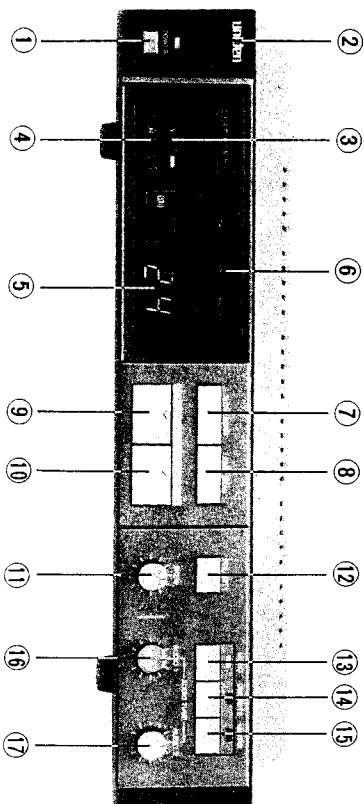


FEATURES OF THE UST 6000 SATELLITE RECEIVER

FRONT PANEL CONTROLS AND FEATURES

To properly operate the UST 6000 satellite receiver, it is necessary to understand the various features that are on the front panel of the unit. (see diagram A)

DIAGRAM A



1. **Power On/Off Switch** — This switch turns the unit on and off.
 2. **L.E.D. Power Indicator** — This red indicator turns on when power is applied to the unit, and turns off when power is off.
 3. **(V) Vertical Polarity Indicator** — This green indicator appears when the receiver is receiving a vertically polarized (V) channel.
 4. **(H) Horizontal Polarity Indicator** — This red indicator appears when the receiver is receiving a horizontally polarized (H) channel.
- The H and V indicators change when the receiver receives a horizontal (i.e., even numbered channel — ch. 22) or vertical (i.e., odd numbered channel — ch. 13) channel.
5. **L.E.D. Channel Indicator** — This two digit, green readout indicates the channel that the receiver is receiving. This number will change when the Channel Up/Down Controls (9 , 10) are pushed.
 6. **L.E.D. Signal Level** — This seven light indicator shows the relative amount of signal being received.

7. **Slow Scan Control** — When pushed, this control will scan through all of the channels on the satellite. This control should be used to indicate what type of programs are being broadcast. If a desirable channel is seen, the operator can then press the control again to stop the scan.
8. **Fast Scan Control** — This control is to be used when moving the antenna from one satellite to another. The satellite search is a very fast version of the channel scan. When the antenna is moving from one satellite to another (between two satellites) the television screen will become snowy and filled with black and white dots. As the antenna moves towards the satellite and begins to receive the satellite transmission, the satellite's channels will appear on the television screen at a very fast rate (fast scan). To stop the Fast Scan, press the button again.
9. **Channel Down Control** — When pressed, this control will change the channel the receiver is receiving to a lower number for channels 1—24.
10. **Channel Up Control** — When pressed, this control will change the channel that the receiver receives to a higher number for channels 1—24.
11. **Skew Control** — This adjustment controls part of the internal portion of the Mechanical Polarization Device (Unitrotor) which is located at the antenna. The control adjusts the picture on the television set for best reception. This control is operable only when using a Mechanical Type Polarization Device.
12. **Polarity Control** — This control is to be used when changing from horizontal channels to vertical channels. The control is primarily used when changing from a Galaxy, Anik, or Westar satellite (i.e., channel 1 is horizontal) to a Satcom, Constar or Telstar (i.e., channel 1 is vertical). When the Polarity Control is pressed the Polarity Indicators (3, 4) will change.
13. **Mono Audio Control** — This audio control allows the receiver to process only mono audio. When the button is pressed, the green mono indicator will light to indicate mono audio mode.
If the receiver is in mono mode, only the audio 1 (left channel) (17) serves as the adjustment for mono audio tuning.
14. **Discrete Audio Control** — This audio control allows the receiver to process discrete stereo audio frequencies and when in use, the green discrete audio indicator will appear. If in discrete mode, both audio channels (16, 17) can be adjusted to tune the discrete audio channel.

- 15. Matrix Audio Control** — This audio control allows the receiver to process matrix stereo audio frequencies. When in the matrix mode the green matrix indicator will appear. If the UST 6000 is in matrix audio format, both audio channels (16, 17) can be adjusted to tune the matrix audio channel.

NOTE

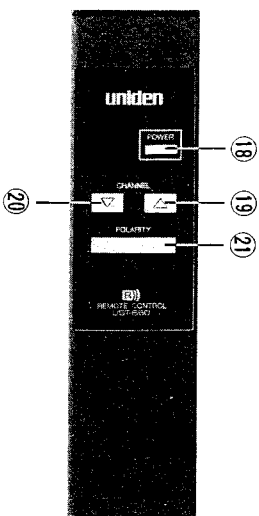
MATRIX MODE TUNING

If two subcarriers are found and one has a noticeably lower "loudness" and sounds somewhat muffled, the transmission is most likely in matrix mode. In this case, tune the AUDIO 1 control to the lesser subcarrier while in the DISCRETE mode, and set the AUDIO 2 control to the louder subcarrier while in the DISCRETE mode. Switch then to MATRIX mode to hear true stereo.

- 16. Audio 1 Adjustment** — This knob controls the audio frequency being received by the left channel.
- 17. Audio 2 Adjustment** — This knob controls the audio frequency being received by the right channel.

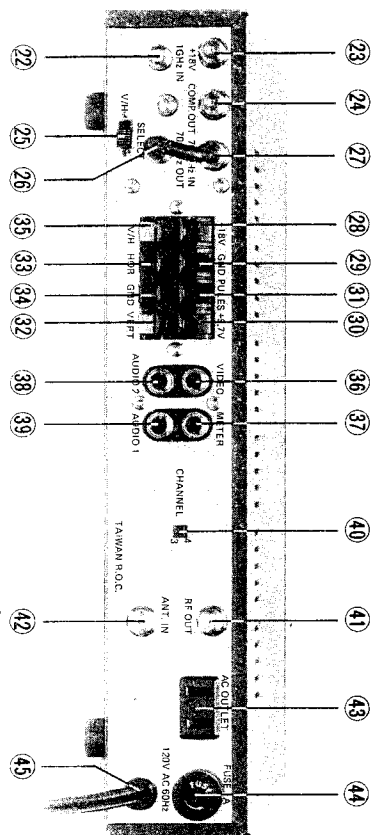
These channel select controls perform the name function as the channel up/down buttons on the infrared remote control. The controls automatically adjust the polarization unit (Unitor) to accommodate changes in polarity. As each channel is changed the receiver automatically selects the correct frequency, changes polarity (if necessary), changes the polarization indicator (3, 4), if necessary, and changes the LED readout (5). Some SKEW adjustment (10) may be necessary as you change from satellite to satellite.

INFRARED HANDHELD REMOTE INFORMATION DIAGRAM B



- 18. Power** — This switch controls power to the UST 6000. If the unit is off, standard television is viewable; if on, Satellite television may be viewed.
- 19. Channel Up Control** — Same as (10) on front panel features.
- 20. Channel Down Control** — Same as (9) on front panel features.
- 21. Polarity Control** — Same as (12) on front panel features.

REAR PANEL INFORMATION DIAGRAM C



The rear panel of the UST 6000 receiver is where all receiver installation terminals, plugs, and switches are located. Except for the Channel Switch (40), the rear panel should not be used by the owner.

- 22. 1 GHz IN** — This connection receives the incoming signal directly from the LNB, Block Down Converter, or Horizontal/Vertical Switch in the case of multi-receiver hook-up.
- 23. +18V** — This connection supplies the splitter or Horizontal/Vertical Switch with 18V of power through a RG-59/U cable.
- 24. Comp. OUT** — This connection is to be used in conjunction with an External Descrambler. This connection is usually called an Unclamped Baseband Output.
- 25. Select** — V/H +18V Switch — This switch should be moved to one of the two positions, depending on the type of installation utilized.
- a. For single receiver installation using Pin Diode or Motor-Type Polarization Device: +18V position.
 - b. For multiple receiver installation using Dual Feedhorn and/or Vertical/Horizontal Switch or Dual Splitters: V/H position.
- 26. 70 MHz OUT** — This connection supplies power to an external trap or filter which can be used to filter out Local Terrestrial Interference (TI) or, in some cases, adjacent satellite transmissions.

27. 70 MHz IN — This connection receives the signal from the External Filter Output.

Special Note: If no filter is used, a jumper cable from 70 MHz Out to 70 MHz IN must be connected.

28. +18V — This terminal supplies 18V DC current for auxiliary equipment.

Motor-Type Polarization Device Control Terminal

29. GND — Provides the grounding connection for the Motor-Type Polarization Device.

30. +5.7V — Provides constant voltage to the Motor-Type Polarization Device.

31. Pulse (Control Voltage) — Provides Pulse Control Voltage to the Motor-Type Polarization Device.

Pin Diode-Type Polarization Device Control Terminals

32. VERT — Provides the vertical connection for the Pin Diode-Type Polarization Device.

33. HOR — Provides the horizontal connection for the Pin Diode-Type Polarization Device.

34. GND — Provides the ground connection for the Pin Diode-Type Polarization Device.

NOTE: All three terminals for either the Motor or the Pin Diode-type Polarization Devices must be properly connected to the Polarization Device. Consult the unit's separate instructions for color-coding designations.

35. V/H — Same as 1GHz IN Terminal.

36. Video — RCA fitting delivers direct unmodulated video for inputs to auxiliary equipment such as a VCR, television tuner, or monitor.

37. Meter — This output allows for an External Signal Strength Meter or similar equipment to be connected.

38. Audio 2 — Provides Audio right channel to Audio equipment etc.

39. Audio 1 — Provides Audio left channel to Audio equipment etc.

40. Channels 3, 4 — Provides ability to switch modulated output to either channel 3 or 4 for reception by your television set.

41. RF OUT — Provides Modulated Output Signal to Channel 3 or 4 (40) of the television set.

42. ANT. IN — Provides reception Input Connection for standard VHF (outdoor) TV antenna.

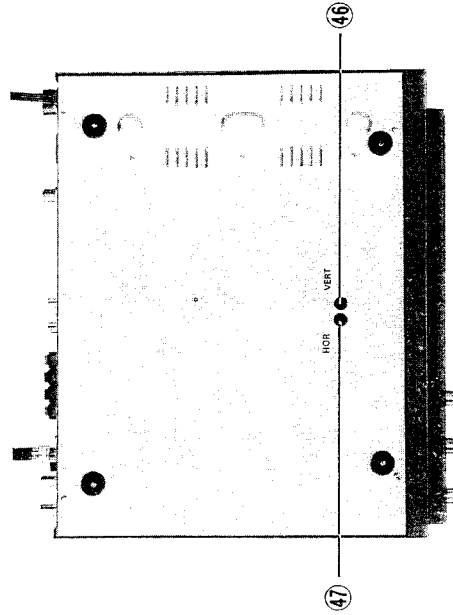
43. AC Outlet — This AC Outlet supplies power to Audio equipment, etc.

44. Fuse 1A — This is a 1 ampere fuse. An extra one is packed with each UST 6000. If the fuses continue to blow (burn out), do not replace the 1 ampere fuse with a larger one. Instead, contact the Uniden Service Center nearest you.

45. 120V AC 60 Hz — This cord plugs into a standard wall socket to provide current for receiver functions.

BOTTOM PANEL INFORMATION

DIAGRAM D



These are the only adjustments on the bottom panel of the UST 6000.

46. Vertical Polarity Adjustment Pot — Allows for adjustment of the vertical polarization of your system's polarization equipment.

47. Horizontal Polarity Adjustment Pot — Allows for adjustment of the horizontal polarization of your system's polarizing equipment.

SYSTEM LAYOUT

There are a variety of ways to receive TV pictures with the Uniden Block Down Conversion satellite equipment. System hookup varies depending on the number of receivers that are in the home.

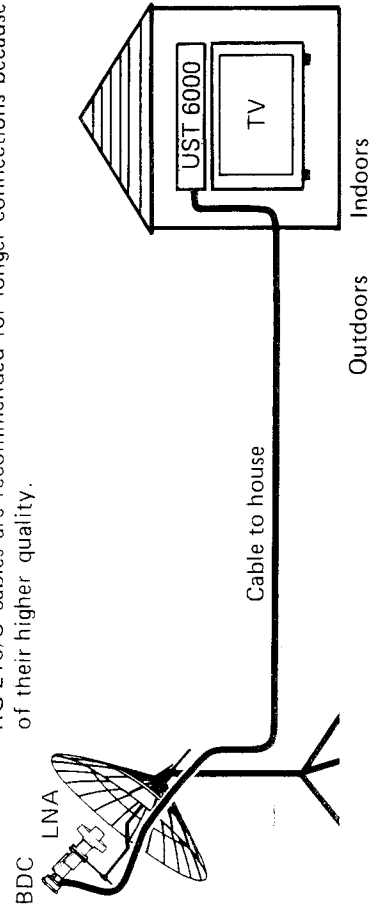
If more than one receiver is used in the home, the system will utilize extra equipment to make it possible to view all channels available with each receiver. If one receiver is to be hooked up, the system layout is much more basic.

LAYOUT A—SINGLE RECEIVER INSTALLATION

NOTE: In this example, the Polarization Device would be cabled directly from the device to the rear of the UST 6000.

RG-59/U cables can be used for connections of 120 feet or less.

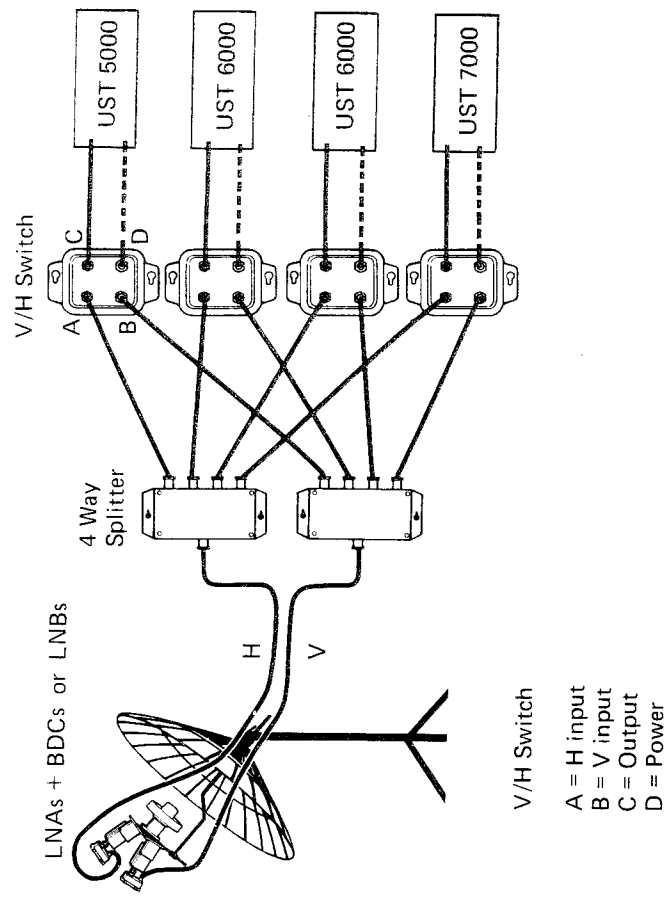
RG-216/U cables are recommended for longer connections because of their higher quality.



LAYOUT B — MULTI-RECEIVER INSTALLATION

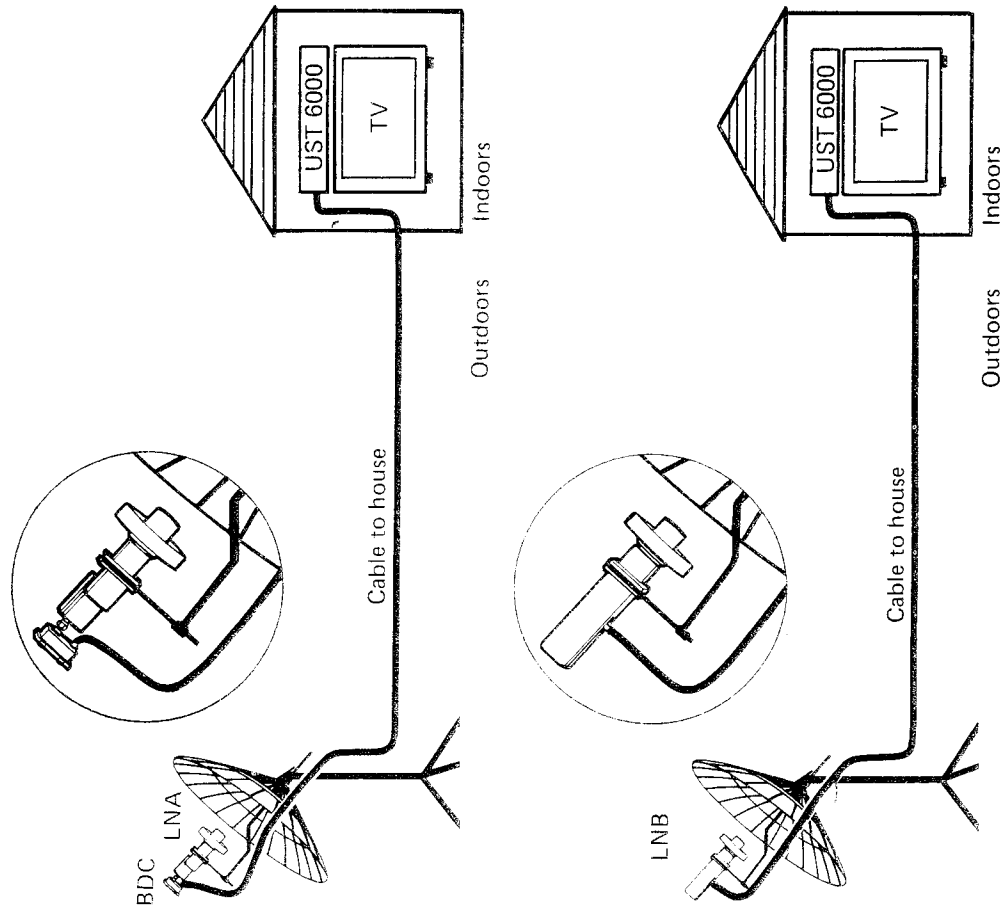
In any multi-receiver installation, 2 LNA's and Block Down Convertors or 2 LNB's are necessary for full satellite viewing by each receiver.

- As you can see, there are two Low Noise Amplifiers. One amplifies only horizontal channels, and the other amplifies all vertical channels.
- From there, cables take both Vertical and Horizontal Signals to separate 4-way splitters. In this example, up to 4 receivers can be used in one home.
- The Four-Way Splitter splits the Horizontal or Vertical Signal into four separate Horizontal or Vertical Signals. From there, both signals go to a Vertical/Horizontal Switch. One switch is needed per multi-hookup receiver. The V/H Switch takes in both polarities (horizontal & vertical) and gives the receiver the ability to switch from one channel (polarization) to another.
- The dotted line indicates an RG-59/U cable, which runs from the +18 Volts Terminal (23) to the power connection on the UST 502 horizontal/vertical switch.
- An RG-59/U Cable is used to connect the output of the V/H Switch to the 1GHz in on the rear panel of the receiver.
- No polarization device is necessary, since the system is constantly receiving both polarities via the two LNA's.



BLOCK DOWN CONVERTOR

There are basically two ways to install a single receiver UST 6000 system.

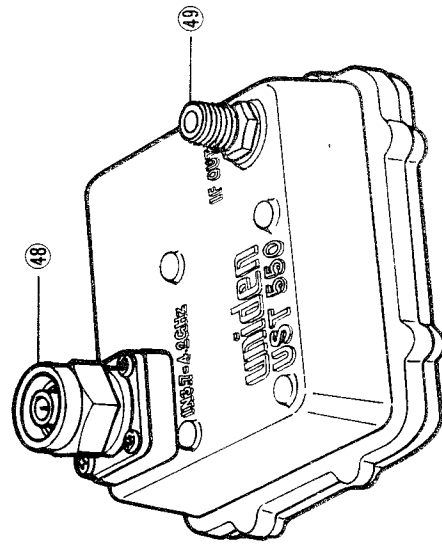


In example A, both an LNA and Block Down Converter are used to convert the signal to the 950–1450 MHz range. In example B, this frequency conversion takes place in one stage — the LNB.

If your UST 6000 satellite system utilizes installation A, your system will include the UST 550 Block Down Converter (BDC). The converter should be mounted directly to the LNA. The unit is completely weather-sealed, so that moisture will not penetrate it.

BLOCK DOWN CONVERTOR CONNECTIONS

(picture of Block Down Converter)



48. N. Fitting Input — This connection receives the signal from the LNA.

49. F. Fitting Output — This connection sends the signal from the Block Down Converter to either a splitter (for multi-receiver reception), or directly to your UST 6000 (for single receiver reception)

INSTALLATION INFORMATION

Consult materials accompanying your antenna and polarization device for instructions concerning installation of the antenna and polarization device.

1. CONNECTION OF THE BLOCK DOWN CONVERTOR TO THE LNA

The following steps should be taken for installation of the Block Down Converter. Again, installations may vary.

- Connect the Block Down Converter (BDC) directly to the rear of the LNA. Remember to attach the BDC with the Input side up and the Output side facing the ground.
- Connect the Output Connector of the BDC by RG-59/U cable to the 1 GHz IN connector (22) on the rear of the UST 6000. The cable should use an F fitting on both ends.

2. CONNECTION OF THE LNB TO THE UST 6000

If the LNB (Low Noise Block Converter) is used in the installation, run a RG-59/U cable from the Output connection on the LNB to the 1 GHz IN connection on the rear panel of the UST 6000 for single receiver hook-up.

3. CONNECTION OF THE UST 6000 TO A TELEVISION SET

A. For Cable ready TV sets, run the RG-59/U cable from the RF output (41) directly to the VHF input on the rear of the TV set. If the cable ready set has separate audio and video inputs, run the RG-59/U cable from the Video and Audio connections (36, 39) to the audio and video input connection on the television.

B. For non-cable ready sets, an Impedance Matcher (adaptor) is necessary. The two wires coming from the adaptor connect to the VHF Input on the rear of the television. The RG-59/U cable should run from the RF Output (41) to the Input of the Impedance Matcher.

4. CONNECTION OF A ROOFTOP LOCAL ANTENNA TO A TELEVISION SET

After connecting the UST 6000 to the television, simply run the incoming cable from the outdoor local TV antenna to the Antenna IN (42) connection. When the UST 6000 is in the power "on" position, satellite TV will be received. When the UST 6000 is off (and the television is on), normal television viewing may be obtained.

5. CONNECTION OF THE UST 6000 TO A MONITOR OR VCR

If a VCR or video monitor is to be used, connect the direct Video Output (36) on the rear panel of the receiver unit to the Video Input Connection on the VCR or video monitor. Then connect the Audio Connection (39) on the rear panel of the receiver unit to the Audio Input Connection on the VCR or video monitor.

NOTE: At this point it is important to make sure that the TV set is on channel 3 or 4. The TV Channel Selector Knob, or channel readout, should correspond to the switch position (3 CH or 4CH) on the rear of the UST 6000 (40).

TROUBLE SHOOTING

PROBLEM: After carefully following the Installation Instructions, you still do not have a television picture.

ACTION: Check the alignment of your satellite TV antenna system (reflector). To do so, put the receiver unit in the scan mode by depressing the Fast Scan Control (8) on the front panel of the receiver, and scan the channels until you see flashes of color on the television screen. Immediately take the receiver out of the search mode by touching the button again, and fine tune the alignment of the antenna.

PROBLEM: There is no picture on your television set, and the indicator lights are not working on the receiver unit.

ACTION:

1. Check the AC Power Cord (45) to make sure the receiver is plugged in.
2. Check the Power On/Off Switch (1) to make sure the button is depressed and the receiver unit is on.
3. Check to make sure the In-Line Power Fuse (Fuse 1.0A) has not blown. If so, replace the fuse with the second fuse supplied with your UST 6000 receiver unit.

(DO NOT USE A FUSE WHICH IS LARGER THAN ONE AMP. IF THE SECOND FUSE BLOWS, REFER TO THE NEAREST UNIDEN SERVICE CENTER FOR ASSISTANCE.)

PROBLEM: There is no picture on your television set, but the indicator lights on receiver are operating.

ACTION:

1. Make certain that the Channel Selector on your television set is on channel 3 or 4, and that Channel 3-4 Switch on the rear panel of the receiver is on the same channel.
2. If step 1 does not solve the problem, check the cables between the RF Output Connection (41) on the rear panel of the receiver unit and the Antenna Input Connection on the back of your television set.
3. Check the cable connection between the 1 GHz IN Connector (22) on the rear panel of the receiver unit and the 1 GHz Output Connection (49) on the Block Down Converter.
4. Check the alignment of your satellite TV antenna system (reflector). To do so, put the receiver unit in the scan mode by depressing the Fast Scan Control (8) on the front panel of the receiver, and scan the channels until you see flashing colors on the television screen. Immediately take the receiver out of the scan mode by touching the Fast Scan Control again, and fine tune the alignment of the reflector.