

Please read before using this equipment.

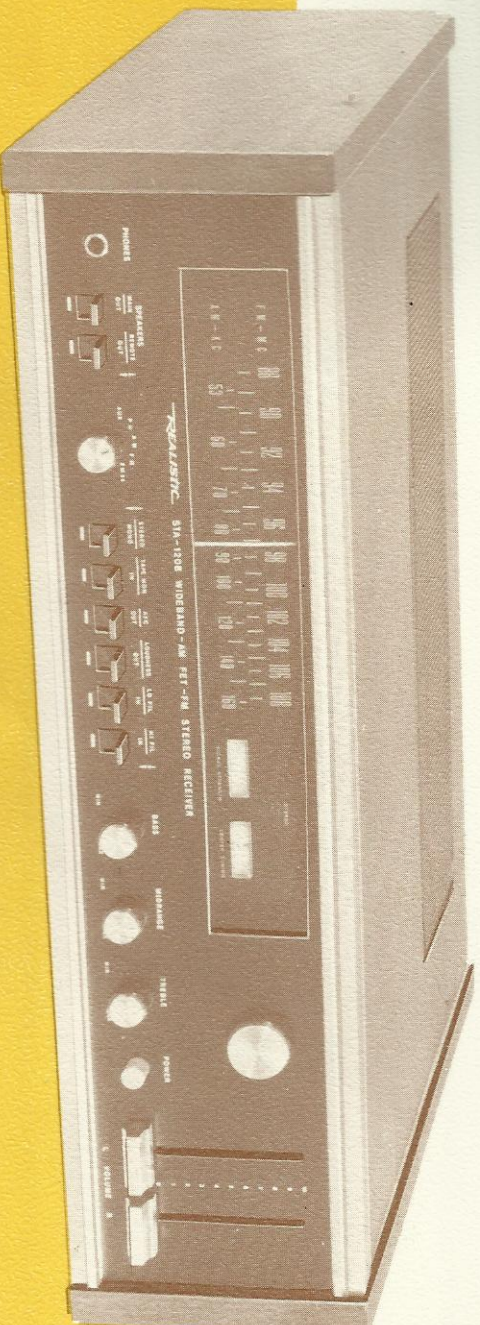
OWNERS MANUAL



Realistic® HIGH FIDELITY

Catalog No.
31-2042

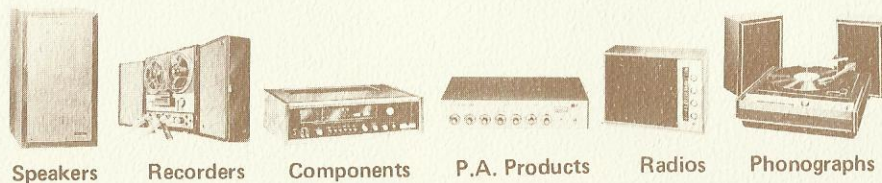
MODEL STA-120B Solid State 150-Watt Stereo FM Receiver



Sold, serviced and
guaranteed from
coast-to-coast

CUSTOM MANUFACTURED FOR

RADIO SHACK  A TANDY CORPORATION COMPANY



REALISTIC AUDIO PRODUCTS are the proud result of Radio Shack engineering, research development, and over 45 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 — 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.

Recent "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.

We do not "sell" watts of power or speakers by the number; or rely on the usual confusing array of "Manufacturer's Specifications", most of which are, sad to say, quite irresponsible. We sell three things only: sound with minimum distortion, value without hidden extras, and ingenuity. Realistic's market share has grown satisfactorily on this basis. We think it's the way YOU want us to be.

Model STA-120B

General Description

Your STA-120B is a solid state stereophonic receiver with an output of 140 watts, full controls for radio and tape and records, a number of truly unique features, and comes to you mounted at the factory in a walnut cabinet for which you do NOT have to pay the usual \$29.95 or so extra.

The AM radio is wideband in design, meaning the STA-120B reproduces the maximum fidelity of which the medium is capable.

The FM radio section has a superb FET-transistor front end and performs exactly the way an audiophile would expect.

There are two meters (explained in manual) for FM tuning; one doubles for AM tuning. Most receivers at any price give you only one meter. Realistic thinks you need two.

The amplifier is rated at 150 watts. More than this is, in our view, superfluous. Even 150 is at the upper limit of practicality considering loudspeaker limitations and one's capacity to "take" more than just a few watts for periods longer than milli- or even micro-seconds.

The eight "flip-lever" front switches make push-buttons seem archaic. And under each is a little white line which, when covered by a lever, indicates *visibly* a non-normal position.

The Glide-Path™ volume controls offer a new degree of *visible* volume and balance, plus a feature (described inside) which we call "Perfect Loudness". Our exclusive design, of course, and certain to be copied if the other brands know their Fletcher-Munson. The AC power switch is NOT linked to these controls, you'll be glad to note.

Every provision for tape recorder use has been provided: monitor switch, tape in, tape out; and rear-panel control of tape-in level.

A third tone control (see inside) has been added to overcome the defect of having just two. And on the function switch there's a second position for FM in which ONLY STEREO is heard, all other FM stations being muted out. This is position FMss.

To do all this, Realistic had to make the STA-120B bigger than almost any receiver on the market. But somehow we were able to arrive at a cost smaller than our \$300 target. And there — in sharp contrast to usual hi-fi industry antics — it shall remain!

GUARANTEE: the Realistic guarantee is stated on the Fact Tag packed with the equipment. It is in effect from coast to coast. At any time, Realistic equipment may be restored to new condition with original parts with MINIMUM delay anywhere in the U.S.A., usually in your own neighborhood. It is NOT necessary to return Realistic equipment to our Laboratories in 98% of the cases.

Model STA-120B

General Specifications*

*Note: these are given in general form only since Realistic does not believe in buying to or designing to numerical specifications. The latter are subject to variables unrelated to performance, just as frequency range, the number of transistors or IC's or watts, etc., is totally irrelevant to the end product in terms of sound quality. Our philosophy is that hi-fi equipment should be classified as musical instruments, their quality and relative value being judged the way a pianist selects between brands and styles of pianos. Thus Realistic designs toward *achieving a certain sound*. . . regardless of cost, regardless of lab measurements, regardless of competitive advertising claims. Price is determined by parts, tool and labor costs, features, and physical size. Sound is determined by our "electronic musicianship" tempered by your appreciation of the result.

Amplifier-Preamplifier Section

Audio Output per 8Ω: RMS 80 watts

IHF 120 watts IHF ±1db 150 watts

Power Bandwidth: 15-22,000 cycles

Harmonic Distortion: Under 1.0%.

Frequency Response: ± 1 db 20-25,000 cps or better.

Sensitivity: Magnetic phono (low) 2 mv, (high) 5 mv.

Tone Controls: Bass - ± 12 db @ 100 cycles, Midrange

± 6 db @ 1500 cycles, Treble ± 12 db

@ 10,000 cycles.

Hum (Phono): -65 db.

This equipment designed for 120V AC 60 cycle operation. Before operating for first time: be sure speakers are properly attached (see manual); be sure all "flip-lever" switches are in UP position, and Glide-Path volume controls are in DOWN position. Connect AC plug to wall. Push AC button. Play!

Radio Tuner Section

FM Sensitivity: 1.8 μv IHF.

FM Stereo Separation: 35 db @ 1000 cycles.

FM Image Rejection: 75 db.

FM Signal-to-Noise Ratio: 65 db.

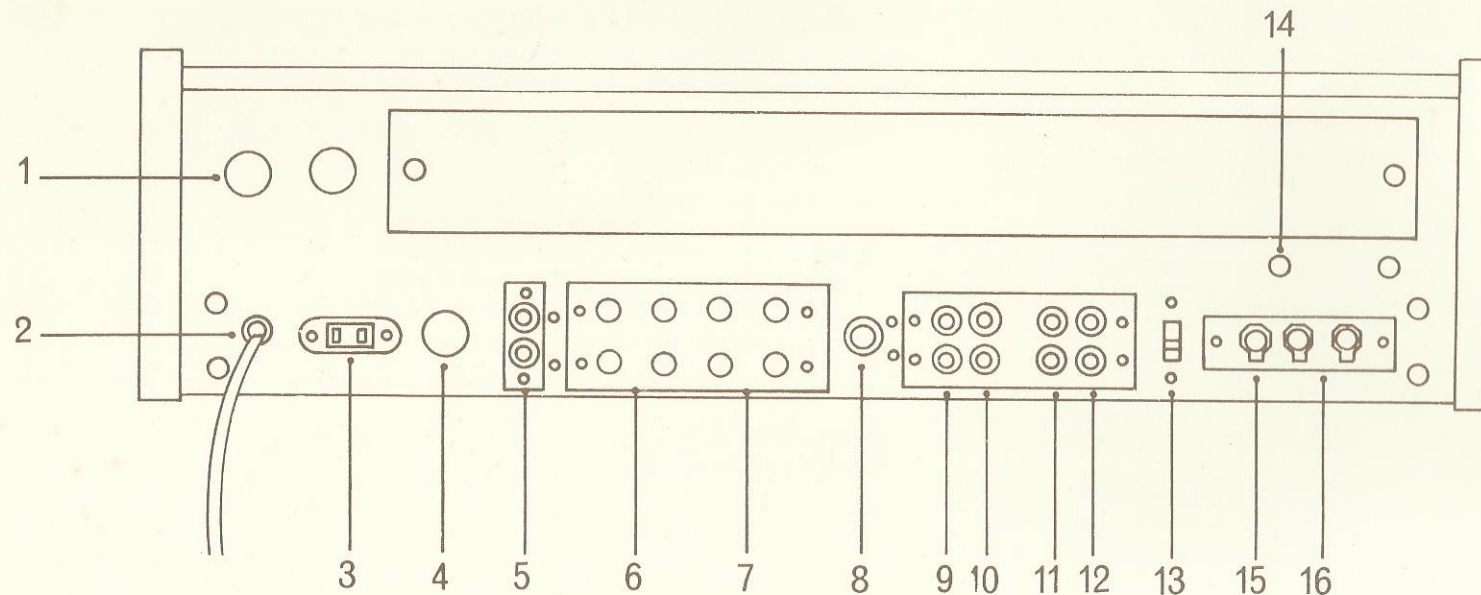
AM Sensitivity: 40 μv.

AM Image Rejection: 80 db.

AM Signal-to-Noise Ratio: 50 db.

Antennas: Built-in AM and FM, plus external facilities.

Rear Panel Inputs And Outputs: Identity And Location



(1,2,3,4) Power And Protection

- 1 — Right and left channel fuses (2.5 A, "Fast").
- 2 — AC line cord for 120 volt 60 cycle AC current, 240W.
- 3 — Spare AC receptacle (unswitched) for changer or deck.
- 4 — Main fuse (2A "Slow").

(1,5,6,7) Speaker Connections

- 1 — Right and left channel (speaker) fuses.
- 5 — RCA-type jacks for main stereo speaker pair if equipped with RCA-type plugs.
- 6 — Screw terminals for main stereo speaker pair.
- 7 — Screw terminals for remote stereo speaker pair.

(8,9,10) For Tape Recording

- 8 — Tape input level control.

- 9 — Tape output jacks.
- 10 — Tape input jacks

(11,12,13,14) Aux. And Phono Connections

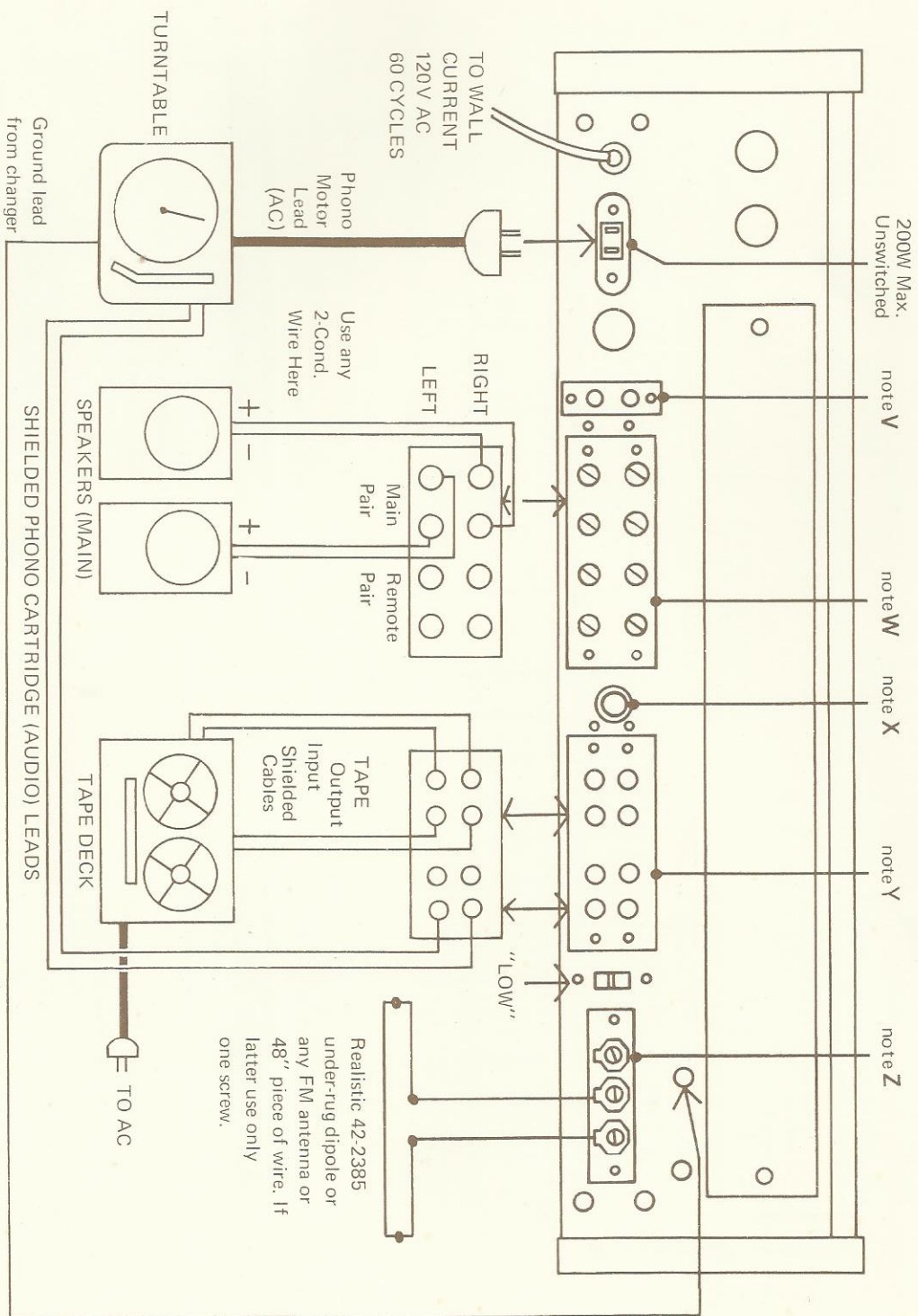
- 11 — Auxiliary input jacks.
- 12 — Phono input jacks.
- 13 — Phono hi/lo level switch for magnetic pickups.
- 14 — Grounding screw for record changer

(15,16) AM And FM External Antennas

- 15 — AM antenna screw terminal.
- 16 — FM antenna screw terminals; use one for single 48" wire, both for 300-ohm dipoles and outdoor types.

NOTE: STA-120B has built-in AM ferrite antenna, plus built-in FM line antenna suitable for strong signal area only.

A Typical System: STA-120B, Changer, 2 Speakers, Tape Deck



Note V: for "main" speaker pair IF leads have RCA-type phono plugs only.

Note W: for "remote" speaker pair; connect same as "main" pair in diagram. Always observe (+) and (-) polarity to properly phase speakers.

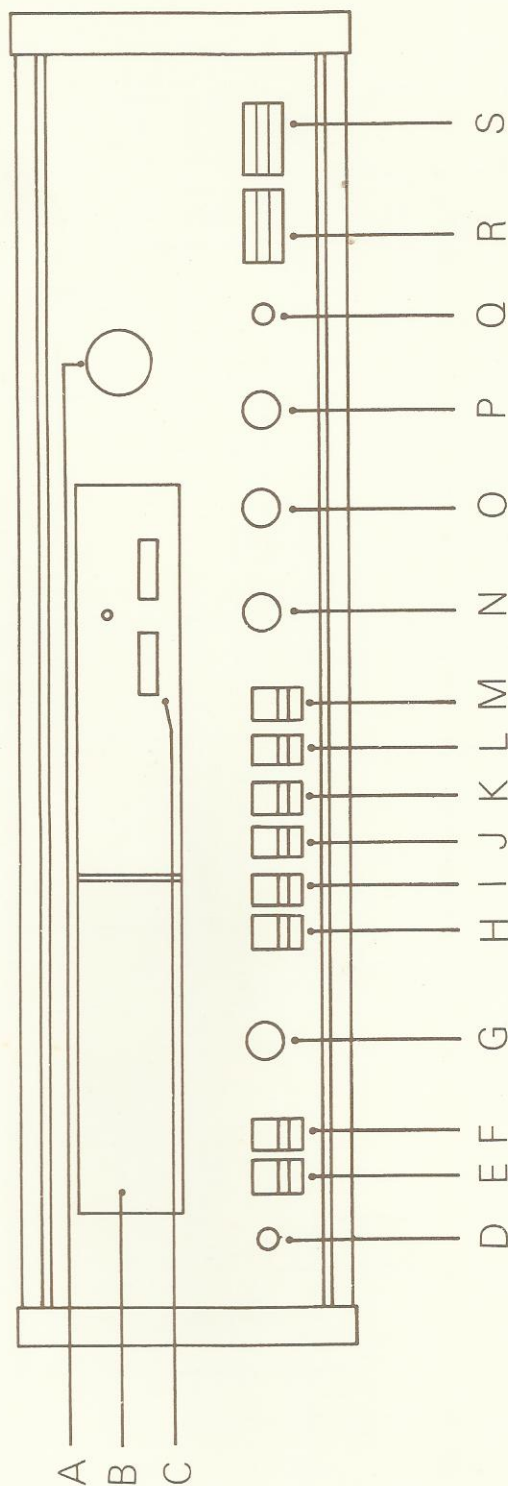
Note X: Variable tape-in level control to adjust to same level

as radio and obtain equal volume when switching from tape to radio.

Note Y: Aux inputs for second cartridge (non-magnetic), or 2nd recorder, TV set, ham receiver, etc. High level.

Note Z: for external AM antenna if required (unlikely).

Model STA-120B Front Panel Controls: Identity And Location



(A,B,C) Radio Tuning Controls

- A — Tuning knob and stereo indicator lamp.
- B — Illuminated slide-rule dial.
- C — (Left) Illuminated FM-AM signal strength meter;
(Right) Illuminated FM center tuning meter.

(D,E,F) Speaker/Phone Controls

- D — Stereo headphone jack, low level.
- E — Flip-lever "main" stereo speaker (pair) switch.
- F — Flip-lever "remote" stereo speaker (pair) switch.

(G,H,I,J,K,L,M) Mode/Sound Controls

- G — Rotary program selector knob.
- H — Flip-lever stereo-mono switch.
- I — Flip-lever tape monitor switch.
- J — Flip-lever AFC switch.
- K — Flip-lever loudness switch.
- L — Flip-lever lo-filter switch.
- M — Flip-lever hi-filter switch.

(N,O,P) Tone Controls

- N — Bass Tone control knob.
- O — Midrange tone control knob.
- P — Treble tone control knob.

(Q) AC Power Control

- Q — Push-on push-off type.

(R,S) Volume Controls

- R — Left channel volume slide control.
- S — Right channel volume slide control.

Note: these are new Realistic Glide-Path™ controls which are independent of power switch and which combine balance, volume and "perfect loudness" (see details inside) together with exceptionally smooth action. Another feature is that volume level is now completely obvious to the listener by touch and by sight. One finger operation of both controls together is very easy. In addition, the need for a separate balance control is eliminated.

How To Operate The STA-120B Receiver Controls

Before turning on this equipment, a "main" pair of stereo speakers should be attached per example on Page 3, using any 4 to 16 ohm speakers (usually 8-ohm types). As the true capability of the STA-120B—in terms of sound quality—cannot be better than the speakers employed, we recommend

Radio Tuning Controls (Photo A,B,C) — 2 Meters, Not 1

To tune FM and AM rotate the knob A; if tuning FM (see below) selector knob G will have to be in FM or FMss position. The stereo lamp will light — and set will receive stereo automatically — if station is broadcasting stereo and mode switch H is in stereo position; mono FM is also automatic if station is broadcasting mono even though H is in stereo position.

The *left meter* C is for FM and AM signal strength indication; tune to maximum deflection. The *right meter* acts

our Minimus series (absolute minimum) or our Electrostat and Optimus series speakers (preferred). All "flip-lever" switches should be in UP position; both volume controls DOWN. The following notes should be read carefully since the STA-120B has a number of unique controls whose best use can only be derived from a few moments of study.

and illuminates on FM only — this is an FM "center tuning" meter and tuning is achieved as follows: (1) rotate tuning knob A until *right meter* is at null or center position; this optimizes antenna operation in its existing position. (2) *Left meter* (signal strength) now automatically registers relative strength of incoming signal. (3) To improve the latter, re-orient your FM antenna if possible and repeat steps (1) and (2) in that order. The value of the 2nd meter is obvious, and tuning is no more complicated.

Note: FMss feature is described on page 6 of this manual.

Speaker/Phone Controls (Photo D,E,F) — New "Flip-Lever" Design

For private listening plug any good stereo headset such as Realistic 33-1002 or 33-195 into jack D and turn speakers ("main") off by flipping down switch E. If you have never experienced headphone stereo you will be extremely surprised at the sound quality and sensation of wide separation.

Connect 4-to-16-ohm (preferably 8-ohm) speakers per sketch on Page 3. Flip-lever E controls the "main" pair of speakers, "main" meaning "same room." Flip-lever F controls a pair of "remote" speakers, a 2nd pair placed in any room.

Note: ALL the flip-lever switches on the front panel are *normally* left in the UP position regardless of what is connected to the rear panel.

NO SOUND WILL BE HEARD FROM ANY PAIR OF SPEAKERS whose flip-lever switch is in DOWN position (as for headphone listening or actual inactivity). This is the FIRST CHECK to make if equipment appears inoperative!

Use any 2-conductor wire to connect each speaker taking care to: (1) let no bared wire touch any other bared wire, and (2) to phase speakers properly by running (+) to (+) and (—) to (—) as indicated on terminals of equipment and your speakers. If Page 3 sketch is followed you cannot make a mistake. Your dealer will supply you with the proper wire for speaker connection. A(+) to (—) wiring error will not damage the

equipment but may result in speakers being "out of phase" — meaning that while one is moving forward, the other is moving rearward, resulting in some loss of bass and stereo effect.

It is generally considered that stereo speaker pairs should be similar speaker systems and that the proper spacing between them is 6 feet or more. However there are other relationships to consider, including: normal listening distance from you to speakers, "hard" or "soft" room, dimensions of room, and personal variables.

Caution: when attaching bared end of speaker wire to a terminal, end of wire should be wrapped clockwise around screw. Do not attach any speaker wire to any terminal or ground other than those assigned. In the event one of two stereo channels is inoperative, always check channel fuse (Page 2, item 1) before making any other assumption; if one channel is "out" and one is playing, the probability of a wiring short at terminal of equipment or speaker itself is 90%. If both channels are "out" the first check is the main fuse (Page 2, item 4) and a check to see if wall socket is actually "live" or if plug mates to socket. And to repeat a warning: if the speaker flip-lever switch is in down position THE PAIR OF SPEAKERS CONNECTED TO THIS SWITCH WILL NOT BE HEARD until switch is returned to normal UP position.

How To Operate The STA-120B Receiver Controls (Continued)

Mode/Sound Controls (Photo G,H,I,J,K,L,M) — New "Flip-Lever" Design

Note: Controls H thru M, like E and F, are Realistic's special Flip-Lever design — Much more "positive" and secure than pushbuttons, better mechanically, and better because their position is apparent to touch as well as sight. To enhance this visibility, under each switch is a white line (—): when this is visually covered the switch is in DOWN position. Normal position of ALL these switches is UP — be sure to observe this when first operating the equipment.

"G" selector knob selects (left to right): Aux., Phono, AM, FM, and FMss. All these controls are affected by flip-lever switch H which selects stereo (normal, up) from mono. The functions of G are quite obvious except for the FM positions. "FM" automatically plays stereo or mono — whatever the station is broadcasting, with switch H left in its normal (stereo, up) position. "FMss" position during tuning SELECTS ONLY FM STEREOCASTS and mutes out all other FM stations, a very desirable feature for those who do not wish to hear monaural broadcasts or watch for the stereo lamp to indicate stereo, and a pleasant relief from inter-station noise.

"H" switch has been explained above. Up - stereo. Down - monaural.

"I" switch is for TAPE MONITOR which is normally left in the up-off position; its use is limited to tape recorders and decks. If nothing is connected to rear panel inputs (10) shown on Page 2, depressing switch "I" will SILENCE the equipment until restored to UP position, since "I" bypasses rotary selector "G". It is depressed for ALL tape play purposes and —

in the case of 3-HEAD decks, to allow monitoring (hearing of tape being recorded JUST AFTER TAPE PASSES THE RECORD-MONITOR HEAD, as opposed to merely listening to the program (radio, LP, etc.) coming through the receiver and/or checking taped result by rewinding and playing back. Realistic Model 999 3-head stereo tape deck is recommended for use with the tape monitor facility. Similar equipment is made by Ampex and Sony.

"J" switch in normal (up) position keeps AFC — automatic frequency control — in the FM circuit. Tuning is usually done with this switch up.

"K" switch in normal (up) position keeps "loudness" in the amplifier circuit, the actual control of which is a function of the volume controls. In the out (down) position, there is no "loudness" in the circuit at any volume level. Since loudness control replaces tones which the ear naturally loses at low listening levels, most listeners prefer to leave it in the circuit.

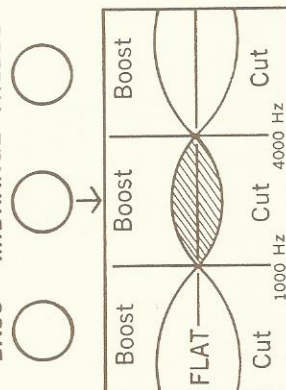
"L" switch in normal (up) position removes the high filter from the amplifier circuit. In down position, the filter is in the circuit to remove unwanted "highs" — usually record scratch, etc.

"K" switch in normal (up) position removes the low filter from the amplifier circuit. In down position, the filter is in the circuit to remove unwanted "lows" — usually turntable rumble.

TO REPEAT: all the flip-lever switches along the front panel are normally in UP POSITION. If you run into trouble, first check position of these switches!

Tone Controls (Photo N,O,P) — Why There Are 3 Instead of 2

BASS MIDRANGE TREBLE



Most amplifiers and receivers have two tone controls, i.e. — N and P in photo on Page 4. But these controls are least effective precisely in the area of maximum need where FUNDAMENTAL tones of the orchestra, and particularly the human voice, are involved. Your STA-120B therefore, in the form of the MIDRANGE TONE CONTROL (figure O), has a third tone control. All three tone controls are "single" type controls because we believe there is nothing but confusion to be gained by making each of them "double" and creating a useless "feature" for the sake of advertising.

"O" midrange tone control is effective in the range of 1000 to 4000 cycles. To demonstrate the effectiveness of this feature, play a vocal record and note how you are able to "place" the singer in terms of nearness or remoteness from you and /or the orchestra! The diagram clearly and simply exhibits the good sense of midrange tone control.

In the "12 o'clock" position, all three tone controls are "flat" — meaning out of the circuit.

How To Operate The STA-120B Receiver Controls (Continued)

AC Power Control (Photo Q)

"Q" is a pushbutton. Push — it's ON. Push — it's OFF. Most receivers incorporate the AC switch as a part of the volume controls. By removing this function from the volume controls, the STA-120B permits you to leave the volume controls at any

desired setting — a solid feature, not a gadget! Be sure volume controls are at a normal listening level before switching power on!

Volume Controls (Photo R,S) — New Glide-Path™ Design

"R" and "S" are volume controls which operate *vertically* and control the left and right channels respectively. This type of control is occasionally found on very costly audio equipment but at the time Realistic introduced the Glide-Path design — with its own custom differences — in late 1968, the Realistic STA-120B was the only piece of equipment we know of in this country employing this excellent feature to control volume. As previously stated, Glide-Path controls offer VISUAL and TACTILE control of both volume and loudness, yet may be operated with one finger and offer incredibly discrete changes in level without effort. Controlling volume, they operate from bottom (no volume) to top (maximum volume) and their position may be left unchanged when the receiver is turned off.

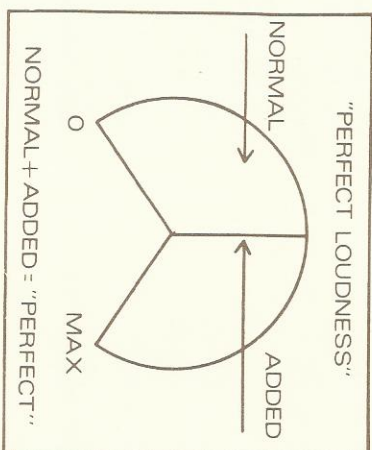
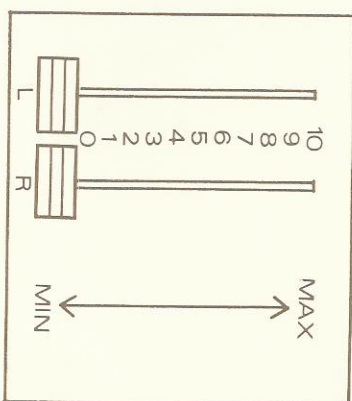
Why STA-120B Volume And Loudness Controls Are Unique

A special and unique feature of the Glide-Path controls is their control of LOUDNESS (naturally with loudness switch K in normal "up" position). For want of another name, Allied Radio Shack's engineers have termed this feature "PERFECT LOUDNESS." To our knowledge it is exclusive in Realistic equipment. We have attempted to simplify "Perfect loudness" in the accompanying diagram, showing you how this feature gives you about 50% more range of loudness control than any comparable equipment. To duplicate this, for the more technically minded, you would have to use a 4-gang instead of the customary 2-gang potentiometer on each control. In attempting to do what our "perfect loudness" feature does, other manufacturers — with the best of intentions — have had to "put" their loudness in at a certain point, one point only, resulting in so much apparent distortion or "over-bassiness" that many audiophiles eventually remove or defeat the loudness circuit. "Perfect loudness" gives you continual and varying loudness over the entire useful range of the so-called Fletcher-Munson curve, all the way out (in level) until the ear no longer requires this compensation in hearing low tones in proper relation to mid and high tones!

The diagram shows you, however over-simplified, what "perfect loudness" means in pictorial terms.

Finally, the Glide-Path controls together with the eight flip-lever switch controls and the pushbutton AC switch, make the STA-120B useable in the dark. Even a blind person may operate it without trouble! This happy blend of "human" and electronic engineering has resulted in the finest component ever produced by Allied Radio Shack engineering for the Realistic label.

Note: both volume controls should be in at NORMAL listening level position before turning receiver on, to avoid "blasting" or possible speaker damage.



Attaching A Record Player To The STA-120B

Practical considerations call for a record changer — sometimes known as an "automatic turntable" — to be used instead of a manual player. Use the best you can afford — Realistic, Garrard, Miracord, or Dual, are the preferred brands. Always use a MAGNETIC type cartridge with a diamond stylus. Preferred brands are Realistic (by Shure), Shure, Pickering. See Manual pages 2 and 3 for location and sketch of components.

Every record player includes two audio shielded leads for stereo — these take the current set up within the cartridge by the mechanical effect of the record grooves coupling to the needle, and send this minute electrical current to the preamplifier stage of the equipment's amplifier section. They connect from the record player to phono input jacks (Page 2, item 12).

Every player also has an AC (motor) lead which you plug into the wall or spare AC receptacle (Page 2, item 3) which is unswitched — meaning it's still "live" even when equipment is turned off. This is to prevent accidental turnoff while record player is still in operating mode. This AC lead has a 3rd wire running from it — usually green — with a bare, tinned end. Its purpose is to prevent "hum" and it is meant to be attached to ground screw (Page 2, item 14) on receiver. Its use is not mandatory and it is not dangerous to touch.

A special HI-LO PHONO LEVEL SWITCH is built into this equipment (Page 2, item 13) principally to let you balance the output level of the cartridge to that of the radio, thus avoiding unpleasant "blasting" by switching the selector control (Page 3, item G) from radio to phono. Its normal position is DOWN (low). Occasionally you may use a magnetic cartridge of exceptionally high output; you can take advantage of this higher output with this switch with IMPROVED signal-to-noise (ordinary circuits actually waste this opportunity to lower S/N). You know you've chosen properly if you have no trouble bringing radio and phono levels to the same approximate loudness when switching; and our unique "Perfect Loudness" is correctly contoured for all programs. This switch is left alone once in its proper position.

Tape Recording With The STA-120B

Despite the improving performance of slow-speed reel and cassette tape mechanisms, there is no substitute for stereophonic 7" reel-to-reel recording at 7½ ips speed. A tape deck is the most desirable "add-on" to equipment like the STA-120B, with a portable tape recorder being equally acceptable if the recorder is wanted for external use. Both perform similar functions: record and playback. A deck costs somewhat less since it does not require playback amplifiers and speakers and elaborate cabinetry; decks include preamp electronics only.

Much of the following has been stated earlier in the manual but a re-statement may clear up some of the questions you have.

TO CONNECT A TAPE DECK — plug AC cord into wall or spare STA-120B unswitched outlet ("unswitched" meaning "always on" bypassing STA-120B power switch). Connect a pair of shielded audio cables to deck OUTPUT jacks and into STA-120B jacks marked TAPE IN (Page 2, item 10); depress TAPE MON front panel switch (Page 4, item I); and play the recorded tape through the STA-120B amplifier and speaker system. If you have a full recorder instead of a deck, connect from the recorder's PREAMP OUT jacks to the STA-120B as described above.

TO RECORD WITH A DECK — when it is desired to record radio or LP discs from the STA-120B onto tape, you naturally insert such a program INTO the deck instead of using microphones. In the case of a deck or full recorder, using shielded audio cables, connect the recorder's AUX. INPUTS to the receiver's TAPE OUT jacks (Page 2, item 9).

Typical connections are illustrated on Page 3 of this manual, showing the 4 audio cables required to make and play tape recordings and which may be left connected as long as you like.

PLAYBACK THROUGH THE STA-120B is achieved by depressing front panel TAPE MON switch which bypasses the selector control (G). Unless TAPE MON is restored to normal (up) position you will not be able to hear radio or phono.

MONITORING THE RECORDING is done directly from the tape itself during recording session — in the case of 3 HEAD MACHINES ONLY; depressing TAPE MON switch at this time lets you hear the tape itself just after it has passed the record head; the input program is not affected. For regular 2-head machines, monitoring is done by listening to the program being recorded and by occasional rewind/replay sampling; naturally, observation of the tape recorder's VU meters gives visual indication that material is being fed to the record head.

ADJUSTING TAPE-IN LEVEL is useful to match the level (of volume) of the recording being played through the STA-120B to that of its radio or phono; you avoid unpleasant or awkward changes in volume as you switch from one type of program to another. This is simply to make listening more enjoyable and to maintain our unique "Perfect Loudness" contours. The STA-120B lets you match levels by means of the TAPE-IN LEVEL CONTROL on rear panel (Page 2, item 8). Once adjusted it will probably never need readjustment.

A TYPICAL WAY OF ADJUSTMENT: tune the radio; turn selector switch G to FM or FMss position and select a desirable listening level with the STA-120B Glide-Path volume controls. Now you wish to match the level of your recorded tape to that of the FM radio program so that you may switch back and forth without apparent change of level. Put recorder into "play" mode and play into STA-120B via TAPE IN jacks; switch from radio to tape without changing G selector by depressing TAPE MON flip-lever switch ("I") and turn TAPE-IN LEVEL CONTROL (8) until the two levels match.

With a little experimentation you will find that the really difficult part of tape recording is the proper selection and placement of microphones! The Realistic stereo Pro-200 mike system — see Dealer — will improve the performance of ANY tape system and permit very long cables to be used without loss or degradation of signal. This is the finest advance in "live" recording equipment we know of, and a bargain at its price.

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

NATURAL SOUND

REALISTIC®

SPEAKER SYSTEMS

Optimus™ Series

About 500,000 Realistic loudspeakers have been sold in recent years by some of the nation's most estimable stores including those in the 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 5-year guarantee. Our Optimus, Electrostat and Minimus series have lifetime guarantees. Every speaker is engineered by us, not "just a box with a label." And even though speakers are meant to be heard and not seen, every Realistic speaker is born as beautiful as it sounds. Choose from 10 different models!

Solo® Series



Minimus™ Series



RADIO SHACK **TG** A TANDY CORPORATION COMPANY

FORT WORTH, TEXAS 76107

PRINTED IN JAPAN

STA-120B CIRCUIT DIAGRAM

