

# 44-Watt AM/FM Stereo Receiver with Quatravox®

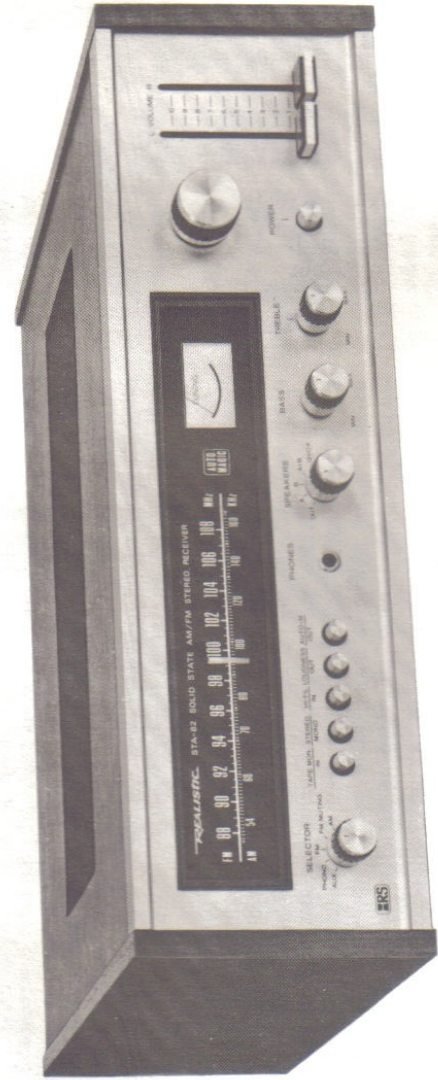
STA-82

OWNER'S  
MANUAL

PLEASE READ BEFORE  
USING THIS EQUIPMENT

**REALISTIC®**

CAT. NO.  
31-2056



CUSTOM MANUFACTURED FOR RADIO SHACK  A TANDY CORPORATION COMPANY

# REALISTIC®

THE BRAND WITH OVER 1,000,000 CUSTOMERS

*In choosing this fine Realistic product you have demonstrated a rather acute awareness of "getting the most for your money". With Realistic this is not an idle boast.*

*The "line" was born in Boston, long famous for Yankee ingenuity — and thrift. Its original intent was to bridge a gap between \$100 equipment and \$25 equipment where, at the time, there was a real void in hi-fi merchandise.*

*Early products were a \$39.95 FM tuner, a \$29.95 preamp/amplifier, a \$19.95 speaker. Soon we found ourselves a unique niche as manufacturing retailers.*

*Capacity and ability grew simultaneously. Our Realistic Electrostat-3® electrostatic tweeter — now used in the Electrostat-2A speaker — was called a "best buy" by the country's leading product-review magazine. Our 10TRF radio out-performed practically anything then available. And dealers from all over the world began requesting a Realistic franchise.*

*"Firsts" include: the first medium cost DC/AC communications receiver totally engineered in solid state — the Realistic DX-150A; the first properly designed low-cost police band radio — the Realistic Patrolman; the Realistic Optimus-1 loudspeaker, bringing "over \$120 sound" down 33%; the first lifetime-guaranteed vacuum tube; and the Realistic STA-120B stereo receiver which combined massive power, modern styling, and a veritable host of new ideas — at a cost fully \$100-\$200 below its value under traditional marketing practices.*

*But of course! — Realistic marketing practices are NOT traditional. First: the line is restricted in distribution. Second: we do not have sales representatives and other normal "trade" costs, nor do we waste money and tools on frequent model changes to attract new dealers — a new model is a NEW model, a current model is one that gets a steady stream of improvements at no cost to you and without a lot of wild (and expensive) claims of novelty.*



Speakers Recorders Components P.A. Products Radios Phonographs

REALISTIC AUDIO PRODUCTS are the proud result of Radio Shack engineering, research, development, and over 50 years of experience in electronics. Laboratories and major testing facilities are maintained in Fort Worth, Los Angeles, Chicago, Boston, Philadelphia, Columbus Ohio, Burlington Iowa, Toronto and Tokyo. In every sense a national brand, the Realistic label is worn with equal distinction by our highly original Communications and Citizens Band (two way radio) products, and numerous other items, including: tape, headphones, antennas, intercoms and tubes.

## INTRODUCTION

Your new STA-82 is a highly versatile AM/FM Stereo Receiver which delivers enough power to drive almost any speaker system. The "honest" 22 watts per channel over the entire audio bandwidth will drive both "main" and "remote" speakers. And it has the performance and convenience features that distinguish a truly great receiver.

- Built-in Quadraphonic sound from ordinary stereo sources. Add a second set of stereo speakers — stereo and the best of both worlds.
- With the FM tuner, the specifications tell the story. There's an FET front-end for excellent sensitivity and reduced noise. When you tune, muting eliminates interstation hiss.
- Our exclusive Auto-Magic™ dramatically simplifies FM tuning. When you touch the tuning knob, it lets you dial stations easily. Then as you release the knob, Auto-Magic fine-tunes the station and locks it in for drift-free listening.
- The wideband tuner provides maximum AM fidelity.

And there are a lot of "little things" that show you how carefully we designed the STA-82. Things like easy-to-use Glide Path™ volume controls and a separate pushbutton power switch so you don't have to reset the volume every time you turn the receiver on.

At Radio Shack we also believe a receiver should look as good as it sounds. So we built the STA-82 with a blackout dial and a dial pointer that changes from yellow to red to indicate stereo broadcasts. Like every Realistic component, the STA-82 comes with a beautiful oiled walnut case — and it doesn't cost you a penny extra.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS RECEIVER TO RAIN OR MOISTURE.**

**GUARANTEE:** The Realistic guarantee is stated on the Guarantee Card packed with the receiver. It is in effect from coast-to-coast and in Alaska. At any time, Realistic equipment will be restored to new condition with original parts with MINIMUM delay anywhere in the U.S.A., usually right in your own neighborhood. In 98% of the cases, it is NOT necessary to return Realistic components to one of our Laboratories.

## SPECIFICATIONS

### AMPLIFIER

Audio Output Power at 1% THD into 8 ohms, over the audio spectrum, 20 ~ 20,000 Hz (RMS power, both channels driven)

22 watts per channel

### IHF Power

47 watts/channel, ± 1 dB

30~20,000 Hz ± 1 dB

Less than 1% (typically 0.3%)

55 dB (Phono)

60 dB (Aux)

Frequency Response

IM Distortion

Signal-to-Noise Ratio

### FM TUNER

Sensitivity

2.5  $\mu$ V (IHF)

65 dB

Signal-to-Noise Ratio

Total Harmonic Distortion

Mono

0.6%

Stereo

0.8%

Image Rejection

-50 dB

Selectivity

45 dB

Separation at 1000 Hz

35 dB

### AM TUNER

Sensitivity

500  $\mu$ V/m

(for 20 dB S+N/N)

Image Rejection

33 dB

### POWER REQUIREMENTS

120 VAC, 60 Hz

(220/240 VAC, 50 Hz for

European and Australian

models as indicated on

rear of unit)

**NOTE:** Before operating your STA-82 for the first time, please read this manual carefully. It will tell you how to connect your receiver and how to get the most enjoyment from your system.

## CONTROL FUNCTIONS



### SELECTOR

Chooses one of five input positions.

**AUX** — For any high-output source — a second tuner, a crystal or ceramic phono cartridge, a second tape deck, TV, Ham radio, etc.

**PHONO** — For any turntable equipped with a magnetic cartridge.

**FM** — Activates the built-in FM tuner.

**FM MUTING** — Activates the built-in FM tuner and eliminates interstation hiss.

**AM** — Activates the built-in wideband AM tuner.

### STEREO/MONO

When pressed in, switches the amplifier and tuner from stereo to monaural operation. In the out position, the amplifier operates in stereo and the FM tuner automatically switches to stereo when there is a stereo signal.

### TAPE MONITOR

Push in to play tapes or to monitor a tape as it is being recorded.

### HI FILTER

When pressed in, minimizes hiss, scratches and other high-frequency noise.

### AUTO-Magic

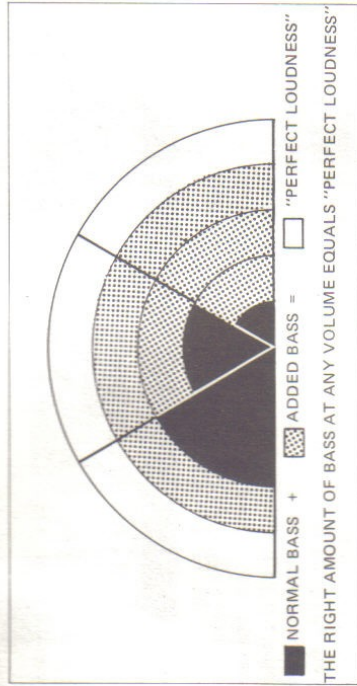
With the button out, the AUTO-MAGIC beacon on the tuning dial lights and special circuitry simplifies FM tuning. When pressed in, FM tuning is manual.

### PHONES

Accepts any pair of low impedance stereo headphones. The jack is always "live."

## LOUDNESS

With button out, boosts high and low frequencies to compensate for the ear's reduced sensitivity to bass and treble at low volume. Radio Shack's exclusive **Perfect Loudness** adds just the right amount of compensation at every listening level. Pressing the button in removes the compensation.



### Perfect Loudness Effect

## SPEAKERS

**OUT** — Turns all speakers off for private headphone listening.  
**A** — Connects main speakers only.  
**B** — Connects remote speakers only.  
**A+B** — Connects main and remote speakers.  
**QUATRAVOX** — Synthesizes 4-channel sound. "A" speakers become front channels, "B" speakers are rear.

## BASS

Controls low frequencies. At the center position, it does not effect the sound. Turn clockwise to boost bass response, counterclockwise to de-emphasize the low frequencies.

## TREBLE

Controls high frequencies. At the center position, it does not effect the sound. Turn clockwise to boost treble response, counterclockwise to de-emphasize the high frequencies.

## POWER

Turns the receiver on when pushed in — off when pushed a second time.

## LEFT and RIGHT VOLUME

Adjusts volume and balance.

## Tuning Knob

Tunes AM and FM stations. In the Auto-Magic mode, touching the knob changes the **TUNING** meter light from green to white and permits easy station selection.

## TUNING Meter

Indicates the relative strength of FM and AM signals. Tune for the highest reading.

## Dial Pointer

Lights yellow when listening to AM or FM. The pointer turns red when the **STEREO/MONO** button is out and there is an FM stereo signal.

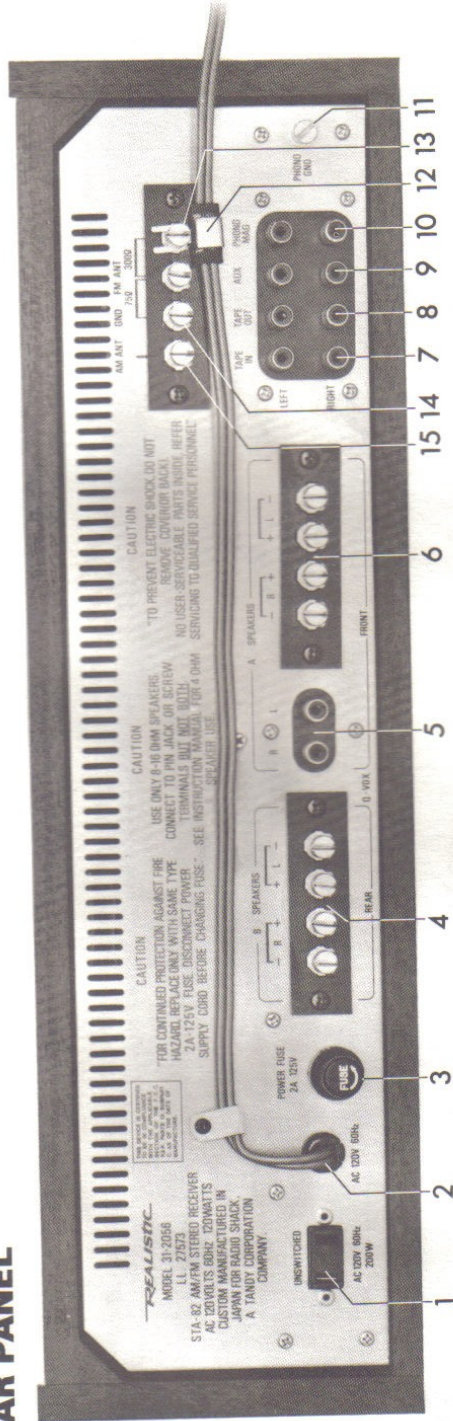
## AUTO-MAGIC Beacon

Lights when listening to FM with **AUTO-Magic** button pressed in.

## Blackout Dial

Lights whenever the receiver's power is on.

## REAR PANEL



1. **UNSWITCHED Convenience Outlet** — Powers any audio accessory up to 200 watts. The front panel **POWER** switch does not effect this receptacle.
2. **AC Cord** — Supplies the receiver's power. Plug the cord into any 120 VAC, 60 Hz outlet (220/240 VAC, 50 Hz power where the sets are so marked in the rear for European and Australian models).
3. **POWER FUSE** — Protects the receiver from voltage surges, short circuits and other abnormal operating conditions. If the dial light does not go on when **POWER** is pressed, check the fuse. If it is blown, replace it with an identical size and value.
4. **B SPEAKERS** — Powers remote/rear speakers.
5. **A SPEAKERS Phono Jacks** — Connects to speakers with phono jack connectors. **NOTE:** Use either phono jacks or screw terminals for A speakers, **not both**.
6. **A SPEAKERS Screw Terminals** — Powers main/front speakers which do not have phono jacks connectors. **NOTE:** Use either phono jacks or screw terminals for A speakers, **not both**.
7. **TAPE IN** — Accepts output from any tape deck or recorder for tape playback.
8. **TAPE OUT** — Permits tape recording any source chosen by the **SELECTOR**. The output from these jacks is unaffected by the front panel controls.
9. **AUX** — Accepts output from any high-level source — a second tape deck or tuner, a ceramic or crystal phono cartridge, etc.
10. **PHONO MAG** — Accepts output from any turntable equipped with a magnetic cartridge.
11. **PHONO GND** — Accepts the green or black ground wire found on most turntables. Making this "ground" connection reduces or eliminates hum.
12. **FM Linecord Antenna** — Connects to 300Ω FM screw terminal to provide FM reception in most metropolitan areas. Remove the linecord antenna when attaching an external FM antenna.
13. **FM ANTenna 300Ω** — Connects to antennas using standard 300-ohm lead-in.
14. **FM ANTenna 75Ω** — Connects to antennas using 75-ohm coaxial lead-in. Coaxial cable provides extremely high resistance to static and other noise.
15. **AM ANTenna** — Connects to external AM/shortwave antenna for long distance AM reception. In most areas the built-in antenna will provide excellent reception.

## CHOOSING THE REST OF YOUR SYSTEM

### SPEAKERS

No stereo system sounds better than its speakers, so choose the best you can afford for your front or main speakers. With a high quality receiver like the STA-82, you should carefully consider Radio Shack's **Optimus** and **Nova**-series speakers. To be able to hear your new receiver's superior performance, we recommend one of the **Minimus** or **Electrostat** speakers as a minimum investment.

Ideally your rear channel speakers for **Quatravox** should be identical to your front speakers. This assures a perfect tonal match and makes it easy and inexpensive to convert to one of the discrete 4-channel systems whenever you're ready. However, it is possible to enjoy the added spaciousness of **Quatravox** with an inexpensive set of rear speakers like Radio Shack's **Solo**-series.

Of course there are a wide variety of speakers intended primarily for remote use. Some are weather-proofed for outdoor installations and others offer the convenience of a built-in volume control. Naturally, if you plan to use your remote speakers for critical listening, you should consider using the same type of speakers for both your main and remote installations.

Your nearest Radio Shack has a complete selection of speakers for every application and budget.

### TURNTABLE

For convenience, most people prefer a record changer (often called an automatic turntable) to a manual turntable. A changer will play an entire stack of records and returns the tonearm to its rest at the end of the last record.

For the best sound, your turntable should be equipped with a magnetic cartridge. Cartridges equipped with conical styli (needles) are usually inexpensive and have good sound. But a cartridge with an elliptical stylus follows the record groove more accurately and, so, produces better sound. Your Radio Shack store has a selection of changer systems which come with factory-mounted bases and cartridges.

### TAPE DECKS

Until very recently, reel-to-reel tape decks were the only possible choice for those interested in true high-fidelity. Recent technological advances have made 8-track and cassette recorders approach the sound quality of reel-to-reel machines.

Reel-to-reel decks are must for those who want to edit their own tapes and they still have marginally the best performance.

The best cassette decks, equipped with special tape bias settings and noise reduction circuitry, will out-perform many reel-to-reel decks. They have the additional advantage of compactness and convenient pop-in loading. In addition, cassettes can be used in the car as well as at home.

8-track cartridges provide slightly less fidelity than cassettes or reels, but have several advantages. An 8-track recorder plays pre-recorded car tapes at home and can save money by recording new auto tapes. In addition, an 8-track cartridge uses a continuous tape loop which can provide hours of uninterrupted music. Many 8-track playback decks are less expensive than record changers and let you use car tapes at home.

### HEADPHONES

Any system can benefit from a good pair of stereo headphones. They provide convenient private listening and many people find the heightened stereo very exciting.

Your STA-82's front-panel headphone jack will accept any low impedance stereo headphones. When shopping, wear each pair of headphones long enough to be sure they will be comfortable.

### ANTENNAS

Under most conditions your receiver's built-in antennas should provide adequate AM and FM reception. If you have difficulty see **HINTS FOR BETTER SOUNDS**.





## CONNECTIONS

### BEFORE MAKING CONNECTIONS:

1. Do not plug in the receiver's power cord.
2. Be sure the **POWER** button is out ("off" position).

**NOTE:** To reduce hum, use shielded audio cables for all connections except speakers.

### SPEAKERS

The STA-82 has two sets of A (main/front) speaker outputs — use only one set. If your speakers have phono plug inputs, use the receiver's phono plug outputs and a set of unshielded speaker cables. Otherwise use the receiver's screw terminal outputs.

For maximum bass response, be sure to observe proper phasing. Connect the + Receiver speaker output to the speaker terminal labeled A, 1 or + and the — output to the speaker terminal labeled B, 2 or —. Most speaker wire is marked with a ridge along one conductor or has one color-coded conductor. If you use preassembled phono plugs, phasing will automatically be correct.

Connect B (remote/rear) speakers following the instructions above. Be sure the speakers are phased properly.

- NOTES:**
1. The STA-82's outputs are designed for 4-16 ohms speakers. However, when more than one set of speakers are being connected, use only 8-16 ohms systems. This will prevent the amplifier from being overloaded.
  2. When using the screw terminals, be sure no stray strands of wire touch a second terminal or the chassis — a harmful short could result.
  3. Connect no more than two sets of speakers to the receiver.
  4. Use only as much wire as necessary to connect the speakers. Do not coil excess wire. The inductance of the coil may filter out the high frequencies.

If you are using 4 ohm speakers, connect only one set of speakers, or use only one set of speakers at a time. That is, don't use A+B or REAR/QUATRAVOX if one set is 4 ohms. Low impedance speaker systems will tend to trip the automatic circuit protection/amplifier shut-down circuitry when operating at high volume levels (to prevent damage from amplifier overdrive).

### TURNTABLE

Connect the turntable leads to the **PHONO MAG** inputs. If the turntable has a ground wire (usually green or black), connect it to the **PHONO GND** screw. Plug the turntable's power cord into an AC outlet or the receiver's **UNSWITCHED** convenience outlet.

(NOTE: If the turntable has a ceramic or crystal cartridge, connect it to the **AUX** jacks.)

### TAPE DECK

For recording, connect the Receiver's **TAPE OUT** jacks to the recorder's Aux or Line input. For playback, connect the deck's Line or Output jacks to the Receiver's **TAPE IN** jacks.

### ANTENNAS

Be sure the linecord FM antenna is connected to the **FM ANT** 300Ω terminal. The built-in AM antenna requires no attention.

If you think you need an external antenna, see **HINTS FOR BETTER SOUND**.

### AUXILIARY

Plug the output from any high level source into the **AUX** jacks. This input is ideal for a second tuner, TV audio, ceramic or crystal phono cartridges, a tape player, shortwave radio, etc.

## BEFORE PLUGGING IN THE STA-82

1. Double-check all connections — especially the speaker connections — to assure that all connections are firm and that there are no shorts.
2. Set the VOLUME controls to "0" (minimum).
3. All pushbuttons (including POWER) should be out.

## OPERATING THE STA-82

### SPEAKERS/HEADPHONES

Select any speaker or combination of speakers with the **SPEAKERS** switch. In the A position, the receiver's power goes to the main/front speakers only and in the B position to the remote/rear speakers only. A + B puts the same stereo signal through both sets of speakers. In **QUATRAVOX**, a 4-channel synthesizer turns the A and B speakers into the front and rear channels of a simulated quadraphonic program.

The **PHONES** jack permits headphone listening with any or all of the speakers. For private listening, turn the **SPEAKERS** switch to OFF.

### POWER

Press **POWER** button in to turn the receiver on. Press a second time to turn the receiver off.

### VOLUME

Adjust the Left and Right **VOLUME** controls for a comfortable listening level. If you are slightly off-center from the two speakers you may need to "balance" the system. To do this, adjust the **VOLUME** controls separately until the sound of a mono source seems to come from a point midway between the two speakers. (See **MONO** below.)

### SELECTOR

Choose the input you want by turning the **SELECTOR** switch.

**AUX** — Adjust **VOLUME**, **BASS** and **TREBLE** for best sound.

**PHONO** — Put on a record and adjust the front-panel controls for best sound.

**FM** — Use the Tuning knob to select a station. Tune for the highest reading of the **TUNING** meter or use **Auto-Magic** (see below). If the station is broadcasting stereo, the dial pointer will turn red. Adjust the front-panel controls for best sound.

If the signal is noisy, try either or both of these solutions:

1. Press the **HI-FIL** button. (This will filter out some treble, but the signal will still be stereo.)
2. Press the **MONO** button. (This will leave the fidelity unimpaired, but the signal will no longer be stereo.)

**FM MUTING** — Use as **FM** (above), but a special circuit eliminates interstation hiss. When listening to very weak stations, it may be necessary to set the **SELECTOR** to **FM**.

**AM** — Use the Tuning knob to select a station. Tune for the highest reading of the **TUNING** meter. Adjust the front-panel controls for best sound.

**NOTE:** If the **TAPE MONITOR** button is pressed in, the **SELECTOR** switch will have no effect on the sound.

### TAPE MONITOR

Press the **TAPE MONITOR** button in to play tapes or (with a three-head deck) to listen to tapes immediately after they have been recorded. **IF NO TAPE IS BEING PLAYED, PRESSING THIS BUTTON WILL SILENCE THE RECEIVER.**

## **BASS**

Turn the **BASS** control toward **MAX** to boost the low frequencies or toward **MIN** to de-emphasize them. In the center position, the control has no effect on the sound.

## **TREBLE**

Turn the **TREBLE** control toward **MAX** to boost high frequencies or toward **MIN** to de-emphasize them. In the center position, the control has no effect on the sound.

## **MONO**

Press the **MONO** button to defeat normal stereo operation. The result is a composite signal (left + right). When you listen to weak FM stereo stations, pressing the **MONO** button will reduce the hiss, but the signal will no longer be stereo.

## **HI-FILter**

Press the **HI-FIL** button to filter out hiss and scratches. For normal operation, leave the filter out.

## **LOUDNESS**

Press the **LOUDNESS** button to remove the loudness compensation. In the normal (out) position, the bass and treble are boosted to compensate for the ear's reduced sensitivity to extreme frequencies at low volumes. Radio Shack's exclusive **Perfect Loudness** adds just the right amount of compensation at every listening level.

## **AUTO-MAGIC**

Tuning with Auto-Magic  
Turn the **SELECTOR** to **FM** or **FM MUTING** and set the **AUTO-M** button in normal (out) position. The **AUTO-MAGIC** beacon on the dial will light to show that this automatic fine-tuning system is functioning.

When you touch the Tuning knob with your hand, you'll notice that the **TUNING** meter changes from green to white. Special, advanced circuitry automatically senses your touch and releases the station you were listening to so you can tune another one easily.

Just turn the Tuning knob until you hear the station you want — there's no need to fine-tune. When you release the knob, the **TUNING** meter will turn green again as Auto-Magic fine-tunes the station with electronic precision and locks it in for drift-free listening.

## **Tuning Manually**

If you are trying to listen to a weak station located between two very strong stations, it may be necessary to tune manually.

Press the **AUTO-M** button in and adjust Tuning until you find the station you want. Now fine-tune for the highest reading of the **TUNING** meter.

## **Thermal Protection**

Your Receiver has built-in thermal overload protection. That means that it can not become abnormally hot and damage some portion of the circuitry. If internal temperatures do rise abnormally, the Receiver will automatically silence itself. If this happens, check to be sure you have not placed something over the ventilation holes — if you have, remove it. If you are using speakers with excessively low impedance, the amplifier circuit may be over-driven and thus producing excessive heat. This can be caused by using 4 ohm speakers on main and remote — if you use remote with main speakers, be sure to use either 8 or 16 ohm speakers.

In any case, if the Receiver does turn itself off, press **POWER** off, check ventilation and then check to be sure your speakers are properly connected and that you are not using a combination of 4 ohm speakers for both main and remote. The protective circuit is triggered by temperature, thus it may take a few minutes for the circuitry to cool down and allow the unit to come back on. If everything is OK, turn power back on. If the Receiver does not come back on, you may have to wait a few more minutes for everything to cool adequately — it should never take more than about 20-30 minutes for this cool down cycle, or, check the fuse (2A, 125V) on the rear panel. Replace only with the same size and rating.

## HINTS FOR BETTER SOUND

### QUATRAVOX

One of the STA-82's outstanding features is its built-in Quatravox circuitry. Quatravox synthesizes 4-channel sound from almost any stereo source — discs, tapes and FM broadcasts take on a rich, new, spacious sound like you've only heard at live performances.

And it's not a trick — Quatravox actually recovers the important ambient (reflected) sound hidden in ordinary stereo playback. When this reflected sound is channeled through the rear speakers, it helps recreate the acoustics of the studio or concert hall where the recording was made. That makes your system sound more realistic — and after all, that's what hi-fi is all about.

**NOTE:** Quatravox will reveal astounding 4-channel effects in some programs and very little in others. It all depends on the recording techniques used and the acoustics of the studio or concert hall.

### POSITIONING YOUR SPEAKERS

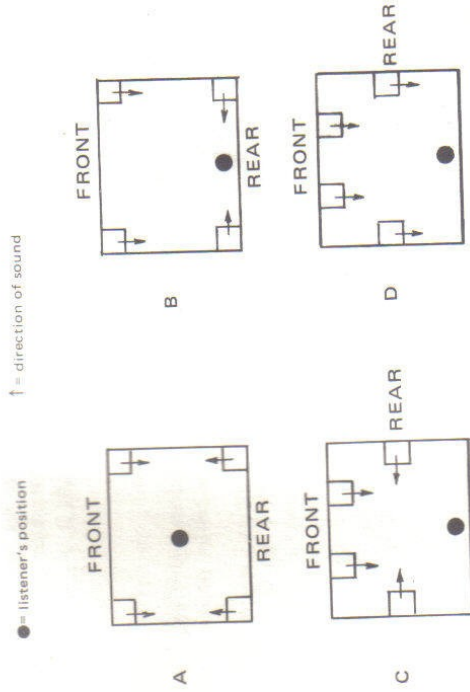
Where you put your speakers is a highly personal matter, depending largely on the arrangement of your listening room and the way you listen to music. Where you put your speakers **does** make a difference in how your system will sound, so before settling on a final arrangement, try several alternatives.

Bass response is highly dependent on speaker location. For maximum bass, place the speakers in the corners of your room. Putting the speakers directly on the floor will make the bass even stronger. If the bass sounds boomy and exaggerated, move the speakers away from the corner slightly, pull them out from the wall a little or raise them 6 to 18 inches off the floor.

#### Stereo

Stereo speakers should be 6 to 8 feet apart. Putting them too close together reduces the stereo effect, while placing them too far apart reduces bass response and creates a "hole in the middle." Also, most speakers have a tweeter dispersion angle of about 60°. Ideally your listening position should be in the overlap, so you may want to angle the speakers toward you for better stereo.

### Speaker Arrangements for Quatravox



All arrangements based on 6:8' minimum front speaker separation

### Quatravox

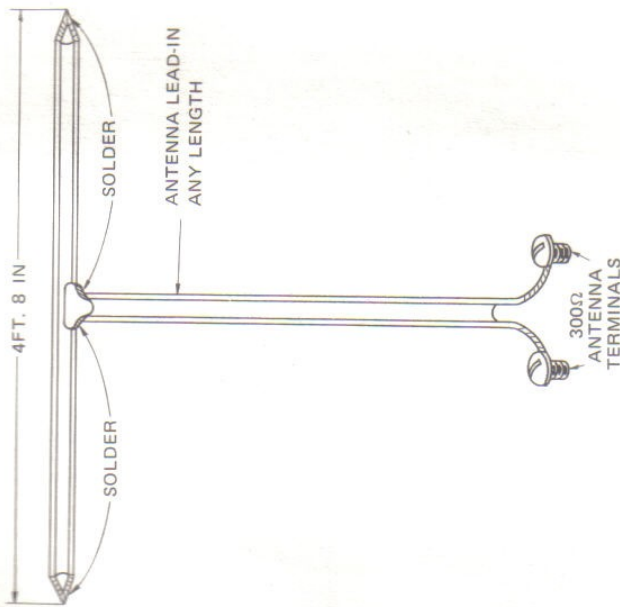
The theoretically ideal position is shown in Figure A — one speaker in each corner of the room. Since this arrangement is frequently impractical, you may want to modify it. Figure B shows a common living room arrangement. The listener faces the two front speakers while the rear speakers face each other.

Figures C and D produce a different type of sensation. Instead of being surrounded by sound, the two rear speakers create a sense of depth — as if you were sitting in the audience at a live performance. Depending on the size of your room and the efficiency of the rear speakers, you may want them to face you or to face each other.

There are almost an infinite number of satisfying Quatravox arrangements, so if one of these doesn't suit your needs, invent your own.

## ANTENNAS

Under most conditions your STA-82's built-in antennas should be adequate for AM and FM reception. If you are not satisfied with the reception, try one of the arrangements listed below.



FM DIPOLE ANTENNA

For FM, build the low-cost folded dipole (illustrated). Just splice regular 300-ohm lead-in wire as shown. Apply a small amount of solder and heat the twisted ends until solder flows evenly over each strand of wire. Attach the lead-in to the 300 $\Omega$  terminals on the back of the receiver. The antenna itself can be tacked to the back of a record cabinet or onto a wall — the higher the better. Radio Shack carries a ready-made version of this antenna (Catalog Number 42-2385).

A set of VHF-TV rabbit ears or ones made specially for FM reception work well in suburban areas. Some deluxe models feature electronic "tuning" for better directionality. Connect such antennas to the 300 $\Omega$  terminals.

An outside VHF-TV antenna provides excellent FM reception. An inexpensive "splitter" permits you to connect a TV set and your Receiver to the same antenna. In fringe areas, a special outdoor FM antenna may be the only solution. Such antennas can pick up stations up to 175 miles away over flat terrain. If you use 300-ohm lead-in, connect it to the 300 $\Omega$  terminals and if you use 75-ohm lead-in, connect it to the 75 $\Omega$  terminals. (Attach the braided ground wire of 75-ohm lead-in to the GND terminal). For AM, a long piece of wire hung outdoors between two insulators can greatly improve long-distance AM reception.

**NOTE:** To protect your receiver use a lightning arrester on any outdoor antenna.

## CARING FOR THE STA-82

The STA-82's walnut case looks best when it is polished occasionally with lemon oil. Waxing produces a glossier finish, but can eventually cause a dull wax buildup.

Clean the metal parts of the front panel and the dial face with a soft duster cloth.





Guaranteed Quality from the builders of the famous ELECTROSTAT-3® TWEETER

NATURAL SOUND

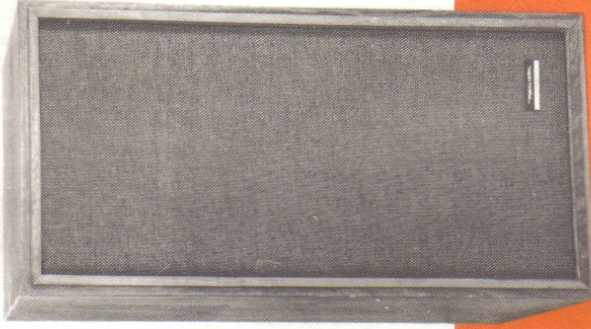
—*REALISTIC*®

SPEAKER SYSTEMS

Solo™ Series



Optimus® Series



Minimus® Series



Over 1,000,000 Realistic loudspeakers have been sold in recent years through the nationwide Radio Shack chain. Since the development of its widely acclaimed electrostatic tweeter — now used in our Electrostat-2a system, Realistic has had an enviable reputation for building good speakers at lower than usual prices. Our Solo Series has a five-year guarantee. Our Optimus, Electrostat, Nova and Minimus Series have lifetime guarantees. Every speaker is engineered by us, not just "a box with a label." And though speakers are meant to be heard and not seen, every Realistic speaker is born as beautiful as it sounds. Choose from over 20 different models.

RADIO SHACK  A TANDY CORPORATION COMPANY

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TANDY CORPORATION

AUSTRALIA

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RYDALMERE, N.S.W. 2116

BELGIUM

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5140 NANINNE

U. K.

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