
SELECT CHANNEL NUMBER OR SELECT (CHAN) TO EXIT		

SATELLITE NAMES	
1 SAT5-F5	10 WES4-W4
2 SAT1-F1	11 TEL1-T1
3 GAL1-G1	12 GAL3-G3
4 SAT3-F3	13 WES3-W3
5 ASC1-A1	14 TEL2-T2
6 TEL3-T3	15 SAT4-F4
7 WES5-W5	16 GAL2-G2
8 SPA1-S1	17 SAT2-F2
9 ANID-AD	18 SAT18
SELECT SATELLITE NUMBER OR SELECT (SAT) TO EXIT	

**NOTE:** The ASR2000 System comes from the factory with the lockout code set at 49355. The lockout code may be changed to any other 5 digit combination See page 16 for instructions on how to change the code. **REMEMBER TO WRITE DOWN YOUR NEW FIVE-DIGIT CODE.**

PROGRAM 1		
CHANNEL 24 ART-EN		
SATELLITE 4 SAT 3 - F3		
TIME	TIME	DATE OR
ON	OFF	WEEKDAY
00:00 am	00:00 am	00/00/00
DIRECTIONS:		
GRAY CHANNEL KEY SETS CHAN		
GRAY SAT KEY SETS SAT VAL		
TIME KEY PROGRAMS TIME ON		
NEXT AND BACK CHANGE PRO#		
USE END KEY WHEN FINISHED		



## HOW TO PRESET ANY PROGRAM

### FOR AUTOMATIC FUTURE VIEWING

This feature of the ASR2000 System provides you with the ability to preset programs within your System for automatic future viewing and/or taping with a VCR.

Press [PROG] KEY to begin.

Then use the BLACK NUMBER KEYS to enter lockout code.

The MAIN PROGRAM DISPLAY will automatically appear.

The MAIN PROGRAM DISPLAY lists three change functions necessary to preset programs for automatic future viewing.

1. DARK GRAY [CHANNEL] KEY changes channel number on MAIN PROGRAM DISPLAY.
2. DARK GRAY [SAT] KEY changes satellite name and number on MAIN PROGRAM DISPLAY.
3. DARK GRAY [TIME] KEY changes time on MAIN PROGRAM DISPLAY.

### TO PRESET CHANNEL

Press the DARK GRAY [CHANNEL] KEY to preset the desired channel on the MAIN PROGRAM DISPLAY.

DIRECTIONS: Select a channel number or [SAVE] to exit.

MAIN PROGRAM DISPLAY will appear automatically after channel number is entered.

[SAVE] KEY will exit you back to MAIN PROGRAM DISPLAY.

### TO PRESET SATELLITE

Press the DARK GRAY [SAT] KEY to preset the desired satellite on the MAIN PROGRAM DISPLAY.

DIRECTIONS: Select a satellite number or [SAVE] to exit.

MAIN PROGRAM DISPLAY will appear automatically after satellite number is entered.

[SAVE] KEY will exit you back to MAIN PROGRAM DISPLAY.

### TO PRESET TIME

Press DARK GRAY [TIME] KEY to preset time on MAIN PROGRAM DISPLAY.

Follow this routine step by step to enter the program's time on the screen.

TIME ON: Enter hours (1-12)-or [SAVE] to advance.

TIME ON: Enter minutes (0-59)- or [SAVE] to advance.

TIME ON: Enter AM = 0 or PM = 1- or [SAVE] to advance.

TIME OFF: Enter hours (1-12)-or [SAVE] to advance.

TIME OFF: Enter minutes (0-59)-or [SAVE] to advance.

TIME OFF: ENTER AM = 0 or PM = 1- or [SAVE] to advance.

SELECT DATE MODE (0-9)-Calendar = 0 Month/Day/Year SUN = 1  
SAT = 7 WKDY = 8 ALL = 9.

Press DARK GRAY [END] KEY to return to satellite televised program.



## ASR2000 SYSTEM SETUP

### INTRODUCTION

Proper setup is very important for the ASR2000 System to function properly. Your installer will be primarily responsible for setting up the operational parameters of the ASR2000 System, but the directions provided will allow you to make changes in the operational parameters of the System.

The ASR2000 System SETUP section consists of 7 main areas of information and instruction.

1. ENTER ACTUATOR COUNTS
2. ENTER SATELLITE NAMES
3. ENTER CHANNEL NAMES
4. CHANGE ASR PERSONALITY
  1. Place dish on map
  2. Owner Name
  3. Change Lockout Code
5. FINE TUNE
  1. Actuator Position
  2. Polarity
  3. Descrambler
  4. Audio 1/Audio 2
  5. Audio Mode
6. REINITIALIZE ACTUATOR
7. PARENTAL LOCKOUT MENU

### HOW TO ENTER SETUP MENU

**TO BEGIN:** Press [START]

The ASR2000 System will ask for the lockout code. Enter the lockout code using the BLACK NUMBER KEYS. (Factory programmed lockout code is 49355).

The ASR2000 System will display the SETUP MENU.

Select the appropriate number and begin.

An explanation of each set-up routine is provided on the following pages.

1. ENTER ACTUATOR COUNTS/PAGE 14
2. ENTER SATELLITE NAMES/PAGE 14
3. ENTER CHANNEL NAMES/PAGE 15
4. CHANGE ASR PERSONALITY/PAGES 15-16
5. FINE TUNE/PAGES 17-19
6. REINITIALIZE ACTUATOR/PAGE 19
7. PARENTAL LOCKOUT MENU/PAGES 19-20

### ACTUATOR COUNTS INTRODUCTION

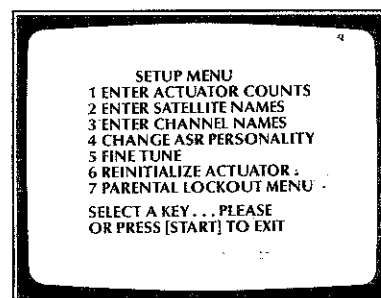
The satellites which broadcast the signals to your dish are located in a geosynchronous orbit 22,230 miles above the equator. The satellites circle the earth at the same speed as the earth's rotation. In this orbit, any given satellite appears fixed or stationary in relation to a specific point on earth.

From your location, the satellites will appear to be arranged in an arc across the sky. Your dish must be positioned correctly to "track" the arc and the System must be programmed correctly to point the dish directly at each individual satellite.

The movement of the dish across the arc, from satellite to satellite, is accomplished by the actuator. The actuator has a motor that allows the dish to be moved in either direction by means of the screw jack.

DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

#### ENTER LOCKOUT CODE



**WARNING:** Make sure you understand how the actuator counts work before changing any of them. If you do not, your dish may track the satellite arc, but not stop at appropriate positions to receive satellite signals. Ask your installer if there is ANY doubt in your mind before changing actuator counts. If you are sure, proceed with the directions.

DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

49855  
Batt + Cool

ACTUATOR COUNTS			
1	0	10	3970
2	161	11	4426
3	862	12	4789
4	1154	13	5345
5	1264	14	5893
6	2015	15	6000
7	2100	16	6100
8	3500	17	6200
9	3900	18	6600

NOTE: Actuator counts entered in the FINE TUNE mode will automatically be stored in the actuator count list when [SAVE] is pressed.

SETUP MENU	
1	ENTER ACTUATOR COUNTS
2	ENTER SATELLITE NAMES
3	ENTER CHANNEL NAMES
4	CHANGE ASR PERSONALITY
5	FINE TUNE
6	REINITIALIZE ACTUATOR
7	PARENTAL LOCKOUT MENU
SELECT A KEY... PLEASE	
OR PRESS [START] TO EXIT.	

SATELLITE NAMES	
1 SAT5-F5	10 WES4-W4
2 SAT1-F1	11 TEL1-T1
3 GAL1-G1	12 GAL3-G3
4 SAT3-F3	13 WES3-W3
5 ASC1-A1	14 TEL2-T2
6 TEL3-T3	15 SAT4-F4
7 WES5-W5	16 GAL2-G2
8 SPA1-S1	17 SAT2-F2
9 ANID-AD	18 SAT18
SELECT SATELLITE NUMBER	
OR SELECT [SAT] TO EXIT.	

NOTE: While using the keys on the keypad, remember that holding down the keys will speed up the process, and to tap or press the keys allows you to progress at your own speed.

The actuator must know exactly where to stop in order to receive the satellite you have selected. This is done with a counter located in the receiver that electronically counts the number of turns the actuator moves. When the count reaches a certain preset number, the actuator stops. This electromechanical action aims the dish directly at the satellite you have selected to view.

Your installer will aim your dish and program your System so that it will operate correctly, moving from satellite to satellite as you select. However, as new satellites are put into orbit, and old ones are moved or abandoned, the actuator counts may need to be changed. As this does not happen very frequently, you may wish to call your installer for changes when appropriate. However, the ASR2000 System, through a series of on-screen displays, will guide the owner through the appropriate steps to make changes when they are required.

### 1/HOW TO ENTER ACTUATOR COUNTS

TO ENTER ACTUATOR COUNTS, select your first option and press the BLACK [1] KEY.

Actuator counts for each satellite will appear on screen.

SELECT SATELLITE NUMBER OR SELECT [SAT] TO EXIT.

Select satellite number (1 through 18) using BLACK NUMBER KEYS. (If it is 1 or 2, enter a zero first to cancel the three second delay.)

Enter desired actuator count up to 4 digits.

Press [SAVE] to transfer the numbers up to the line of the actuator count list.

Repeat routine for each satellite desired.

### 2/HOW TO ENTER SATELLITE NAMES

This routine enters the names of each satellite into the ASR2000 System for proper satellite selection throughout your daily viewing.

If you are already in the SETUP MENU, proceed. Otherwise, press [START] and the SETUP MENU will appear.

Press BLACK [2] KEY.

The satellite list will appear.

Select the satellite (number 1 through 18) you wish to change.

To eliminate the single digit time delay, simply enter "0" before the single digit.

Follow the instructions at the bottom of the screen to enter SATELLITE NAMES.

The LIGHT GRAY [LABEL] KEY moves the cursor through the 8 possible spaces available to enter the satellite name.

When the cursor (red square) is in place, press the DARK GRAY [NEXT] KEY to cycle forward through the 59 possible character selections for that space (letters, numbers and punctuation marks).

When the cursor (red square) is in place, press the DARK GRAY [BACK] KEY to cycle backward through the 59 possible character selections for that space (letters, numbers and punctuation marks).

Press LIGHT GRAY [SAVE] KEY to transfer the new satellite name up to its appropriate position on the SATELLITE LIST.

At this point you can continue to enter satellite names or press BLACK [SAT] KEY to return to SETUP MENU.

### 3/HOW TO ENTER CHANNEL NAMES

This routine enters the names of each channel into the ASR2000 System for proper channel selection throughout your daily viewing. As services change satellites and/or transponders, it may become necessary to update channel list. If you are already in the SETUP MENU, proceed. Otherwise, press [START] and enter lockout code and the SETUP MENU will appear.

Press BLACK [3] KEY to enter CHANNEL NAMES.

The satellite list will appear.

Select the satellite (1 through 18) which carries the channel you wish to enter. (If a single digit number 1 or 2 is selected, there will be a time delay before CHANNEL LIST appears.)

The CHANNEL LIST for the selected satellite will appear.

Enter the channel number desired (1 through 24).

Follow the directions on the bottom of the screen to enter CHANNEL NAME.

DARK GRAY [NEXT] KEY cycles you forward through the 59 possible character selection (letters, numbers and punctuation marks).

DARK GRAY [BACK] KEY cycles you backward through the 59 possible character selection (letters, numbers and punctuation marks).

The LIGHT GRAY [LABEL] KEY moves the cursor through the 8 possible spaces available to enter the channel name.

Press LIGHT GRAY [SAVE] KEY to transfer the new channel name up to its appropriate position on the channel.

At this point, you can continue to enter channel names or press the BLACK [CHAN] KEY to return to the SETUP MENU.

Press LIGHT GRAY [START] KEY to return to the satellite televised program.

### 4/HOW TO CHANGE ASR2000 PERSONALITY

This section of the ASR2000 sets up 3 areas of your System.

To enter the ASR2000 personality section, select number 4 on the SETUP MENU with the BLACK NUMBER KEYS. If you are in the SETUP MENU proceed. Otherwise press [START] and enter lockout code and the SETUP MENU will appear.

The System PERSONALITY MENU will appear on your screen.

Select the item that you want to set up and enter number.

#### 1. PLACE DISH ON MAP

This routine allows you to move the simulated dish to the location of your antenna on the map.

Press the BLACK [0] KEY and the GRAPHICS VIEW FROM SPACE (MAP) appears.

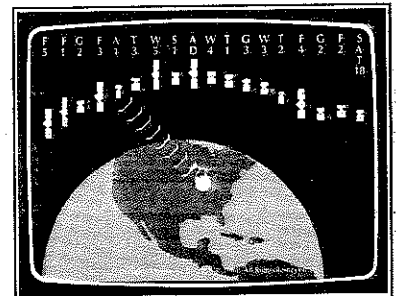
The LIGHT GRAY [POL] KEYS move the dish up and down on the map.

DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

SATELLITE NAMES	
1 SAT5-F5	10 WES4-W4
2 SAT1-F1	11 TEL1-T1
3 GAL1-G1	12 GAL3-G3
4 SAT3-F3	13 WES3-W3
5 ASC1-A1	14 TEL2-T2
6 TEL3-T3	15 SAT4-F4
7 WES5-W5	16 GAL2-G2
8 SPA1-S1	17 SAT2-F2
9 ANID-AD	18 SAT18

NOTE: While entering characters onto screen, remember that the "blank" square is located immediately following the last letter of the alphabet.

PERSONALITY MENU	
1	PLACE DISH ON MAP
2	OWNER NAME
3	CHANGE LOCKOUT CODE



DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

NOTE: While entering characters onto screen, remember that the "blank" square is located immediately following the last letter of the alphabet.

The LIGHT GRAY [E-SAT-W] KEYS move the dish east and west on the map.

Press the LIGHT GRAY [SAVE] KEY to return back to PERSONALITY MENU.

Press the LIGHT GRAY [SAVE] KEY again to return to the SETUP MENU. At this point you can select another number from the PERSONALITY MENU

OR

Press the LIGHT GRAY [START] KEY to return to the satellite televised program.

## 2. OWNER NAME

This routine allows you to personalize the ASR2000 System by providing a title screen for the owner's name.

The owner's name is entered in this routine and appears when the System is turned on.

If you are in the PERSONALITY MENU proceed. Otherwise press [START], enter lockout code, and the SETUP MENU will appear. Then press [4] and the PERSONALITY MENU will appear. Then proceed.

Press BLACK [2] KEY. Owner title screen will appear.

The LIGHT GRAY [LABEL] KEY moves the cursor (red square) through the 28 possible spaces available to enter the owner's name.

When the cursor (red square) is in place, press the DARK GRAY [NEXT] KEY to cycle forward through the 59 possible character selections for that space (letters, numbers, punctuation marks, blanks, etc.).

When the cursor (red square) is in place, press the DARK GRAY [BACK] KEY to cycle backward through the 59 possible character selections for that space (letters, numbers, punctuation marks, blanks, etc.).

Press LIGHT GRAY [SAVE] KEY to return to PERSONALITY MENU.

Press LIGHT GRAY [SAVE] KEY again to return to the SETUP MENU.

Press LIGHT GRAY [START] KEY to return to the satellite televised program.

## 3. CHANGE LOCKOUT CODE

This routine allows you to change the lockout code on your ASR2000 System

If you are in the PERSONALITY MENU proceed. Otherwise, press [START], enter lockout code and the SETUP MENU will appear. Then press [4] and the PERSONALITY MENU will appear. Then proceed.

Press BLACK [4] KEY.

The lockout change screen will appear.

Enter new 5 digit lockout code and answer question at bottom of screen. Be sure to write down the new lockout code.

You will automatically return to the PERSONALITY MENU.

Press the LIGHT GRAY [SAVE] KEY to return to the SETUP MENU.

Then press the LIGHT GRAY [START] KEY to return to the satellite televised program.

# 5/FINE TUNE

The FINE TUNE KEYS are the LARGE LIGHT GRAY KEYS.

This section controls a critical part of the system, and an absolute working knowledge is necessary.

It consists of five main functions:

1. Setting the proper actuator counts to locate a satellite;
2. Setting the proper Vertical and Horizontal POLARITY on each satellite;
3. programming the ASR2000 to interface with a DESCRAMBLER;
4. setting the proper AUDIO FREQUENCIES.
5. setting the proper AUDIO MODE;

YOU SHOULD MAKE ABSOLUTELY CERTAIN THE PERSON WHO IS INSTALLING YOUR SYSTEM HAS EXPLAINED ALL THESE FUNCTIONS TO YOUR COMPLETE SATISFACTION.

The actuator is essential for aiming the dish correctly at the satellite(s). The actuator is given a command from the keypad. This command tells the actuator how many turns are required to move the dish to a given, or known satellite location.

The installer will enter the appropriate actuator counts for your geographical location.

The procedures for setting ACTUATOR COUNTS, POLARITY, DESCRAMBLER, AUDIO MODE, and AUDIO FREQUENCIES number follow. They should be completed by following the FINE TUNE routines on the next few pages.

If you are not in the SETUP MENU press [START] and enter lockout code. SETUP MENU will appear. Then proceed.

To enter the FINE TUNE Section of the ASR2000 press the BLACK [5] KEY. The FINE TUNE display will appear on your screen.

The BLACK [DISPLAY] KEY takes you back and forth, from the FINE TUNE DISPLAY to the televised video. You will find that it is easier to fine tune while viewing the picture, rather than the display.

The LIGHT GRAY [E-SAT-W] KEYS are used to peak dish position for best picture.

Press the LIGHT GRAY EAST and WEST KEYS back and forth as necessary to get the clearest picture on your screen.

The LIGHT GRAY [POL] KEYS are also used to further peak the picture.

Press the LIGHT GRAY [POL] KEYS, up or down, as necessary to get the clearest picture on your screen.

To completely fine tune all of the channels on a given satellite, simply follow this routine on (one) EVEN #, and on (one) ODD # channel of that satellite.

If you have used the above keys correctly, you should have clear video reception on your screen.

DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

NOTE: It is the responsibility of the dealer/installer to set the proper counts for your location. These numbers should then be entered in the spaces provided on page 46.

FINE TUNE	
CHANNEL	11 CBN
SATELLITE	3 GAL1-G1
03:11:22 PM	
6 FRIDAY 06/20/86	
SIGNAL STRENGTH	142
POLARITY	37
ACTUATOR POSITION	350
DESCRAMBLER NO.	NONE
AUDIO 1	6.800 MHZ
AUDIO 2	6.200 MHZ
AUDIO MODE	AUDIO 1 WIDE

NOTE: While using the keys on the keypad, remember that holding down the keys will speed up the process, and to tap or press the keys allows you to progress at your own speed.

NOTE: To completely fine tune all of the channels on a given satellite, simply follow this routine on (one) EVEN number, and on (one) ODD number channel of that particular satellite.



DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

FINE TUNE	
CHANNEL	23 HBO E-S
SATELLITE	3 GALZ-G2
10:39:18 PM	
2 MONDAY 08/18/86	
SIGNAL STRENGTH	155
POLARITY	217
ACTUATOR POSITION	1084
DESCRAMBLER NO.	1
AUDIO 1	6.800 MHZ
AUDIO 2	6.200 MHZ
AUDIO MODE:	EXTERNAL SOURCE

NOTE: When the AUDIO MODE selection is made, be sure that the audio 1 and 2 (if necessary) are displaying proper frequencies.

## 5/FINE TUNE

### DECODER NUMBER

The ASR2000 System is compatible with most popular domestic descramblers, however, one descrambler is all that is needed to receive most of the popular scrambled video programming. To connect the ASR2000 System to a descrambler, follow the diagram on page 29. Once the descrambler is properly connected to the ASR2000 System and you wish to interface the descrambler with the System's computer, press the small DARK GRAY [NEXT] KEY located near the upper left hand corner of the keypad so that the number 1 appears next to DESCRAMBLER NO. (Note: If you go past 1, use the small DARK GRAY [BACK] KEY to return to 1.)

### AUDIO MODE: EXTERNAL SOURCE

Also the AUDIO MODE must be selected for EXTERNAL SOURCE. Refer to page 18 for the procedure to set the AUDIO MODE.

Press the LIGHT GRAY [SAVE] KEY to store descrambler number, then press [START] to return to the SETUP MENU. Then press [START] again to return to the satellite televised program.

The ASR2000 System has the capability of receiving a wide range of radio signals on subcarrier frequencies.

In the FINE TUNE section, you can set up your System to receive . . .

- external audio from an outside source

- a selection of 16 various mode options

The AUDIO frequencies may vary from channel to channel, and are preset at the factory.

The standard AUDIO frequencies for most channels are:

6.8 MHZ for AUDIO 1

6.2 MHZ for AUDIO 2

The AUDIO frequencies can be adjusted in the FINE TUNE section.

Simply look up the AUDIO frequency listed in a satellite TV program guide for the satellite and channel you have selected. There are many publications that provide the AUDIO and subcarrier information needed to adjust your AUDIO.

To enter the proper frequency for each AUDIO (1 and 2), use the LIGHT GRAY AUDIO KEYS (1 and 2). These keys control the selection of frequencies.

Press the LIGHT GRAY [SAVE] KEY to store the audio frequencies.

The AUDIO MODE selection at the bottom of the FINE TUNE DISPLAY provides a selection of 16 various AUDIO MODES.

These selections are available for any channel.

To select one of these AUDIO MODES, simply press the LIGHT GRAY [MODE] KEY repeatedly until the desired MODE appears on the bottom of your screen.

#### MATRIX WIDE STEREO

used when program is broadcast in matrix format with bandwidths of 200Khz to 400 KHz, 75us de-emphasis.

#### MATRIX WIDE SPACIAL

used when program is broadcast in matrix format with bandwidths of 200Khz to 400KHz, 75us de-emphasis.

#### MATRIX NARROW STEREO

used when program is broadcast in matrix format with a bandwidth of 100Khz, 75 us de-emphasis.

**MATRIX NARROW SPACIAL**

used when program is broadcast in matrix format with a bandwidth of 100Khz 75 us de-emphasis, but with stereo accent.

**DISCRETE WIDE STEREO**

used when program is broadcast in discrete format with a bandwidth of 200Khz to 400Khz, 75 us de-emphasis.

**DISCRETE WIDE SPACIAL**

used when program is broadcast in discrete format with a bandwidth of 200Khz to 400Khz, 75 us de-emphasis, but with stereo accent.

**DISCRETE NARROW STEREO**

used when program is broadcast in discrete format with a bandwidth of 100Khz, 75 us de-emphasis.

**DISCRETE NARROW SPACIAL**

used when program is broadcast in discrete format with a bandwidth of 100Khz, 75 us de-emphasis, but with stereo accent.

**MASTER MUTE**

used for muting all outputs.

**EXTERNAL PSEUDO**

used for routing mono signals through the ASR2000 and adding an artificial stereo effect.

**EXTERNAL STEREO**

used for routing stereo signals through the ASR2000.

**EXTERNAL STEREO SPACIAL**

used for routing stereo signals through the ASR2000 and adding an enhanced stereo effect.

**AUDIO 1 WIDE**

used for subcarriers with bandwidths of 200 Khz to 400 Khz, 75us de-emphasis.

**AUDIO 1 WIDE PSEUDO**

used for subcarriers with bandwidths of 200Khz to 400Khz, 75us de-emphasis, but output is simulated stereo.

**AUDIO 1 NARROW MONO**

used for subcarriers with bandwidths of 100Khz, 75us de-emphasis.

**AUDIO 1 PSEUDO NARROW**

used for subcarriers with bandwidths of 100Khz, 75us de-emphasis, but output is simulated stereo.

**6/REINITIALIZE ACTUATOR** (This establishes a zero count point for determining actuator positioning. This is primarily for use by your installer.

If you are not in the SETUP MENU, press [START] and enter lockout code. SETUP MENU will appear. Then proceed.

Press the BLACK [6] KEY.

SEARCHING FOR  
ACTUATOR ORIGIN  
ACTUATOR ORIGIN  
HAS BEEN FOUND

The following messages will appear on your screen:

The ASR2000 System will go through this sequence on your screen and, returns to the SETUP MENU.

Press the BLACK [2] KEY after the actuator origin has been found and check the actuator counts list against the dealer sheet in back of the manual (pg. 30).

Press the LARGE BLACK [SAT] KEY to return to the SETUP MENU. Press the LIGHT GRAY [START] KEY to exit.

**7/PARENTAL LOCKOUT**

This routine allows you to lock-out any or all channels on any satellite you wish. The lockout is applied all day long, seven days a week.

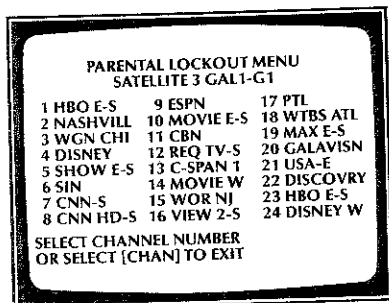
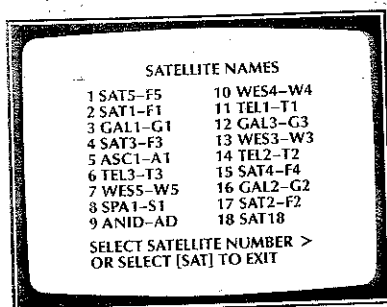
Any time you wish, you can remove the lockout and watch the channel.

DO NOT ATTEMPT TO MAKE SYSTEM CHANGES BEFORE YOU HAVE READ AND UNDERSTOOD THIS SECTION. REMEMBER, PRESSING THE [SAVE] KEY WILL ENTER NEW INFORMATION IN THE MEMORY AND WILL DELETE WHAT WAS PREVIOUSLY STORED.

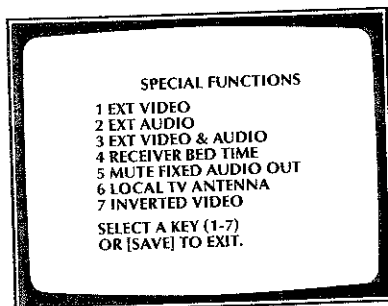
**SETUP MENU**

- 1 ENTER ACTUATOR COUNTS
- 2 ENTER SATELLITE NAMES
- 3 ENTER CHANNEL NAMES
- 4 CHANGE ASR PERSONALITY
- 5 FINE TUNE
- 6 REINITIALIZE ACTUATOR
- 7 PARENTAL LOCKOUT MENU

SELECT A KEY . . . PLEASE  
OR PRESS [START] TO EXIT



**NOTE:** Remember that removing and applying the lockout is done with the same procedure.



REMOVING and APPLYING the LOCKOUT are done with the same procedure.

If you are not in the SETUP MENU, press [START] and enter lockout code. SETUP MENU will appear. Then proceed.

Press BLACK [7] KEY.

Satellite list will appear.

Select satellite number (1 through 18) with BLACK NUMBER KEYS. PARENTAL LOCKOUT MENU for that satellite will appear.

Select and enter the channel number that you want to lock out.

"xxx" will automatically appear on the channel locked out.

To undo LOCKOUT on any channel, simply follow the same routine, and re-enter the channel number.

Press the LIGHT GRAY [SAVE] KEY to return to the SETUP MENU.

**REMEMBER** You can override the locked channels at any time by pressing the DARK GRAY [LOCK] KEY and entering the lockout code.



## SPECIAL FUNCTIONS

This section of the ASR2000 provides 7 options that are available to turn on or off at any time.

Press the LIGHT GRAY [MODE] KEY and the SPECIAL FUNCTIONS list appears.

Turn each function ON and OFF by pressing the number for that selection.

### 1/EXTERNAL VIDEO

This function allows you to receive video from an external source at any time (i.e., VCR, descrambler).

### 2/EXTERNAL AUDIO

This function allows you to receive audio from an external source at any time (i.e., stereo, descrambler).

### 3/EXTERNAL VIDEO & AUDIO

This function allows you to receive audio and video from an external source at any time (i.e., VCR, descrambler).

### 4/RECEIVER BED TIME

This function allows you to set your ASR2000 System to turn ON or OFF at any given time. (Simply press the 4 KEY and follow the directions on the screen.)

### 5/MUTE FIXED AUDIO OUT

This function allows you to shut off the audio and amplifiers (located in another area of the home) while you are viewing from a remote location.

### 6/LOCAL TV ANTENNA

This function allows you to automatically switch to your local TV antenna (automatic AB switching).

### 7/INVERTED VIDEO

This function allows you to invert the video to accommodate other video broadcast formats.

## TROUBLESHOOTING GUIDE

Your Amway ASR2000 Satellite Television System has been designed and built to exacting specifications to insure you years of enjoyable, trouble-free operation. If a problem does arise, consult the list below for directions as to how to remedy the problem. If the problem still persists, call the Amway Technical Hotline 1-800-253-7088 (inside Michigan: 1-800-632-9551) for further help. For general information, call Product Information at 1-616-676-6279.

**CAUTION:** Please do not attempt to repair or modify any of the ASR2000 components yourself. You may damage one or more of the components and such damage is not covered under the warranty.

<b>Problem Description:</b>	<b>Cause:</b>	<b>Corrective Action:</b>
No video, no audio, power supply power light is off, receiver power light is off.	1. Power supply not plugged in. 2. Tripped circuit breaker in power supply.	1. Plug in power supply. 2. Press center button into circuit breakers on power supply. If circuit breaker trips on power up, call Amway Technical Hotline.
No video, no audio, power supply light is on, receiver power light is off.	1. Receiver is not turned on.	1. Press red POWER key on COMMAND CENTER KEYPAD.
No video, no audio, power supply light is on, receiver power light is off. Pressing POWER key on COMMAND CENTER KEYPAD does not turn on receiver.	1. No battery or dead battery in COMMAND CENTER KEYPAD (red LED on KEYPAD does not blink when keys are pressed). 2. ASR EYE not receiving signal from COMMAND CENTER KEYPAD.  3. ASR EYE not properly connected to receiver.  4. ASR EYE not powered up.  5. ASR2000 needs to be reset.	1. Put a (new) battery in the COMMAND CENTER KEYPAD.  2. Aim COMMAND CENTER KEYPAD directly at the ASR EYE. Stand closer to ASR EYE. Insure clear line of sight from COMMAND CENTER KEYPAD to ASR EYE. 3. Check all connectors to make sure they are secure. If none of the above remedy the problem, call the Amway Technical Hotline. 4. Make sure ASR EYE power supply is plugged into outlet. Make sure ASR EYE power supply cable is plugged into the mini jack on the rear of the ASR EYE. 5. Press the reset button on the ASR2000 receiver front panel.

Problem Description:	Cause:	Corrective Action:
Power is on, but no audio or video.	<ol style="list-style-type: none"> <li>1. Television not set for the same VHF channel as the output of the receiver's modulator.</li> <li>2. Improper or poor connection on receiver, ASR EYE, television</li> <li>3. Defective LNB or poor connection at LNB.</li> <li>4. Dish not tracking satellite arc properly.</li> <li>5. Actuator counts are wrong.</li> <li>6. External video and audio inputs have been selected.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure TV set is tuned to the same channel (VHF Ch. 3 or 4) selected with the CH3-CH4 switch on the front of the receiver. Use the channel which is not utilized by an over-the-air television station in your area. Also verify that your TV set is working properly. (Try some over-the-air channels.)</li> <li>2. Check all connectors to make sure they are secure.</li> <li>3. Call Amway Technical Hotline.</li> <li>4. Call Amway Technical Hotline.</li> <li>5. Check actuator count against Installer Reference Sheet. If counts do not match, call Amway Technical Hotline.</li> <li>6. Enter SPECIAL FUNCTIONS section and turn off external video and external audio.</li> </ol>
Power is on, but no audio.	<ol style="list-style-type: none"> <li>1. MUTE function has been activated.</li> <li>2. External audio input has been activated.</li> <li>3. Volume control on COMMAND CENTER KEYPAD has volume turned all the way down. (This only applies when an external stereo amplifier is used with the ASR2000.)</li> <li>4. Wrong audio mode has been selected (ex: MATRIX WIDE when it should be AUDIO 1 WIDE).</li> <li>5. Wrong audio frequency has been selected (ex. 6.200 MHz when it should be 6.800 MHz).</li> <li>6. Volume control has been turned down on TV or TV audio has been muted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press MUTE key on COMMAND CENTER KEYPAD.</li> <li>2. Enter SPECIAL FUNCTIONS section and turn off external audio.</li> <li>3. Press upper VOL key on COMMAND CENTER KEYPAD to increase volume. Also check for proper connections and interface with stereo amplifier.</li> <li>4. Enter SETUP MENU and select #5-"FINE TUNE." Use light gray MODE key to select proper audio mode. Check a satellite TV program guide for a listing of correct audio modes.</li> <li>5. Enter SETUP MENU and select #5-"FINE TUNE." Use light gray 1 AUDIO 2 keys to select the proper frequency. Check a satellite TV program guide for a listing of correct audio modes.</li> <li>6. Make sure TV volume is turned up and that TV mute is off.</li> </ol>

Problem Description:	Cause:	Corrective Action:
Poor audio and video.	<ol style="list-style-type: none"> <li>1. Improper or poor connections in System.</li> <li>2. Actuator counts are wrong.</li> <li>3. Polarity is not set properly.</li> <li>4. Obstruction blocking dish's view of satellite arc.</li> <li>5. Dish not tracking satellite arc properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check all connectors to make sure they are secure.</li> <li>2. Check actuator counts against Installer Reference Sheet. If counts do not match, call Amway Technical Hotline.</li> <li>3. Check polarity settings against Installer Reference Sheet. If polarity values need to be re-set, enter SETUP MENU, select #5-"FINE TUNE" and use light gray POL keys to enter polarity settings.</li> <li>4. Check for trees, buildings, etc., between dish and satellite arc. Remove or trim trees, if necessary.</li> <li>5. Call Amway Technical Hotline.</li> </ol>
Poor video and audio. Video characterized by small wavy lines, loss of color, and/or heringbone pattern on TV screen.	<ol style="list-style-type: none"> <li>1. Modulator output does not match VHF Channel 3 or 4.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust VHF Channel 3 or 4 with fine tune control on the TV set.</li> </ol>
Able to receive only all odd or all even channels on <i>some</i> satellites. Other satellites have both odd and even channels working properly.	<ol style="list-style-type: none"> <li>1. Polarity not set correctly for either odd or even channels.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set polarity by entering #5-"FINE TUNE" in SETUP MENU and adjust using light gray POL keys. (Refer to Installer Reference Sheet for polarity settings.)</li> </ol>
Able to receive only all odd or all even channels on <i>all</i> satellites.	<ol style="list-style-type: none"> <li>1. Defective polarotor or poor connection.</li> </ol>	<ol style="list-style-type: none"> <li>1. Call Amway Technical Hotline.</li> </ol>
Key stroke on COMMAND CENTER KEYPAD does not execute the proper function. Example: You press the large black SAT key and the System shuts off.	<ol style="list-style-type: none"> <li>1. Proper infrared message did not reach the ASR EYE.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press key again, making sure COMMAND CENTER KEYPAD is aimed directly at the ASR EYE. If this does not help, replace battery in COMMAND CENTER KEYPAD.</li> </ol>
System automatically turns off at the same time everyday.	<ol style="list-style-type: none"> <li>1. "RECEIVER BEDTIME" in SPECIAL FUNCTIONS menu has been activated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press light gray MODE key, then select #4-"RECEIVER BEDTIME" and set time for 00:00.</li> </ol>
Unable to turn System off by pressing red POWER key.	<ol style="list-style-type: none"> <li>1. System is in the SETUP MENU in FINE TUNE mode.</li> </ol>	<ol style="list-style-type: none"> <li>1. Exit SETUP MENU by pressing light gray START key twice. Then press red POWER key to turn System off.</li> </ol>

Problem Description:	Cause:	Corrective Action:
Unable to get audio on a channel broadcasting on an intermittent or occasional basis. These are common in sports and newsgathering and are also known as "raw feeds."	<ol style="list-style-type: none"> <li>1. Proper audio frequency has not been selected.</li> <li>2. Proper audio mode has not been selected.</li> </ol>	<ol style="list-style-type: none"> <li>1. Enter SETUP MENU and select #5—"FINE TUNE." Use light gray 1 AUDIO 2 keys to find correct audio frequency.</li> <li>2. Enter SETUP MENU and select #5—"FINE TUNE." Use light gray MODE key to find correct audio mode.</li> </ol>
Lockout Code no longer accesses SETUP MENU, PARENTAL LOCKOUT, and PROGRAMMING functions.	<ol style="list-style-type: none"> <li>1. You have forgotten the correct lockout code.</li> <li>2. Someone has changed your lockout code.</li> </ol>	<ol style="list-style-type: none"> <li>1. Factory preset lockout code is 49355. If you have changed it and written it down as instructed, find your written record.</li> <li>2. Consult other users/family members to find out new code. Call Amway Technical Hotline if correct lockout code cannot be verified.</li> </ol>
Program function does not appear to have executed properly while attempting to record a satellite delivered program.	<ol style="list-style-type: none"> <li>1. Programming parameters not set properly.</li> <li>2. The program you were trying to record did not play at the time indicated in your satellite program guide.</li> <li>3. The program in your ASR2000 System was overridden by a program previously entered.</li> <li>4. Timer on VCR was programmed incorrectly.</li> <li>5. Clock on VCR and/or ASR2000 not set to the correct time.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recheck satellite, channel, time on, time off, AM/PM, etc., settings. Did you make an error?</li> <li>2. Programmers sometimes change their previously-announced program schedules. Try taping the program at another time.</li> <li>3. Check all programs (1-12) in the system for overlap. Make sure programs do not overlap.</li> <li>4. Check proper procedure for programming your VCR.</li> <li>5. Set VCR clock and ASR2000 clock for the correct time.</li> </ol>
All channels appear to be scrambled.	<ol style="list-style-type: none"> <li>1. Inverted Video mode has been activated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Enter SPECIAL FUNCTIONS menu by pressing light gray MODE key. Select #7—"INVERTED VIDEO" to deactivate. Press light gray SAVE key to exit.</li> </ol>
<p>NOTE: The following addresses problems which may be due to faulty or incorrect connections or settings involving the interface of the ASR2000 with a descrambler. Please refer to the descrambler owner's manual troubleshooting section before proceeding any further.</p> <p>Descrambler will not unscramble channel(s) for which it has been authorized.</p>	<ol style="list-style-type: none"> <li>1. Improper connection of descrambler to ASR2000.</li> <li>2. Proper descrambler number has not been selected in FINE TUNE mode.</li> </ol>	<ol style="list-style-type: none"> <li>1. See ASR2000 wiring/hookup diagram for proper connection points.</li> <li>2. Enter SETUP MENU and select #5—"FINE TUNE." Use small dark gray NEXT and BACK keys to select proper descramble number. Also be sure to set audio mode to EXTERNAL SOURCE.</li> </ol>
Video on a descrambled channel is clear, but there is no audio.	<ol style="list-style-type: none"> <li>1. Audio mode not set for EXTERNAL SOURCE.</li> </ol>	<ol style="list-style-type: none"> <li>1. Enter SETUP MENU and select #5—"FINE TUNE." Use large gray MODE key to select EXTERNAL SOURCE.</li> </ol>



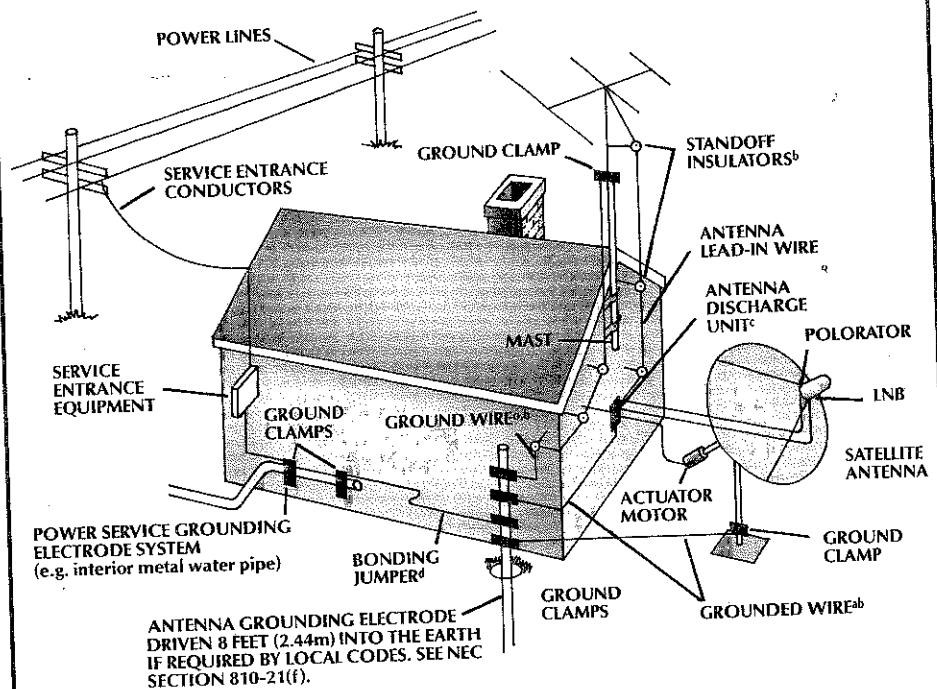


## IMPORTANT SAFEGUARDS

1. **Read Instructions**—All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions**—The safety and operating instructions should be retained for future reference.
3. **Heed Warnings**—All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions**—All operating and use instructions should be followed.
5. **Cleaning**—Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. **Attachments**—Do not use attachments not recommended by the video product manufacturer as they may cause hazards.
7. **Water and Moisture**—Do not use this video product near water—for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
8. **Accessories**—Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the video product. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
9. **Ventilation**—Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the video product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. **Power Sources**—This video product should be operated only from the type of power source indicated on the marketing label. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
11. **Grounding or Polarization**—This video product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.  
**Alternate Warnings**—This video product is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. **Power-Cord Protection**—Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

12A. **Protective Attachment Plug**—The appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

13. **Outdoor Antenna Grounding**—If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure below.



NOTE: Coaxial cable from LNB must be connected through a grounded antenna discharge unit using an 8' GND rod at the service entrance of the home. Shield drain wires on actuator and polorator bundles must be connected to the GND rod at service entrance of the home.

14. **Lightning**—For added protection for this video product receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

15. **Power Lines**—An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

16. **Overloading**—Do not overload wall outlets and extension cords as this can result in a risk of fire or electrical shock.
17. **Object and Liquid Entry**—Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.
18. **Servicing**—Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer servicing to qualified service personnel.
19. **Damage Requiring Service**—Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a. When the power-supply cord or plug is damaged.
  - b. If liquid has been spilled, or objects have fallen into the video product.
  - c. If the video product has been exposed to rain or water.
  - d. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
  - e. If the video product has been dropped or the cabinet has been damaged.
  - f. When the video product exhibits a distinct change in performance—this indicates a need for service.
20. **Replacement Parts**—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
21. **Safety Check**—Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.



## TYPICAL SPECIFICATIONS ASR2000 SATELLITE TELEVISION SYSTEM

### RECEIVER/POWER SUPPLY

#### General

Power: 117 VAC @ 60 Hz  
Size: Receiver 7.75"H x 13.5"L x 5.5"W  
Power Supply 4"H x 8"L x 10"W  
Function Selection: Infrared Remote Control

#### Environmental

Operating Temperature Range: 0°C to +45°C

#### Audio Characteristics

Tuning Range: 5 MHz to 9 MHz  
Tuning Method: Digital Phase Lock Loop  
Frequency Response: 50 Hz to 15 KHz  
Output Level: 0.5V RMS Nominal  
Harmonic Distortion: 1.5% Maximum (75 KHz Dev.)  
Intermodulation Distortion: 2% Maximum (75 KHz Dev.)

#### Video Characteristics

Output Level: 1V P.P. Nominal  
Output Impedance: 75 Ohms Unbalanced  
Dispersal Clamping: 50 dB Minimum  
Differential Gain: 5% Typical (Baseband Video)  
Differential Phase: 5% Typical (Baseband Video)  
Video Frequency Response: 30 Hz to 3.58 MHz  $\pm$  0.5 dB  
3.58 MHz to 4.2 MHz  $\pm$  1 dB

#### R.F. Characteristics

Input Frequency: 950-1450 MHz  
Input Level: 0 dBm to -60 dBm  
Final IF Frequency: 70 MHz  
IF Bandwidth: 25 MHz

### COMMAND CENTER KEYPAD

Type: Infrared remote control transmitter  
Size: 1"H x 5.7"L x 2.75"W  
Power: 9V Alkaline Battery  
Range: 25 Feet Minimum

### ASR EYE

Size: 1.5"H x 4"L x 8"W  
Power: 9 VDC Class 2 Wall Transformer rated at 200 mA  
Range: 25 Feet Minimum

### FEEDHORN

Type: Chaparral Polarotor 1 w/Gold Ring  
Input Frequency Range: 3.7 GHz to 4.2 GHz  
F/D Range: 0.28 to 0.32  
VSWR: 1.25 to 1 Typical  
Isolation: 35 dB Typical  
Servo Power Requirements: +5 VDC @ 500 mA Maximum

### LNB

Input Frequency Range: 3.7 GHz to 4.2 GHz  
Output Frequency: 950 to 1450 MHz  
Output Impedance: 75 Ohms  
Gain: 56 dB Minimum  
Noise Temperature: 75°K Maximum  
Local Oscillator Stability:  $\pm$  3 MHz @ -40°C to +60°C  
Image Rejection: 45 dB Minimum  
Operating Temperature: -40°C to +60°C

### ACTUATOR

Type: 18 inch Acme Screw Actuator  
Power: 24 VDC  
Operating Temperature Range: -40°F to +170°F

**ANTENNA**

Type: Winegard Model CK-1088 with MT-5 Mini-Mount, BK-810 Backup Structure, Buttonhook with Shroud.

Reflector Diameter: 10 Feet (3 Meters)

Surface Tolerance: + .030 inch\*

Frequency Range: C-Band 3.7 to 4.2 GHz

Ku-Band 11.7 to 12.7 GHz

Hole Size: .078 inch

Gain: C-Band 40.4 dB Ku-Band 49.0 dB\*

Efficiency: C-Band 67% Ku-Band 46.5%\*

Half-Power Beamwidth: 1.6°

F/D Ratio: 0.278

Cross Polarization: 25 dB down

Side Lobes: 20 dB down

Operating Temperature: -40° to + 140°F

Feed Type: Prime Focus

Depth: 27 inches

Focal Length: 33-5/16 inches (33-1/16 inches with P1 Feed and Gold Ring)

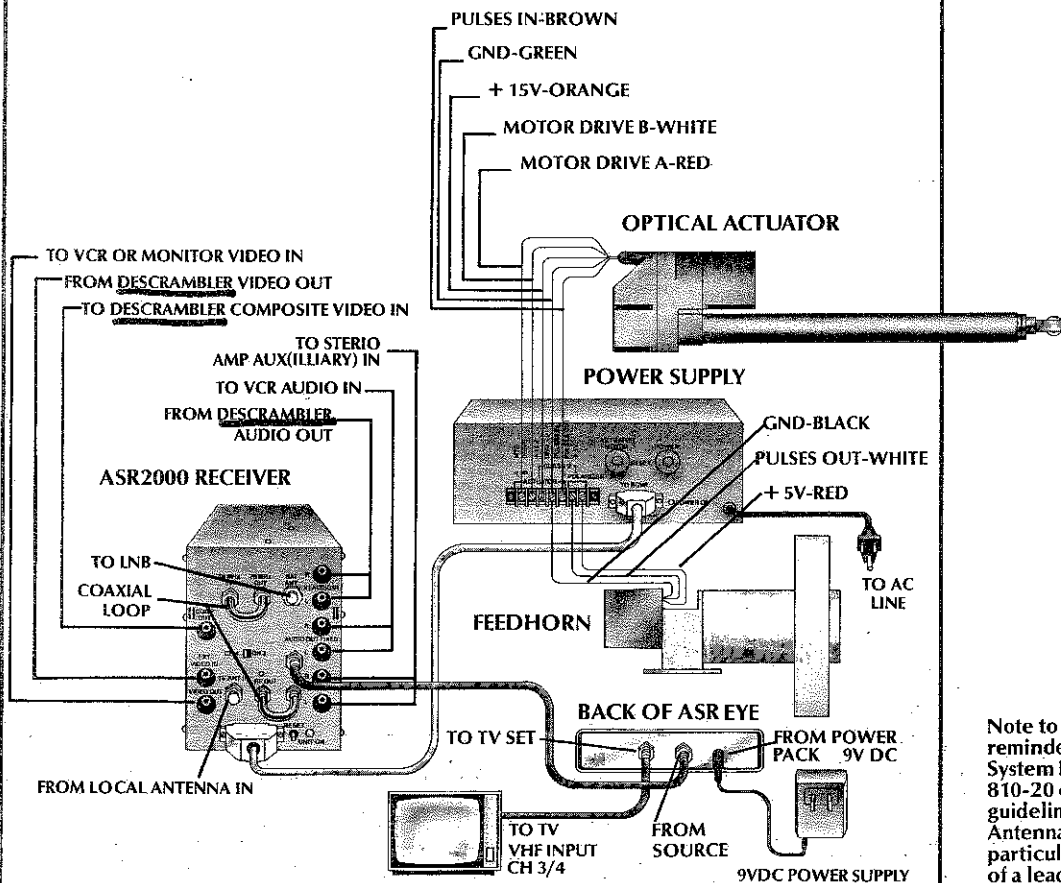
Finish: Powder Coat Smoked Chrome

Gauge: .040 Perforated aluminum

Weight: Reflector weighs 92 lbs.

Mount Requirements: For grade-level installations requires 96" length of 4 inch O.D. pipe, can use 3.5 inch ASA schedule 40 or 80 pipe, or 4 inch O.D. steel tubing with wall thickness not less than 0.1875 inch.

\*Based on computer modeling



**Note to TVRO System Installers:** This reminder is provided to call TVRO System Installer's attention to Article 810-20 of the NEC that provides guidelines for proper installation of Antenna Discharge Units and, in particular, specifies that each conductor of a lead-in from an outdoor antenna shall be provided with a Listed antenna discharge unit except where the lead-in conductors are enclosed in a continuous metallic shield that is effectively grounded.

INSTALLER SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

## installer information

name \_\_\_\_\_

address \_\_\_\_\_

city \_\_\_\_\_

state, zip \_\_\_\_\_

phone \_\_\_\_\_



# INSTALLER REFERENCE SHEET FOR ASR2000 SYSTEM

SAT. #	ACTUATOR COUNT	POLARITY SETTING	NOTES
1.		odd channel #	
		even channel #	
2.		odd channel #	
		even channel #	
3.		odd channel #	
		even channel #	
4.		odd channel #	
		even channel #	
5.		odd channel #	
		even channel #	
6.		odd channel #	
		even channel #	
7.		odd channel #	
		even channel #	
8.		odd channel #	
		even channel #	
9.		odd channel #	
		even channel #	
10.		odd channel #	
		even channel #	
11.		odd channel #	
		even channel #	
12.		odd channel #	
		even channel #	
13.		odd channel #	
		even channel #	
14.		odd channel #	
		even channel #	
15.		odd channel #	
		even channel #	
16.		odd channel #	
		even channel #	
17.		odd channel #	
		even channel #	
18.		odd channel #	
		even channel #	



## TWO-YEAR LIMITED WARRANTY, EXCLUSIONS AND LIMITATIONS

The express limited warranty set forth below is in lieu of any and all other warranties. The Amway Customer Satisfaction Guarantee and Amway Pledge of Fairness do not apply to the ASR2000 Series Satellite TV Reception System.

Amway Corporation warrants all ASR2000 Series Satellite TV Reception System components to be free from defects in materials and workmanship for two years from date of original purchase, under normal use and service. Amway's obligation is limited to repairing or replacing, at its option, free of charge for parts or labor, any component proven to be defective in materials or workmanship under normal use and service. IN-WARRANTY components will be repaired or replaced and returned to the customer. This warranty is void if the product is altered or improperly repaired or serviced by anyone other than Amway. NO WARRANTY CLAIM WILL BE HONORED UNLESS AT THE TIME THE CLAIM IS MADE, YOU PRESENT A DATED COPY OF PROOF OF PURCHASE OR AMWAY HAS ON FILE A COMPLETED AND VALID WARRANTY REGISTRATION CARD. This warranty does not cover any costs incurred in removal, packaging, transportation or reinstallation of the component into your system. This warranty does not extend to components which have been subjected to misuse, improper installation, or to damage caused by wind, lightning, ice, electrical power surges or outages, or other occurrences over which Amway has no control.

THERE ARE NO EXPRESS WARRANTIES WHICH EXTEND BEYOND THE FACE HEREOF. ALL IMPLIED WARRANTIES, OBLIGATIONS OR LIABILITIES MADE BY AMWAY IN CONNECTION WITH THIS PRODUCT, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, ARE LIMITED IN DURATION TO A PERIOD OF TWO YEARS FROM THE DATE OF ORIGINAL PURCHASE. Some states do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you. IN NO CASE SHALL AMWAY BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR ANY OTHER BASIS OF LIABILITY WHATSOEVER, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY AMWAY'S OWN NEGLIGENCE OR FAULT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. No increase or alteration, written or verbal, of the obligation of this warranty is authorized.

The terms of the manufacturer's warranty are included in and covered by the above warranty. The installation of the ASR2000 is not covered by the above warranty.

Amway Corporation is not responsible for, and the above warranty does not cover, any degradation of the quality of reception due to scrambling of the signal by a satellite user, terrestrial or other microwave interference, line-of-sight obstruction, or from any other cause not directly related to the operation of the ASR2000. In this regard, some specific channels being transmitted by various satellites may not be available for use by the ASR2000.

### POLICY REGARDING RETURNS FOR REFUND

Optimum site location, installation and hook-up are *essential* to proper performance of the ASR2000 Satellite TV Reception System. Amway strongly recommends that a qualified professional installer be contracted to perform a site survey, and to complete installation and hook-up of the system.

Amway **will not** accept return of any ASR2000 components for refund except under the following conditions:

1. The components, in their **unopened** original shipping container, must be returned, within 30 days from the date of purchase, to the Amway distributor from whom they were purchased.
2. The components must be accompanied by a written statement, signed by a professional installer, attesting that a site survey of the customer's location was performed and the site failed.

**NOTE:** The customer shall be responsible for compliance with all applicable ordinances, statutes, regulations, restrictions and covenants which may affect the installation, placement and use of the ASR2000 System.

**NOTE:** The Amway Customer Satisfaction Guarantee and Amway Pledge of Fairness **DO NOT** apply to the ASR2000 Series System Components.