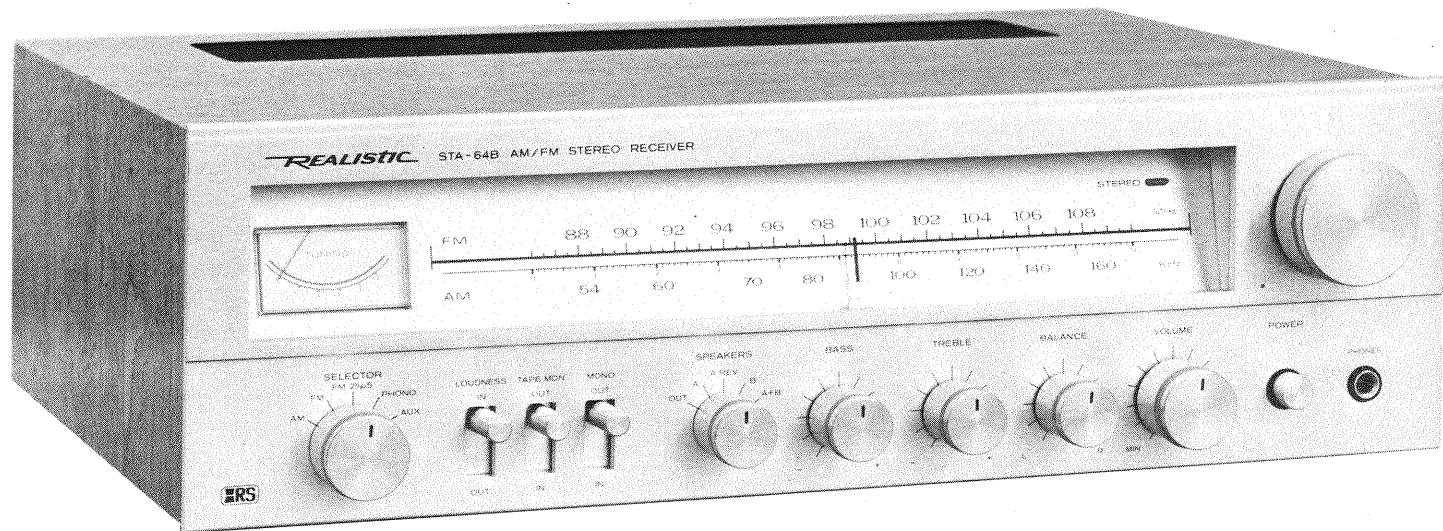

OWNER'S MANUAL

PLEASE READ BEFORE OPERATING THIS EQUIPMENT.

STA-64B SOLID STATE am/fm stereo receiver

CATALOG NO. 31-2081



CUSTOM MANUFACTURED FOR RADIO SHACK  A DIVISION OF TANDY CORPORATION

REALISTIC[®]

For your own protection, we urge you to record the Serial Number of this unit in the space provided. You'll find the Serial Number on the back panel of the unit.

Serial Number

RADIO SHACK LIMITED WARRANTY

This equipment is warranted against defects for 2 years from date of purchase. Within this period, we will repair it without charge for parts and labor. Simply **bring your sales slip** as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover equipment subjected to misuse or accidental damage.

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

We Service What We Sell



Speakers



Components



P.A. Products



Radios



Recorders



Phonographs

REALISTIC AUDIO PRODUCTS are the proud result of Radio Shack engineering, research, development, and over 50 years of experience in electronics. Laboratories are maintained in Boston, Ft. Worth, Los Angeles, and abroad. 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.

REALISTIC[®]

THE BRAND WITH OVER 1,000,000 CUSTOMERS

In choosing this fine Realistic product you have demonstrated a rather acute awareness of the good old American custom called "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 was called a "best buy" by the country's leading product-review magazine. Our 10TRF radio outperformed practically anything then available. And dealers from all over the world began requesting a Realistic franchise.

Recent "firsts" include: the first medium cost DC/AC communications receiver totally engineered in solid-state — the Realistic DX-150A; the first properly designed microprocessor-controlled UHF/VHF radio; the Realistic Mach One loudspeaker, making "theater-type sound" affordable; the first lifetime-guaranteed vacuum tube; and the Realistic STA-2000 stereo receiver, which combines massive power, modern styling and a host of new ideas — at a cost fully \$100-\$200 below its value under traditional marketing practices.

SPECIFICATIONS

PRE-AMPLIFIER / AMPLIFIER

Audio Output Power at no more than 0.5%	:	18 watts
Total Harmonic Distortion into 8 ohms, over the audio spectrum, 20 to 20,000 Hz	:	(Minimum RMS Power, Both Channels Driven)
Frequency Response (1 watt)	:	15–30,000 Hz \pm 2 dB
Sensitivity (for full output)	PHONO	: 2.5 mV
	AUX	: 150 mV
	TAPE IN	: 190 mV
Tape Output Level	:	160 mV (15 mV for DIN output)
Harmonic Distortion (at 5 watts)	:	0.2%
Signal-to-Noise Ratio	AUX	: 70 dB (2.5 mV)
	PHONO	: 65 dB (150 mV)
Tone Control Action	BASS	: \pm 10 dB @100 Hz
	TREBLE	: \pm 10 dB @10000 Hz

FM TUNER

Sensitivity (IHF)	:	2.2 μ V (6.2 dBf)
Limiting Sensitivity (–3 dB)	:	2.5 μ V
Signal-to-Noise Ratio (1 mV)	:	65 dB
Total Harmonic Distortion	Mono	: 0.5%
	Stereo	: 0.6%
Stereo Separation (1 kHz)	:	48 dB
Image Rejection	:	56 dB
IF Rejection	:	100 dB
Alternate Channel Selectivity	:	70 dB
Capture Ratio	:	2 dB

AM TUNER

Terminal Sensitivity	:	10 μ V for 20 dB S/N
Radiated Sensitivity	:	200 μ V/m
Image Rejection	:	45 dB
Signal-to-Noise Ratio	:	42 dB (5 mV input)
Total Harmonic Distortion	:	1.5% (5 mV/m)
A.G.C. Figure of Merit	:	45 dB
Selectivity (10 kHz)	:	30 dB
RF Interference Rejection	:	Rated excellent

ANTENNAS

AM: Built-in ferrite FM: Linecord, plus terminals for External Antennas

POWER REQUIREMENTS

120 V AC, 60 Hz (200 watts max.)
(220/240 V AC, 50 Hz for European and 240 V AC, 50 Hz for Australian models as indicated on rear of unit)

General Description

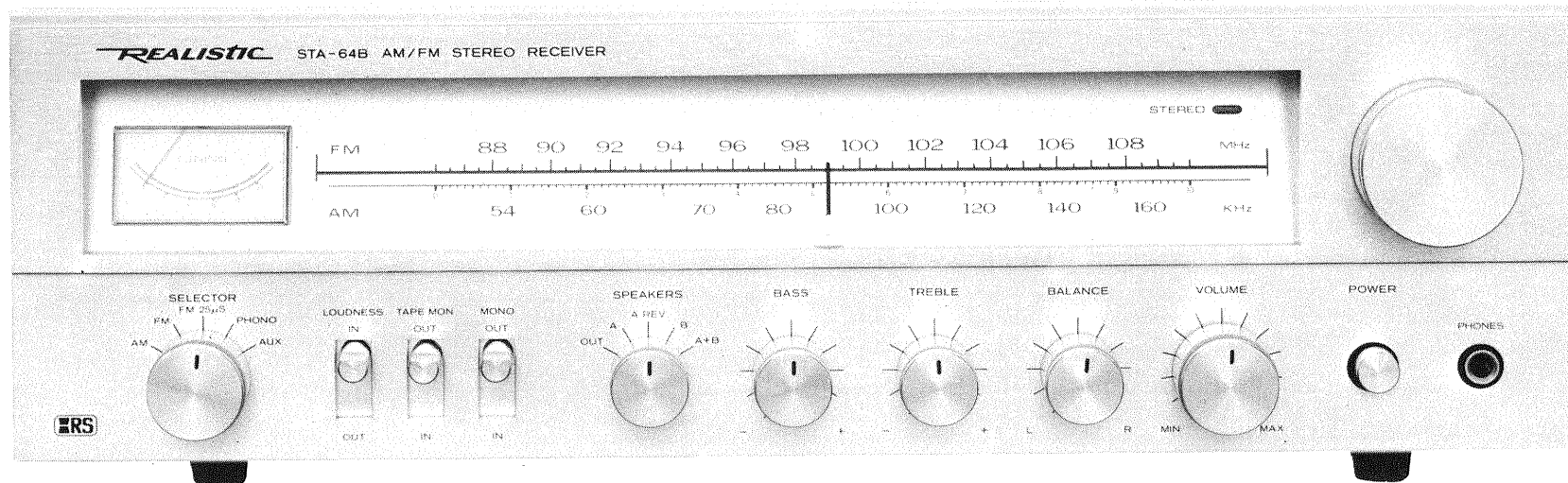
Your STA-64B represents one of best values available today in a high-quality receiver. Its power and versatility make it an outstanding buy.

- 18 watts of clean “honest” power will drive almost any speaker system – even *two* sets of speakers!
- The FM front-end section utilizes a “Field Effect Transistor”. This means that your tuner has extra-high sensitivity combined with exceptionally low noise, plus unusual immunity to distortion caused by electrical interference at these high frequencies and minute signal levels. Maybe that’s a little too “technical” for you – but it’s all solid up-to-the-minute engineering technology.
- The FM multiplex section employs a newly developed Phase Lock Loop IC (P.L.L. IC) which assures stable stereo separation even if internal temperatures rise or drop.
- The High-power Main Amplifiers are in a complementary OCL (Output Capacitor-less) circuit configuration, providing maximum power even at low frequencies.
- The Pre-amplifier uses a newly developed operational amplifier IC (OP-AMP IC) which assures high-gain, low distortion and wide dynamic range.
- Provisions for **both** Main and Remote speakers.
- Built-in overload protection circuitry automatically shuts off the amplifier under excessive load conditions.
- A factory-mounted walnut veneer case, and you don’t pay a penny extra.
- Soft bold-styled panel with hair-line finish makes this an elegant component, suitable for any decor or system.

NOTE: Before connecting the STA-64B, please read the following instructions. They will insure your getting the most enjoyment from your new Receiver.

REALISTIC[®]

CONTROL FUNCTIONS



SELECTOR

Chooses one of five input positions.

AM — Activates the built-in AM tuner.

FM — Activates the built-in FM tuner.

FM 25 μ S — Makes your Receiver "FM Dolby*-compatible". By adding a Dolby noise reduction decoder or a Dolby tape deck, you can get the full benefit from superb FM Dolby broadcasts. (Check your local FM stations to see if any of them offer Dolby broadcasts.) When listening to non-Dolby FM (or if you do not have a Dolby decoder), leave **SELECTOR** switch in FM position.

*"Dolby" is a registered trademark of Dolby Laboratories, Inc.

PHONO — For any turntable equipped with a magnetic cartridge.

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

LOUDNESS

In up (IN) position, this switch boosts low and high frequencies, to compensate for the ear's reduced sensitivity to extreme bass and treble at low volumes. With flip-switch down (OUT), no compensation is added.

TAPE MONitor

Flip **TAPE MON** down to play tapes when deck is connected to receiver through **TAPE IN** jacks. With a three-head deck, you can monitor a tape a fraction of a second after it has been recorded.

MONO

When flip switch is down (IN), Receiver operates in monaural mode. In up (OUT) position, the amplifier operates in stereo and the FM tuner automatically switches to stereo when there is a stereo signal.

REALISTIC[®]

SPEAKERS

OUT – Turns all speakers off for private headphone listening.

A – Connects main speakers only.

A REV – Reverses the left/right sound output from the "A" (or Main) speakers.

B – Connects remote speakers only.

A + B – Connects main and remote speakers.

BASS

Controls low frequencies. At the center position, it does not affect 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 affect the sound. Turn clockwise to boost treble response, counterclockwise to de-emphasize the high frequencies. You'll notice that both tone controls are "stepped" for convenient reference (you can always return to exactly the same setting as a previous one).

VOLUME

Adjusts power output to speakers and headphones.

BALANCE

Adjusts balance of Right and Left channels. At center position, Right and Left channel outputs are equal. However, depending on speaker placement, program material, and your preference, you may want to boost the Right channel (turn clockwise) or Left channel (counterclockwise).

POWER

Master Power On/Off.

PHONES

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

Tuning Knob

Tunes AM and FM stations.

TUNING Meter

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

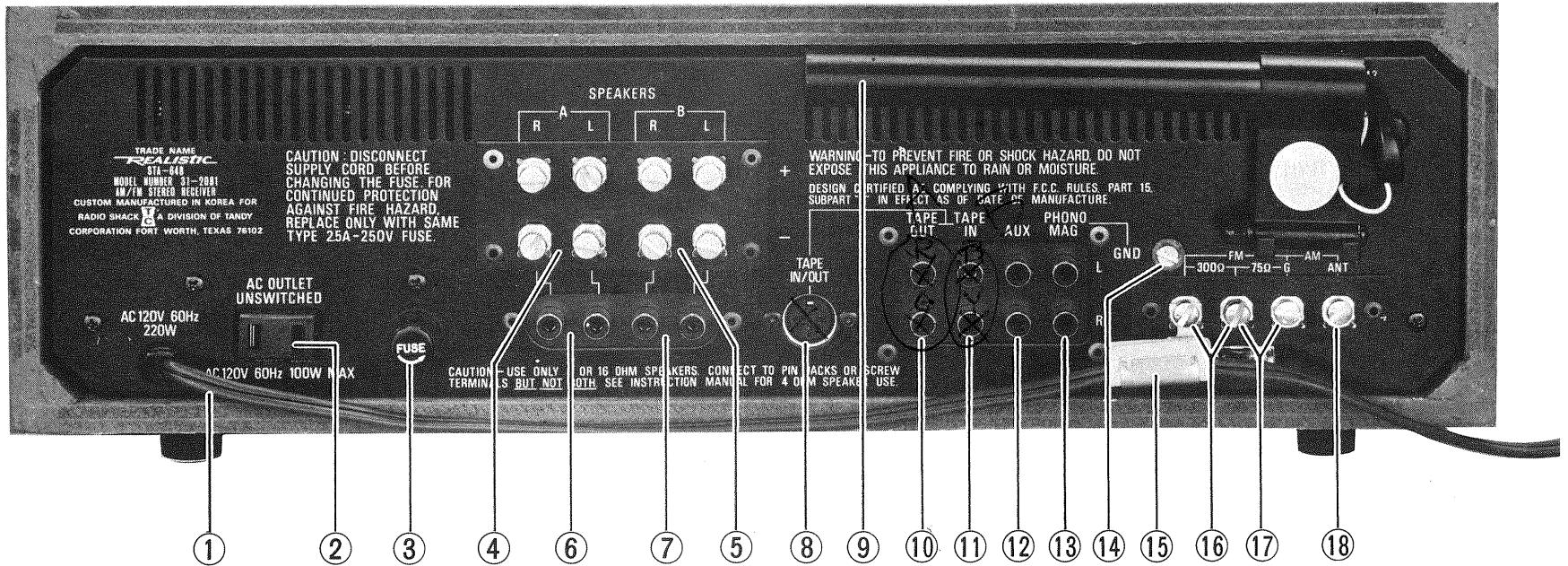
STEREO Indicator

This bright red lamp lights up when the **MONO** switch is **OUT** (up) and you are tuned to a stereo FM signal.

REALISTIC[®]

REAR PANEL

Receiver



*TO
Tape
1
2
3
4
Top
Bottom*

1. **AC Cord** – Supplies the Receiver’s power. Plug into any 120 V AC, 60 Hz outlet (220/240 V AC, 50 Hz for European and 240 V AC, 50 Hz for Australian models as indicated on rear of unit).

2. **UNSWITCHED Convenience Outlet** – Powers any audio accessory up to 100 watts. The front panel **POWER** switch does not affect this receptacle.

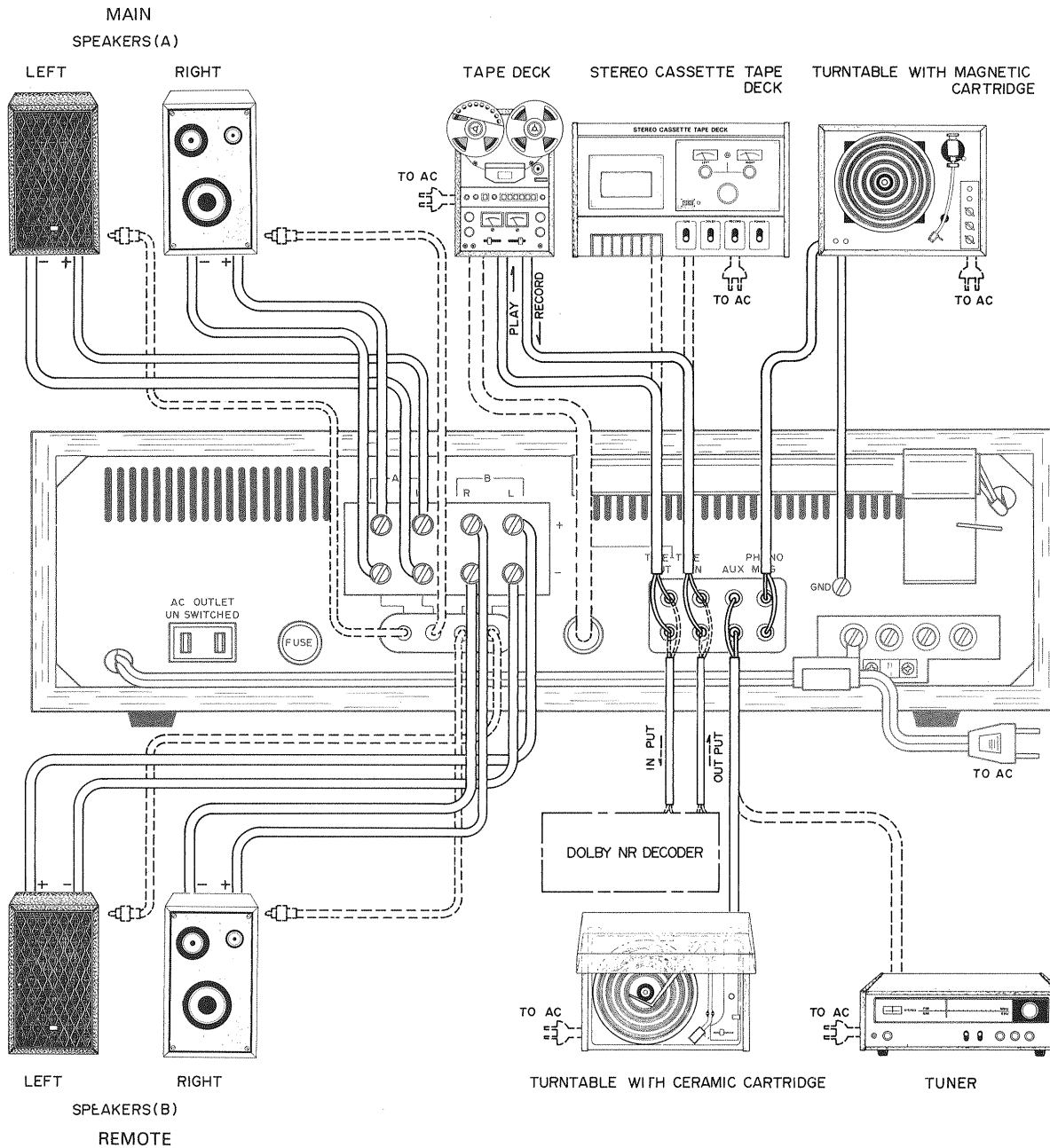
3. **POWER FUSE**– Protects the receiver from voltage surges, short circuits and other abnormal operating conditions. If the dial light does not go on when **POWER** is on, check the fuse. If it is blown, replace it with an identical size and value(2.5A).

REALISTIC®

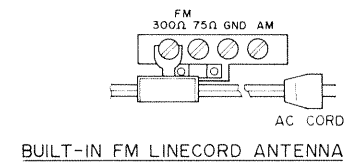
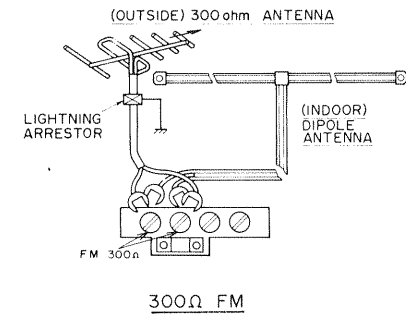
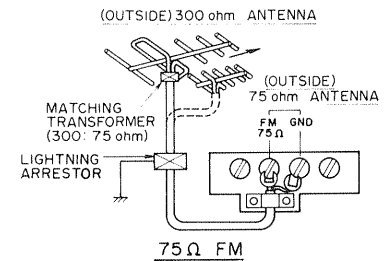
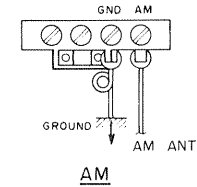
- 4. A SPEAKERS Screw Terminals**— Powers main speakers which do not have phono jack connectors.
NOTE: Use either phono jack or screw terminals for A speakers, not both.
- 5. B SPEAKERS Screw Terminals** — Powers remote Speakers which do not have phono jack connectors.
NOTE: Use either phono jack or screw terminals for B speakers, not both.
- 6. A SPEAKERS Phono Jacks** — Powers main speakers which have phono jack connectors.
NOTE: Use either phono jack or screw terminals for A speakers, not both.
- 7. B SPEAKERS Phono Jacks** — Powers remote speakers which have phono jack connectors.
NOTE: Use either phono jack or screw terminals for B speakers, not both.
- 8. TAPE IN/OUT DIN Jack** — If your Tape Recorder has a DIN-type socket, use a cable with DIN-type connectors and plug into the DIN-type socket on the Receiver.
- 9. Built-in adjustable ferrite AM antenna** — Is adequate for most areas for AM reception. Adjust for best reception.
- 10. TAPE OUT**— Permits tape recording any source chosen by the **SELECTOR**. The output from these jacks is unaffected by the front panel controls.
- 11. TAPE IN**— Accepts output from any tape deck or recorder for tape playback. These jacks are active only when front panel **TAPE MON** switch is pressed in.
- 12. AUX** — Accepts output from any high-level source — a second tape deck or tuner, a ceramic or crystal phono cartridge, etc.
- 13. PHONO MAG**— Accepts output from any turntable equipped with a magnetic cartridge. These jacks are active when **SELECTOR** is set to **PHONO**.
- 14. PHONO GND**— Accepts the green or black ground wire found on most turntables. Making this ground connection reduces or eliminates hum.
- 15. FM Line Cord Antenna**— Connect to the 300 Ω FM screw terminal illustrated to provide FM reception in most metropolitan areas. Disconnect the line cord antenna when using an external FM antenna.
- 16. FM ANTenna 300 Ω Screw Terminals**— Connect antennas using standard 300-ohm lead-in to these screws.
- 17. FM ANTenna 75 Ω Screw Terminals**— Connect to antennas using 75-ohm coaxial lead-in. Coaxial cable provides extremely high resistance to static and other noise.
- 18. AM ANTenna Screw Terminal**— Connect an external AM/short-wave antenna to this screw for long-distance AM reception. In most areas the built-in antenna will provide excellent reception.

REALISTIC[®]

A Typical System: STA-64B, Turntable, 4 Speakers, Tape Decks and Extra Tuner



ANTENNA CONNECTIONS



REALISTIC®

CONNECTIONS

BEFORE MAKING CONNECTIONS:

1. Do not plug in the Receiver's power cord.
2. Be sure POWER is off.

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

SPEAKERS

The STA-64B has two sets of A (main) and B (remote) speaker outputs.

If your speakers have RCA phono jack connectors, hook them up to the RCA jacks on the Receiver's rear panel. If your speakers have only screw terminals, use two-conductor lamp or speaker wire to connect them to the screw terminals on the STA-64B. Connect the main speakers to the strip marked "A/MAIN" and the remote speakers to strip "B/REMOTE".

NOTE: When using the screw terminals be sure to observe proper polarity. Most speaker wire is clearly marked with a raised line along one conductor, or has one wire a different color from the other. Connect the (+) receiver output to the (+) or "marked" (color dot or other marking) speaker terminal, and the (-) output to the (-) or unmarked speaker terminal. **Do not allow stray strands of wire to touch adjacent terminals or the metal chassis.**

NOTE: Use no more than four speakers with the STA-64B.

The STA-64B's outputs are designed for 4-16 ohm speakers. However, when more than one pair of speakers is being connected, use only 8-16 ohm systems; connect them to either screw terminals or RCA jacks - but not both. This will keep the amplifier circuitry from being overloaded. See also Overload Protection on Page 12.

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. If your tape deck has a DIN-type socket, use a cable with DIN-type connectors and plug into the DIN-type socket on the Receiver.

ANTENNAS

Be sure the line cord 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 SOURCES

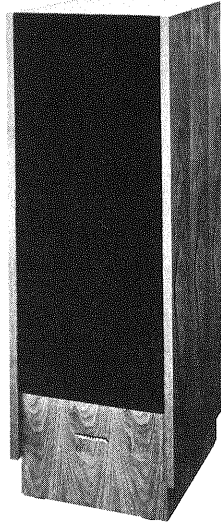
Plug the output from any high level source into the AUX jacks. This input is ideal for a second tuner, TV audio, ceramic or crystal phono cartridges, a tape player, shortwave radio, etc.

REALISTIC[®]

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-64B, 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 speakers as a minimum investment.



Of course there is 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 return 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 a 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-64B'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 SOUND.

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BEFORE PLUGGING IN THE STA-64B

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 control fully counterclockwise (MINimum).
3. Put the “flip” switches in the “OUT” positions.

OPERATING THE STA-64B

Now, plug in Receiver and push **POWER** button to turn it on.

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 speakers only and in the **B** position to the remote speakers only. **A + B** puts the same stereo signal through both sets of speakers. In the **A REV** position, the left/right sound output from the **A/Main** speakers will be reversed. Sometimes this reversing of channels can give interesting effects from various sound sources.

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

VOLUME

Increase or decrease the **VOLUME** control for a pleasant listening level.

BALANCE

If necessary, adjust **BALANCE** for best stereo effect and channel balance, or to compensate for slightly off-center listening positions.

SELECTOR

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

AM — Use the Tuning knob to find the desired station. Fine-tune for the highest reading on the **TUNING** meter.

FM — Use the Tuning knob to select the desired station. If you're tuned to a stereo FM station, the **STEREO** light will come on. Adjust Tuning for the highest reading on Meter.

FM 25 μ S — For normal listening, set to the **FM** position. If you want to record a signal being broadcast by an FM station using Dolby, set to **FM 25 μ S**. Then, when you play back the tape, you must use a Dolby Decoder (that is, record with a Dolby-type tape recorder, but with Dolby “off”; then play back with the Tape Deck's Dolby circuitry “on”). If you set to the **FM 25 μ S** position when listening to a Dolby FM signal, the sound will be excessively “bright” (too much high-frequency emphasis).

If you have a Dolby NR Decoder, you can connect it to the **TAPE IN/TAPE OUT** jacks, set to **FM 25 μ S**, and press down **TAPE MON**. When an FM station is broadcasting a Dolbyized FM signal, you will be able to enjoy the following advantages:

- Improved signal-to-noise ratio
- Full program dynamic range, even at high frequencies
- Improved reception in weak-signal areas

PHONO — Adjust the **VOLUME**, **BALANCE**, **BASS** and **TREBLE** controls. For the best sound and longest record life, do not track your cartridge below the recommended force. Light tracking may actually cause more distortion than heavy tracking.

AUX — Adjust **VOLUME**, **BALANCE**, **BASS** and **TREBLE** controls. The auxiliary inputs can be used for any high-level source such as a tape player, a second tuner, TV, ceramic or crystal phono cartridge, ham radio, etc.

NOTE: If the **TAPE MON**itor button is pressed down, the **SELECTOR** switch will have no effect on the sound.

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TAPE MONitor

Flip **TAPE MONitor** down (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 SWITCH DOWN WILL SILENCE THE RECEIVER.

LOUDNESS

When listening at low volume, flip **LOUDNESS** up (IN). This overcomes the ear's reduced sensitivity to treble and bass at low volume by boosting the high and low frequencies.

MONO

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

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.

OVERLOAD PROTECTION

Your Receiver has built-in, automatic overload protection. If an abnormal load is presented to the speaker terminals, this protective circuit will automatically silence the Receiver. If this happens, turn **POWER** "off" and check all speaker connections; be sure no pieces of wire are touching between speaker terminals and be sure you don't have 4 ohm speakers connected for both **MAIN** and **REMOTE**. When you are sure everything is OK, apply power once more.

HINTS FOR BETTER SOUND

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 (15 – 45 cm) off the floor. Radio Shack Speaker Stands, Catalog Number 40-1249, are ideal for this purpose.

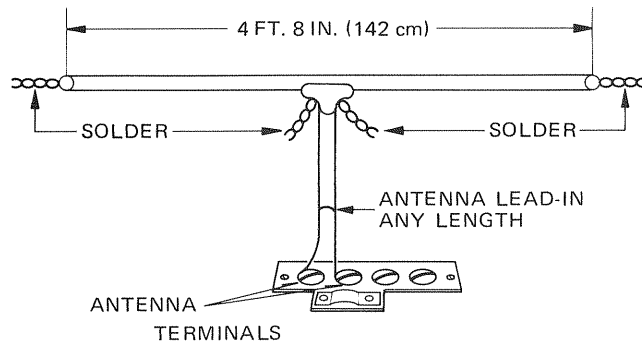
Stereo

Stereo speakers should be 6 to 8 feet (1.8 – 2.4 m) 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.

REALISTIC[®]

Antennas

Under most conditions your STA-64B's built-in antennas should be adequate for AM and FM reception. If you cannot get adequate reception, try one of the arrangements listed below. Your Radio Shack salesman knows about reception difficulties in your area. For FM, build the very low-cost folded-dipole (illustrated); or buy one ready-made from Radio Shack (42-2385). Just splice regular 300-ohm lead-in wire as shown. Apply a small amount of solder and heat the twisted ends until it flows evenly over each strand of wire. This antenna can be tacked to the back of a record cabinet or onto a wall — the higher the better.



A set of VHF rabbit ears or those specially for FM reception work well in suburban areas. Some feature electronic "tuning" and amplification circuits for better reception.

An ordinary rooftop VHF TV antenna provides excellent FM reception. An inexpensive "splitter" permits you to use the TV and FM at the same time with very little signal loss.

In extremely weak reception areas, a special outdoor antenna may be the only solution. Such antennas can receive stations up to 175 miles (280 km) away over flat terrain.

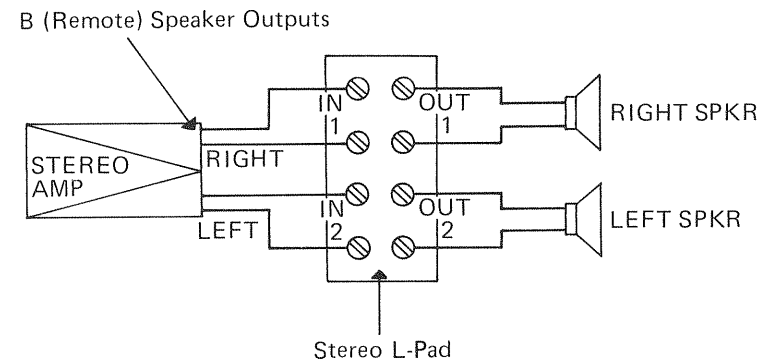
Many new homes and apartments have built-in 75-ohm antenna lead-in systems (use coaxial cable); your STA-64B incorporates a clamp to hold coaxial cable connections. Your Receiver is designed to be used with either 300-ohm or 75-ohm type antenna systems. See the antenna connection drawings at the right on page 8; the shield portion of the 75-ohm cable must be connected to the GND antenna screw terminal.

For AM, a long piece of wire strung outdoors between two insulators can greatly increase AM long-distance reception. Or use Radio Shack's 278-758.

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

Connecting an L-Pad

In some cases you may want to vary the volume of the remote speakers separately. This can be done very simply and inexpensively with a stereo L-pad, such as Radio Shack Catalog Number 40-979.



Headphones

The STA-64B will accept any low-impedance headphone through its front panel jack. Through its speaker outputs it will drive even the finest electrostatic headsets.

Stop by your Radio Shack store to hear some of the headphones we sell — you'll be pleasantly surprised.

REALISTIC®

Notes on Tape Recorder Care

A clean, demagnetized recorder will give its best performance for many years, while a dirty recorder can mangle or ruin pre-recorded tapes in a very short time.

An inexpensive demagnetizer (degausser) removes residual magnetism from the tape heads. This will insure the lowest possible hiss and distortion and the best possible high frequency response. Always clean and demagnetize your recorder before making critical recordings. Under normal conditions you should demagnetize your recorder after every 10–15 hours of play.

With normal use you should clean the heads and metal tape guides once or twice a month with a special solvent such as Realistic Recorder Cleaner (Catalog Number 44-1010). Moisten a clean cotton swab with fluid and rub the heads with short circular movements. Then clean oxide deposits from all metal tape guides. There are also a number of cloth cleaning tapes which can be played like a tape for fast, easy cleaning (such as 44-220 or 44-1160).

You can even use your demagnetizer to help remove oxide particles trapped deep in the head gaps. Place a cleaner-moistened cotton swab over the gap and bring the demagnetizer into contact with it. Move the swab and demagnetizer in short, circular sweeps. Gradually withdraw the demagnetizer and remove the dirty swab.

Yearly preventive maintenance by an authorized technician reduces the possibility of expensive major breakdowns and keeps your recorder in peak operating condition.

CARING FOR YOUR STA-64B

The STA-64B's real-wood veneer should be polished from time to time with lemon oil (available from Radio Shack). Waxing produces a glossy finish but it tends to build up and produce a dull coating.

Treat the front panel with care — so you don't scratch it. A window cleaning liquid works well (a small amount on a soft cloth).

Ventilation—can be important. We merely recommend that you don't place the STA-64B on a surface which would block air circulation — air must be able to circulate freely around the back, under and over the top of the case. Avoid placing on a shag rug, etc. which would block such circulation.

If You Have Problems

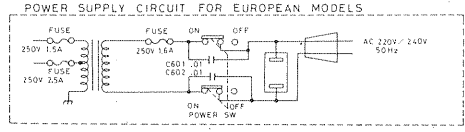
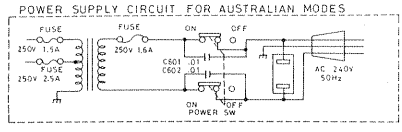
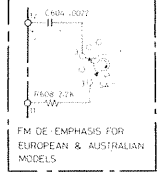
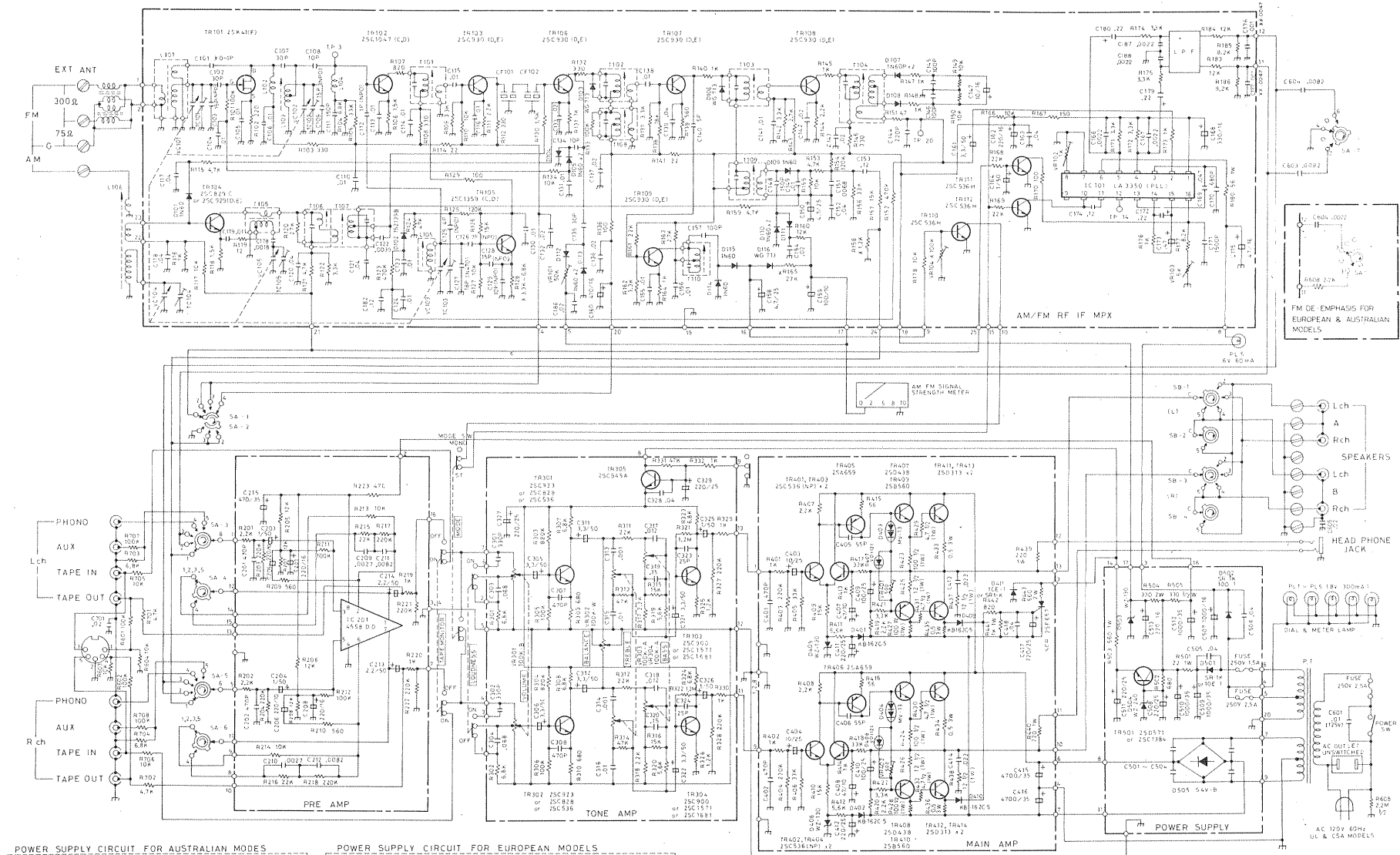
We hope you don't; but if you do, here are some suggestions:

1. Check all your cable connections. Make sure all the leads and plugs are secure at both ends.
2. Try a different AC outlet if you don't get any indication of power (and be sure you've got the line cord plugged in!)
3. Try interchanging cables and connections on the rear panel — sometimes this will give you a hint of where the problem lies — and may solve the problem for you.
4. If the dial scale lights are on and Meter works — but you have no sound — make sure you didn't leave TAPE MON pressed down! If that is not the case — maybe the automatic overload protection circuit has activated. In such a case, turn off POWER and check your speaker connections.
 - A. Make sure there is no short across the speaker screw terminals (stray strand of wire touching between terminals or to the metal chassis).
 - B. If you are using more than one pair of speakers, they must be 8 or 16-ohm type (two pairs of 4-ohm speakers can overload the amplifier circuit and cause this protective circuit to activate).
 - C. Let the Receiver cool down for a few minutes and then turn POWER back on.
5. If the dial lights don't come on, the fuse may be blown. Check it; replace only with a 2.5 Amp type.

In any case, if none of the above does the job and you still have a problem — help is as close as your local Radio Shack store. Bring your unit in and be ready to describe the symptoms — we will get you back into good stereo sound ASAP!

REALISTIC®

SCHEMATIC DIAGRAM



- NOTE
- SA-1~SA-7 FUNCTION SWITCH 1 - AM, 2 - FM, 3 - FM 25 μ s, 4 - PHONO, 5 - AUX.
 - SB-1~SB-5 SPEAKER SELECTOR SWITCH 1 - OUT, 2 - A, 3 - QUATRAVox, 4 - B, 5 - A+B.
 - ALL RESISTANCE VALUES ARE INDICATED IN "OHM" (K=10³OHM, M=10⁶OHM).
 - ALL CAPACITANCE VALUES ARE INDICATED IN "PF" (P=10⁻⁶PF).
 - Ø VALUE MAY VARY FROM UNIT TO UNIT FOR OPTIMUM PERFORMANCE.
 - 1.8 VALUE IS USED FOR C-S-A MODELS ONLY.
 - XX VALUE IS USED FOR EUROPEAN & AUSTRALIAN MODELS.



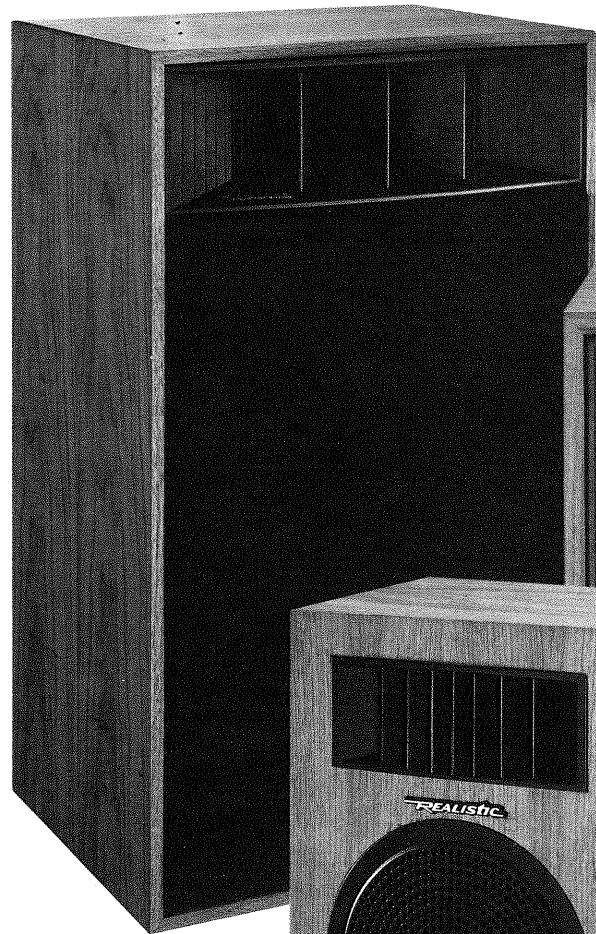
SPEAKERS – FOR THE MUSIC MINDED

OPTIMUS® SERIES

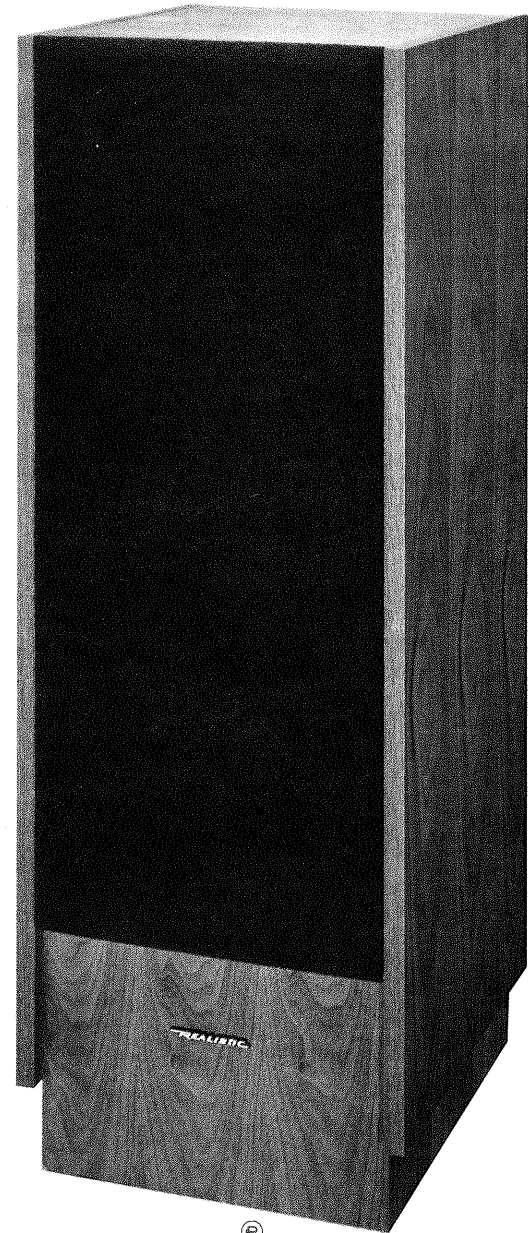
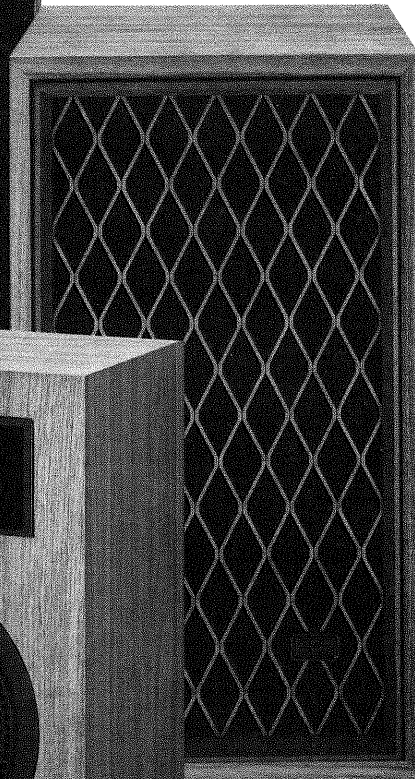
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