

Operating Instructions

VIDEOCIPHER[®] RS Descrambler Compatible

VIDEOpal[®] Order Recorder

Integrated Satellite Receiver

Model No. **PS-550SU**



Panasonic[®]

Read these instructions completely *before* operating this unit.

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Useful Function

Dear Panasonic Customer

Congratulation on your purchase of a new Panasonic Integrated Satellite Receiver [PS-550SU].

This receiver is compatible with the VideoCipher RS descrambler and VIDEOpal order recoder module*¹⁾ and is provided with a variety of new functions.

It represents the state-of-the-art in your television viewing.

*¹⁾ VideoCipher[®] RS and VIDEOpal[®] order recoder are registered trademarks of General Instrument Corporation.

* Modules will be supplied and warrenteed by your dealer or program provider.

Customer's Record

Model Number	PS-550SU
Serial Number	
Address Number (VCRS) Unit/Phone Nos.* ²⁾	/
Date of Purchase	
Dealer Name	TEL:

*²⁾ See the operating instructions of VideoCipher RS.

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Important Safety Notice

WARNING: To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.

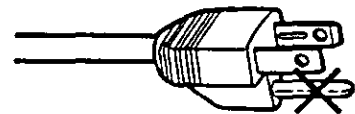
WARNING: This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacture's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a TV interface device in accordance with the specifications in part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.



If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: "Something about interference" which is available from FCC regional offices.

CAUTION: Do not change or modify without the express approval of the party responsible for compliance. These changes or modifications could void the user's authority to operate this equipment.

CAUTION: Do not remove the grounding pin on the power plug. This equipment is equipped with a three grounding-type power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician. Do not defeat the purpose of the grounding plug.



Do not remove

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL		



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 that 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 appliance.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

General Description

Panasonic Integrated Satellite Receiver

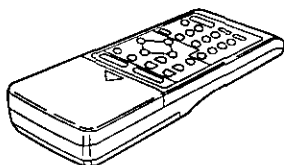
The PS-550SU is a high-end feature packed, Integrated Satellite Receiver offered by Panasonic. It combines Panasonic's receiver; television and audio expertise to offer superb video and audio performance from Satellite broadcast programs. Standard UHF remote control provides out-of-room satellite or channel selection. Surround sound circuits offer multi-mode listening excitement.

Features and Capabilities

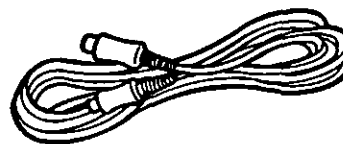
- Compatible with VideoCipher® RS Descrambler and Videopal Order Recorder modules
- Menu driven operation up to 12 categories pre-programmed
- User re-programmable program locations and program names
- A/V Surround-sound circuitry
- Built-in Programmable Actuator Controller with 60 satellite memory
- 27 User programmable favorite channels
- Frequency tuning plans for all major Ku Band Satellites
- Direct Satellite access
- Auto peak adjustments for dish and skew
- Built-in programmable TI filter
- Sophisticated on-screen display with satellite graphics
- Full function UHF remote control
- Optional simplified UHF remote control available
- Digital Stereo Sound on VideoCipher channels
- Parental lock with programmable password and unique one time view function
- Skip-channel tuning
- Second Receiver Operation
- Dual LNB inputs for V/H or C/KU inputs with internal switching
- Last Channel Recall
- Automatic Memory remembers last control settings
- Programmable AFC ON/OFF with video fine tuning
- Video scan mode
- Built in RF modulator with channel 3/4 switch
- Compatible with Pulse controlled LNBF units

Accessories

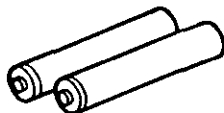
UHF Remote Control1 pc.
[RMC-550]



Connecting Cable1 pc.
[TSX4270-1]



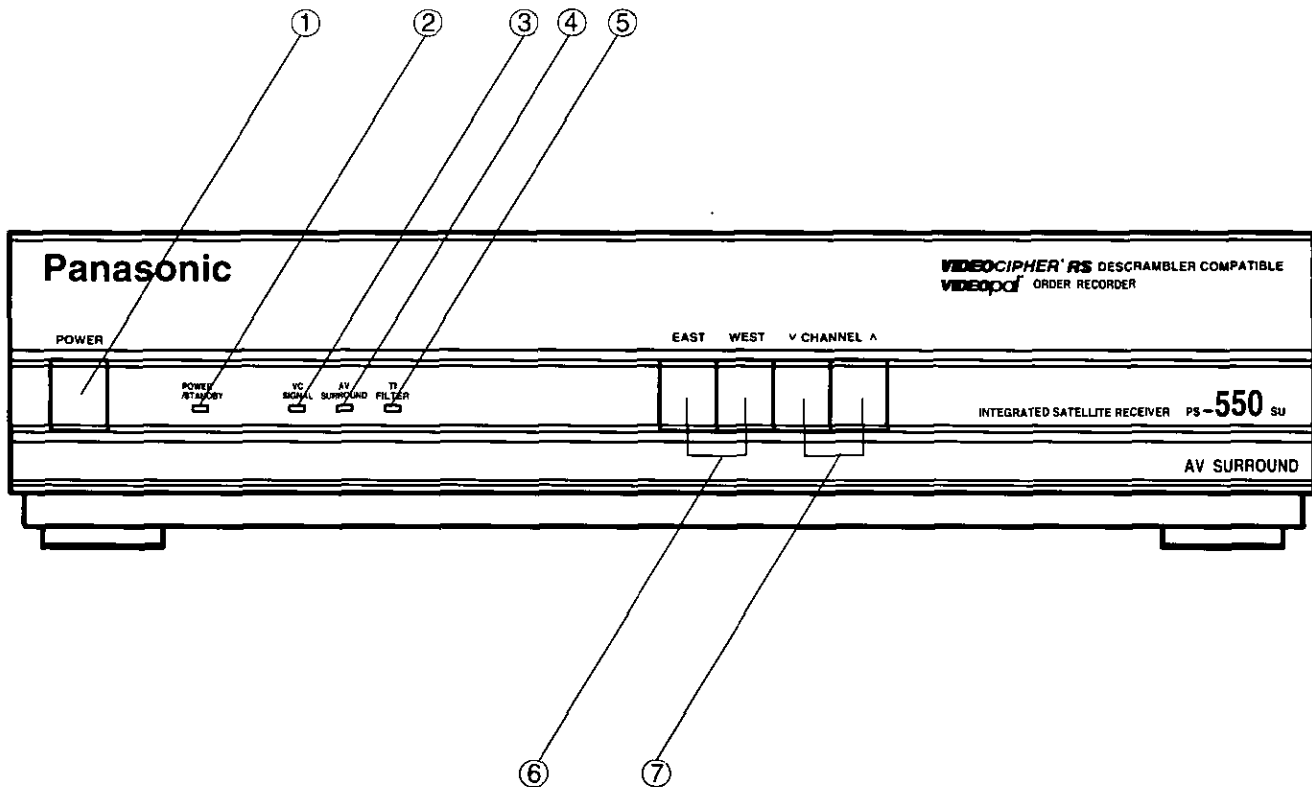
Batteries for Remote Control2 pcs.
[AA: SUM-3: R6]



UHF Antenna1 pc.
[TSA110007]



Location: Front Controls and Indicators



① POWER ON/OFF SWITCH

Turns the unit ON/OFF.

② POWER/STANDBY INDICATOR

Indicates when the power of unit is turned ON (red), or the unit is in stand-by mode (green).

③ VC SIGNAL INDICATOR

Indicates when the system is receiving a VideoCipher signal.

④ AV SURROUND INDICATOR

Indicates when AV Surround mode is selected.

⑤ TI FILTER INDICATOR

Indicates when the built-in TI filter circuit is selected.

⑥ EAST WEST BUTTON

Causes the antenna to be positioned toward the next east or west satellite.

⑦ CHANNEL UP (Λ) /DOWN (V) BUTTONS

Press either button to change channels in sequence.

**① IF INPUT/+18V DC OUTPUT TERMINAL (C/H)
[F connector]**

Input connector for IF signal from LNB, and also supplies a +18V DC power to the LNB.

**② IF INPUT/+18V DC OUTPUT TERMINAL (Ku/V)
[F connector]**

Input connector for IF signal from LNB, and also supplies a +18V DC power to the LNB.

③ TV RF OUTPUT TERMINAL [F connector]

VHF signal to television set.

④ CHANNEL SELECT SWITCH (CH3/CH4)

Selects channel 3 or channel 4 output of PS-550SU to the television. Choose the channel that is not broadcast locally and tune the television to this channel.

**⑤ EXT. ANTENNA INPUT TERMINAL
[F connector]**

VHF signal from an external VHF antenna.

⑥ COMPOSITE OUTPUT TERMINAL [RCA connector]

Composite baseband signal to other descramblers.

⑦ VIDEO OUTPUT TERMINAL [RCA connector]

Video signal to video monitor.

**⑧ VIDEOCIPHER (IPPV/DATA) TERMINALS
[RCA connector]**

RCA connector for future applications.

**⑨ +24V/-24V DC OUTPUT TERMINALS
(TO ACTUATOR)**

+24V and -24V DC output to actuator motor.

⑩ V/H CONTROL VOLTAGE TERMINALS

Control voltage output to select between V/H polarity.

⑪ ANTENNA ACTUATOR CONTROL TERMINALS

GNDSignal ground conductor from actuator.

DC5V 50mA5V DC (50mA) output to supply

Hall sensor or Optical type in actuator.

PULSE.....Actuator sensor pulse output.

(Reed switch, Hall sensor or Optical type)

⑫ AUDIO OUTPUT TERMINALS [RCA connector]

Audio signals (L/R) to video monitor or external audio amplifier.

⑬ VIDEOCIPHER ADDRESS NO.

You can read the first 8 numbers of your Authorization (Address) Number through this window. See the operating instructions of VideoCipher RS for directions to read the full 12-digit number. Use this number for program subscription.

⑭ MODEM TELEPHONE JACK LOCATION

For videopal operation.

**⑮ UHF REMOTE ANTENNA CONNECTING TERMINAL
[F connector]**

Connector for UHF remote antenna.

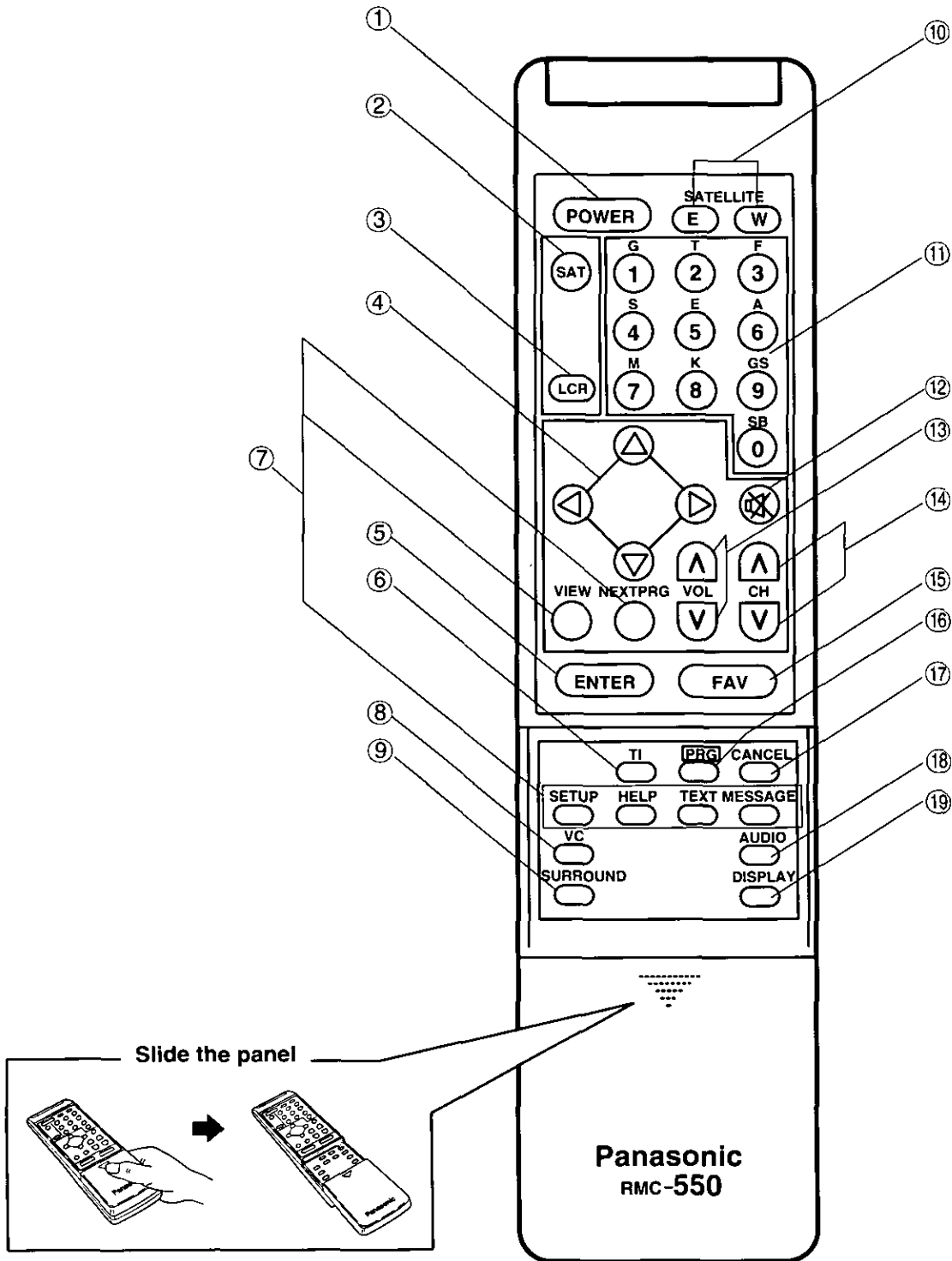
⑯ POLARIZATION CONTROL SIGNAL TERMINALS

Polarization control signals to polarizer.

⑰ RESET BUTTON

Built-in circuit breaker for overcurrent or short circuit protection. Press button to reset the breaker.

Location: UHF Remote Control



① POWER ON/OFF SWITCH

Turns the unit ON/OFF.

② SAT BUTTON

Used to select a satellite by remote control.

Press once to select or sequence through the C-Band Satellites. Press twice for Ku-Band Satellites.

③ L.C.R. (Last Channel Recall) BUTTON

Use this button to recall the last selected channel in one easy step. Useful in switching between channels when you want to watch concurrent programs alternatively.

④ CURSOR CONTROL BUTTONS

Use to control the cursor.

Use these buttons for various functions.

⑤ ENTER BUTTON

Use for various functions.

⑥ TI FILTER ON/OFF SWITCH

Used to turn the built-in TI filter circuit ON/OFF.

⑦ VIDEOCIPHER CONTROL BUTTONS

SET UP

Use this button along with the number buttons to display the Authorization Number and set up your VideoCipher channel services and features.

HELP

Press the button to read instructional text about setting up your VideoCipher features and controls.

TEXT

Some VideoCipher channels provide text information to their users. Use this button to read channel and service related text on your TV screen.

MESSAGE

Occasionally, your program supplier may have a personal message for your subscription.

Press this button to read messages on your TV screen.

NEXT PRG

This button allows you to see information about the next scheduled program on a VideoCipher channel.

VIEW

At the skip channel operations, use this button to cancel settings.

Use this button to check the program title, running time and other information about the program you are watching on a VideoCipher channel.

⑧ VC ON/OFF

Turns the VC ON/OFF when VideoCipher signal is present in order to listen to audio programs.

⑨ SURROUND BUTTON

Used to select surround ON/OFF.

⑩ SATELLITE EAST/WEST BUTTONS

Cause the antenna to be positioned toward the east (E) or west (W).

⑪ NUMBER BUTTONS

Used to select satellite and channel by direct access. Used to enter a password.

⑫ MUTE BUTTON

Mutes the audio.

⑬ VOLUME UP/DOWN BUTTONS

Decrease (V) or increase (A) audio volume.

⑭ CHANNEL UP (A)/DOWN (V) BUTTONS

Used to change channels in sequence.

⑮ FAVORITE BUTTON

Displays FAV channel mode and menu mode.

⑯ PROGRAM BUTTON

Used to select program mode.

⑰ CANCEL BUTTON

Used to delete data and for VideoCipher operation.

⑱ AUDIO BUTTON

Used to tune audio subcarrier frequency. Selection of bandwidth of audio IF bandwidth.

⑲ DISPLAY BUTTON

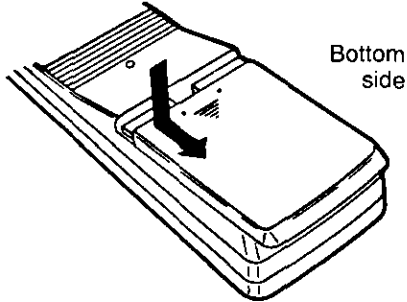
Calls up receiver on-screen display data.

Battery Replacement

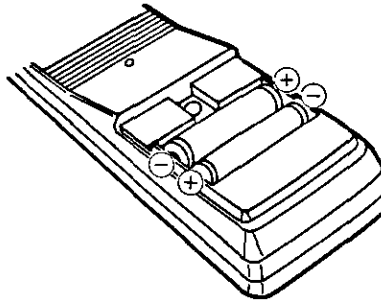
Open the battery cover by sliding the panel away from the body. Insert the two AA batteries (SUM-3) into the battery compartment.

To Install the Remote Control Batteries

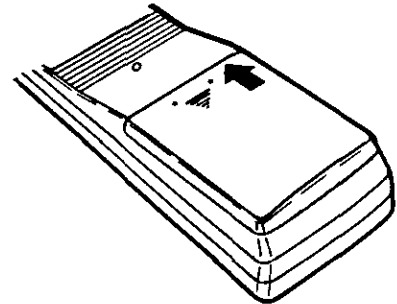
① Slide the panel away.



② Insert new batteries with the correct polarity.



③ Replace the panel.



Note: Replace both batteries at the same time.

Battery Precautions

The incorrect use of batteries can cause electrolyte leakage which will corrode the remote control transmitter or cause the batteries to explode. The following precautions must be observed carefully.

<p>Old Batteries New Batteries</p> <p>Replace both batteries at the same time. Dispose of them immediately.</p>	<p>Don't mix battery types. (alkaline and carbon zinc, etc.)</p>	<p>Don't</p> <p>Recharge Short-circuit Disassemble Fire Heat or Burn</p>
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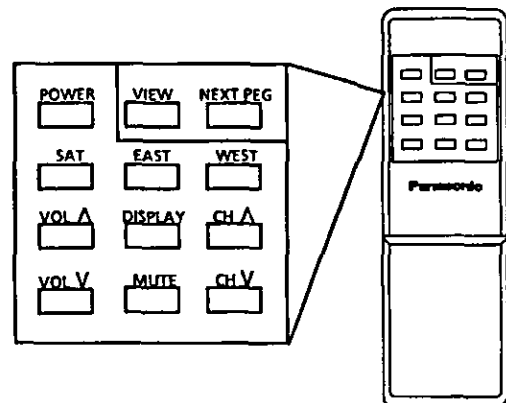
Note:

1. The remote control transmitter should be placed to avoid direct sunlight or heat.
2. Pressing more than two buttons at a time can lead to an incorrect command.

Optional Remote Control [RMC-40SR] (UHF)

PS-550SU is compatible with the Panasonic Simplified Remote Control RMC-40SR. It is a scaled down alternative to the standard remote control RMC-550.

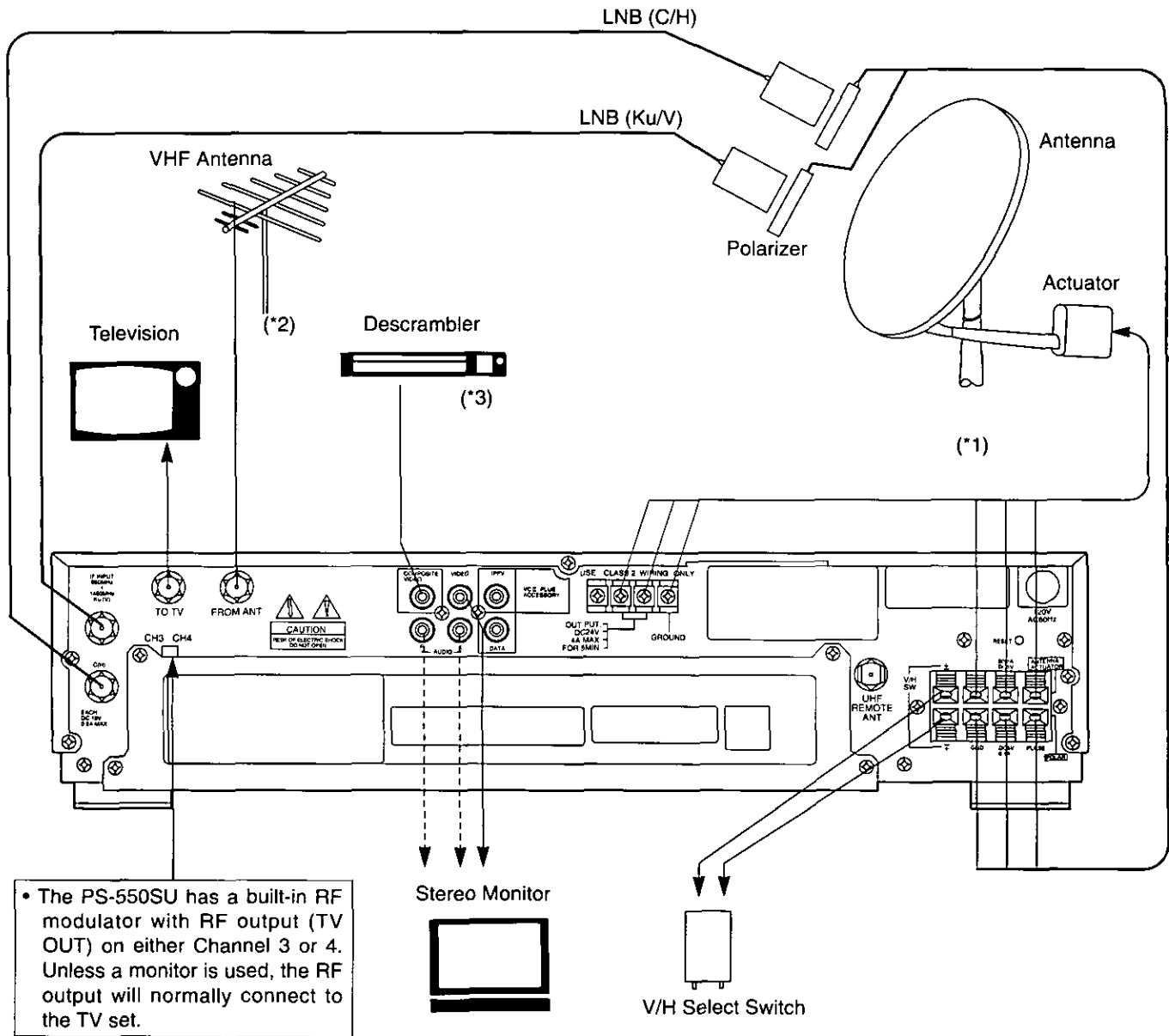
With only 12 buttons, you still have control over essential receiver functions as well as View and Next Program, which are the two most often used VideoCipher Descrambler controls.



Connections

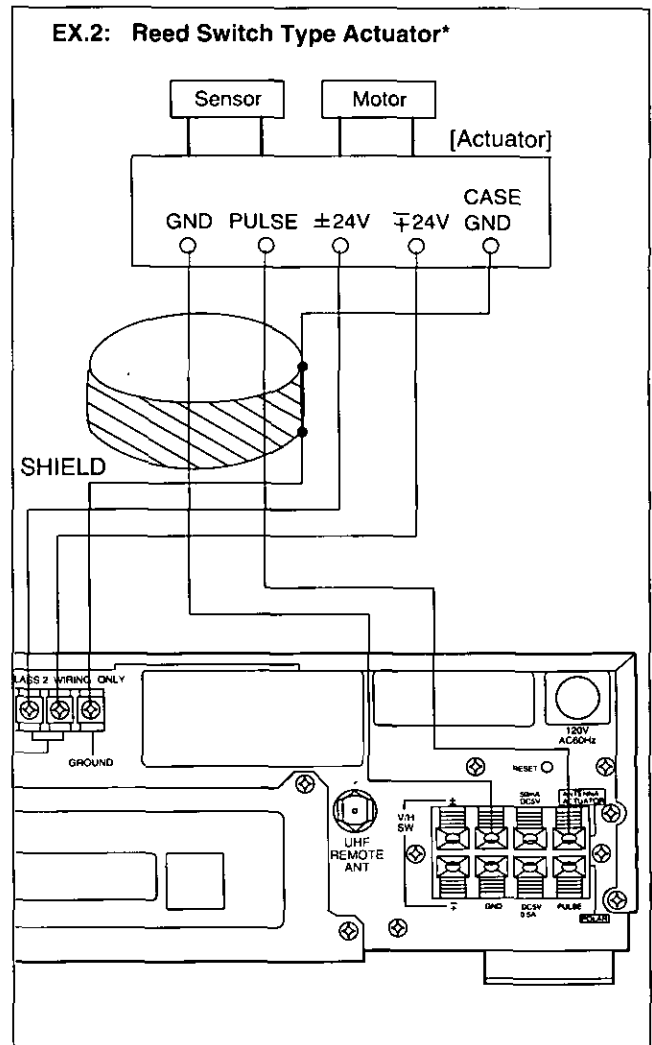
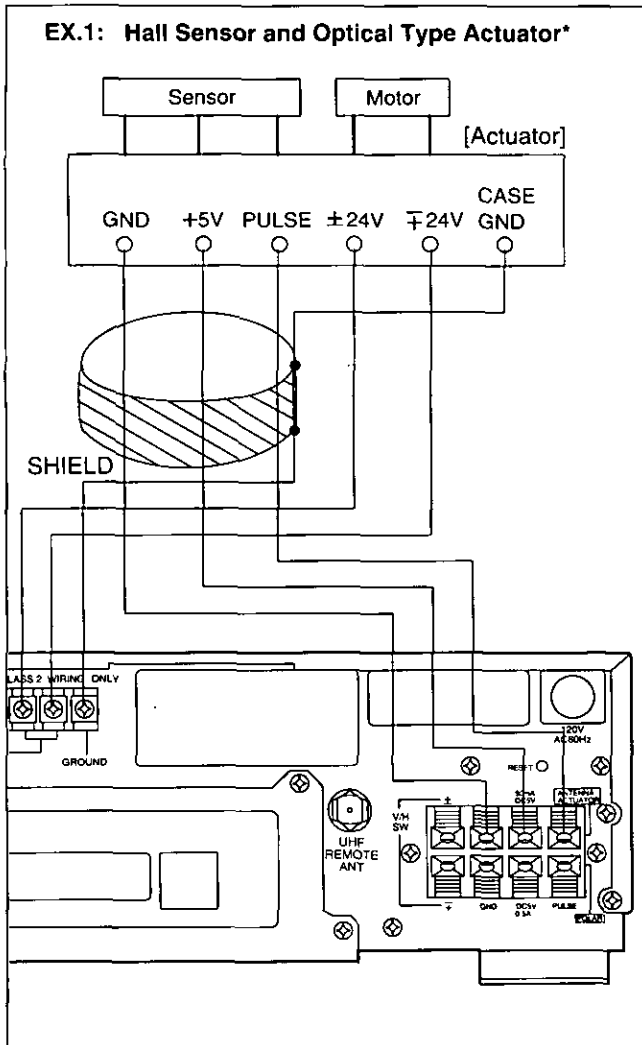
CAUTION: Improper connection of accessories (or connection to incompatible equipment) may damage your unit. All connections should be made with the AC cord unplugged.

1 Basic Connecting Diagram



- Notes:**
- *1. Above diagram shows an example of connection where a Reed Switch Type Actuator is connect. Note that the actuator connection method may differ with the actuator type. (Refer to page 11 for actuator connection)
 - *2. To receive an ordinary TV broadcast, turn the receiver OFF.
 - *3. In case of connecting a descrambler other than VideoCipher, connect it to the composite out terminal.
 - *4. The audio to a monaural monitor can be connected to either the R or L audio output terminal.
 - *5. For a dual LNB system, Panasonic's V/H Select Switch [TZ-VHS] may also be used. For detailed information, refer to the Installation Instructions.

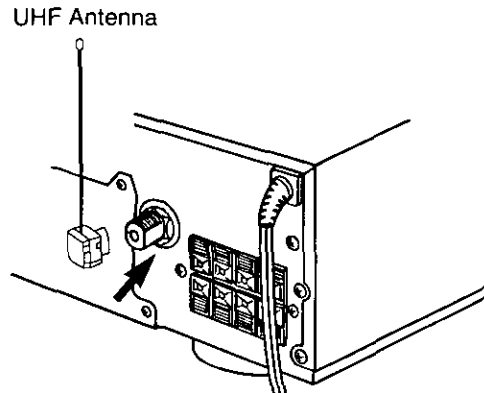
2 Antenna Actuator Connection



Note (*): It is recommended that actuators with 24 V or 30 V DC motors be used to minimize antenna slewing time.

3 Attachment of the UHF Antenna

After all connections have been finished, install the UHF antenna [TSA 110007] to the rear terminal of the receiver as shown below.



ADDITIONAL NOTICE:

UHF Remote Control

The normal range of the UHF remote control is greater than 150 feet, with no obstructions. Houses where a greater range is required, or that have several walls in the path of the signal may have problems with reliable remote operation. In these cases it may be necessary to relocate the UHF receiving antenna to a different location. Remove the antenna from the back of the receiver and reconnect it using a length of coaxial cable while testing for a location where signals can be received reliably from all control areas.

Low Noise Block Down Converter (LNB)

The receiver uses Low Noise Block Down Converters (C or Ku-Band LNB) for its microwave interface. The output frequency range is 950 to 1450MHz. Power is supplied to the LNB via its output F connector.

Note: The receiver is capable of supplying 18V DC at 200 milliamps max. from each input F connector simultaneously.

Programming and Operations Information

General Information

The PS-550SU is designed for automatic operation and simplified installation.

Pre-stored in the memory are the names, relative locations, format and frequency band of over 40 satellites with provisions for storing about 20 new satellites when they are launched into orbit.

The set-up mode is accomplished using the remote control with no programming controls located on the front panel of the receiver. After set up operation, it is extremely simple to change various settings from the remote control without resorting to the set-up mode. AFC ON or OFF, video fine tune, TI filter ON or OFF, audio tuning, audio bandwidth, antenna fine positioning may all be changed from the remote control and are automatically stored in memory on a per-channel basis after adjustment.

Satellite selection, channel selection, and audio tuning may be done either by direct access using the 10 number buttons, or by using the appropriate slew controls.

On-Screen Displays

The PS-550SU generates a variety of on-screen informational displays.

Programming in set-up mode and operations in auto mode are carried out sequentially as the on-screen display indicates.

This Operating Instructions Illustrate the on-screen display in each step of operation.

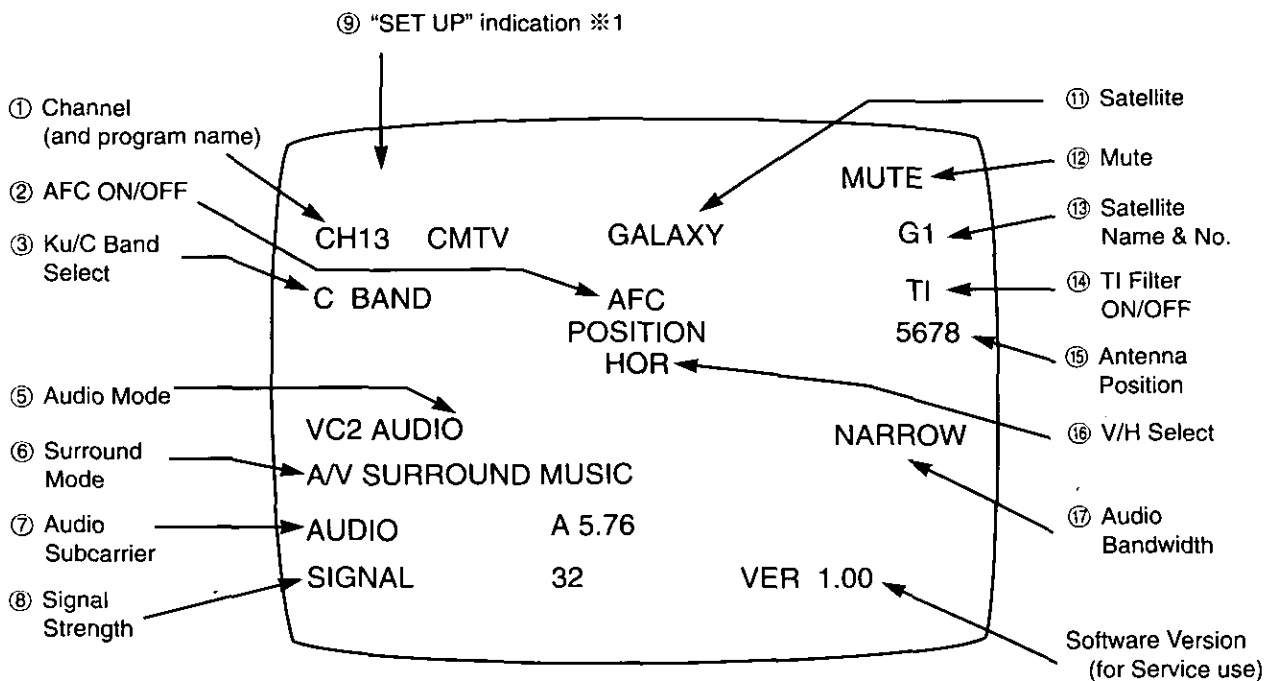
However these illustrations may be different depends on your setting and selection.

A full data display indicates the current satellite, channel, program name, polarity, antenna position, and more.

You can also check your setting at any time by pressing the **DISPLAY** button on the remote control.

When the equipment is turned on and the **DISPLAY** button on the remote control is depressed, the following data will be displayed on TV or the monitor screen connected to the equipment.

On-Screen Display's basic formation



※1 In the set-up mode, "SET UP" is displayed.

※ In the set-up mode, "SKEW" is displayed when adjusting skew.

Full data display indications

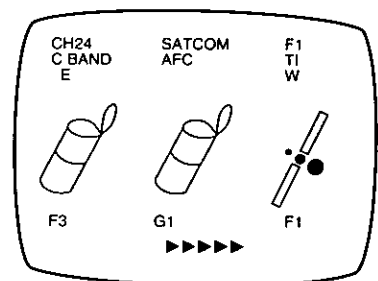
Note: (*1)···Displays name of pre-stored satellite.

No.	PARAMETER	DATA INPUT CHOICES	No.	PARAMETER	DATA INPUT CHOICES
①	Channel	Channel number (and program name)	⑧	Signal Strength	0 ~ 50
②	AFC ON/OFF	"AFC" or no display	⑩	Satellite	Satellite name (*1)
③	Ku/C-Band Select	"Ku BAND" or "C BAND"	⑫	Mute	"MUTE" or no display
⑤	Audio Mode	"MONO" or "VC2 AUDIO"	⑬	Satellite Name & No.	Name..... letter No..... 1 ~ 9
⑥	Surround Modes	VC2 AUDIO "A/V SURROUND MOVIE" "A/V SURROUND MUSIC" "SURROUND OFF" Monaural: "A/V SURROUND MONO" "SURROUND OFF"	⑭	TI Filter ON/OFF	"TI" or no display
			⑮	Antenna Position	0000 ~ 9999
			⑯	V/H Select	"VERT" or "HOR"
⑦	Audio Subcarrier	A: 5.00 ~ 8.60 MHz	⑰	Audio Bandwidth	"WIDE" or "NARROW"

On-Screen Display with Satellite Graphics

This on-screen display is shown during the time the antenna is slewing from one satellite to another.

<Example>



Programming and Operations Information

Pre-stored Satellite's

※ As of July 1993. (Software ver. 1.00)

Table 1 lists data on C-Band Satellites that have been pre-stored in the PS-550SU's memory.

Table 2 lists data on Ku-Band Satellites that have been pre-stored in the PS-550SU's memory.

Table 3 lists data on Ku-Band tuning formats.

C BAND SATELLITES

[TABLE 1]

NAME	CODE	LOCATION	FORMAT
ASC 1	A1	128.00W	H
ANIK E1	E1	111.10W	H
ANIK E2	E2	107.30W	H
GALAXY 1	G1	133.00W	H
GALAXY 2	G2	74.00W	H
GALAXY 3	G3	93.50W	H
GALAXY 4	G4	99.00W	H
GALAXY 5	G5	125.00W	H
GALAXY 6	G6	99.00W	H
GALAXY 7	G7	91.00W	H
MORELOS 1	M1	113.50W	H
MORELOS 2	M2	116.80W	H

NAME	CODE	LOCATION	FORMAT
SATCOM F1	F1	137.00W	H
SATCOM F2	F2	72.00W	V
SATCOM F3	F3	131.00W	V
SATCOM F4	F4	135.00W	V
SATCOM F5	F5	139.00W	V
SPACENET 2	S2	69.00W	H
SPACENET 3	S3	87.00W	H
SPACENET 4	S4	101.00W	V
TELSTAR 301	T1	96.00W	V
TELSTAR 302	T2	85.00W	V
TELSTAR 303	T3	123.00W	V

KU BAND SATELLITES

[TABLE 2]

NAME	CODE	LOCATION	FORMAT
ASC	A1	128.00W	4
ANIK	E1	111.10W	2
ANIK	E2	107.30W	2
G-STAR 1	GS 1	103.00W	3
G-STAR 2	GS 2	125.00W	3
G-STAR 3	GS 3	93.00W	3
G-STAR 4	GS 4	105.00W	3
SATCOM	K1	85.00W	1
SATCOM	K2	81.00W	1
SBS 2	SB2	97.00W	5
SBS 3	SB3	95.00W	5
SBS 5	SB5	123.00W	5
SBS 6	M6	99.00W	6
SPACENET 2	S2	69.00W	4
SPACENET 3	S3	87.00W	4
SPACENET 4	S4	101.00W	4
GALAXY 4	G4	99.00W	7
GALAXY 7	G7	91.00W	7

KU BAND TUNING FORMATS [TABLE 3]

FREQ UNIT: MHz

FORMAT 1					
K*- SATCOM K1, K2					
CH	FREQ.	V/H	CH	FREQ.	V/H
1	11729	H	9	11965.0	H
2	11758.5	V	10	11994.5	V
3	11788.0	H	11	12024.0	H
4	11817.5	V	12	12053.0	V
5	11847.0	H	13	12083.0	H
6	11876.5	V	14	12112.5	V
7	11906.0	H	15	12142.0	H
8	11935.5	V	16	12171.5	V

※ FORMAT 8 is used for future satellite TELSTAR 4.

KU BAND TUNING FORMATS [TABLE 3]

FREQ UNIT: MHz

FORMAT 2					
E*- ANIK E1, E2					
CH	FREQ.	V/H	CH	FREQ.	V/H
1	11717	V	17	11730	H
2	11743	V	18	11756	H
3	11778	V	19	11791	H
4	11804	V	20	11817	H
5	11839	V	21	11852	H
6	11865	V	22	11878	H
7	11900	V	23	11913	H
8	11926	V	24	11939	H
9	11961	V	25	11974	H
10	11987	V	26	12000	H
11	12022	V	27	12035	H
12	12048	V	28	12061	H
13	12083	V	29	12096	H
14	12109	V	30	12122	H
15	12144	V	31	12157	H
16	12170	V	32	12183	H

FORMAT 3		
G-STAR GS*- 1, 2, 3, 4		
CH	FREQ.	V/H
1	11730	H
2	11791	H
3	11852	H
4	11913	H
5	11974	H
6	12035	H
7	12096	H
8	12157	H
9	11744	V
10	11805	V
11	11866	V
12	11927	V
13	11988	V
14	12049	V
15	12110	V
16	12171	V

FORMAT 4		
A*, S*, ASC A1 Spacenet 2, 3, 4		
CH	FREQ.	V/H
1	11740	H
2	11820	H
3	11900	H
4	11980	H
5	12060	H
6	12140	H

FORMAT 5		
SB*- SBS 2, 3, 5		
CH	FREQ.	V/H
1	11725	H
2	11774	H
3	11823	H
4	11872	H
5	11921	H
6	11970	H
7	12019	H
8	12068	H
9	12117	H
10	12166	H

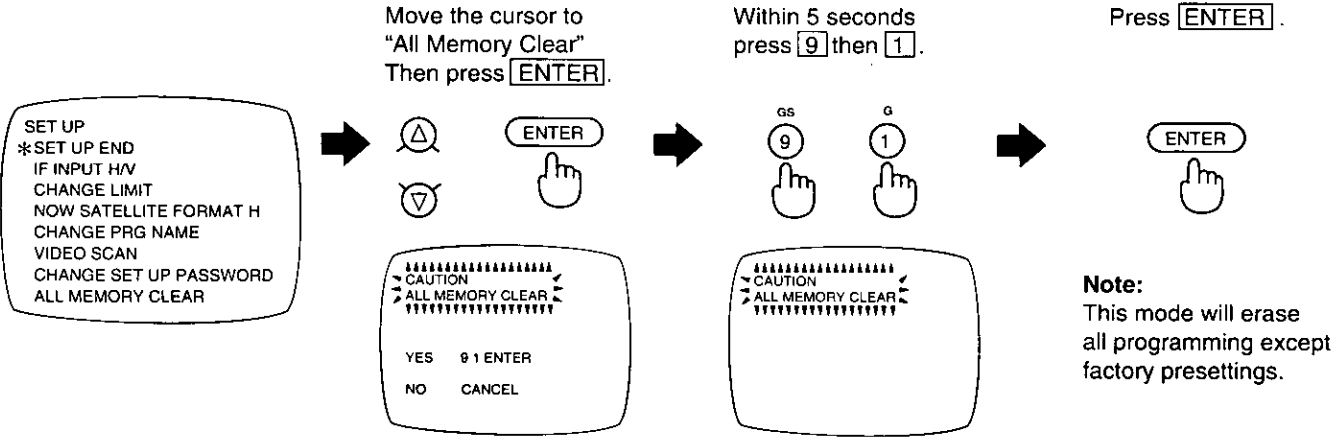
FORMAT 6					
M*- SBS 6					
CH	FREQ.	V/H	CH	FREQ.	V/H
1	11725	H	17	12117	H
2	11749.5	V	18	12141.5	V
3	11774	H	19	12166	H
4	11789.5	V			
5	11823	H			
6	11847.5	V			
7	11872	H			
8	11896.5	V			
9	11921	H			
10	11945.5	V			
11	11970	H			
12	11994.5	V			
13	12019	H			
14	12043.5	V			
15	12068	H			
16	12092.5	V			

FORMAT 7					
G*- GALAXY 4, 7					
CH	FREQ.	V/H	CH	FREQ.	V/H
1	11720	V	17	12035	H
2	11750	H	18	12050	V
3	11750	V	19	12080	V
4	11780	V	20	12110	H
5	11810	H	21	12110	V
6	11810	V	22	12140	V
7	11840	V	23	12170	H
8	11870	H	24	12170	V
9	11870	V	25	12005	H
10	11900	V	26	12065	H
11	11945	H			
12	11930	V			
13	11960	V			
14	11976	H			
15	11991	V			
16	12020	V			

FORMAT 8		
T*- TELSTAR 4		
CH	FREQ.	V/H
1	11730	V
2	11743	H
3	11790	V
4	11803	H
5	11850	V
6	11863	H
7	11910	V
8	11923	H
9	11971	V
10	11984	H
11	12033	V
12	12046	H
13	12095	V
14	12108	H
15	12157	V
16	12170	H

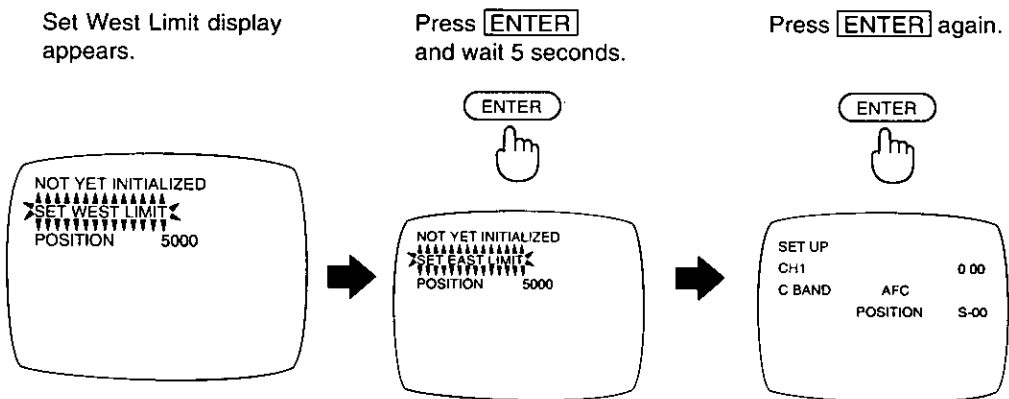
Information

2 Clear Memory



3 Set Limits

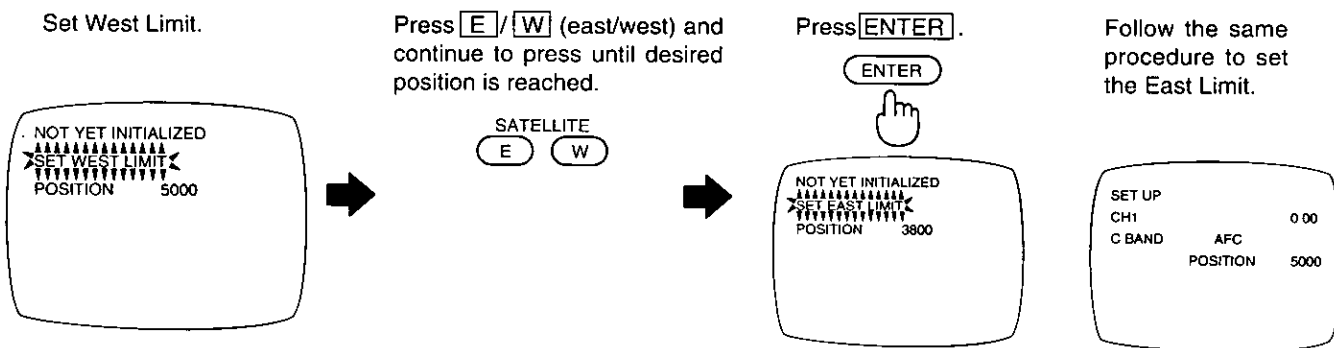
① For single satellite with fixed antenna or 2nd receiver operation.



② For multiple satellite with motor drive antenna

Initialized antenna counts is 5000. The limits are normally set just beyond the most easterly and westerly satellites.

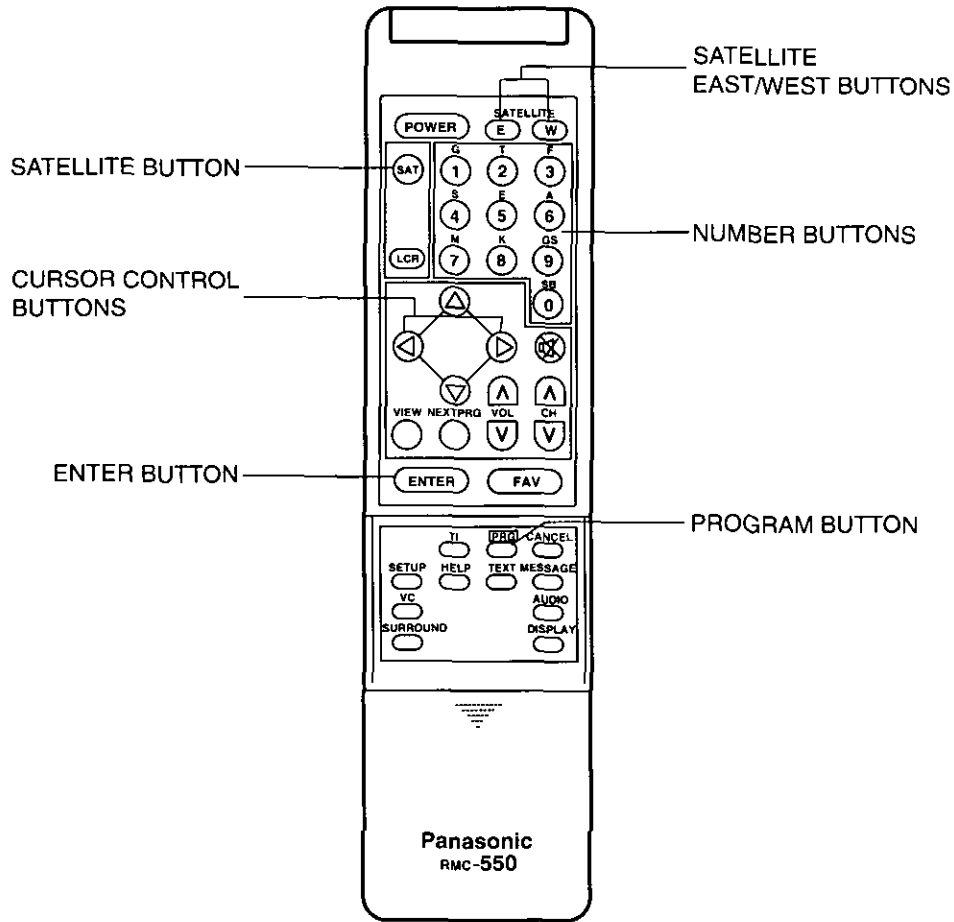
Note: Direction of antenna drive should correspond to East or West command. If not, reverse motor connections.



If ERROR-6 appears on display _____ ,
 Wait about 5 seconds, then Error message disappears.
 Check that antenna is not into a stop, or that cable connections to actuator are secure.
 Press **E** / **W** to move the antenna position slightly in the reverse direction.
 If ERROR-6 message does not appear, press **ENTER** and continue setting.

Programming: Set up (continued)

Programming



4 Set IF Input (If necessary)

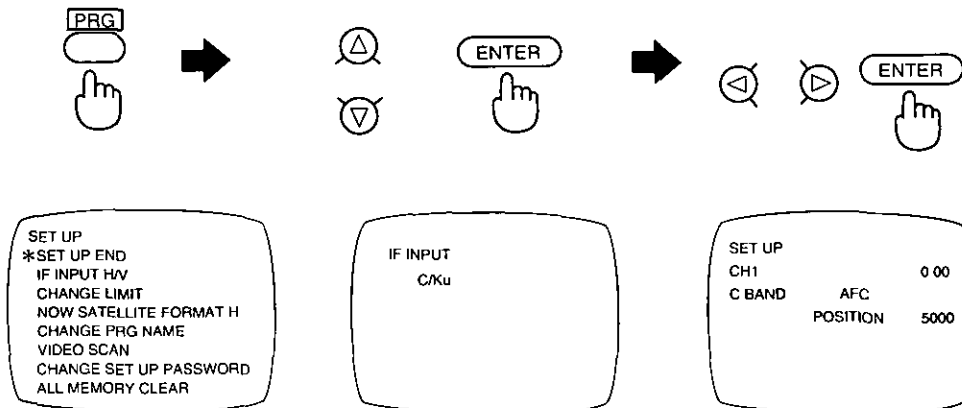
Set IF Input condition and switching voltage to correspond to the IF Input set up.

Press **PRG**.

Move the cursor to "IF Input", then press **ENTER**. The actual condition appears.

To change the condition, press **←/→** (left/right), then press **ENTER**.

The choices are:
 C/Kufor C band only or C and Ku band with external switch.
 H/Vfor C band only with separate H and V signal with external switch.
 C/Ku W/LNBF...C/Ku with LNBF.
 H/V W/LNBF.....H/V with LNBF.



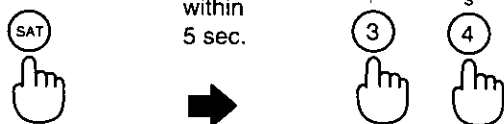
This receiver is compatible with LNBF units controlled by Pulse switching or V/H Signal Switching. It is not compatible with Voltage Switching LNBF units.

5 To Program Satellites for 2nd Receiver Operation or for Single Satellite Operation with Fixed Antenna

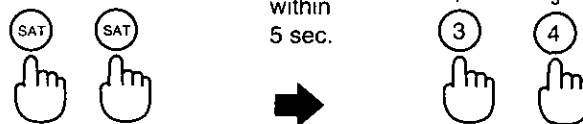
① Select the desired satellite to be programmed.

For C band: Press **SAT** once and satellite letter and number.
 For Ku band: Press **SAT** twice and satellite letter and number.
 e.g. To select F4

[C band]



[Ku band]



② Enter the satellite into memory.

Press **ENTER**.



The "SET UP" on the screen display will blink to indicate the command has been received.

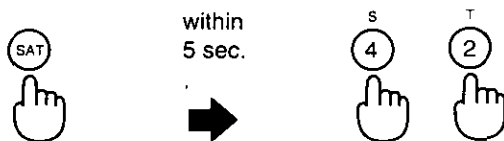
For 2nd receiver operation it is necessary to program all the satellites that have been entered into the primary receiver. The on-screen-display will indicate the number of satellites entered following the S- indications.

6 To Program Satellites for Multiple Satellite Operation with Motor Driven Antenna

①

After Limits are set press **SAT** **S** **2** to call up the name of the most easterly C-Band satellite.

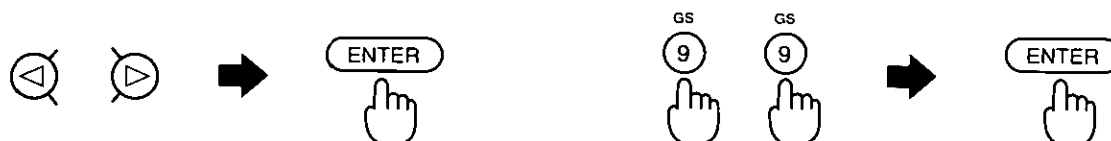
Search for the satellite using video scan, or if a known channel is active, set the receiver to that channel.



②

When the satellite is located, adjust the skew using the **◀**/**▶** buttons on an even channel and again on an odd channel.
 Press **ENTER** to program the satellite.

Auto peak may be used in place of using the skew controls. Press **9** **9** to initiate the Autopeak mode. (Do on both odd and even channel and press **ENTER** when autopeak mode is completed.)



③

Press **SAT** **W** to skip to next westerly C-Band satellite and repeat the above operations or direct access satellite if preferred. Continue until all the desired C-Band Satellites are programmed.

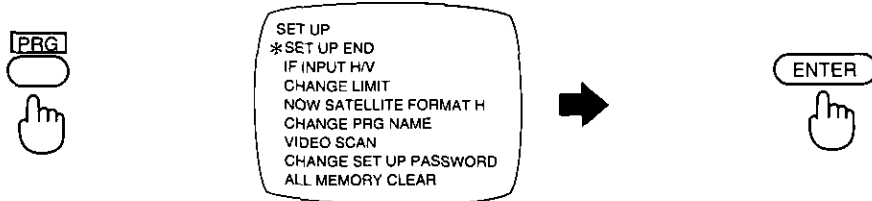
If it is desired to program Ku Band satellites repeat the above procedures except press **SAT** two times to call up the Ku Band satellites.

Programming: Set up (continued)

7 End Programming

When all satellites have been entered into memory. Press **PRG**. Confirm the cursor lines up with "Set up End".

Press **ENTER**.



Programming Note

If these **ERRORS** appear on display — ,

- ERROR-2** — When trying to enter the same satellite name/No. into memory at more than one satellite position. Press **ENTER** again to cancel the error. The satellite is stored at the new position.
- ERROR-3** — When trying to enter more than two satellite into memory at one single satellite position. Press **ENTER** again to cancel the error. The priority is given to the name of the new satellite.
- ERROR-8** — The same satellite name was tried to be stored at the same antenna position. Press **CANCEL**. This information has been already stored.

Polarization Format (Horizontal or Vertical)

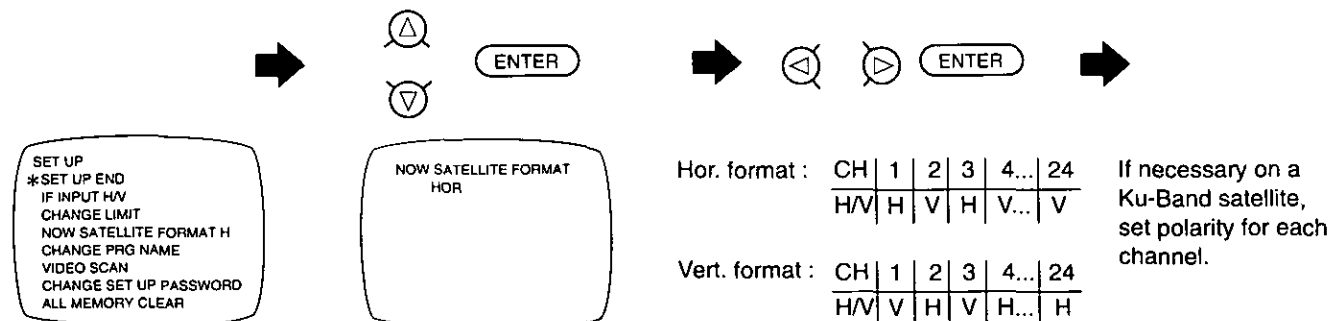
The PS-550SU has been pre-programmed with each satellite format (horizontal or vertical polarization) according to the program guides. If it appears that the format on any satellite seems to be opposite to the pre-stored information then follow one of the procedures below:

Display the set up menu referring to the next page.

Move the cursor to "Now Satellite Format H (or V)" by using **▲**/**▼** (up/down), then press **ENTER**.

Press **◀**/**▶** (left/right) to change format HOR or VERT, then press **ENTER**.

To return the normal satellite operation, display and set up menu and select "Set up End".



Note:

Ku Band Tuning

8 Ku Band Tuning formats have been pre-programmed which allow easy tuning for all major Ku Band Satellites. Since there is no standard, channel numbers listed in program guides may not correspond to the channel number displayed by the PS-550SU. These channel numbers correspond to the actual transponder number on the satellite.

For a new Ku satellite to be stored, select a name that corresponds to one of the tuning formats as listed in TABLE 3.

Programming: Programming Note

Other Function on the Set up Menu

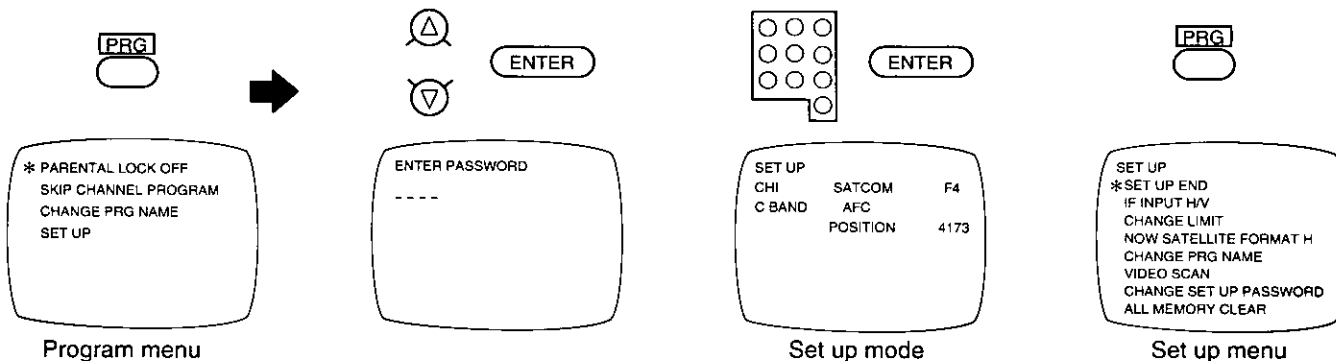
Display the set up menu

Press **PRG**.

Move the cursor to "Set up" by using **▲**/**▼**, then press **ENTER**.

Enter the 4 digit password, then press **ENTER**.

Press **PRG**.



• Change limit

You can change East and West limit settings after the programming is completed. Pay attention not to erase the stored position of the satellite.

• Video scan

Select "Video Scan" to scan through all channels of actual tuned satellite. Press **CANCEL** to stop the "Video Scan".

• Change set up password

By selecting this function, "Enter New Password" appears on display, then enter a new 4 digit password and press **ENTER**.

• Change PRG name

Refer to page 35 and 36.

To return to normal operation

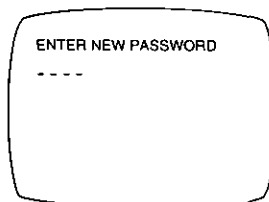
Select "Set up End" by using **▲**/**▼** then press **ENTER**.

To Program C/Ku Band Hybrid Satellites or co-located Satellites

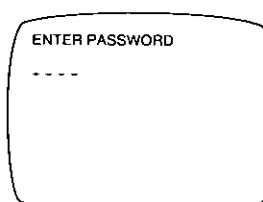
You can store a hybrid satellite C/Ku at the same position as long as you are using the designated name for C band and Ku as in TABLE 1 and TABLE 2 on page 15.

Password

It is necessary to enter 4 digit passwords for "Set up" and "Parental Lock" operation.

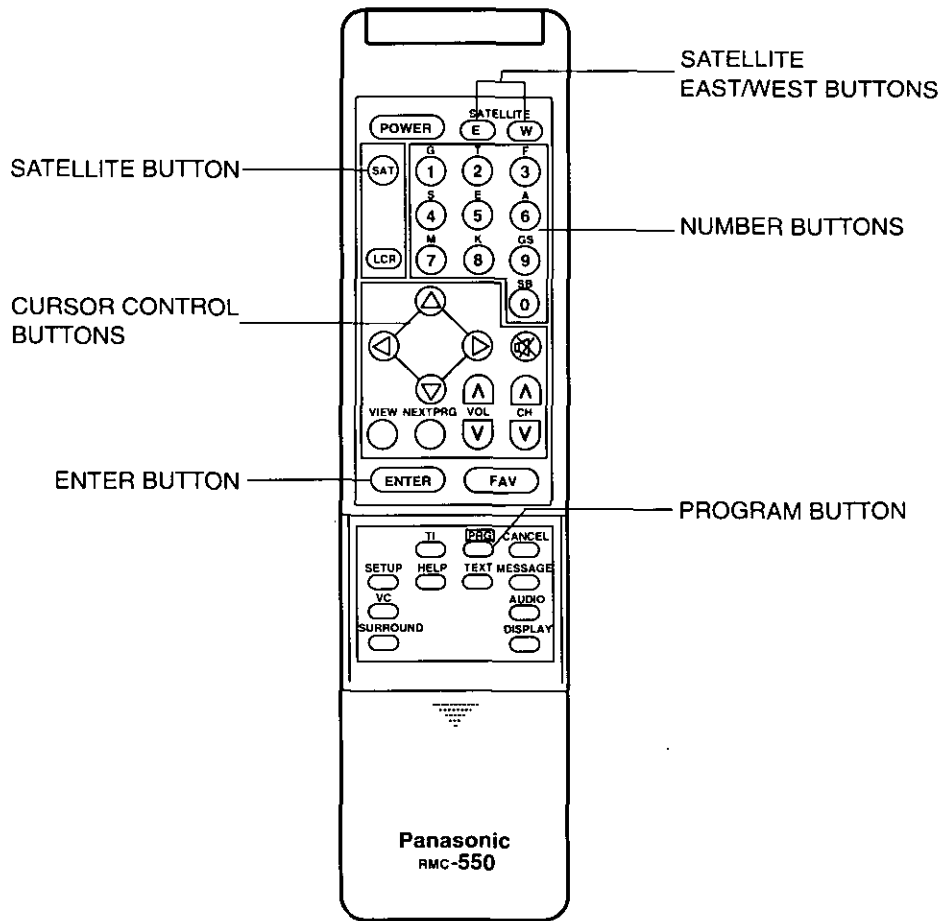


Password screen shows "Enter New Password", you can enter any desired 4 digit combination. Select an easy to remember number.



Password screen shows "Enter Password", you must enter a password which was already entered. If you forget your password, enter the Master Password, see page 45.

Reprogramming: Satellite Addition



Satellite addition after the Programming is completed. (pre-stored in this unit and/or new satellite)

1 Enter the Set up Mode

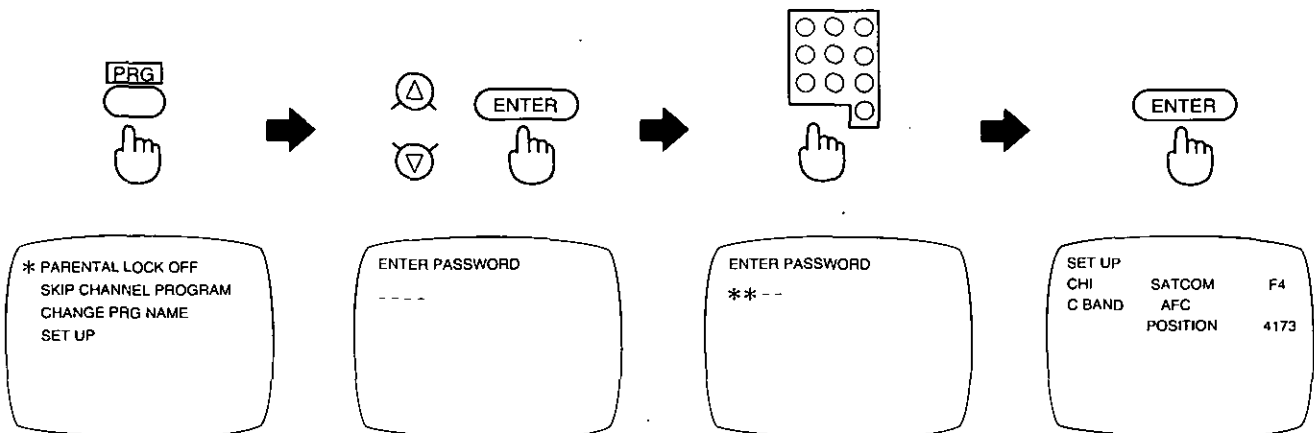
■ Indication with means button on remote control.

Press PRG.

Move the cursor to "Set up" by using ▲/▼, then press ENTER.

Enter the 4 digit set-up password.

Press ENTER.



* PARENTAL LOCK OFF
SKIP CHANNEL PROGRAM
CHANGE PRG NAME
SET UP

ENTER PASSWORD

ENTER PASSWORD
**--

SET UP	SATCOM	F4
CHI	AFC	
C BAND	POSITION	4173

For Password detail,
refer to page 22.

2 Set Satellite

① Select the satellite.

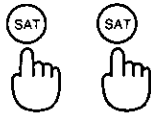
Press **SAT** once or twice.

[C band]

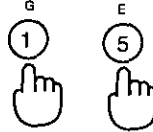


OR

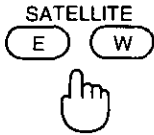
[Ku band]



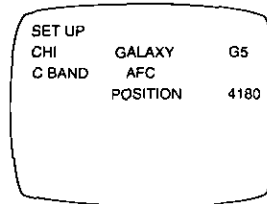
Press the code with Number buttons.
e.g. To select G5.



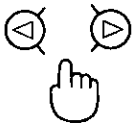
② Locate the satellite



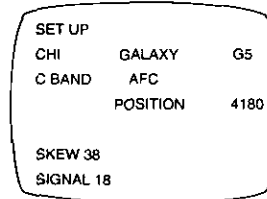
Find the position of the satellite by pressing **E** / **W** (east/west).



③ Adjust the skew (If necessary)



Press **◀** / **▶** (left/right) to adjust the skew position.

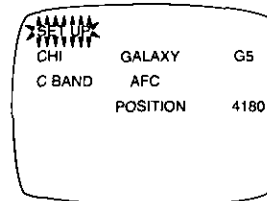


Or press **9** **9** for Auto peaking function.

④ Enter new setting into the memory



Press **ENTER**.

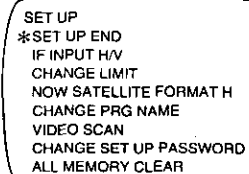


3 Repeat

If you want to add more satellites, repeat steps **2** ① through ④.

4 To Return to Normal Operation

Press **PRG**. Confirm the cursor lines up with "Set up End".



Press **ENTER**.



Reprogramming: To Reposition a Satellite

Satellite repositioning after the Programming is completed.
Tune to the satellite to be repositioned at first.

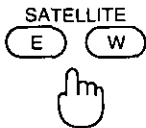
1 Enter the Set up Mode

Refer to page 22.

2 Set the New Position

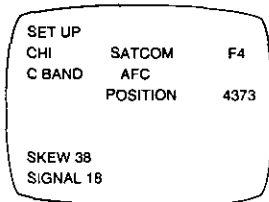
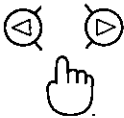
① Select the new position

Find the new position of a satellite
by pressing **[E]** / **[W]** (east/west).



② Adjust the skew (If necessary)

Press **[◀]** / **[▶]** (left/right) to adjust the
skew position.



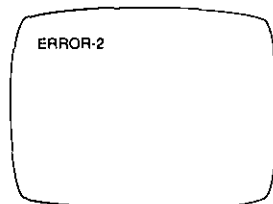
Or press **[9]** **[9]** for Auto peaking function.

③ Enter new setting into the memory

Press **[ENTER]**,

"ERROR-2" appears.

Press **[ENTER]** again.



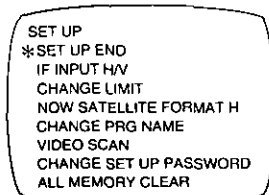
within
5 sec.



3 To Return to Normal Operation

Press **[PRG]**. Confirm the cursor lines up with
"Set up End".

Press **[ENTER]**.



Reprogramming: To Delete a Satellite

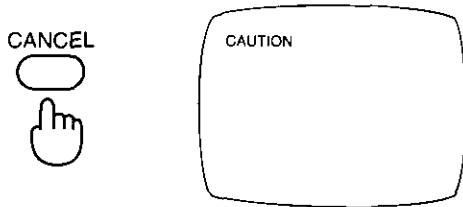
To delete a satellite after the Programming is completed.
Tune to the satellite to be deleted at first.

1 Enter the Set up Mode

Refer to page 22.

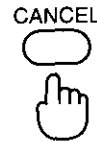
2 Delete Satellite

Press **CANCEL** , then "CAUTION" appears.



Press **CANCEL** again.

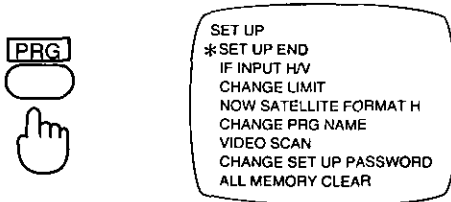
within
5 sec.
➔



Note:
During "CAUTION"
display appears, it is
possible to stop
erasing by pressing
VIEW .

3 To Return to Normal Operation

Press **PRG** . Confirm the cursor lines up with
"Set up End".

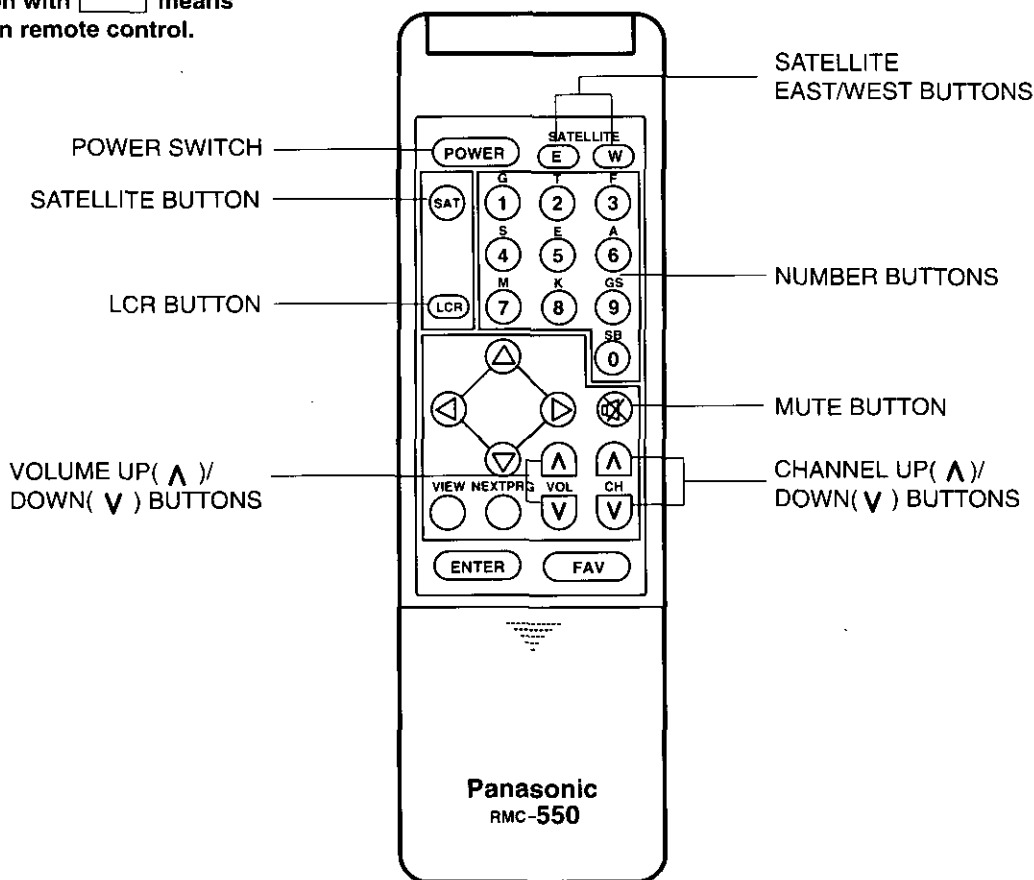


Press **ENTER** .



Operations: Daily Operations

■ Indication with means button on remote control.



Power On/Off (stand-by)



Press POWER to turn on or off (stand-by) this receiver.

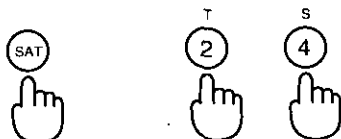


When this receiver is turned on, the Power/Stand-by Indicator Lights red. When this receiver is in stand-by mode, this indicator lights green.

To Select a Satellite

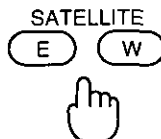
[C band]

e.g. To select T4



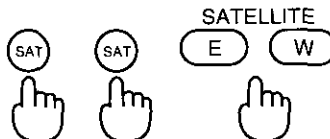
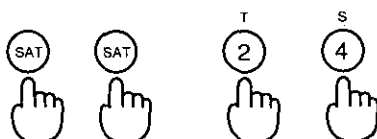
or

Slew Through



The receiver slews through the names of the C-band satellites pre-programmed. When the desired satellite name is displayed, release the button.

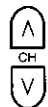
[Ku band]



The receiver slews through the names of the Ku-band satellites pre-programmed. When the desired satellite name is displayed, release the button.

To Select a Channel

① Channel Up/Down



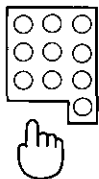
Press CH (channel up).

Press CH (channel down).

Note:

You may be able to skip unused or undesired channels. Please refer to page 41.

② Direct channel number



Press the Number buttons.

e.g. To select CH13.



③ Last channel recall



Press **LCR** to watch the last channel (selected with the Number buttons) on the same satellite.

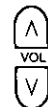
Note:

When you select two channels with Number buttons, you can quickly switch between the two channels.

Selecting with Favorite lists and Menu lists — refer to page 33 through 38

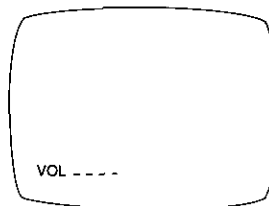
Volume Control

① Volume Up/Down



Press VOL (volume up).

Press VOL (volume down).

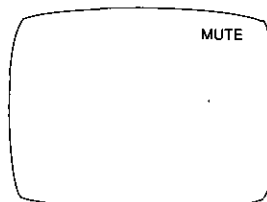


The on-screen display indicates the volume level.

② Mute

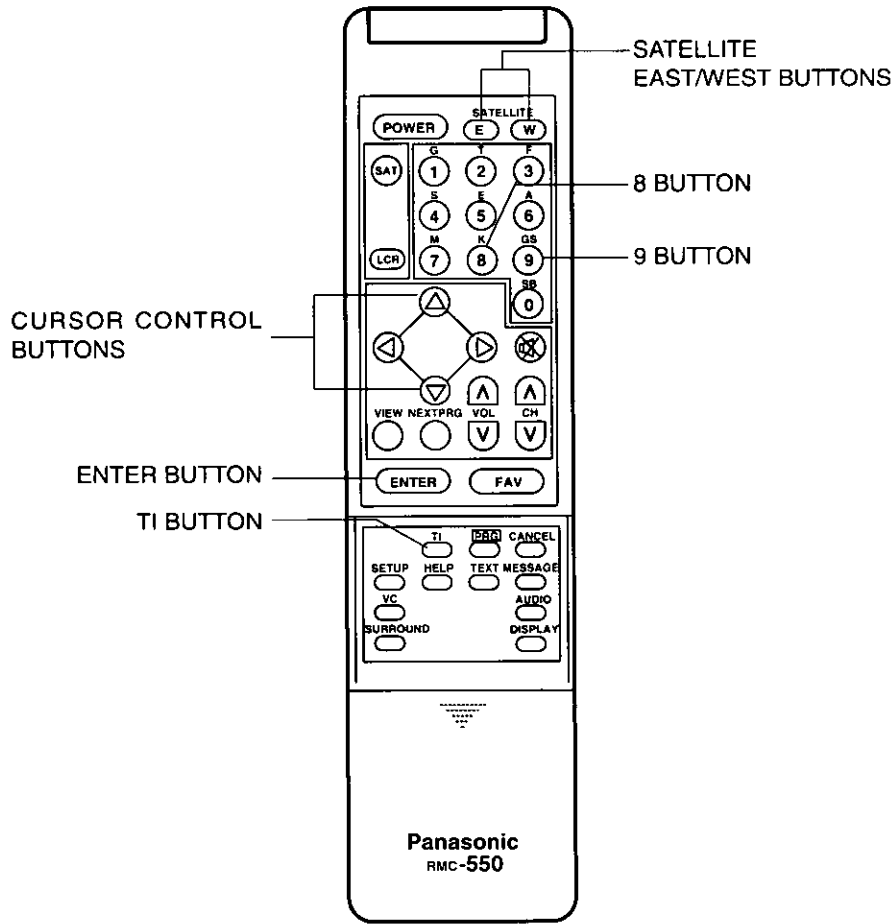


Press the Mute button. Mute Indicator appears and sound is muted.



To return the previous sound, press the Mute button again, or press VOL /.

Operations: Picture Adjustment operations

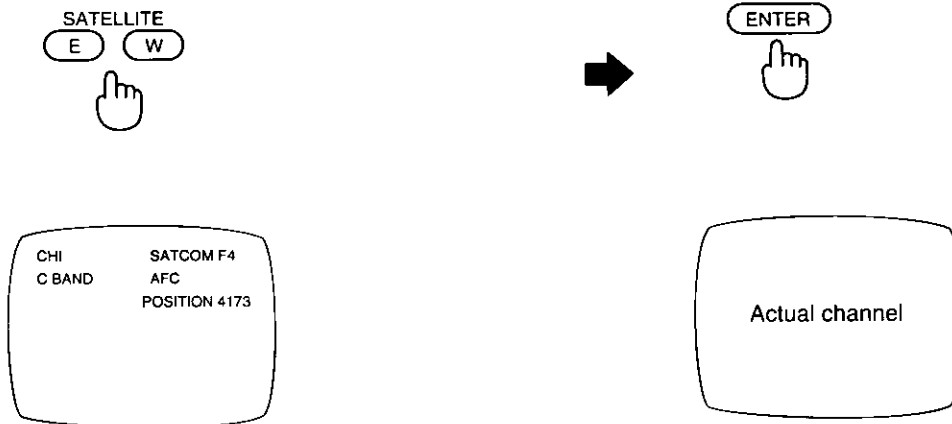


Operation

Antenna Fine Positioning

Tap **E** (east) or **W** (west) for fine positioning of the antenna. The antenna can be moved 8 counts in either direction.

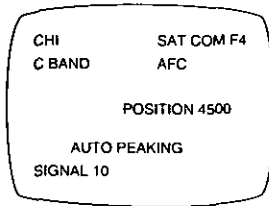
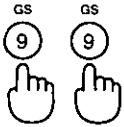
Press **ENTER** while the position display is being shown to program the new position for the satellite.



Auto Peaking

It is possible to adjust the antenna position and skew adjustment automatically by using the auto peaking function.

Press **9** **9**.



Note:

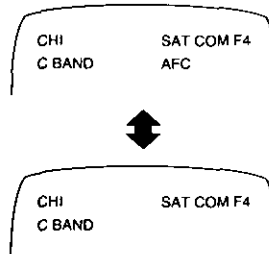
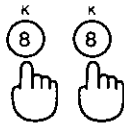
This function is available in both set-up and program mode (auto mode). The last setting will be automatically stored. All functions are disabled while Auto peaking is functioning.

AFC (Automatic Fine Tuning)

AFC (Automatic Fine Tuning) is normally ON.

When Terrestrial Interference is present, or with some Ku Band channels, it may be necessary to off-tune the receiver.

Press **8** **8** to turn the AFC OFF or ON. The "AFC" display will appear only when AFC is ON.



With AFC OFF, press **Δ**/**▽** (up/down) until the best picture is received.

Note:

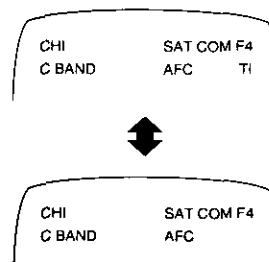
AFC mode and fine tuning adjustment are automatically memorized for each channel after adjusting.



TI Filter

Press **TI** to turn the TI filter ON or OFF.

The last setting will be automatically stored in memory for that channel and satellite.

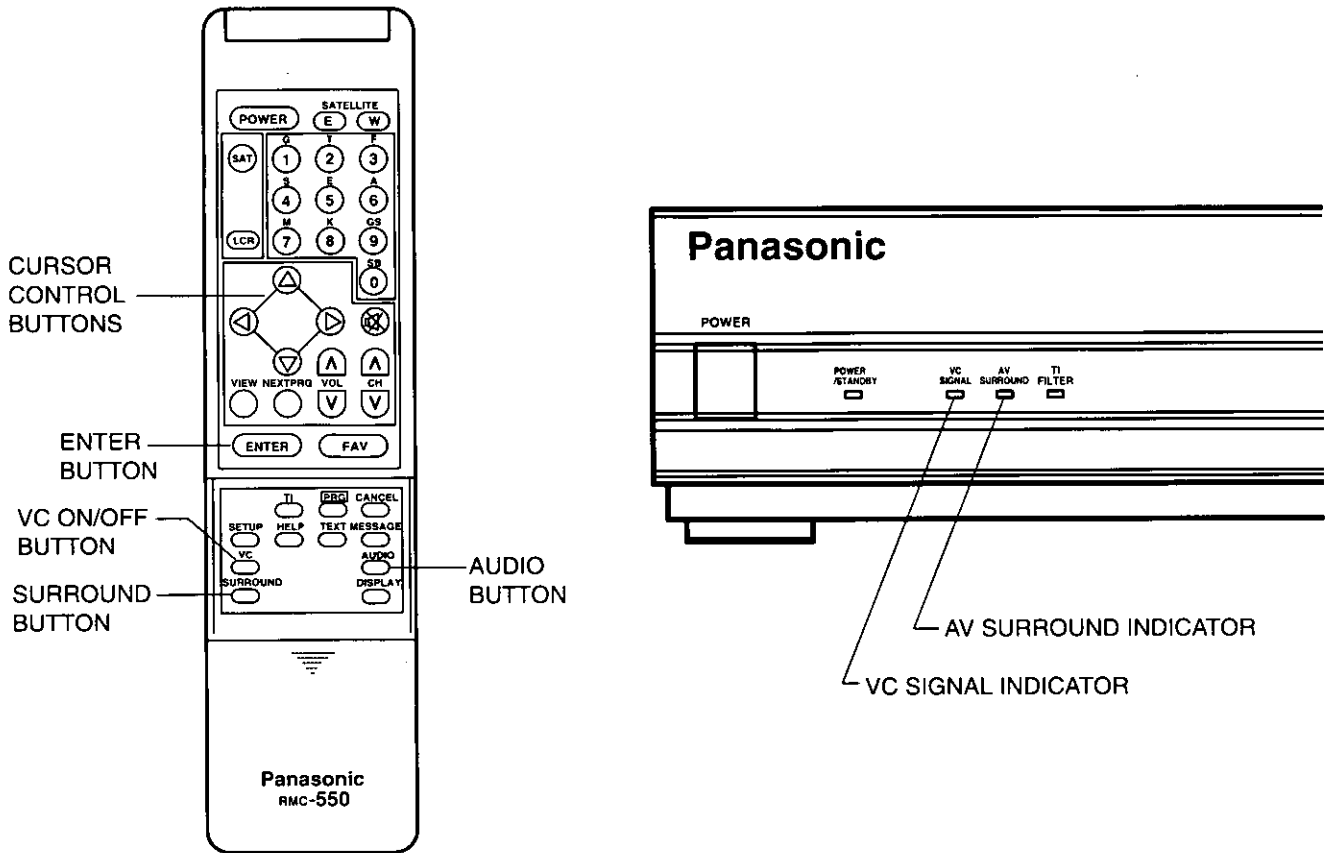


When TI filter is on, the TI Filter Indicator lights up. It may be necessary to turn off the AFC and tune the receiver with the TI filter on.

Note:

For Ku-Band operation, the TI filter will decrease the bandwidth of the channel selected.

Operations: Audio Operations



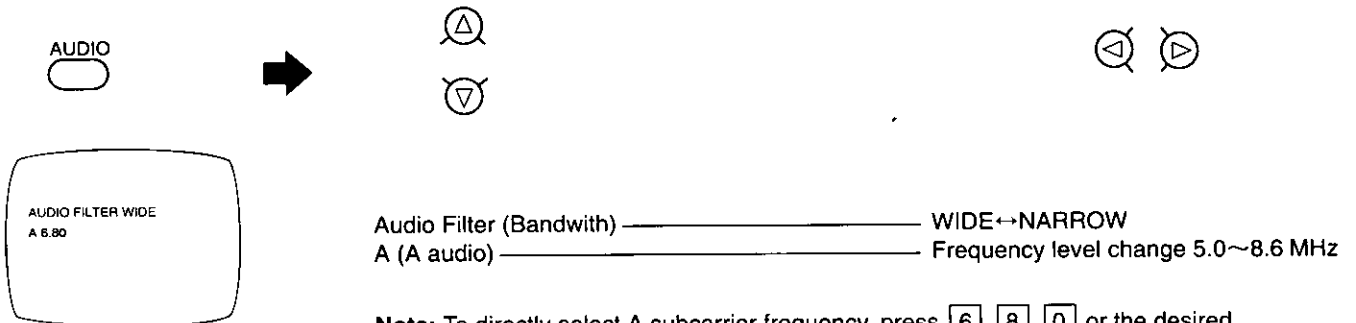
Audio Select

The subcarrier audio mode may be changed by pressing the AUDIO button. The subcarrier frequency may be changed by either direct selection of the frequency, if known, or slewing through all the frequencies. Also the audio bandwidth may be changed from wide to narrow. Subcarriers associated with a non-scrambled video program are transmitted in the WIDE mode. Subcarriers on other audio services may be transmitted either in the WIDE or NARROW mode. Refer to your program guide for the proper selection.

Press **AUDIO**.

Move the cursor to desired item by using \uparrow/\downarrow (up/down).

Select the desired condition by using \leftarrow/\rightarrow (left/right).



Note: To directly select A subcarrier frequency, press **6 8 0** or the desired frequency to be tuned to.

Surround

This mode provides great sound presence when a stereo monitor is used or a separate stereo system is connected to the receiver.

Press **SURROUND**.

SURROUND


The surround sound mode may be selected by pressing **SURROUND**

When AV surround mode is selected, AV Surround Indicator lights up.



< In the Video Cipher mode >
A/V SURROUND MOVIE → SURROUND OFF ← A/V SURROUND MUSIC ←

AV
SURROUND

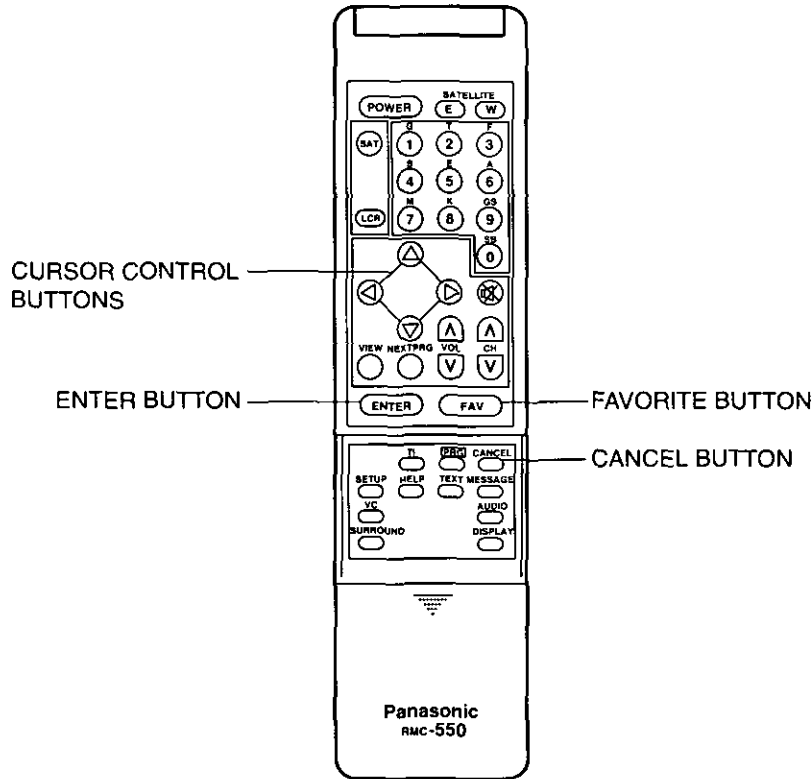

< MONO mode >
A/V SURROUND MONO ↔ SURROUND OFF.

When changing channels the normal mode is A/V surround movie for VideoCipher channels and A/V surround mono for monaural channels unless surround off is selected.

Audio Services on VideoCipher channels

Some VideoCipher channels also have audio services available on the same channel. To access these services press **VC** and tune to the audio subcarrier of the service. During the time VC is off the TV screen will be a solid blue. When the VC signal is received, the VC signal Indicator lights up.

Favorite Channel and Menu Operations



Menu Select Operation

The PS-550SU has 150 Satellites program Call Letters pre-programmed in memory, broken down into 12 categories of interest. These categories are listed in Table 4 and the program names, the corresponding Call Letters and their locations are listed in TABLE 5 on page 37 and 38. The program Call Letters are identical to the listings used by program guide publications.

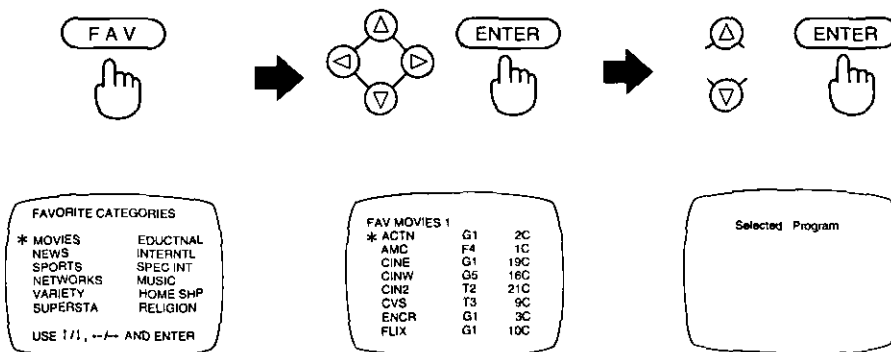
Press **FAV** once.

Select a desired category by using **▲/▼/◀/▶** (up/down/left/right) then press **ENTER**.

Select a desired program channel by using **▲/▼** (up/down), then press **ENTER**.

[TABLE 4]

FAVORITE CATEGORIES	CODE
MOVIES	MOVIES
NEWS	NEWS
SPORTS	SPORTS
NETWORKS	NETWORKS
VARIETY	VARIETY
SUPERSTATIONS	SUPERSTA
EDUCATIONAL	EDUCTNAL
INTERNATIONAL	INTERNTL
SPECIAL INTEREST	SPEC INT
MUSIC	MUSIC
HOME SHOPPING	HOME SHP
RELIGIOUS	RELIGION



e.g. Selecting "Movies"

These programs were in effect as of the printing of this manual.

Operation

Favorite Program Operation

Up to 27 favorite video channels may be stored in the favorite page memories. 9 channels may be stored in each of 3 pages. Programs can only be stored on satellites that have been programmed.

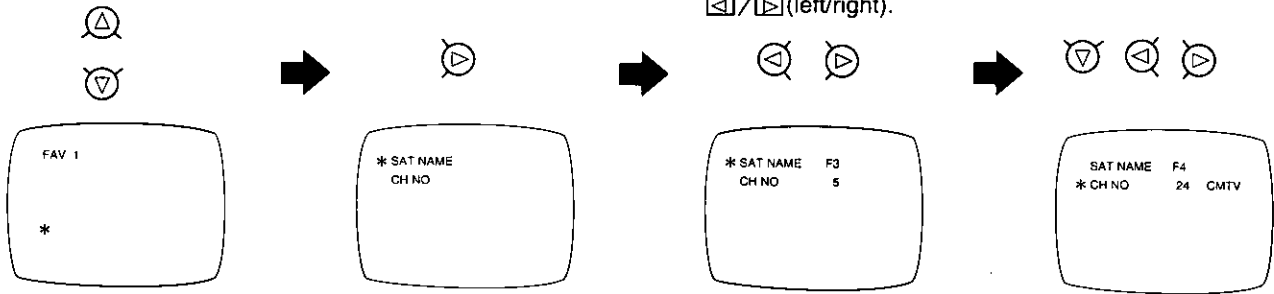
① Favorite channel store

Move the cursor to the desired position (1~27) by using Δ/∇ .

Press \rightarrow (right). The channel tuned to is shown.

To store a different program. Select the desired satellite by using \leftarrow/\rightarrow (left/right).

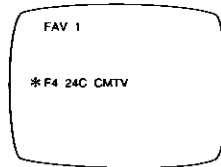
Press ∇ (down), then select the desired channel by using \leftarrow/\rightarrow (left/right).



①-2

Press **ENTER**.

ENTER



Press **FAV** again to access FAV page 2 or FAV page 3.

Repeat steps ① and ①-2 for additional favorite channels.

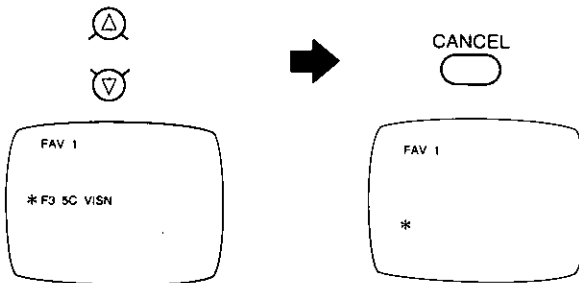
Press **VIEW** to return to normal operation.

② Cancel

Select the channel to be canceled.

Press **CANCEL**.

Press **VIEW** to return to normal operation.

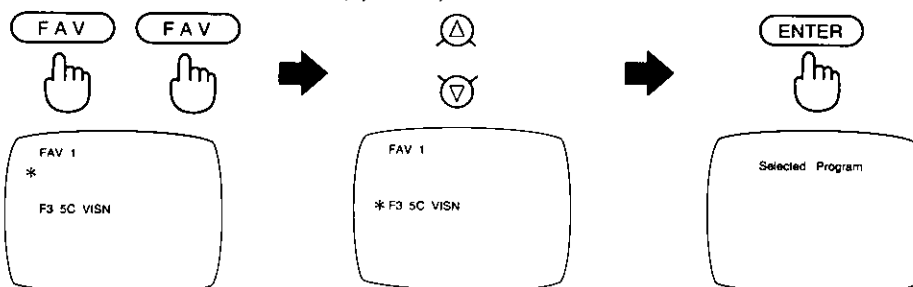


③ Favorite channel recall

Press **FAV** twice to access FAV page 1.

Move the cursor to the desired channel by using Δ/∇ (up/down).

Press **ENTER**.



Note:

Some favorite channels must be stored in the favorite page memories. Refer to step ①

Favorite Channel and Menu Operations: Change Program Name

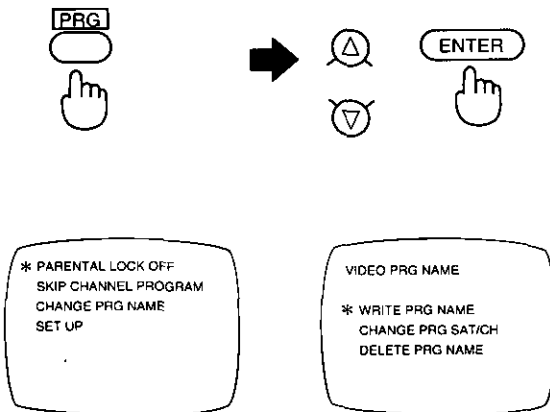
Change Program Name

Due to changes in satellites over a period of time, programmers frequently move the location of various programs from one satellite to another or from one channel to another. The PS-550SU permits you to reprogram any program in the listings to a new location. The procedure is simple and convenient, however the new location must be on a satellite that has been programmed into the receiver. It is also possible to add new program names to the memory.

1 Enter the Change Program Name Mode

Press **PRG**.

Move the cursor to "Change PRG Name" by using **▲/▼** (up/down), then press **ENTER**.

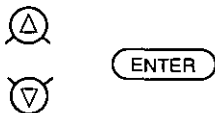


Or display the set up menu referring to page 22.

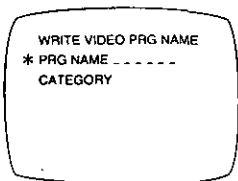
2 Select a function

Move the cursor to the desired function, then press **ENTER**.

Write PRG Name _____ To add new program name into the Menu list.
Change PRG SAT/CH _____ To change location of a program.
Delete PRG Name _____ To delete unusable program name from the Menu list.

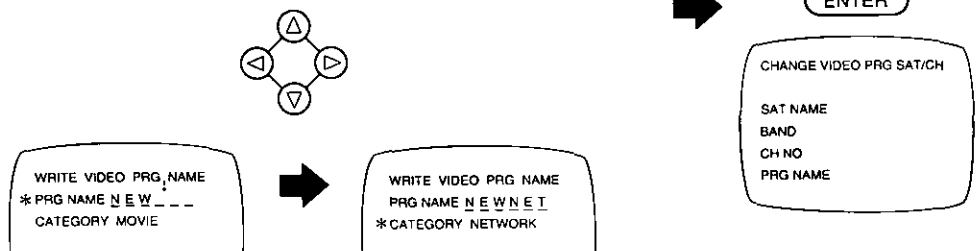


3-1 Write Program Name



By using **◀/▶**, the small arrow selects one of 6 positions. Select a desired character by using **▲/▼**. When finished, continue pressing **◀ ▶** until the arrow disappears. Then press **▼** and select a desired category by using **◀/▶**.

When the name writing is completed, press **ENTER**.



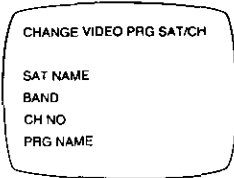
3-2 Change Program SAT/CH

The channel tuned to is shown.

Move the cursor to desired item by using Δ / ∇ (up/down).

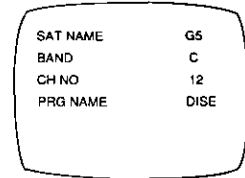
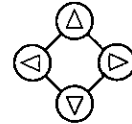
Change condition by using \leftarrow / \rightarrow (left/right).

e.g. DISE (VARIETY) is changed from G5 · CH1 · C band to G5 · CH12 · C band.



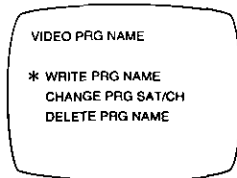
SAT NAME _____ \leftarrow Letter \rightarrow Digit
 BAND _____ Cor Ku
 CH NO _____ Channel Number
 PRG NAME _____ Program Name
 ※Slews through all program names in memory.

By using Δ / ∇ / \leftarrow / \rightarrow change condition to "G5, C band, CH12, DISE"

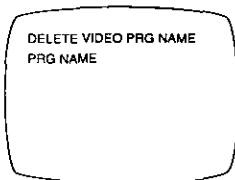


②

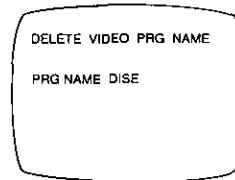
Press **ENTER**.



3-3 Delete Program Name



Select a program name by using \leftarrow / \rightarrow .



Press **ENTER**.



4 To Return to Normal Program Mode



Press **VIEW**.

or



If in Set-up mode, press **PRG**, then confirm the cursor lines up with "Set up End", press **ENTER**.

Video Menu Lists [TABLE 5] ※ As of July 1993. (VER. 1.00)

FAVORITE CATEGORIES	CODE	FAVORITE CATEGORIES	CODE
MOVIES	MOVIES	EDUCATIONAL	EDUCTNAL
NEWS	NEWS	INTERNATIONAL	INTERNTL
SPORTS	SPORTS	SPECIAL INTEREST	SPEC INT
NETWORKS	NETWORKS	MUSIC	MUSIC
VARIETY	VARIETY	HOME SHOPPING	HOME SHP
SUPERSTATIONS	SUPERSTA	RELIGIOUS	RELIGION

MOVIES

ACTN	G1	2	ACTION PPV
AMC	F4	1	AMERICAN MOVIE CLASSICS
CINE	G1	19	CINEMAX - EAST
CINW	G5	16	CINEMAX - WEST
CIN2	T2	21	CINEMAX 2
CVS	T3	9	TVN/CABLE VIDEO STORE PPV
ENCR	G1	3	ENCORE
FLIX	G1	10	FLIX
HBOE	G5	15	HOME BOX OFFICE - EAST
HBOW	G5	8	HOME BOX OFFICE - WEST
HBO2E	T2	5	HOME BOX OFFICE 2 EAST
HBO2W	T2	14	HOME BOX OFFICE 2 WEST
HBO3	T2	9	HOME BOX OFFICE 3
HITS	F1	21	CONTINUOUS HITS PPV
HOTC	F4	18	HOT CHOICE PPV
NOST	G1	22	THE NOSTALGIA CHANNEL
REQ1	F4	16	REQUEST 1 PPV
REQ2	F4	2	REQUEST 2 PPV
SHOE	F3	15	SHOWTIME - EAST
SHOW	F4	20	SHOWTIME - WEST
SHO2	G1	16	SHOWTIME 2
TMCE	F3	17	THE MOVIE CHANNEL - EAST
TMCW	F4	22	THE MOVIE CHANNEL - WEST
TNT	G5	17	TNT
VIEW	F3	3	VIEWER'S CHOICE PPV

NETWORKS

CBCNA	E2	19	CBC NORTH - ATLANTIC
CBCNP	E2	11	CBC NORTH - PACIFIC
FOX E	T3	18	FOX - EAST
FOX N	F1	19	FOX - NET
FOX W	T3	23	FOX - WEST
KCNC	F1	14	NBC - KCNC (M)
KMGH	F1	6	CBS - KMGH (M)
KUSA	F1	2	ABC - KUSA
PBSA	S4	8	PUBLIC BROADCAST SERVICE - A
PBSB	S4	6	PUBLIC BROADCAST SERVICE - B
PBSC	S4	10	PUBLIC BROADCAST SERVICE - C
PBSD	S4	12	PUBLIC BROADCAST SERVICE - D
WABC	F2	4	ABC - WABC
WRAL	F2	2	CBS - WRAL - EAST
WXIA	F2	12	NBC - WXIA - EAST

NEWS

CNBC	G5	13	CNBC
CNN	G5	5	CABLE NEWS NETWORK
HEAD	G5	22	CNN HEADLINE NEWS
NECN	F2	21	NEW ENGLAND CABLE NEWS
NEWS	G1	5	ALL NEWS CHANNEL

SPORTS

EMPR	G3	2	EMPIRE SPORTS NETWORK
ESPN	G5	9	ESPN
HSE	F1	10	HOME SPORTS ENTERTAINMENT
HTS	S3	23	HOME TEAM SPORTS
KBL	S2	9	PITTSBURGH SPORTS NETWORK
MSG	F4	6	MADISON SQUARE GARDEN NETWORK
MWSC	A1	22	MIDWEST SPORTS CHANNEL
NESN	F3	14	NEW ENGLAND SPORTS NETWORK
PASS	S3	21	PRO AM SPORTS SYSTEM DETROIT
PRMN	F3	11	PRIME NETWORK
PRNW	F1	22	PRIME SPORTS NORTHWEST
PTN	F1	7	PRIME TICKET NETWORK
SCCH	F1	13	SPORTS CHANNEL - CHICAGO
SCCP	F1	9	SPORTS CHANNEL - CHICAGO PLUS
SCFL	F1	15	SPORTS CHANNEL - FLORIDA
SCNE	F2	23	SPORTS CHANNEL - NEW ENGLAND
SCNY	F2	22	SPORTS CHANNEL - NEW YORK
SCOH	F1	15	SPORTS CHANNEL - OHIO
SCP	F2	17	SPORTS CHANNEL NEW YORK PLUS
SCPA	F2	18	SPORTS CHANNEL - PHILADELPHIA
SPAC	F1	4	SPORTS CHANNEL - PACIFIC
SPTS	S3	19	SPORT SOUTH
SUN	F1	24	SUNSHINE NETWORK

VARIETY

ARTS	G5	23	ARTS & ENTERTAINMENT
BRAVO	F4	7	BRAVO
CHAM	A1	20	CHANNEL AMERICA
COME	F3	21	COMEDY TV NETWORK - EAST
COMW	G1	1	COMEDY TV NETWORK - WEST
DISE	G5	1	DISNEY - EAST
DISW	G1	24	DISNEY - WEST
DIS2	G1	4	DISNEY 2
E!	F3	23	E! ENTERTAINMENT
FAME	G5	11	FAMILY CHANNEL - EAST
FAMW	F3	1	FAMILY CHANNEL - WEST
LIFE	F4	4	LIFETIME-EAST
LIFW	F3	4	LIFETIME-WEST
NIKE	F4	3	NICKELODEON - EAST
NIKW	F3	18	NICKELODEON - WEST
USAE	G5	19	USA NETWORK - EAST
USAW	G1	21	USA NETWORK - WEST

SUPERSTATIONS (SUPERSTA)

KTLA	S3	15	LOS ANGELES
KTVT	S3	5	FT. WORTH
KWGN	F1	23	DENVER
TBS	G5	6	ATLANTA
WGN	G5	7	CHICAGO
WPIX	S3	9	NEW YORK
WSBK	S3	3	BOSTON
WWOR	F4	15	NEW YORK

EDUCATIONAL

KRMA	F1	3	KRMA-PBS
MEU	G5	21	MIND EXTENSION UNIVERSITY
NETV	S3	2	NETV-PBS
SLNT	F1	16	SILENT NETWORK
TDCE	F4	21	DISCOVERY-EAST
TDCW	G5	12	DISCOVERY-WEST
TLC	F3	2	THE LEARNING CHANNEL

INTERNATIONAL

ANT-1	G3	9	ANT-1 (GREEK)
ARAB	F2	1	ARAB NETWORK OF AMERICA
CBC	E2	15	CBC (FRENCH)
GALA	G1	20	GALAVISION (SPANISH)
GERMN	F4	5	DEUTSCHE WELLE TV (GERMAN)
INTL	F1	20	INTERNATIONAL CHANNEL
NHK	F1	17	NHK/TOKYO (JAPANESE)
RAI	F4	7	RAI FEED (ITALIAN)
RTP	G3	5	RTP (PORTUGAL)
SCOLA	A1	23	SCOLA (MULTILINGUAL)
SUR	S2	22	SUR (SPANISH)
TELE	G6	8	TELEMUNDO (SPANISH)
TV5	E1	17	TV5 (FRENCH)
UNIV	G1	6	UNIVISION (SPANISH)

SPECIAL INTEREST

ALASKA	F1	24	ALASKA SATELLITE TV
BET	G5	20	BLACK ENTERTAINMENT TV
CSPAN1	F3	7	C-SPAN I
CSPAN2	F4	19	C-SPAN II
CAL CH	F1	22	CALIFORNIA CHANNEL
COURT	F3	6	COURTROOM TV
MINRTY	G3	21	MINORITY BROADCASTING
NASA	F2	13	NASA SELECT TV
PLAY	G5	2	PLAYBOY
SCIFI	G5	4	SCI-FI CHANNEL
SPICE	T3	20	SPICE PPV
TOON	G1	8	CARTOON NETWORK
TRAVEL	F4	13	THE TRAVEL CHANNEL
WEATH	F3	13	THE WEATHER CHANNEL

MUSIC

CMTV	F4	24	COUNTRY MUSIC TV
NASH	G5	18	THE NASHVILLE NETWORK
MOR	G5	10	MOR MUSIC TV
MTVE	F4	17	MUSIC TELEVISION - EAST
MTVW	F3	16	MUSIC TELEVISION - WEST
VH-1	F4	23	VIDEO HITS ONE
Z - MUS	G1	15	Z MUSIC

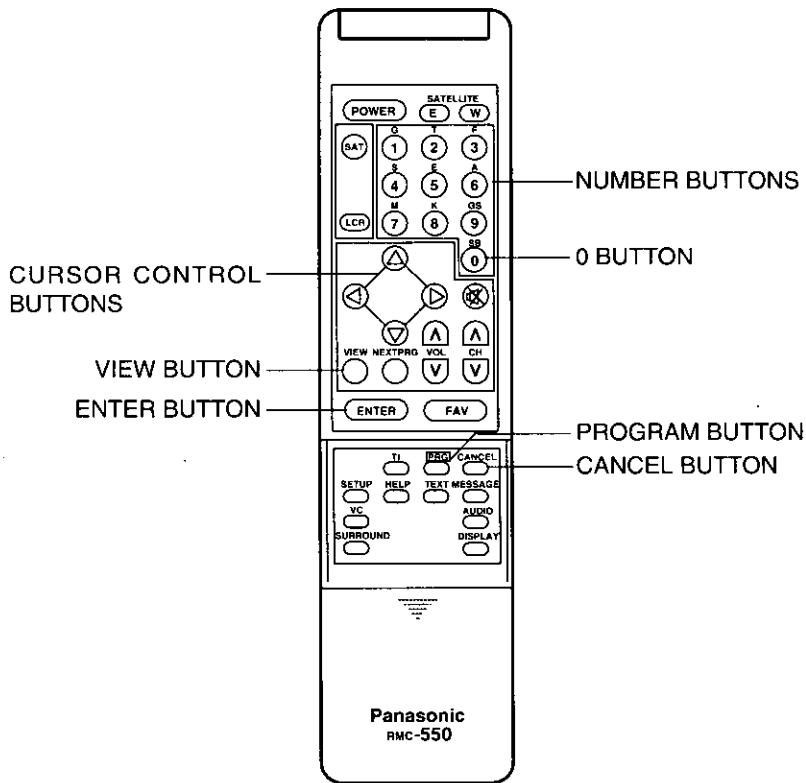
HOME SHOPPING

HSC	F4	10	HOME SHOPPING CLUB
HSC2	F3	10	HOME SHOPPING CLUB II
HSS	F2	11	HOME SHOPPING SPREE
QVC	F4	9	QVC NETWORK
QVCF	F3	8	QVC FASHION CHANNEL
SAH	G3	17	SHOP AT HOME
SAH2	G1	9	SHOP AT HOME II
SHCAM	G3	22	SHOWCASE AMERICA
VALUE	G1	12	VALUEVISION
VIDCAT	G3	15	VIDEO CATALOGUE CHANNEL

RELIGIOUS

ACVI	F3	5	ACTS
EWTN	G1	11	ETERNAL WORD TV NETWORK
FMLY	G6	14	FAMILY NET
INS	G1	17	NEW INSPIRATIONAL NETWORK
KEY	G3	11	KEYSTONE INSPIRATIONAL
NCN	G6	6	NCN & SHEPHERD'S CHAPEL
SCOTT	G3	12	DR. GENE SCOTT
TRIN	G5	3	TRINITY BROADCASTING
VISN	F3	5	VISN INTERFAITH
WORSHIP	F1	11	WORSHIP
WPCB	S2	21	WPCB (CORNERSTONE TV)
3ANG	S4	9	THREE ANGELS BROADCASTING

Useful Functions: Parental Lock



The parental lock will allow the lock-out of up to nine channels on any combination of satellites or up to nine complete satellites or any combination of satellites and channels.

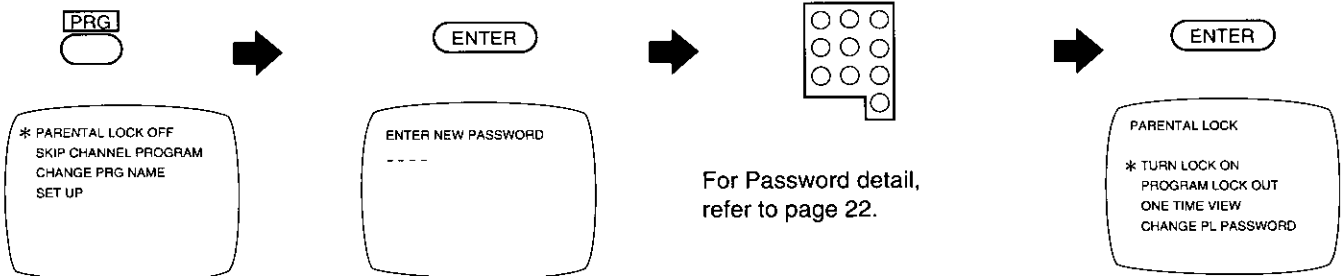
Display Parental Lock Menu

Press **PRG**.

Confirm the cursor arrows
"Parental Lock On (or Off)"
then, press **ENTER**.

Enter the 4 digit
Parental lock password
by pressing the Number buttons.

Press **ENTER**.

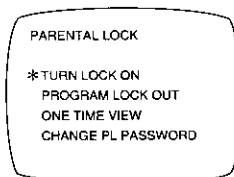


For Password detail,
refer to page 22.

Turn Lock On/Off

In the on condition, if the receiver is tuned to a channel that has been locked out, a solid blue screen will be displayed and the audio will be muted.

Select "Turn Lock On (or Off)"
by using **▲/▼** (up/down).



To change On or Off, press **ENTER**.
The on-screen returns to actual channel
and Parental lock is turned on or off
automatically.



Useful Function

Program Lock Out

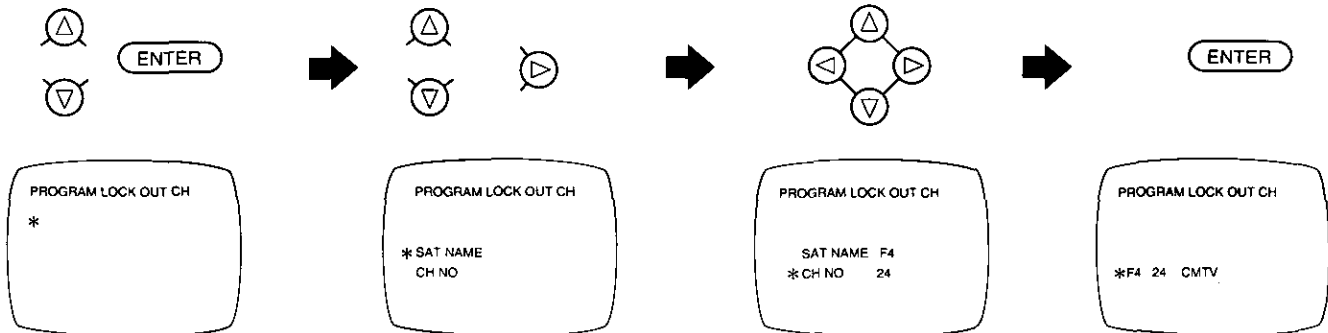
Any satellite and channel selected can be locked out.

On the PL lock menu, select "Program Lock Out" by using Δ/∇ , then press **ENTER**.

Move the cursor to the desired position, then press \rightarrow (right).

Select the satellite and channel to be locked out by using $\Delta/\nabla/\leftarrow/\rightarrow$.

Press **ENTER**.



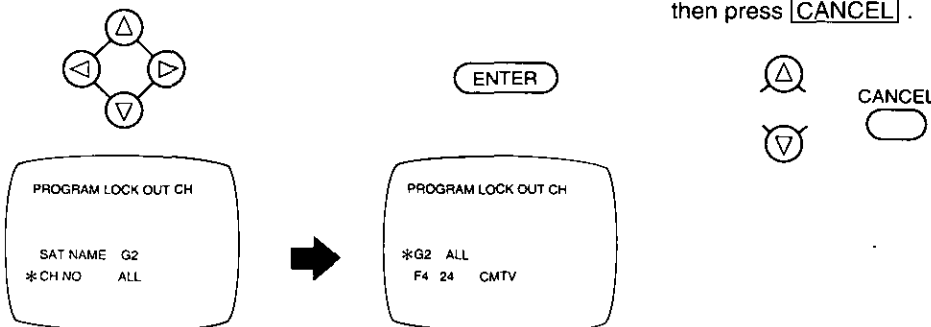
②

To lock out an entire satellite, set the channel number "ALL" then press **ENTER**.

To remove a channel or satellite from the lock out menu, move the cursor to the position, then press **CANCEL**.

Repeat for additional programs to be locked out.

To return the previous channel program, press **VIEW**.



One Time View

The one time view will allow watching of any channel on the lock out menu when the parental lock is ON, until the channel is changed or the receiver turned off. At that time, the normal parental lock operation will take over.

① Tune to the desired channel on the lock out menu.

② Display parental lock menu.

③ Select "One Time View" then press **ENTER**.

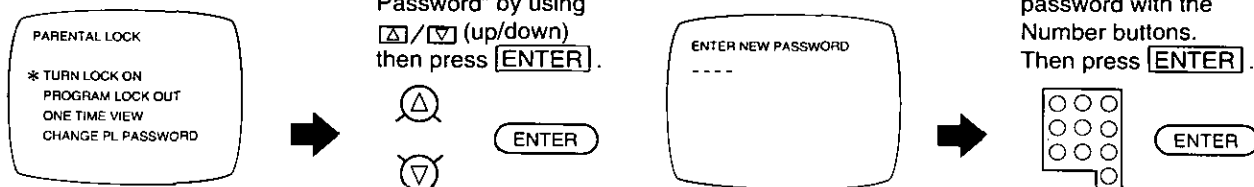
④ That channel can now be viewed until the channel is changed.

Change Parental Lock Password

Display parental lock menu.

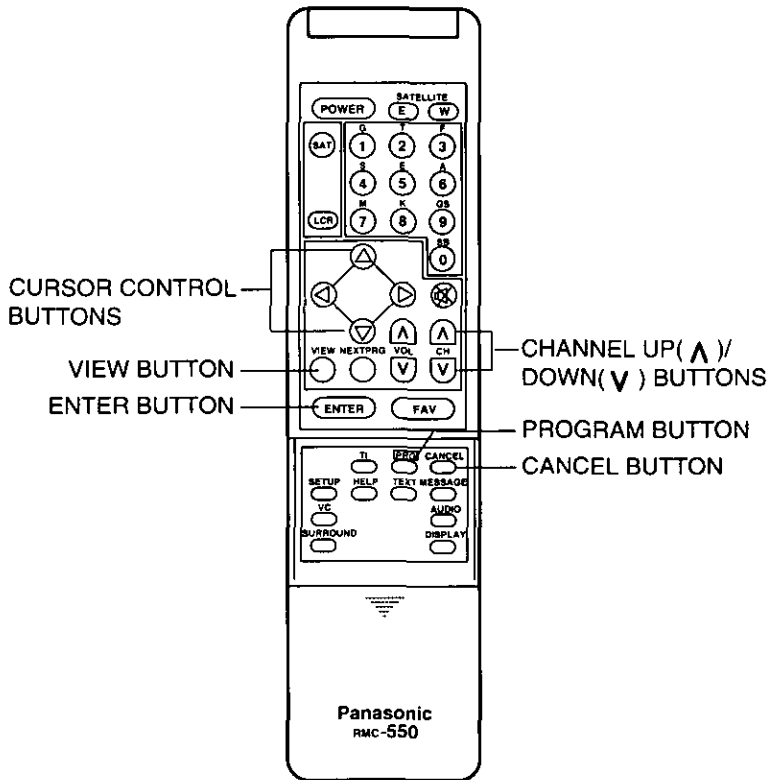
Select "Change PL Password" by using Δ/∇ (up/down) then press **ENTER**.

Enter the 4 digit new password with the Number buttons. Then press **ENTER**.



Useful Function

Useful Functions: Skip channel

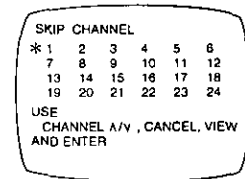
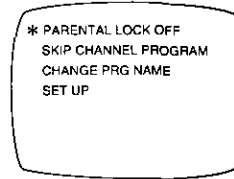


When selecting a channel by using the Channel / , you can program the receiver to skip unused or undesirable channels on each satellite. Tune to a satellite at first.

Skip Channel

Press **PRG** and select "Skip Channel Program".

Press **ENTER**.



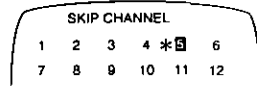
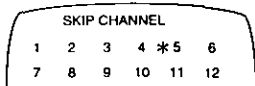
e.g. C band

Set Skip Channel

Select the channels to be skipped by using Channel / until the cursor is aligned with the channel number selected. Press **CANCEL**.

The channel number aligned with cursor will be changed to one in reverse video. Repeat the step until all channel numbers to be skipped have characters in reverse video.

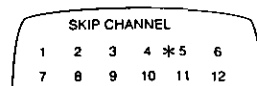
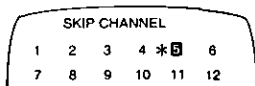
Press **ENTER** to put into memory. This should be repeated for each satellite.



Release Skip

To release the channel from the skip mode, aligned the cursor with the channel number similarly to step ② and press **VIEW**.

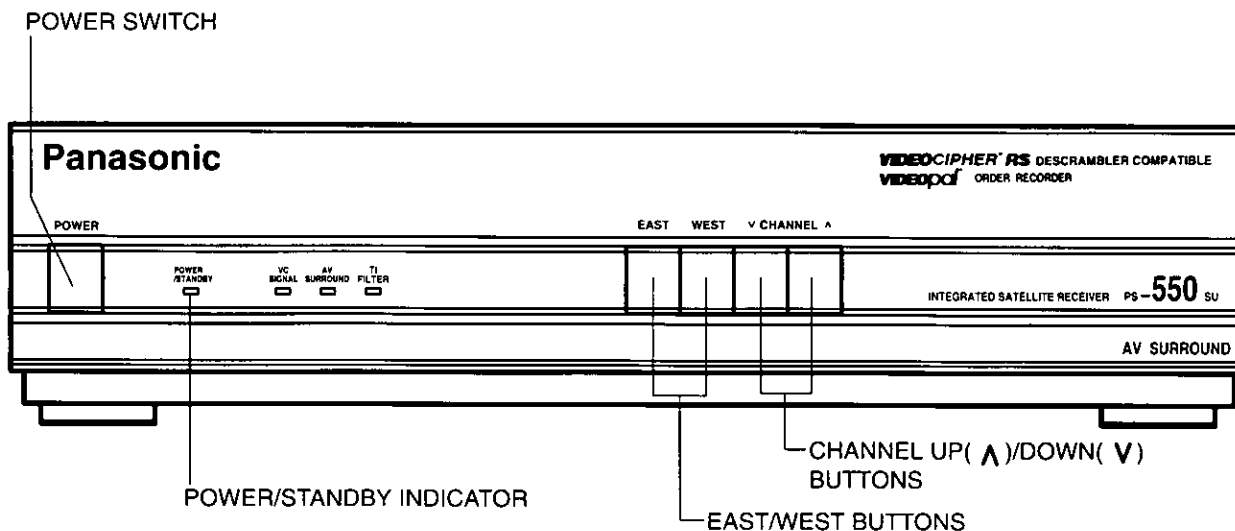
To return to normal program mode, press **ENTER**.



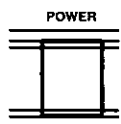
Useful Function

Operations from Front Panel

■ Indication with means button on front panel of receiver.



Power On/Off (stand-by)

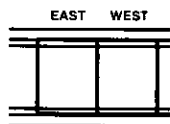


Press **POWER** to turn on or off (stand-by) this receiver.



When this receiver is turned on, the Power/Stand-by Indicator lights red. When this receiver is in stand-by mode, this indicator lights green.

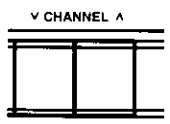
Select Satellite



Press **EAST** or **WEST**.

This receiver searches for the next East or West satellite whether C or Ku band.

Select Channel



Press CHANNEL (up) or (down) to slew through the channels.

Useful Function

Diagnostics

■ Error Indication (Error is indicated by a flashing message)

No.	ON SCREEN	CAUSES	METHODS OF CORRECTION
①	ERROR-2	When trying to enter the same satellite name/No. into memory at more than one satellite position.	Press ENTER again to cancel the error. The satellite is stored at the new position.
②	ERROR-3	When trying to enter more than two satellite into memory at one single satellite position. Except if one is C Band and the other Ku Band.	Press ENTER again to cancel the error. The priority is given to the name of the new satellite.
③	ERROR-6	When feedback pulses are not being received. A. When the actuator is fully extended or retracted in the initialize mode or in the manual mode. B. When the actuator is not correctly connected with the receiver, the connection is broken. (no pulse being received) or a defective position sensor.	Press E/W to move the antenna position slightly in the reverse direction. Check that antenna is not into a stop, or that cable connections to actuator are secure.
④	ERROR-8	"ERROR-2" and "ERROR-3" occurred simultaneously. (The same satellite name was tried to be stored at the same antenna position.)	Press CANCEL . This information has been already stored.
⑤	ERROR-!	Memory error	Turn the power off and call your dealer.

Troubleshooting

Before calling for service, determine symptoms and attempt these simple solutions below. These checks apply to your TV or monitor as well as the receiver.

PROBLEM	SYMPTOM	CHECK
No operation	Check stand-by light: 1. If on ... 2. If off ...	1. Unplug receiver and plug back in - try it again. 2. Check AC cord. If there is still a problem, call your dealer.
Remote Control	Doesn't work (receiver is still operable from front panel controls)	<ul style="list-style-type: none"> • Test at different distances • Make sure UHF receiving antenna is connected properly • Replace batteries • Call dealer
Antenna	Doesn't move - Error 6 comes on	<ul style="list-style-type: none"> • Check antenna for obstruction • Check electrical connections from receiver to the antenna • Check antenna actuator load, if too heavy caused by freezing • Call dealer
Picture Sound	Noisy (Snow) distorted	<ul style="list-style-type: none"> • No transmission on channel selected, try another channel • Antenna adjustment • Check cable connections • TV not tuned to output channel of receiver CH3/CH4 • Check polarization and antenna position • Check if antenna is loaded with snow • Call dealer
Picture and Sound	1. No picture, sound OK 2. No picture or sound	<p>1. Verify you are at CH3/4. Check on non-scrambled channel. If problem persists, call your dealer.</p> <p>2. -Check your program guide to see if you are on a scrambled or non-scrambled channel. -Make sure you are subscribed to that program. -Check to see if green VC LED on the front is lit. -If the receiver was unplugged for a period of time, it is possible that it lost the updated codes sent in by the programmer. Please contact the programmer for instant hit.</p> <p>If the above doesn't work, tune in to a clear (non-scrambled) channel and fine tune the antenna E/W button and the receiver using AFC Off and fine tuning to obtain a clear picture. (A minimum signal requirement is needed - the programmer will inform you of it.)</p>
Sound	Sound is Distorted or only noise	Check if receiver is tuned to proper subcarrier frequency and proper audio bandwidth (N/W).
Video	Poor Video or interference from another channel.	Check if interference is TI. Use TI filter. Check if AFC is ON or video fine tuning is set properly if AFC is OFF. Check if skew is set properly for that satellite. Check if dish is properly pointed to satellite.

Specifications

IF IN [F connector × 2]

Input Frequency: 950 – 1450MHz
Input Impedance: 75 ohms
Input Signal Level: –65 to –30dBm
Noise Figure: 15dB max.
Number of Channels: Ku-band 32ch (max)
C-band 24ch
Bandwidth (–3dB): 27MHz (typical)
Threshold: less than 7dB C/N
Demodulator: PLL Demodulator
TI Filter: Built-in

VIDEO OUT [Phono connector × 1]

Frequency Response: 50kHz ~ 4.2MHz, ±1dB
Output Impedance: 75 ohms
Output Signal Level: 1Vp-p (typical)
De-emphasis: 525 lines CCIR Rec 405-1
DG & DP: 5%, 5°

COMPOSITE OUT [Phono connector × 1]

Frequency Response: 50kHz ~ 8.0MHz, ±1dB
Output Impedance: 75 ohms
Output Signal Level: 1Vp-p (typical)

AUDIO OUT [Phono connector × 2 L/R]

Frequency Response: 30Hz ~ 15kHz, ±2dB
Output Impedance: 600 ohms
Output Signal Level: 2.0 Vp-p (FM 100% Deviation)

SUBCARRIER AUDIO

Tuning Range: 5.0 ~ 8.6MHz
Bandwidth: Wide; 280kHz
Narrow; 180kHz
Mode: MONO

VC MODE AUDIO

Mode: STEREO
Frequency Response: 20Hz ~ 18kHz, ±2dB

RF OUTPUT [F connector × 1]

Output Impedance: 75 ohms
Output Signal Level: 65dB μ V (typical)
Output Channel: CH3/CH4

OTHERS

Surround: A/V surround
LNB Power: 18V DC, 200mA × 2
Actuator Power: 24V DC, 4A max. for 5 minutes
*Pulse Power: 5V DC, 50mA max.
Actuator Sensor Type: Hall effect, Reed switch and
Optical switch

Polarizer:
Polarizer: 0.5A (Pulse 1.0A max.)
Skew Pulse Width: 0.8 ~ 2.2mS
Switching Voltage
for V/H SW: ±12V nominal

GENERAL

Power Source: 120V AC ±10%, 60Hz
Power Consumption: 230W (Max.)
Dimension:
Wide; 16-15/16" (430mm)
Height; 4-1/8" (105mm)
Depth; 15-11/32" (390mm)
Weight: 21-5/32 lbs. (9.6kg)

Specifications subject to change without notice.

MASTER PASSWORDS For Parental Lock: 3872 For Set-up: 5172
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CRIMINAL WARNING

Title 47, Section 605 (e) (4), United States Code (U.S.C.) makes it a federal crime to modify this device to enable it to receive encrypted (scrambled) television programming without payment of required subscriptions. Conviction can result in a fine of up to \$500,000 and imprisonment for five years, or both. Any owner of this device who procures or willfully causes its modification is an accessory to that offense and may be punishable in a like manner. Other federal statutes which relate to the possession or use of this device are set out below. Investigative authority for violations lies with the Federal Bureau of Investigation (FBI).

CRIMINAL ACTIVITY	STATUTE	PENALTY
Intercept (receive) subscription TV by use of modified decoder	18 U.S.C. §2511 (1) (a)	Maximum fine of \$10,000 Maximum imprisonment of 5 years, or both
Possess modified decoder	18 U.S.C. §2512 (1) (b)	Maximum fine of \$10,000 Maximum imprisonment of 5 years, or both
Privately receive subscription TV programming by use of modified decoder	47 U.S.C. §605 (a)	Maximum fine of \$2,000 Maximum imprisonment of 6 months, or both
Receive subscription TV programming by use of modified decoder for commercial advantage or private gain	47 U.S.C. §605 (a)	Maximum fine of \$50,000 Maximum imprisonment of 2 years, or both for first conviction; \$100,000 fine or 5 years imprisonment, or both, for subsequent convictions

WARRANTY

PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY,
DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA
One Panasonic Way
Secaucus, New Jersey 07094

PANASONIC SATELLITE RECEIVING PRODUCT LIMITED WARRANTY

Panasonic Broadcast & Television Systems Company will, at its option, either repair or replace this Panasonic Satellite Receiving Product free of charge in the U.S.A. and Puerto Rico in the event of a defect in materials or workmanship as follows:

PARTS: New or rebuilt parts in exchange for defective parts for two (2) years after date of original purchase. Batteries are not warranted.

LABOR: Mail-in service for two (2) years after original purchase.

SERVICE PROCEDURE: If a problem with the Panasonic Satellite Receiving Product develops during or after the warranty period, contact your dealer for assistance and instructions or call toll-free 800-526-6610 to obtain the name of the nearest Panasonic Authorized Servicenter.

TECHNICAL ASSISTANCE: If you have difficulty operating this Panasonic Satellite Receiving Product, please contact your dealer or Distributor first.

If further assistance is required, please contact Panasonic Technical Support Dept at 1-800-524-1448, 9:00AM to 5:00PM, E.S.T.

If instructed to return the product to Panasonic Broadcast & Television Systems Company Service Division, or Authorized Servicenter, carefully pack and send it prepaid, adequately insured, and, if possible in the original carton. Attach a postage-affixed letter detailing the complaint to the outside of the carton and tape a piece of paper with your name and address to the product.

This warranty only covers failures due to manufacturing defects which occur during normal use. It does not cover failure due to damage which occurs in shipment or failures which are caused by products not supplied by Panasonic Broadcast & Television Systems Company or Panasonic Company or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, adjustment of controls or improper maintenance, modification, inadequate signal pickup or service by anyone other than your dealer or the Panasonic Servicenter or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS: There are no other express warranties except the one listed above.

PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY assumes no responsibility or liability to reimburse or compensate owners/users of an IRD (intergrated receiver/descrambler unit) for the loss of paid subscription television programming, such as HBO, Showtime, Cinemax, etc., in the event your IRD unit should require servicing. THE OWNER/END-USER OF THE IRD UNIT IS ADVISED TO NOTIFY EACH PROGRAMMER BEING PAID A SUBSCRIPTION FEE THAT YOUR IRD UNIT IS 'out-of-service' AND THAT YOU WISH TO SUSPEND YOUR SUBSCRIPTION DURING THE PERIOD YOUR IRD UNIT IS INOPERABLE.

PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY BREACH OF THIS WARRANTY. DURATION OF IMPLIED WARRANTIES, IF ANY, IS LIMITED TO ONE (1) YEAR.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts. So the above exclusion or limitation may not apply to you.

This limited warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

If a problem with your product is not handled to your satisfaction, then write to the Consumer Affairs Division at the following address:

Panasonic Broadcast & Television Systems Company, Division of Matsushita Electric Corporation of America
50 Meadowland Parkway, Secaucus, New Jersey 07094
Attn: Customer Care 2A-3.

Panasonic®

Broadcast & Television Systems Company

Division of Matsushita Electric Corporation of America

SATELLITE PRODUCTS GROUP

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