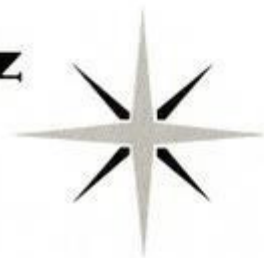


The Sound of Marantz is the Sound of Music at its Very Best

marantz





MARANTZ deliberately withheld its entry into solid state products until it was possible to step into the position of leadership in this field. Now, MARANTZ engineers have developed new methods of solid state application to produce a circuit design equalling the matchless performance and dependability of the previously unmatched MARANTZ-designed vacuum tube 7C preamplifier.

The new Model 7T delivers unequalled specifications for low noise and low distortion, without the usual transistor problem of inadequate signal handling capacity or dynamic range. The widest dynamic excursions on your favorite record or tape will not overload the sensitive low-level phono stages.

This has not been possible in previous solid state equipment, since the quietest operation of a transistor is the very condition under which it will produce clipping and distortion with normal input signals. MARANTZ solid state circuitry now has solved this problem, and traditionally impeccable performance is assured in the new MARANTZ Model 7T Solid State Stereo Preamplifier.

Optional Accessories: Oiled Walnut Cabinet — Rack Mount Panel

MODEL 7T SOLID STATE STEREO CONSOLE

2 Front Panel Jacks — For recording, copying or playback with an external tape recorder.

Panel Headphone Jack — Built-in circuit for driving popular low or high impedance phones. Sound automatically cuts off from speakers when headphones are plugged in.

Center Channel Output — Separate A + B mixing circuit with level control to drive one or two additional amplifiers for "center" channel or remote monophonic speakers. Low impedance output.

Tape Play / Tape Copy Switch

New circuit and switching permits tape recording playback or monitoring plus, duplication of tapes with front panel and rear panel recording outputs. They are capable of driving either low or high impedance recorders with low distortion. Stereo program material can be mixed and recorded monophonically if desired.

SPECIFICATIONS

Gain — Phono to main output: 64.5 db; Phono to recording output: 42.5 db; High level to main output: 22.5 db.

Frequency Response — 20 to 20,000 cps \pm 0.1 db.

Total Noise — 20 to 20,000 cps; 80 db below 10mv input. (1uv equivalent broadband noise input with or without RIAA equalization)

I.M. Distortion — 0.15% at 10 volts RMS output.

Dynamic Range, Phono Input — Approx. 100 db above 1uv equivalent noise input. (1uv to 100 millivolts at less than 0.15% I.M. Distortion)

OTHER FEATURES

Selector Switch with automatic equalization insertion, Mode Switch, Precision Tracking Volume Control, Wide Range Balance Control, Selectable-Curve Feedback Tone Control, High Filter, Rumble Filter, Power Switch, Output Level Adjustment for high or low efficiency speakers, Tape-head Equalizer adjustment, 6/AC Convenience Outlets, Panel Headphone Jack, Panel Tape Recorder Jack, Panel Tape Playback Jack, Two Center Channel Outputs.



Without question, the Model 10B is the most advanced instrument of its kind today. This is the Tuner that was rated by Hi-Fi Stereo Review (December, 1965 issue) as "... we have never seen a tuner to compare with it. ... so outstanding that it is literally in a class by itself." MARANTZ engineers have bypassed the inherent limitations of conventional circuits through the employment of bold new concepts and highly sophisticated electronic techniques. The performance of every circuit stage shows the dramatic order of improvement which can be achieved through creative inventiveness.

Now, with the introduction of the MARANTZ 10B, all the requirements for real high fidelity reception have been met. FM reception with the Model 10B, is comparable in every degree with the clarity and fidelity normally found only in stereo tapes and discs.

Performance properties of the 10B in regard to quieting, stereo separation and distortion are without precedent. Its combination of high sensitivity, ultra-sharp selectivity, fast quieting action and reduced susceptibility to multipath effects, ensures exceptional results in fringe areas. While the advanced features and performance specifications appeal to the primarily technically inclined, the Model 10B's simplicity of operation attracts the listener who is simply a lover of good music. In whatever case, the extent of the new high standard established by this fine instrument is recognized by all of critical judgement.

Optional Accessories: Oiled Walnut Cabinet - Rack Mount Panel.

MODEL 10B STEREO FM TUNER

FEATURES RF Section - The precision tuning capacitor has a "Linear frequency" characteristic so that station calibrations appear evenly and accurately spaced along a full 10" tuning dial. RF stages are balanced-tuned throughout. An important feature is the radar-type, balanced-bridge diode mixer. **IF Section** - The unique MARANTZ IF circuit is based on the development of an "18-pole" phase-linear filter. The ideal characteristics of the filter passband permit performance improvements which are unobtainable with conventional coupled circuits. Phase-linearity in the 200 kc passband eliminates a major source of high-frequency distortion and loss of separation. 108 db/octave cutoff slopes make the Model 10B the most selective FM tuner in existence. The strongest signals have no deteriorating effect on its ideal passband characteristics. IF alignment is permanent, being unaffected by tube changes or normal aging. **Limiters and Discriminator** - There are 9 limiters in the Model 10B using matched pairs of silicon planar diodes. Each IF stage is self-limiting, preventing overload on strong signals, and eliminating the usual need for AGC circuits. Quieting on weak signals is close to the theoretical threshold, with ultimate quieting well in excess of 70 db. The discriminator circuit is extremely linear, ensuring low distortion through the subchannel range. **Multiplex** - The highly sophisticated MARANTZ circuit permits the inclusion of phase correction to maintain proper phase-amplitude relationships. This allows the use of an extremely effective SCA rejection filter without the usual loss of separation at high frequencies. Separation is well in excess of 30 db to 15 kc. The output filter circuit provides very sharp attenuation of residual sub-channel components above the audio range, eliminating noise and interference from SCA. Precision-gapped ferrite cup-cores or precision toroidal coils are used for all filters. Automatic stereo switching and inter-channel muting are both accomplished by means of ingenious electronically triggered photo-electric circuits. **Multipath-Tuning Indicator** - In March 1962, MARANTZ introduced the concept of using an oscilloscope tube as a multipath and tuning indicator in the early prototypes of the Model 10. As each station is tuned, its correct center position on the passband is clearly displayed. Simultaneously, the presence of multipath becomes visible, making it quite easy to readjust the antenna for best results. A panel switch permits test display of the left and right FM channels, or external signals from tape recorders, discs, etc.

SPECIFICATIONS

I. H. F. Sensitivity - 2 uv or better

Quieting Slope - 40 db @ 2 uv; 55 db @ 3.5 uv; 70 db @ 25 uv.

6 IF Stages - Each with 3-pole phase-linear band-pass filter. IF bandwidth, 200 kc. Cutoff slopes, 108 db/octave.

Selectivity Curve - Adjacent carrier - 42 db; Alternate carrier - 150 db.

9 Dynamic Symmetrical-Aperture Limiters - Full limiting on noise.

Ultra-Linear Discriminator - For low distortion through sub-channel range.

Balanced-Bridge Diode Mixer.

Automatic Stereo Switching - Photoelectric, with indicator light and threshold adjustment.

Interstation Muting - Photoelectric, with defeat switch and threshold adjustment.

Total Spurious Rejection - Better than 100 db. Includes images, cross modulation, etc.

Volume Sensitivity - 10 db maximum (reached @ 0.8 uv).

Harmonic Distortion - Less than 0.2% @ 15 kc after deemphasis, and less than 1% at detector.

AM Rejection - At least 70 db @ 80% modulation with all signal levels.

Separation - Approximately 45db average throughout the range. Better than 30db at 15kc.

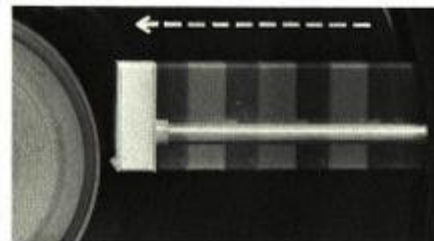
Built-In Multipath / Tuning Indicator - 3" oscilloscope tube.

Tuning Gang - Military type, silver plated, four balanced sections, ceramic spacers. Precision calibrated at 10 points.

Balanced 300 ohm Input. Dimensions - Front panel, 15 1/4" x 5 1/4"; Chassis, 14 1/4" wide x 15" deep (Panel dimensions are identical to Model 7).

Panel Finish - Gold anodized, to match Model 7.

Shipping Weight - 38 lbs.



STRAIGHT LINE TRACKING

Since the introduction of stereo discs, achieving the total signal of a stereo record and maximum channel separation has been a problem with conventional tracking tone arms. Marantz has solved that problem with the new SLT-12 Straight Line Tracking Turntable.

When the master disc is cut in the recording studio, the cutting head travels across the disc in a straight line. The grooves are cut proportionately to the volume of the sound; as the sound ebbs, the grooves narrow — as the sound swells, they broaden. Each side of the groove carries a separate track — one for each stereo channel. These grooves carry the total sound originally recorded.

The Marantz SLT-12 tone-arm tracks across the disc in a straight line following the path originally created by the cutting head. Thus the stylus, always tangent to the grooves, receives the full signal incised on each side of the groove. It is the only system available which faithfully reproduces the sound that was originally recorded.

The critical elements of the Marantz SLT-12 Turntable provide maximum precision and stability in support of the tone-arm assembly. The free-floating stylus is always fully positioned in the groove by counter-balancing the tone-arm assembly. A 12 lb. cast and dynamically balanced turntable rests upon a massive, precision-ground tungsten carbide thrust bearing to produce low friction, dimensional stability. Power is derived from a hysteresis-synchronous motor. The precision-ground uscothane drive belt is noted for its uniquely stable elasticity. Push-button controls have been installed for convenience, while the cueing device eliminates the necessity of ever touching the tone-arm.

The SLT-12 system includes stereo cartridge with elliptical diamond stylus and walnut base.

MODEL SLT-12 TURNTABLE

Zero Tracking Error

— Revolutionary straight line tracking arm holds stylus tangent to record groove at all times, eliminates inner groove tracking error distortion, skating force, and uneven stylus wear — all inherent in conventional arm design.

Rumble Free — 12 lb.

heavyweight precision-machined turntable, tungsten carbide thrust bearings, and precision ground drive belt combine to provide maximum isolation from acoustical feedback with lowest possible rumble.

Widest Dynamic Range

— MARANTZ designed ultra-high compliance pick up and lightweight low mass arm produce finest tone quality and an unprecedented dynamic range!

Cueing Control

— No need to ever touch pick-up arm. Positive cueing control automatically places arm in desired groove-track, eliminating accidental scratching and damaging of prized recordings.

Obsolescence Protection

— The only turntable system designed to precede the state of the art. Advances in cartridge development yet-to-come will obsolete most existing tone-arms. Only the MARANTZ SLT-12 has the capacity to accommodate all future developments.

SPECIFICATIONS

Speeds — 33 $\frac{1}{3}$ and 45 R.P.M.
Flutter and Wow — Better than 0.04%.

Tracking Error — Non-existent. (0 degrees/inch)

Skating Force — Non-existent.

Frequency Response — 20 to 20,000 cps.

Compliance — 30 x 10⁻⁶ cm/dyne.

Stylus — Diamond Elliptical. (.0002 x .0009 radius).

Output — 6 mv; Recommended Load — 47,000 ohms.

Drive Principle — Precision uscothane belt.

Rumble — Virtually non-existent.

Motor — Hysteresis Synchronous.

Leveling — Precision bubble-level adjustment.

Dimensions and Weight — 18 $\frac{1}{4}$ " wide x 14" deep x 6 $\frac{1}{2}$ " high (including Walnut base); 27 lbs.

Power Requirements — 117V, 60 cycles. (50 cycles available.)



MODEL 9 SEVENTY WATT AMPLIFIER

Sleek, efficient beauty hallmarks the unparalleled performance of this massive single-channel 70 watt amplifier. Here is the instrument that proves just how much difference an amplifier can make in high fidelity reproduction. Exceptional stability and low distortion team with its tremendous reserves of power to produce the finest sound available today. Its precision design and construction is mirrored at every point — from superb transient response to the built-in metered adjustments. If you've a taste for luxury and a desire for the purest of sound reproduction, satisfy it with the MARANTZ Model 9.

Optional Accessory: Rack Mount Panel.

ALSO AVAILABLE: Model 970 — 70.7V tap, plus 8 and 16 ohms.

SPECIFICATIONS

Power — 70 watts continuous — 140 watts peak. Switch for 40 watt triode operation.

Response — At full rated power: within 0.1 db, 20 cps to 20 kc; within 1 db, 12 cps to 40 kc. At ½ watt: within 1 db, 3 cps to 40 kc.

Harmonic Distortion — At full rated power: LESS than 0.1% at mid-frequencies, LESS than 0.33%: 20 cps and 20 kc.

I.M. Distortion — LESS than 0.5% at full rated power.

Hum & Noise — Better than 100 db below 70 watts.

Damping Factor — 17. Damping factor may be changed internally by adding current feedback.

Output Impedances — 4, 8 and 16 ohms, plus 1 ohm tap for center-speaker connection.

Construction — Instrument-type, precision construction throughout. Circuit assembled on rigid heavy-duty terminal board with machined, silver plated turret-terminals. Wiring connections neatly cabled. Silicon diode B + and bias supplies, with Zener regulation for first stage. Three Sprague type 17D telephone-grade electrolytic capacitors. Oversized transformers for very cool operation. Heavy front panel with precision-machined knobs, precision d'Arsonval meter, etc.

Test Section — Complete built-in instrument for self-

testing and balancing of output and driver tubes. Adjustments for balance of driving signal. The circuit includes five screwdriver adjustments, a seven-position test switch, and an accurately calibrated d'Arsonval meter. These simple adjustments eliminate the need for matched output tubes and assure optimum performance despite normal tube aging.

Controls — (All controls, adjustments and connections, with the exception of the Triode switch, are accessible from the front).

Gain Control — isolated by cathode-follower / phase-reversal circuit.

Phase Switch — for securing correct phase relation (A + B) of phantom center-channel speakers fed by two amplifiers.

Low Filter — subsonic cut-off filter, LESS than ¼ db @ 20 cps — 20 db @ 3 cps.

Test Switch — for bias (plate current) readings for each tube. Built-in test signal for dynamic balance adjustment.

Five bias and balance adjustments, as well as all input and output connections are located under snap-out panel.

Tube Complement — 2 — 6DJ8/ECC88, 1 — 6CG7, 4 — 6CA7/EL34, 1 Zener Diode, 5 — Silicon rectifiers.

Overall Dimensions — 15½" wide x 8¼" high x 10½" deep. Panel — 15½" wide x 7¼" high.

Shipping Weight — 60 lbs.



MODEL 8B DUAL THIRTY-FIVE, STEREOPHONIC POWER AMPLIFIER

In this ultra-linear high performance amplifier, MARANTZ offers you all the beauty of contemporary design. With its optional grille snapped into place, the Model 8B presents a smooth, uncluttered appearance consistent with the precision of its contemporary electronics. All connections are made in the rear to permit neat installation. Wherever you place the Model 8B its beauty will attract, its name will enhance, its performance will satisfy and endure.

The Model 8B is essentially two 35 watt amplifiers on one compact chassis. Built-in metered adjustments assure balanced performance of both channels.

Optional Accessory: Gold-finish Perforated Grille.

SPECIFICATIONS

Power Output Per Channel — 35 watts (70 watts peak) "Ultra-Linear" operation. Nearly 20 watts of excellent Triode operation can be obtained by altering two connections inside chassis.

Output Connections — 4, 8 and 16 ohms.

Input Sensitivity for 35 Watts — 1.3 volts RMS into 250K.

Response — At 35 watts: Within 0.2 db from 20 cps to 20 kc (equivalent of ± 0.1 db). Within 1 db from 15 cps to 40 kc into "Grid" input. At $\frac{1}{2}$ watt: ± 1 db from 3 cps to 40 kc. Response has been deliberately rolled off approximately 7 db at 100 kc to control transient response. Subsonic Filter in standard "INPUT" slowly rolls response off below 20 cps (Less than 1 db at 20 cps; — 10 db at 3 cps, etc.)

Distortion — Total harmonic distortion at 35 watts: Less than 0.1% at midfrequencies. Less than 0.5% from 20 cps to 20 kc. Intermodulation distortion at 35 watts equivalent (70 watts peak): Less than 0.5% (60 cps/12 kc, 4:1); (I.M. measurement of typical amplifier: 35 W. equiv., 0.5%; 30 W. equiv., 0.28%; 20 W. equiv., 0.17%; 10 W. equiv., 0.11%). Distortion below 35 W. is largely of second order, and reduces rapidly with signal level.

Damping Factors — Greater than 20, from 20 cps to 20 kc. (Instructions given for optional insertion by the customer of two additional re-

sistors to provide damping factors of 2, 11, or $\frac{1}{2}$.)

Inverse Feedback and Stability — 20 db of overall feedback. Great care has been taken to ensure stability and low distortion under widely varying loads, both resistive and reactive, such as are encountered in loud-speaker systems. Power supply surges are balanced out of signal channels providing excellent recovery from strong transients. Will not oscillate under any condition of open circuit capacitive load.

Hum — Better than 100 db below 35 watts containing proportionately little of high order harmonics.

Metered Tests and Adjustments — Built-in meter and test switch provide accurate adjustment of each output tube bias. This makes the use of matched tubes unnecessary. Adjustable Dynamic Balance (located sub-chassis) pre-set at factory.

Power Supply — The use of Silicon rectifiers, three telephone quality electrolytics, and choke, provide excellent regulation, and thorough filtering, together with long life.

Power Requirements — Design center: 117 volts, 60 cycles. Range: 105-125 volts, 50-60 cycles. 170 watts of zero signal; 250 watts of maximum signal.

Tube Complement — 2-6BH6, 2-6CG7, 4-EL34/6CA7.

Size — 13 $\frac{1}{2}$ " wide x 7 $\frac{1}{4}$ " high x 10 $\frac{1}{4}$ " deep overall.

Shipping Weight — 55 lbs.