

better listening

Through High Fidelity

Vol. 3, No. 12 — DECEMBER, 1957



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Hi-Fi Shop

HI-FI HEADQUARTERS

**2 N. HOWARD ST.
BALTIMORE, MARYLAND
SAratoga 7-3523**

new!

TRUSONIC FREE CONE SUSPENSION

A loudspeaker generates sound by moving air. If the speaker cone suspension is tight, the excursion buckles and bends the cone during operation. Stephens Trusonic has engineered the speaker cone in "free suspension," mounting it flexibly with a newly developed plastic-impregnated compliance.

This allows the speaker cone to move as a true piston.

The cone has a free excursion, eliminating distortion,

giving a maximum bass

response and the best transient response. The clarity and

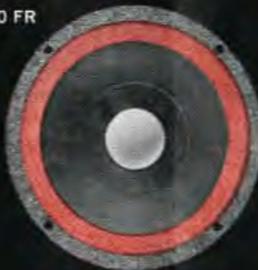
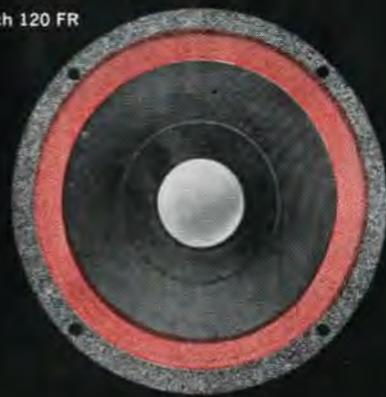
definition of Stephens

Trusonic's new "free-cone suspension" speakers herald

a new engineering achievement in high fidelity equipment.

12 inch 120 FR

8 inch 80 FR



These new 8" and 12" speakers provide a refreshing, new kind of sound. No showroom shrills or false lows. These speakers must be heard to be believed. Ask for a demonstration at your audio dealer's.



On the hi-fi record



By Edwin S. Bergamini

Monteux's near-unique mastery of Stravinsky's "Le Sacre du printemps" has made its mark in several recordings over a number of years. His latest statement of it (RCA VICTOR LM 2085), made with the Paris Conservatory Orchestra, is a small improvement but a discernible one over LM 1149, where Monteux's orchestra was the Boston Symphony; the two versions stand at the head of the half dozen quality readings now available. Excellent recording. It is also being released on stereo tape.

* * *

Schubert, the endlessly lyric genius, the inimitable spinner of songs (with words or no) that stun with their simple beauty, gave the world some of his best in the incidental music he composed to a ridiculously complicated and generally wretched libretto entitled "Rosamunde" (DECCA DXB-144, 2 discs). Here we can forget about the plot and enjoy the late Fritz Lehmann's sympathetic treatment of its lovely musical numbers, of which only a few (such as No. 5, the Entr'acte after Act III, and No. 9, a ballet andantino) are really familiar. Both overtures associated with "Rosamunde," "The Magic Harp" and "Alfonso and Estrella" (a tale too involved to relate here) are included in this recording. The Berlin Philharmonic glows with balanced richness of sound, and the Berlin Motet Choir provides

(Continued on page 5)

245-Mile FM Reception!



THE FABULOUS FISHER 90-X FM TUNER

Fred W. Scholl, Jr. of Lancaster, Ohio, reports:

"My FISHER FM-90X Regularly Receives a 245-Mile Signal!"

"My 90-X is the most astounding FM tuner I have ever had the pleasure to own or operate, including the best to date. WWJ, Detroit, is our usual station for listening—air line about 245 miles!"

FM reception at distances over 200 miles, terrain permitting, is a regular occurrence if you own a FISHER FM-90X. There has never been a tuner like it in radio history. Such performance is no accident, for the key to the unequalled reputation of the FM-90X is the exclusive FISHER Gold Cascode RF amplifier, plus companion circuitry that takes full advantage of the Gold Cascode. Some evidence of the precision-jeweler characteristics of the Gold Cascode's internal construction will be found in the simple fact that we guarantee this tube for two years. With its half-microvolt sensitivity, THE FISHER FM-90X has, in one sweep rendered all other FM tuners in its price range obsolete. Chassis, \$169.50

Mahogany or Blonde Cabinet, \$17.95

Ask for the New FISHER High Fidelity Folder

Listen... you'll always hear more from: STEPHENS TRUSONIC INC.

What Is a "Folded" Horn?

PUTTING A HORN in front of a sound source, for greater efficiency, is not a new idea at all. From time immemorial, the megaphone has been used to augment the human voice, notably by sailors shouting from ship to ship.

The horn is more than a means of making something sound louder. Because of its acoustical and physical properties, it actually helps bass response (when correctly dimensioned), disperses sound over a wide angle instead of beaming it at you, and is the most efficient way of coupling sound waves from a small area (the speaker) to a relatively large area (the room).

Unfortunately, what appears to be the simplest thing with horns is far from practical. To simply attach a horn to an average-size speaker that would be capable of reproducing full deep bass, would involve you in a monstrous structure about 10 feet long, with a mouth opening of more than 30 square feet!

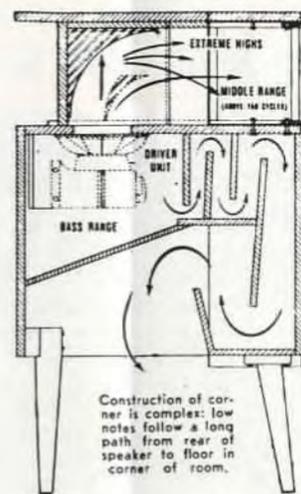
Such a horn, driven by a cone speaker, would load that speaker so favorably as to lower its cone resonance by at least a full octave. The efficiency of such a system would be so high that the speaker could very easily produce full clean tones down to 30 cycles with less "huffing and puffing" than would be required for equal bass output in any other type of baffle. Because of the high efficiency of the horn, no more than a 10-watt amplifier would be needed. The chief reason for this startling performance is that the horn acts as an acoustic transformer, doing for sound energy what an electrical transformer does for voltage and current. The horn provides a smooth, non-resonant, distortionless transfer of sound energy from its source (the speaker) to its load (the room).

A horn with a true exponential flare and sufficient length has a unique advantage over any other kind of baffle. Because it is an open flared tube rather than a confined air space, it is inherently free of any resonance of its own. Hence it cannot add false coloration to the tones it helps to reproduce. Since its diameter changes gradually from point to point, there is a smooth and

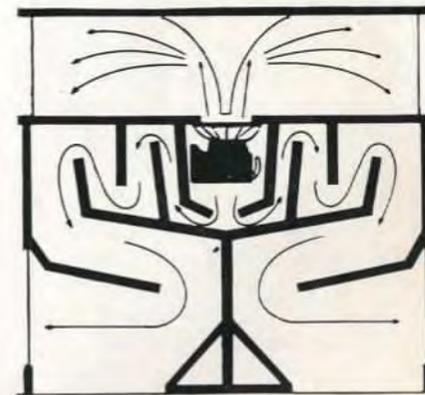
efficient transfer of energy from the apex to the horn to its mouth and thence into the air mass of the listening room. No other enclosure provides such natural and efficient transfer of sonic energy.

Because of the gradual expansion of the sound area within the horn, the sound literally flows out into the room with a minimum of objectionable point-source effect. The listener therefore has a feeling of the music being *in the room* rather than being *thrown into the room* by the speaker.

Intrigued by the performance potentialities of the horn, but themselves "baffled" by its unthinkable size, audio engineers had for years just about given up on the horn as practical for home use. But then it was shown that loud-speaker horns can be made literally to turn corners like the convolutions in a bass tuba. As a result of this "folded horn principle" an abundance of horn enclosures are now available for home use. In these enclosures, the horn is bent, or folded back on itself a number of times until its mouth opens into the listening area. This reduces the overall dimensions while retaining the full length



(Left)—Section drawing through a folded corner horn enclosure shows interior sound paths for highs, middle, and lows. Note the complex interior panels forming a gradually expanding horn for the bass frequencies. This design by audio engineer Stewart Hegeman serves as the basis of several Brociner enclosures.



(Right)—A similar folded horn sound path seen from above.

of the horn. At the apex of this folded horn is the speaker. Some versions use the speaker as a "compression driver." This means the speaker is tucked away inside the enclosure and does not radiate its sound directly into the room. While this may be the most ideal horn system, it is also the biggest and works only for bass, requiring separate tweeters for treble.

More modestly dimensioned and priced are the numerous folded horn variants—many in easily-assembled kit form—that can be seen and heard in audio showrooms, as well as living rooms, throughout the country. This type of folded horn uses the cone speaker in two ways: highs and mid-range are radiated directly into the room by the front of the speaker cone, while the deep bass is channeled, from the rear of the cone, through the folded horn and thence into the room. Generally, this type of horn enclosure requires corner placement with the walls of the room forming an effective part of the horn. Other designs achieve much the same effect in rectangular boxes that may be placed against a flat wall. Horn enclosures of this type can be used where no corner space is available. Hi-fi listeners with little space to spare need not give up the idea of owning a horn: models have been developed and are commercially available for housing 12-inch speakers in structures that are barely 2-foot high! ■ ■ ■

On the Hi-Fi Record

(Continued from page 3)

some of the most ravishing singing we have ever heard. Diana Eustrati is contralto soloist in one of the selections. Filling out the album's fourth side, the Serenade, op. 135 (women's voices and Mme. Eustrati) and the glorious Psalm 23 setting (for women's choir) are joyous Schubertiana in light, floating performances. Spacious, velvety sound.

* * *
Late Mozart Symphonies by Bohm and Klemperer: Bohm's genial and knowing view of the 39th and 40th symphonies (EPIC LC 3357) deserves high place among competitive versions; surely it should not be passed by in favor of conducting names better known to American listeners. The great Amsterdam Concertgebouw handles its part with distinction, and is recorded with sunny spaciousness.

* * *
The Klemperer version of No. 39 with the Philharmonia Orchestra of England (ANGEL 35408) is outstanding for detail and well-controlled warmth; this conductor has a likable, livelier view of the final two movements. Oversight, under his baton, No. 38 is as light as air, glowing with delightful inner detail yet nowhere too detailful, never over-inflected. Perfect tempos complete this near-perfect "Prague"; this disc offers superb playing and beautiful sound.

* * *
The wizardry of *Stokowski* is ever present in "*Landmarks of a Distinguished Career*" (CAPITOL P 8399), where he conducts the Bach Toccata and Fugue in D minor, Debussy's "Clair de Lune" and "Afternoon of a Faun," Sibelius' "Finlandia" and "Swan of Tuonela," and the "Blue Danube" waltz of Johann Strauss. The excess sensuousness one sometimes associates with this conductor's work is largely missing. His orchestra can do anything he wants, and the airy, bright Capitol sound reproduces the players with easeful beauty.

* * *
Holst's colorful "The Planets" has been with us long enough to please rather than startle (even if more startling music hadn't been written since); it has earned its place, permanent if not prominent, in our concert-hall repertory.

(Continued on page 18)

ALL ON ONE, COMPACT CHASSIS

FISHER FM-AM TUNER FISHER AUDIO CONTROLS FISHER 30-WATT AMPLIFIER



THE FISHER "500"

AN FM-AM TUNER of extreme sensitivity, a Master Audio Control, and powerful 30-watt amplifier—laboratory engineered and professionally combined on a single, compact chassis. Simply add a record player and loudspeaker and you have a complete high fidelity system. THE FISHER "500" is the simplest and most economical manner in which to acquire matched components—true to the twenty year FISHER tradition for quality.

Chassis Only, \$249.50

Mahogany or Blonde Cabinet, \$19.95

Outstanding Features of THE FISHER "500"

- Extreme sensitivity on FM and AM. ■ Meter for micro-accurate tuning. ■ Full wide-band FM detector for maximum capture ratio. ■ Powerful, 30-watt amplifier; handles 60-watt peaks. ■ Uniform response, 16 to 32,000 cycles. ■ 4 inputs, including separate tape playback preamp-equalizer. ■ 4, 8 and 16-ohm outputs match all existing speakers. ■ Recorder output ahead of volume and tone controls. ■ 7 Controls, including 9-position Channel Selector (AM, FM, AES, RIAA, LP, NAB, TAPE, AUX 1 and AUX 2), Loudness Contour (4-position), Volume, Bass, Treble, AC-Power, Station Selector. ■ Beautiful die-cast, brushed brass escutcheon and control panel. ■ Pin-point, channel indicator lights. ■ Smooth, flywheel tuning. ■ Largest, easy-to-read, slide-rule dial, with logging scale. ■ High efficiency FM and AM antennas supplied. ■ 18 tuned circuits. ■ 14 tubes plus 2 matched germanium diodes.
- SIZE: 13 1/4" x 13 3/4" x 6 1/2" h.

Prices Slightly Higher in the Far West

Ask for the New FISHER High Fidelity Folder

SHOWING OFF . . .

The annual New York High Fidelity Show is a sort of parade ground where hi-fi manufacturers hopefully trot out their new items and put them through their paces.

These mute pages can't describe the combined din of these exhibits, or the general feeling of liveliness lent to the proceedings by the eager and aware public that came in vast numbers to look and listen. We content ourselves here with a brief pictorial sampling of some of the novelties shown and sounded. A considered appraisal of the event, recollected in tranquility, will be published later.



SHERWOOD S-2000 AM-FM TUNER
Typical Selectivity: FM: 195 kc at -6 db. AM: (wide) 15 kc at -6 db.-(narrow) 5 kc at -6 db. Tuning Range: FM: 87.5-108.5 mc. AM: 530-1650 kc.



BOGEN-PRESTO:
The Presto Caldwell (left)
The Presto Chatham (right)
The Caldwell is designed to hold an amplifier and record changer. The speaker must be mounted elsewhere. It is available with island base or 6" legs. The Chatham features a bar compartment in addition to record storage space and a speaker enclosure.



AMERICAN ELECTRONICS:
Models 61, 62 and 63 Tape Recorders
Tape speeds: 7 1/2"/sec. and 15"/sec. Timing Accuracy: 99.8%. Frequency response: ± 2 db from 40 to 12,000 cps at 7 1/2"/sec. ± 2 db from 30 to 15,000 cps at 15"/sec. Signal to noise ratio: 45 db at 7 1/2"/sec. single track.

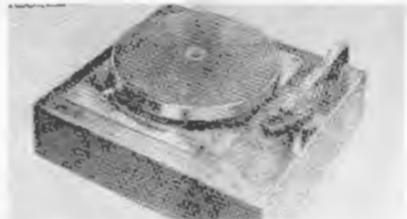


FISHER 90T FM-AM TUNER
Less than 0.1% distortion for 3 volts output, with uniform frequency response from 25 to 40,000 cycles, within 1 db. Hum and noise level better than 80 db below signal for 2 volts output.



BRITISH INDUSTRIES: GARRARD T MK II MANUAL PLAYER
Features 4-pole shaded induction surge motor, turret drive, aluminum tone arm, automatic start and stop.

6 BETTER LISTENING



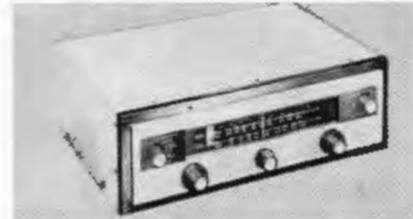
METZNER STARLIGHT TURNTABLE
Signal-to-rumble ratio: -50 db (minimum). Wow and flutter maximum 0.10 per cent.



JAMES B. LANSING
A stereo system designed for professional use by recording companies, this system features two 15" woofers and two high frequency drivers.



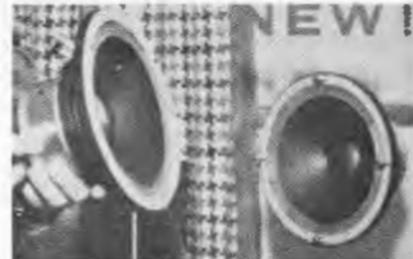
JENSEN LOUDSPEAKER
3-way 15-inch triax loudspeaker, model G-600, has been added to the Jensen line. The G-610A Triaxial provides the only two unitary three-way speaker systems available having three independent electrical and acoustical channels.



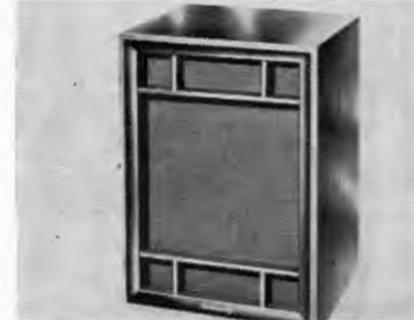
PILOT FA-550 FM-AM TUNER
Tuned RF stage and dual cascade limiter-discriminator for extreme FM sensitivity; 20 db quieting with 2.5 uv at 30% modulation and with 1.0 uv at 100% modulation; AM sensitivity: 3.0 uv for 1 volt DC at detector.



WEATHERS TURNTABLE
A 12-pole synchronous motor of high precision and quietness. A drive system virtually free of rumble, wow and flutter. A suspension system tuned so low that the effects of floor vibration and acoustic feedback are eliminated.



STEPHENS TRU-SONIC 80 FU SPEAKER
Frequency Response: 40-15,000 cps. Free Air Resonance: 50 cps. Power: Continuous: 20 watts. Peak: 50 watts. Voice Coil Diameter: 2 inches. Magnet Weight: 1 lb. Impedance: 16 ohm. Size: 8 1/4" x 4 1/4". Weight: 6 1/2 lb.



UNIVERSITY MODEL S-10 AND MODEL S-11
The Ultra-Linear speaker systems produce bass response which heretofore was never considered possible from enclosures as small as these. The units are fully 40 to 80 per cent smaller than previously available systems of similar performance.



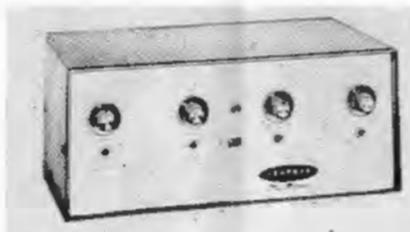
H. H. SCOTT 300 AM-FM TUNER
FM sensitivity 3 microvolts for 20 db of quieting; silver-plated RF circuitry; circuitry drift free; wide-range AM circuitry; edge lighted slide-rule dial with logging scale; sharp-tuned 10 kc whistle filter; FM and AM r.f. stage insures maximum sensitivity; precision tuning and signal strength indicator. Controls include Main Tuning, Selector and Power. Measures 15 1/2" x 5" x 12 1/2".



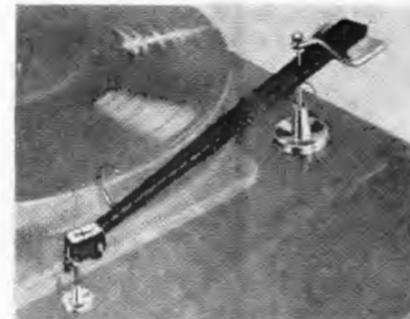
GROMMES 15 PGB AMPLIFIER
Power output: 15 watts with 20 watts peak. Frequency response: ±0.5 db 20 to 20,000 cps at 1 watt. Power response: ±1. db 30 to 15,000 cps at 15 watts. Distortion: 2% harmonic and 3% intermodulation at 15 watts.



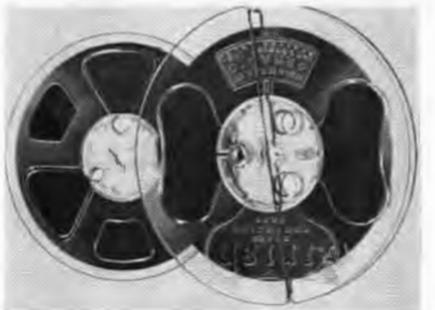
ALTEC 344A AMPLIFIER
Frequency range: 20-22,000 cycles. Power output: 20 watts. Load impedance: 4, 8, and 16 ohms. Inputs: 3 low level for magnetic phono pickup, microphone, and tape deck, 3 high level for radio tuner, tape, reproducer, and spare.



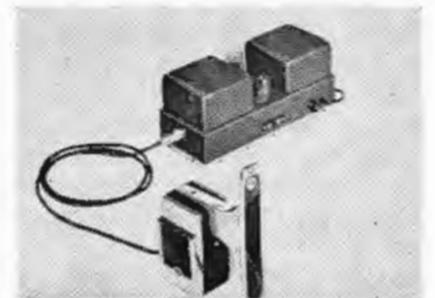
PENTRON TAPE PRE-AMPLIFIER (Model CA-14)
Description: 4 channel, 6 input Electronic Mike and Phono mixer. Frequency response: 20 to 20,000 cps. Inputs: 6 high impedance inputs; 4 microphone, 2 phono. Gains Microphone: 8 db.



PICKERING FLUXVALVE PICKUP AND ARM
Features are: output at 1000 cps with 10 cm/sec stylus velocity—15 millivolts; Rat frequency response from 20 to 30,000 cps, ±2 db; overall length.



IRISH TAPE
The new reel provides easier access to the threading eye by a larger opening in the reel. An added feature is 24 square inches of indexing space on the two sides. The new reel also has the Irish "No Spill" feature. A rubber band in notches keeps the tape from spilling loose on the reel.



ELECTRO-VOICE IONOAC TWEETER
Frequency Response ±2 db, 2 kc to 40 kc. Recommended Crossover: 3500 cps. RETMA Sensitivity Rating: 60 db. Power Handling Capacity: Program Material: 50 watts. Peak: 100 watts. Size: Driver Assembly: 9" h., 3 1/2" w., 7" d. overall. Electronics: 5 1/2" h., 5" w., 13 1/3" d. overall. Baffle Opening: 1 1/4" x 6". Weight: 22 lb.

BETTER LISTENING 7



Personality On Records: Irmgard Seefried

by HERBERT REID

ONE DRAWBACK of the phonograph is that its music emerges divorced from the personality of the musician and the mood of the place in which it is played. It takes a strong dose of musical individuality on the part of the artist to infuse the vinyl tracks of a disc with compelling traces of his or her personal aura.

To bring this elusive element of spontaneity and atmosphere of an actual concert into the living room, Decca Records has issued a song recital by Irmgard Seefried (*Seefried in Person*, DL 9809) compiled from tapes made at actual recitals in Berlin, Munich, Hamburg and Bielefeld.

It is remarkable how much the presence of an audience, more felt than heard, adds to the experience of these

lieder by Schubert, Brahms, Mussorgsky, Bartok, Wolf and Strauss. You can tell that the singer is, as it were, talking to someone through her song with an urgency and persuasion seldom addressed to the animated microphone alone.

Singing lieder—that hauntingly poetic style of German song—is a tricky business. The singing must sound effortless and it must be perfect from the opening note. The singer must work hard and seem to work not at all. Lieder are short and variable and they require technical control of the voice, understanding of the poetry and the music, and an ability to convey to the audience immediately the artist's own ideas and emotions about the works she is singing. Technically, the singer must be so secure that

On the concert stage, Miss Seefried offers visible refutation of the theory that a great soprano must be shaped like a tub.

she need not give any of her attention to problems of how to sing; she needs it all for her interpretation. She must master the lied, its poem, its music, its flavor, for she cannot interpret what she does not understand.

The personality of this pert, young Viennese lends both depth and liveliness to songs that might otherwise fail to move a listener unfamiliar with the original language. Seefried's compelling perception of musical and poetic essences often makes up for the lackluster translations that are the bane of English-speaking listeners.

American music lovers therefore depend especially on the "personality factor" in the interpretation of lieder. They must largely get the finer shades of meaning from the vocal inflections of the singer since they can't follow the precise connotations of the text.

Irmgard Seefried has firm opinions on the responsibilities of artists and she cannot be persuaded to compromise on any artistic matter for any non-artistic reason.

"Music has no boundaries," she says. "An artist must have an international attitude." Although Bavarian-born Irmgard Seefried is an Austrian citizen and speaks of herself as Viennese, she is truly cosmopolitan.

The artist must always find the way to communicate within herself. It is her own philosophy and thinking and feeling. "We all have in us the longing for harmony and completeness. The artist is simply one who feels it with more depth, more sensitivity and stronger compulsion. When the artist speaks, he speaks for all."

When the artist realizes the great responsibility his gift carries with it, he must prepare himself for communication.

"To me, a career in art is neither a source of income nor a high road to fame; it is rather a dedicated vocation. One person is chosen by destiny to give voice to the inner hope and longing of all humanity." ■■■

Does hi-fi



at you?

by JOHN MILDER

IF INVESTIGATOR GALLUP should ever send his practiced snoopers into the disciplined ranks of audiophiles, he would quickly discover that the most common complaint from owners of hi-fi equipment is that they cannot bring their favorite orchestra or railroad into the living room without also inviting a torrent of hisses, crackles and pops. If you are one of the many who are torn between accepting extraneous noise as an inevitable by-product of hi-fi or writing angry letters denouncing record companies for producing such terrible record surfaces, here are a few suggestions which should make either alternative unnecessary.

The most obvious, but important, suggestion is: keep your records clean. This means not only wiping your records with a suitably soft cloth or brush, but also making use of one of the many available anti-static compounds. Any attempt to wipe a record which has a static charge usually succeeds only in forcing dirt deeper into the record grooves. Most anti-static products are quite effective. Keep in mind, however, that a small amount of spray or liquid is usually adequate; over-application can leave a residue in record grooves, gumming up a stylus and producing fuzzy sound.

Most of the other causes of extraneous noise are matters of imbalance between components in a system. The biggest villain in most cases is the tweeter in a multi-speaker system. Advancing the level control on a tweeter too far—for that extra little bit of presence—will emphasize both record scratch and residual amplifier noise. The only remedy needed is to keep the level con-

trol at a sensible setting for reproduction that is lifelike but not "larger than life."

If the tweeter balance is not at fault, the next checkpoint is the phono input of your preamplifier. In most cases the load impedance value (usually 47,000 ohms) of the input is specified on the back panel of the preamp. Check this value against the one suggested by the manufacturer of your pickup cartridge.



Individual input level controls (center), variable pickup load adjustment (right) and level control for the preamp stage (bottom) make it possible to minimize hiss with this Scott 121-C control unit.

Except in the case of a low impedance cartridge (usually 250 ohms or under), a substantial difference between the actual input impedance and the cartridge maker's suggestion can emphasize noise and produce edgy sounding highs. If your preamp does not have a control to vary the impedance of the phono input, remedying the condition means following the manufacturer's suggestion for soldering a resistor of proper compensating value across the input.

If everything seems proper up to now, check the rated sensitivity of your preamp against the rated output voltage of the amp cartridge. If the preamp is not sensitive enough, and will produce its rated output only with level and volume

controls near their maximum positions, lots of hiss and hum will usually result. To overcome any insensitivity, a step-up transformer or one of the new transistorized preamps can be inserted between your cartridge and preamp. While you are checking for this condition, however, make sure that the level control for the phono input, if present, is at the setting recommended for your cartridge by the maker of your preamp. Setting this

control too high can interfere with the loudness compensation in some preamps and introduce great amounts of noise.

If none of these suggestions seem to help, there is one more point to consider before you become discouraged. A slight peak in high frequency response in any one of your components is usually unnoticeable, but a combination of peaks in two or more components at close to the same frequency can greatly emphasize record noise. The remedy is simply to turn down the treble control on your preamp. Cutting the treble is sacrilege to many audiophiles, but the small amount of cut usually needed will keep hi-fi from hissing at you and bring music back out of the noise. ■■■

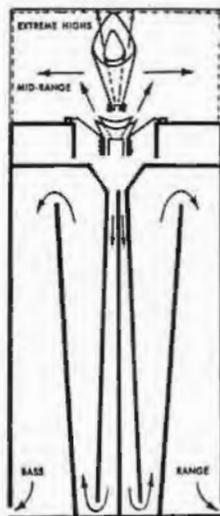


Photo by Irge

Left: Stewart Hegeman, audio inventor.

Center: Cross-sectional view shows the sound paths for treble, mid-range and bass in the small, self-contained EICO-Hegeman system. The two-dimensional drawing fails to indicate sound radiation in the front-to-back plane, which forms part of the dome-shaped sound scatter.

Lower Right: With fabric removed, the omnidirectional tweeter is seen mounted on the mid-range section. Slot-loaded horn extends beneath.



SLOT & SPIKE — New Shapes For Sound

by E. KELVIN PARKER

THE MOST VITAL of all the elements in sound equipment are the ideas entered into its design. This may account for the interest aroused by the new EICO-Hegeman loudspeakers at their first public showing in New York last October; for the new and unusual ideas employed in this loudspeaker, mark a departure from the established conventions of loud-speaker design.

The secret of its uncommonly faithful sound reproduction lies in two radically new shapes of sound radiators: a slot for bass and a spike for treble.

Slot Loading

Instead of having the conventional horn mouth, the flared and critically dimensioned bass passage terminates in

a narrow slot. The slot has the effect of packing the air hard against the vibrating woofer, which cushions the cone and thereby keeps it from "running away with itself" into excessive and uncontrolled motions that cause muddy and unclear bass.

Such "cushioning" also keeps the woofer cone from breaking up into harmonic oscillations that falsify tonal coloration.

What the slots accomplish is technically known as "air loading." Other types of enclosures also provide this effect, but the amount of the air loading achieved often varies at different frequencies. The advantage of the Hegeman slot (a patented feature) in the EICO speaker is that it retains the same

loading characteristic almost uniformly over the entire frequency range. (Engineers can measure this by taking impedance curves.) The result is natural bass, unburdened by boom and false resonance. This system has a flat response down to 50 cps and a useful range down to 30 cps. To hear such a small box lay down such a solid and clear tonal bottom immediately marks the EICO-Hegeman as a "surprise package."

"Spiked" Top

At the top end, the strange-looking spike-shaped tweeter attracts the attention of eye and ear. This loudspeaker realizes in actual design the long-recognized theoretical ideal of a free-floating cone. Its rim "floats" freely in the air without



Right: Unique features are evident in this closeup view of the tweeter: Spike-shape provides broad-band, peak-free response; outer cone surface radiates horizontally in all directions while inner cone surface throws sound upward. Black cone remains static to diffuse upward sound thrust into dome-shaped spread. Black inner cone also provides "loading" of the active outer cone by acting on the ring-shaped airspace between the two cones.

Left: Nothing in the simple outer appearance of this small enclosure gives a hint of its unusual contents.

attachment to any frame. There is no suspension whatever to limit or deflect its motion and thereby alter the sound from that conveyed by the electric signal. This permits a free piston motion of the loudspeaker cone, which represents the theoretical optimum.

The cone itself is shaped as an upward-pointing spike. Two basic and unique advantages derive from this:

1) The asymmetric cone shape provides different radial lengths (i.e., distance from apex to rim) at various perimeter points. This prevents the formation of resonant peaks in the tweeter response. Hence even the highest treble comes through without a trace of shrillness. The extreme highs can add an unaccustomed sense of pleasure to the sound. Yet to attain this, the highs must be undistorted and smoothly matched to the rest of the sound spectrum.

2) The upright position of the treble-radiating spike allows the sound to spray out in a full circle. This 360° sound radiation once and for all solves the problem of directivity. This totally non-directional sound distribution is a major contributing factor to the naturalness of the overall sound and the absence of aural irritation in the high range.

Moreover, sound spreads not only hori-

zontally to all points of the compass; it also aims upward against the ceiling. The result is a dome-shaped (hemispheric) sound radiation pattern which evenly envelops the whole room.

The sound field thus created simulates the acoustic conditions at an actual concert. Instead of "coming out of a hole," the music emerging from this speaker gives the illusion of the sound source being spread out in space.

Concentrically within the upright spike stands a static loading plug, preventing phase clash and providing a certain amount of loading for the free-floating sound radiator. Transients thus become exceptionally clear. Combined

with the peak-free response to about 34,000 cycles (far beyond the limits of human hearing) this excellent transient response accounts for superb acoustic definition. The instruments of an orchestra remain separated or blended in their tonal texture exactly as the conductor and the recording engineer intended.

For auditorium use, exceptionally large rooms, or where heavy bass radiation is required to below 20 cps, Mr. Hegeman has designed a somewhat larger version of this speaker, known as the "Hegeman Professional," which is available directly from his laboratory.

The full-range two-way EICO speaker system, complete with cabinet, takes up only one square foot of floor space and sells for less than \$130. ■ ■ ■

Ersatz echo has ghosts aghast

ONCE UPON A TIME, in the days before audio engineering, ghostly voices belonged only to ghosts and, upon hearing one, it was advisable to be on the lookout for spooks. But tape technology has changed all that, and the next time you hear hollow howls reverberating through a mystery show, you would be well advised to suspect electronic trickery rather than a spectral presence.

The trick is done by using a twin-headed tape recorder, having separate "record" and "monitor" heads. The monitor head plays back what the record head has put on the tape just a fraction of a second before. In this way, it gives you a convenient check on what has actually gone on the tape. Yet by feeding the output from the monitor back into the input of your tape machine, you can make the machine repeat itself with a kind of endless stammer, which produces a hollow, ghostly reverberation.

A simple "patch" connection between the output of the monitor head and the regular signal input will in most cases provide such an "ersatz echo." Since



Even broadcasters and recording engineers don't disdain the ersatz echo for special effects. Here a partisan of Pogo rigs a two-headed machine in an elaborate array of recording equipment so that one head talks back to the other.

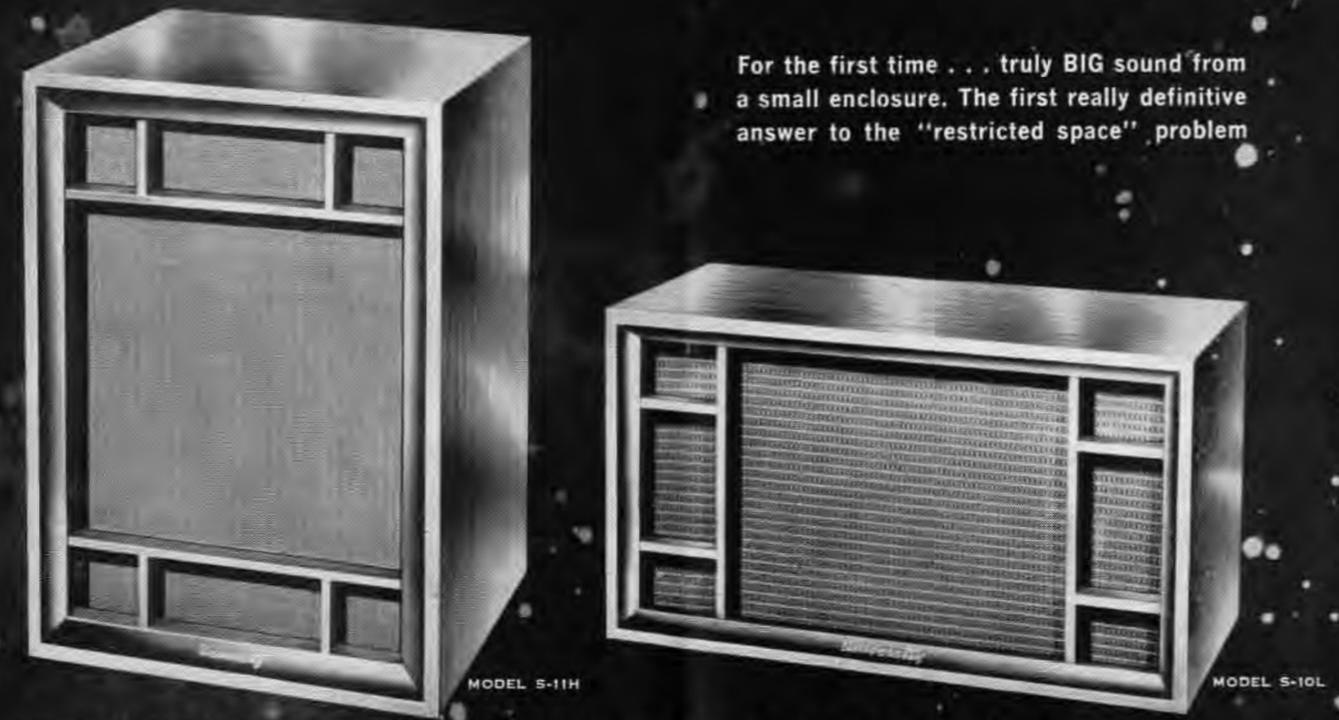
the entire effect is rather on the weird side, we need not worry about uneven frequency response or marginal distortion resulting from a possible impedance mismatch.

If you have a recorder with separate monitor head, you can in this way transform your own voice into the utterance of a monster that would strike terror into the heart of Frankenstein himself. And if you live in a haunted house, the ersatz echo may chase off your ghosts—or make them feel right at home. ■ ■ ■

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BREAKS
THE
SPACE
BARRIER!

Revolutionary! UNIVERSITY ULTRA-LINEAR space-saver speaker systems

Ultra-compact loudspeaker systems without compromise of performance! Free air resonance 15 cps, response to upper limit of audibility . . . and in radically smaller enclosure space

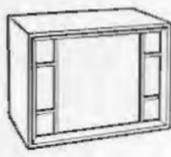


For the first time . . . truly BIG sound from a small enclosure. The first really definitive answer to the "restricted space" problem

TYPICAL APPLICATIONS SHOWING VERSATILITY OF THE FOUR ULTRA-LINEAR MODELS

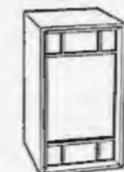


ON BOOK SHELVES AGAINST WALL FOR BINAURAL BUILT-IN IN CORNER LOWBOY CONSOLE



MODEL S-11L

ULTRA-LINEAR 15 CONSOLETTA, MODELS S-11H and S-11L. Unusually small size is achieved by coupling the new University ducted annular relief enclosure to the new heavy duty high compliance 15" C-15HC woofer. Special HC-3 matched-level network with "Presence" and "Brilliance" balance controls integrates the Diffusicone-8 in its own compression chamber for mid-range (200 cps crossover) with special UL/HC Hypersonic Tweeter (5000 cps crossover) for response to beyond audibility. Operates with power input of 20 to 60 clean watts. 8 ohms impedance. Extra-dense 3/4" thick double-braced construction, fine-furniture finish and styling. 26 3/8" x 19 1/2" x 17 1/2" deep; removable base adds 2" to height. S-11H is upright model; S-11L lowboy. User net: Mahogany-\$245, Blond-\$249, Walnut-\$253.



MODEL S-10H

ULTRA-LINEAR 12 CONSOLETTA, MODELS S-10H AND S-10L. For use where space is most restricted. Only 25" x 14" x 14 1/2" deep; removable base adds 1 1/2" to height. Model S-10H is for upright use; S-10L for lowboy. The new C-12HC 12" high compliance, low resonance woofer is employed with special UL/HC wide-angle tweeter (2500 cps crossover) and HC-2 matched-level crossover network with high frequency adjustment to match room attenuation characteristics. Operates with power input of 25 to 60 clean watts. 8 ohms impedance. Extra-dense 3/4" thick double-braced construction; beautiful natural grain, hand-rubbed finish. User net: Mahogany-\$139, Blond-\$143, Walnut-\$147.

TECHNICAL DATA

Components covered in Patent Nos. 2,641,329; 2,690,231 and other patents pending

The basic concept behind these University Ultra-Linear systems begins with a basic woofer mechanism that responds to the very lowest of reproducible frequencies with the very flattest of response throughout its entire operating range. Then, the woofer-driver speaker is built into a new type acoustic enclosure that smooths out whatever self-resonances may exist in the moving coil system. This enclosure is vented through a tubular duct towards the rear of the cabinet, accomplishing a phase inversion action without affecting its performance as a legitimate, tuned circuit for the system's extremely low resonant woofer. By use of a duct of the proper cross section of area and proper length designed around the extreme low resonance of the woofer, the enclosure performs as if it were 30-40% larger. The venting of this cabinet towards the back of the enclosure serves two purposes: (1) it relieves the short-circuiting effect of a port upon the speaker by placing the opening as far away from the face of the speaker as possible; and (2) when placed against a wall, there is additional loading of this vent by proximity to the wall. This creates essentially two radiating surfaces and thus overcomes the diffraction effects of other types of small cabinets.

The woofer mechanisms that drive these enclosures were designed to have mechanically stable high compliances, and masses sufficient to give cone rigidity. Thus, the woofer, when experiencing the large low frequency excursions of which it is capable, maintains its piston-like action over its entire operating range down to the lowest reproducible frequency. The compliance designed into these speakers is a specially formed light fibrous material impregnated with phenolics to give it stability and then treated with a newly developed plasticized rim treatment that will give lifelong protection to the very high compliance and yet maintain adequate acoustic sealing between the rear and the front of the speaker. Very low frequency cone resonances have been achieved by

the combination of the high compliance and the mass relationships of the cones. Achieving resonance by this method results in an exceedingly uniform frequency response characteristic which provides increased linearity throughout its excursion. This, in conjunction with the voice coil (designed to overhang the magnetic gap and thus produce a constant force factor over wide limits of coil amplitude regardless of coil position) insures the preservation of ultra-linearity. To achieve maximum conversion efficiency without affecting response linearity, a new magnet material, Hi Flux UNIFERROX-7, is employed in a newly designed magnetic assembly. Truly clean fundamental cone resonances as low as 15 cps in the 15" Model C-15HC woofer (used in the Ultra-Linear 15) and 18 cps in the Model C-12HC 12" woofer (used in the Ultra-Linear 12) are accomplished.

Because of the woofer and enclosure designs, these systems may be classified in the low efficiency category. However, because matched components designed to complement the woofer are used with it, greater efficiency may be obtained without sacrificing linearity than is possible with other low efficiency systems. Thus, for a given power input, reasonably high listening levels may be achieved. This is vitally important in the case of transients, where the peak power may at times severely exceed the average output power of an available amplifier. If an amplifier has to work too hard to drive a speaker of too low efficiency, the transient response of the combination will be deteriorated. Consequently, in the University design, the extra efficiency, even though it is in the so-called "low efficiency" class, will provide excellent transient response with reasonable conversion efficiency.

For over-all linearity, these systems employ other complementary speakers to complete the mid and high frequency acoustic spectrums. In the Ultra-Linear 12, the response of the woofer extends to a point where it is possible to complete the

system with simply one additional treble complementary reproducer.

By molding the low frequency response of the tweeter to a level corresponding to the acoustic output level of the woofer, it is possible to obtain a completely "flat" system over the entire operating range from the very lowest of the woofer frequencies to the very top of the tweeter range. Although the system is connected for flat response under normal conditions, the over-all level of the tweeter can be changed by a small amount when it is desired to accentuate the high frequencies. Thus the system can be adjusted to suit both the user's preference and the particular acoustic environment.

In the Ultra-Linear 15, a 3-way system is employed, whereby the upper end of the woofer is joined to the acoustic response of a mid-range speaker which, in turn, is complemented by the tweeter. This is necessary because the massive structure of the 15" basic woofer limits its upper frequency response. The mid-range is supplied by a high quality 8" cone speaker installed within the cabinet but in its own rear compression chamber, which protects it from the low frequency pressures of the woofer. It also provides an acoustic crossover for the mid-range, determined by the internal volume of the chamber. The mid-range speaker then works in conjunction with a hypersonic tweeter again balanced to be compatible with the level of the mid-range and woofer speakers. The matched-level network which integrates the three speakers is also adjustable to give a small but perceptible boost in the mid-frequencies and a similar boost to the high frequencies, if listening conditions warrant. However, this system is factory-connected for ultra-linear response.

Thus, high cone mass, high cone compliance, overhanging voice coil and complementary matched upper range units . . . plus the specially designed enclosure, all work together to produce original studio quality.

clean watts to drive Ultra-Linear, here the resemblance ends . . . transient peaks are not distorted because of excess power demands, hence you get cleaner performance. Most important, Ultra-Linear bass reproduction is effective at low volume as well as at higher levels.

There is only one valid comparison for Ultra-Linear systems . . . only one equal they acknowledge. And that is, the superlative performance of University's famed king-sized Dean and Classic deluxe systems! . . . recommended for those who possess the necessary optimum space.

In your home, an Ultra-Linear system will recreate all the brilliant reality of the lowest organ tones, the most fleeting nuances that identify tympani and percussion . . . with such faithfulness . . . that you will listen relaxed and without "ear fatigue," hour after hour. Ultra-Linear systems are ideal, too, for binaural and stereophonic installations.

The data on these pages tell you how truly momentous University Ultra-Linear speaker systems are. But the real test is when your own ears tell you how they live up to every specification, and more! Hear them soon . . . at your dealer . . . and learn that finally there is a genuine answer to the small-space speaker problem!

Incredible but true . . . these new Ultra-Linear speaker systems tell your ear that here is luxurious "big system" performance that brooks neither blurred bass nor strident treble. Yet your eyes see only these handsome, convenient-to-place enclosures that are fully 40 to 80% smaller than previously available systems of similar performance standards!

Yes, here is the "impossible" brought to miraculous tonal reality . . . a small enclosure that leaves nothing to be desired in musical performance. Here, at last, is authentic, distortion-free bass in limited enclosure volume . . . completely new, completely different, a most significant forward step in loudspeaker design.

Do NOT confuse University Ultra-Linear systems with other small units that offer an acoustic compromise acceptable only because of necessity. The Ultra-Linear 12 and Ultra-Linear 15 systems employ newly designed, specially high-compliant woofers tolerating no artificial resonances that "mask" bass deficiency. Mid-range and tweeter performance is balanced to assure completely flat ultra-linear response to beyond the limits of hearing range.

Do NOT confuse Ultra-Linear systems with other "low efficiency" transducers. Though you will need about 20-25

COMPONENTS USED IN ULTRA-LINEAR SYSTEMS ARE AVAILABLE INDIVIDUALLY FOR THE DO-IT-YOURSELFER

LISTEN

University sounds better



BEST BUY

The 99 — more features than ever before — still only \$99.95.

Features like these make the 22 watt 99D complete amplifier a *real* Best Buy . . .

NEW! Front panel speaker selector switch. Choose between two speakers, or play both.

NEW! Front panel tape recorder monitor switch so you can check your tapes as you record them.

- Pickup selector switch lets you choose between either record changer or turntable
- Tape playback channel lets you play pre-recorded tapes direct from tape heads without external pre-amp
- Separate rumble and scratch filters make even old and worn records sound good
- Separate bass, treble and loudness controls
- All aluminum chassis and direct current on pre-amplifier tube heater assures inaudible hum levels.



Famous artists like Metropolitan Opera soprano Eleanor Steber choose H. H. Scott components for their own homes.



Back and top view of the 99 showing accessibility of all external connections. The spacious layout of all parts on this aluminum chassis assures conservative operating temperatures and long life of electronic parts.

"... (The 99) will drive an AR Janszen speaker system at uncomfortably loud levels without distortion or hum, even with an ESL cartridge minus transformer, and that is one of the most exacting listening tests one can apply to an amplifier."

— Audio League Report, Feb. 1957 (Vol 2, No 4)



Perfect Companions — H. H. Scott's FM tuner (model 311) is a perfect match for the 99. At \$129.95 it's a best-buy too!

Additional Technical Information:

Power rating 22 watts; green dot controls for simplified operation; frequency response flat 20cps to 30kc; harmonic distortion less than 0.8%; hum and noise 80db below full output; dimensions in mahogany case 15 1/2" w x 5 h x 12 1/2" d. \$99.95. Choice of handsome accessory cases \$9.95 and \$19.95.

Prices slightly higher west of Rockies.



Shown below: The new H. H. Scott 22 watt 99D complete Amplifier

Furniture and Accessories Courtesy Rapids Furniture, Boston.



Hi-Fi hits the Sawdust —

or, don't put that mike on the barroom floor

THE CRAZIEST THINGS can happen in New York on a Sunday afternoon, says Ben Hall, producer of Westminster's off-beat and slightly outrageous recording, *The Mike on the Barroom Floor* (WP 6056). "There I was, walking through the meat packing district near the River (don't ask me why . . . I was just walking), thinking how quiet and downright deserted the neighborhood was, when I heard piano music coming from around the corner of a packing house. Then I saw a girl in a very pink dress through the window of a little bar. She was dancing like Saturday night at Roseland, and while she was dancing she was singing 'A Good Man Is Hard To Find' and really putting her heart into it. So, naturally I went inside.

"The place turned out to be McCarthy's Bar & Grill," Ben continues, "though not so you could tell from any sign on the outside. It was practically awash with as fine an assortment of happy souls as you'd ever hope to find outside a Saroyan play. The girl in the pink dress announced she was Dolly Duffy — a rare spirit with a checked-tablecloth personality, a malty voice, and a repertoire to match."

About four beers later, as Ben tells it, the music and general spirit of West Greenwich Village *gemutlichkeit* got better and better . . . everybody was singing and dancing and telling fony stories . . . until he could stand it no longer. Leaving half a beer on the bar as hostage, he dashed home, snatched up his Ampex tape recorder, and was back at McCarthy's before you could say "Less Non-Fermented Sugar."

His idea was to capture some of the rowdy fun on tape. The microphone, instead of putting a damper on things (as Ben feared), simply spurred the McCar-

thy regulars on to new heights of music and song. Frank, the piano player, outdid himself on the battered half-size upright. Dolly and her crew — brothers Francis and Bobby, sister Marion, nephew Donald — had the glassware jumping on the shelves with their singing. Even George got into the act from behind the bar with a couple of ballads. And, from his wobbly perch on a stool at the far end of the mahogany, Robert "Rubberlegs" Rittenhouse, the Poet Laureate of McCarthy's Bar & Grill, kept up a running fire of wry quips, sprightly verse, and occasional song. In the

end *everybody* in the place was joining in.

After the Regulars had finally worn themselves out and the tape reels run down, Ben packed up, went home and tried the tape on his hi-fi.

What he heard is just about the same thing you'll hear on *The Mike on the Barroom Floor* . . . a saloon full of warmhearted people having themselves a good time.

As "Rubberlegs" Rittenhouse sums it up on the record: "You mean that went out on the air? I'm going to get arrested!"

NOW... there's a

GARRARD

Auto-Manual Record Changer for every hi-fi system

World's Finest RECORD PLAYING EQUIPMENT from Manual Players to Professional Transcription Turntables

RC 88
Deluxe Changer
\$54.50 net

Full manual and automatic positions. True-turret drive... uses no belts. 4-pole "Induction Surge" motor. Fool-proof Garrard Pusher Platform.

RC 121
Mix Changer
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Garrard's most compact, economical changer — fits any cabinet. Simpli-Mix Operation permits stacking all record sizes together. 4-pole motor. Manual position.

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All RC 88 features, including full manual position and true-turret drive, PLUS continuous + or - variable speed control on all speeds.

301
Turntable
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Supreme in its class. Individual card gives performance measurements for each unit. Dynamically balanced cast aluminum turntable. Heavy-duty 4-pole shaded motor.

New Model T
Manual Player
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This is the answer for a quality budget system. Incorporates all record playing features of the Garrard automatic changers. 4-pole motor; automatic stop.

NO FINGERNAIL FUMBLING!

Exclusive

"T-GUARD"

STYLUS

only with the
fluxvalve

PICKERING'S introduction of the truly miniature FLUXVALVE magnetic phonograph cartridge represents a new era in high fidelity cartridge design. This newest of PICKERING cartridges brings the music lover the most exciting and safest idea in a stylus assembly since PICKERING introduced the first lightweight high fidelity pickup more than a decade ago.

The "T-Guard" stylus assembly is a quick-change, easy to slip-in unit which eliminates precarious finger-nail fumbling. Its practical "T" shape provides a firm and comfortable grip for safe and easy stylus change.

The most flexible cartridge in the world... the FLUXVALVE is the only cartridge with the remarkable 1/2 mil stylus... exclusive only with PICKERING. The FLUXVALVE can be used with any one of five styli, to meet any requirement or application... to play any record, at any speed.

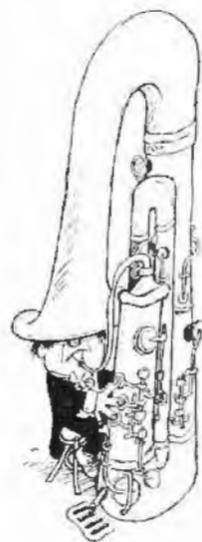
If you are planning to buy a new cartridge—the fact that PICKERING developed this revolutionary stylus is important to you! All of the research, development and planning that went into the "T-Guard" stylus is conclusive proof of the superlative engineering skill in every FLUXVALVE model you buy.

FLUXVALVE SINGLE SERIES 370—A miniature high quality cartridge for use in any type of auto-changer or manual player arm. Available in 5 models, prices start at a low \$17.85.

FLUXVALVE TWIN SERIES 350—A turnover cartridge providing a rapid change of stylus point radius. Available in 12 models featuring many combinations of styli, prices start at a modest \$24.

Model 194D UNIPOISE Pickup Arm—This new... lightweight... integrated arm and cartridge assembly containing the FLUXVALVE with exclusive "T-Guard" stylus... is only a fraction of the weight of conventional tone arms. High compliance and single friction-free pivot bearing assure distortionless tracking of microgroove and standard groove recordings. Available with the 1/2, 1 or 2.7 mil diamond stylus. Prices from \$59.85.

For those who can hear the difference... THE QUALITY HIGH FIDELITY PRODUCTS BY
PICKERING & COMPANY, INC.,



The charms of music as interpreted by Mr. Hoffnung.



GERALD HOFFNUNG

Disc Debut

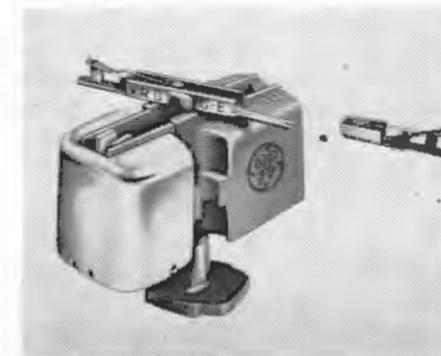
A GARDEN HOSE attached to the rear end of a vacuum cleaner has obvious musical possibilities to the pleasantly perverted mind of Gerard Hoffnung, and to prove them he organized something that he insists on calling a symphony orchestra. Mr. Hoffnung is primarily a cartoonist who delights in drawing preposterous musicians playing preposterous instruments. Lately he's been stepping out of line by converting his sight gags into sound gags, and some of them are so funny that more than three thousand people piled into London's Royal Festival Hall to endure an all-out assault on their musical sensibilities. Angel Records preserved the historic event for posterity. What this disc will do to our cultural heritage is still unforseeable, but it afforded Mr. Hoffnung the opportunity to make his disc debut as a virtuoso on the subcontrabass tuba, which is a sort of tuba's tuba and goes to show how low you can get. On this disc (Angel 35500) no musical cliché remains unheckled, even if it takes a heckelphone to do it. It helps to be English to understand some of the spoof, but it is a matter of record that on the surface of it a good time seems to be had by all—including you and me. ■■■

...In with the new!

MANY AUDIO old-timers—and ten years make an old-timer in this fast-developing field—got their first taste of tonal treats about ten years ago when they replaced their old, heavy crystal pickup with a newfangled design by General Electric working on magnetic principles.

The "G.E. cartridge" has become a hi-fi byword. Over a decade its design remained essentially unchanged, but it retained a loyal following of hi-fiers throughout the world. Its clean, undistorted sound so appealed to musically sensitive ears that many hi-fi fans were willing to forego the somewhat wider frequency response of later rival designs for the sake of the "sweet" tonal quality of the "G.E." Even New York's technically and musically fastidious radio station WQXR stuck faithfully with the "old" G.E. for broadcasting recorded music.

Yet compromise is now no longer necessary. At long last, General Electric has developed a new "G. E. cartridge," heir apparent to its distinguished ancestor. The new Model VR-II retains the basic design and pleasing cleanliness of tone of its predecessor, but the frequency response has been extended to 20,000 cps (beyond the range of human hearing). This puts the VR-II on par with its present-day contemporaries in



The new General Electric VR-II cartridge represents an improvement over its popular predecessor in terms of frequency range and tracking force. Replaceable clip-in stylus is shown as it slides from the stylus bracket.

terms of frequency response. In tonal character the cartridge belongs to that smooth, sweet-sounding group that is typified by the sound of the Electro-Sonic and Grado cartridges. The G.E., however is higher in output and lower in price than most cartridges of comparable performance.

The weight of the new model has been lowered and the compliance of its stylus assembly increased to the point where

it will track at about 3 grams pressure in a good tone arm. Yet it will also operate satisfactorily (at somewhat higher needle pressure) in ordinary record changers.

The new VR-II once again brings General Electric into the forefront of cartridge design. With its clean, wide range it offers a low-priced short cut to the higher regions of tonal fidelity. ■■■

OXFORD HI-FIDELITY SPEAKERS

Optimum Range at Minimum Cost!

Engineered for finest performance at minimum cost, OXFORD HI-FI SPEAKERS have a flat response throughout the audible range and are capable of handling the range of power inputs necessary for finest high fidelity reproduction.

Instrument	Frequency Range (cps)
VIOLIN	200 - 20,000
CELLO	100 - 10,000
FRENCH HORN	100 - 10,000
BASS VIOL	100 - 10,000
PIANO	100 - 10,000
FEMALE VOICE	100 - 10,000

COAXIAL SPEAKERS

C12J408 12"
Frequency response: 40-15,000 cps.

C15L608 15"
Frequency response: 30-15,000 cps.

EXTENDED RANGE SPEAKERS

HFB8JB 8"
HF10JB 10"
HF12JB 12"
HF12LN 12"
HF15LN 15"
Frequency response: 70-10,000 cps.

FULL RANGE SPEAKERS

F8J408 8"
Frequency response: 50-13,000 cps.

F12J408 12"
Frequency response: 50-12,000 cps.

F12L608 12"
Frequency response: 40-10,000 cps.

TWEETERS

T3C208 3"
Frequency response: 1,800 to 15,000 cps.

T5C208 5"
Frequency response: 1,100 to 15,000 cps.

Finer HIGH FIDELITY SPEAKERS... engineered for best reproduction... designed to sell.

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*outstanding honors bestowed, unsolicited, by most recognized testing organizations.

No matter what your source of music—FM, your own discs, or tape—you will enjoy it at its best coming from Sherwood's complete home music center... most honored of them all! Sherwood tuners for example...

First to achieve under one microvolt sensitivity for 20 db FM quieting increases station range to over 100 miles. Other important features include the new "Feather-Ray" tuning eye, automatic frequency control, flywheel tuning output level control and cathode-follower output.

Model S-2000 FM-AM Tuner \$139.50 net
Model S-3000 FM (only) Tuner \$99.50 net

SEE THESE FINE SHERWOOD PRODUCTS AT OUR STORE.

SHERWOOD

ELECTRONIC LABORATORIES, INC.

The "complete high fidelity home music center."



In New York hear "Accent on Sound" with Ship Washer, WBAI-FM, week nights, 9 P.M. In Los Angeles, KNHM-FM, 10 P. M.

On the hi-fi record

(Continued from page 5)

A case in point among the seven planets depicted is Jupiter, "bringer of jollity"; we realize now he's more folksy than fustian, as Holst sees him, but we like it just as much, even so. Capitol's engineers and Stokowski's conducting (with the women of the Roger Wagner Chorale and the Los Angeles Philharmonic) combine to produce a remarkable version, conducting skill couched in brilliant sound (CAPITOL P 8389).

* * *

The crowns of the issue of complete Beethoven piano concertos by Rubinstein (RCA VICTOR LM 6702, 5 discs) are worn by the pianist's beautiful and thoughtful Fourth Concerto, and his "Emperor" of regal proportions. This remarkable pianist continues to grow, as can be discovered by comparing his earlier versions of the Third and Fourth concertos with those in the present release. Joseph Krips' accompaniments (conducting the Symphony of the Air) are affectionate and generally adept, although one misses the sharper contrasts Malcolm Sargent provided backing the great Artur Schnabel, pianist of another era (VICTOR LCT 6700). Plenty of recorded space is allotted this issue; even the shorter concertos receive a full disc each. The resulting sound is warm and full, perhaps the best in the final two concertos.

* * *

Tape recorder music is the more unusual side of a new release by Composers Recordings, Inc. (CRI-112) featuring music for that medium by Otto Luening and Vladimir Ussachevsky. Ussachevsky's "A Piece for Tape Recorder," Luening and Ussachevsky's "Suite from King Lear" (tape recorder), and their "A Poem in Cycles and Bells" (for tape recorder and orchestra) could be given extended comment. But we suggest a sound-picture is worth a thousand words; it is listening that will tell the interested music-lover about these scores. Those with open ears will perceive that tape-composing experts Luening and Ussachevsky have given us interesting, listenable, and likable music, working

in an unusual medium of real potential. The result is a challenge to the tolerant and curious, as well as a workout for their audio equipment.

The very first notes of Bergsma's "Fortunate Islands" on the same disc set a warmly expressive mood for his entire essay; the composer's island-picture convinces, nay entrances. Alfredo Antonini conducts the Orchestra of the National Academy of St. Cecilia, Rome.

* * *

Whereas Luening and Ussachevsky write works with and "for" a tape recording machine (which can either appear solo or with orchestra), the French composers Henry, Philippot, and Schaefer have added another step in "musique concrete," further manipulating their material by means of the "Phonogene," an instrument capable of reproducing tape-recorded sound-stuff at speeds calibrated according to the degrees of the chromatic scale. (DUCRETET-THOMSON DTL 93121). The results are remarkably inventive and clever (as some of the titles such as Tam-Tam IV, Erotica, Apostrophe, and R. A. I. Bird would suggest), and certain of the selections (as Henry's "Astrologie") have a grip and atmosphere similar to the Luening-Ussachevsky "King Lear" music. Perhaps it is because the Frenchmen compose with less abstract sounds (for instance, they use manipulations of the human voice, which the Americans don't seem to), that in these works one is more conscious of the medium than of the music present; with musical expressivity the final criterion, the more abstract-sounding Americans are more convincing. An engrossing record, nonetheless, and some of its splendid percussive sounds are a real test of one's hi-fi rig.

* * *

An interesting, listenable work that's most enjoyable at the very first hearing, is Harold Shapero's Serenade in D for String Orchestra (M-G-M E 3557). Neoclassic in its forms (reminding one of Beethoven) and suggesting influences by Stravinsky, Copland, even a bit of Mah-

(Continued on page 22)

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Tape Reviews

By Edwin S. Bergamini

STRAVINSKY: *Sacre du printemps*. *Monteux, Paris Conservatory Orch.*
RCA VICTOR ECS-67. Stereo.

"Sacre" on stereo!!! We shan't recommend this release for small apartments! Although the great pagan ballet's shrieking brasses and booming bass drum are heard here as never before, the stereo medium also gives beautiful definition to the quiet string tracteries in the Pagan Night tableau. Maitre Monteux premiered "Sacre" in 1913; we can only be thankful he has remained active (and amazingly so) until the era of stereophonic recording to give us this definitive document.

* * *

The first Mercury stereophonic tapes to reach us offer a splendid sound in Carpenter's "Adventures in a Perambulator," with a subtle and finished blend of the spatially separated voices. (MERCURY MDS 5-2). Carpenter's formula-fied infant still snoozes, as we remarked when reviewing the disc, Mercury MG 50136. But stereo sonics show us more of, and make for greater interest in, Carpenter's gentle score in this affectionate performance. (Hanson, Eastman-Rochester Symphony).

* * *

And we suggest "Music for Hi-Fi Bugs" (MERCURY MDS 3-1) as a fetching change of pace from Beethoven and Bartok! The settings of "Once in a While," "These Foolish Things" (faintly satirical?) and five other titles are tasteful and imaginative as arranged and conducted by Pete Rugolo. And if the various bugs brightly photographed in color on the tape box's cover were as vividly alive as the remarkable sonics trapped on the reel inside, we'd be reaching for swatters and insect spray fast!

* * *

Vanguard's latest well-considered service to music-lovers is its introduction on stereo tape (excepting No. 101, the "Clock" symphony, already re-

leased by Concert Hall Society) of the last half-dozen Haydn symphonies, of which two are reviewed here (VANGUARD VRT 3002 and 3004). Woldike brings a solid, genial musicality to his readings of the "Military" (No. 100) and the "London" symphonies, and the Vienna State Opera Orchestra responds with sensitive and accurate playing. Vanguard's engineers have arranged for some suavely beautiful sonics that do real justice to the "Military" symphony's grand "Turkish music" instrumentation (extra percussion, involving bass drum and cymbal plus side drum and triangle, popular in Continental military bands around 1800); the noble sounds are excellently present, but not over-prominent.

* * *

The half-dozen excerpts from the Christmas section of Handel's "Messiah" (BOSTON BO 7-9) include "And the Glory of the Lord," "He Shall Feed His Flock" (and the following "Come unto Him"), "For unto Us a Child is Born," "Thou Shalt Break Them with a Rod of Iron," the "Hallelujah" chorus and (from the Easter section) "I Know that My Redeemer Liveth." Soprano Adele Addison is beautifully touching in "Come unto Him," David Lloyd rhetorically impressive in "Thou Shalt Break Them," and the Hallelujah Chorus sounds gloriously Christmassy, borne on winged

(Continued on page 22)

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Tape Reviews

(Continued from page 20)

stereo sound. The other soloists are Lorna Sydney, contralto; and Donald Gramm, bass. Thompson Stone conducts the Zimble Sinfonietta and the Handel and Haydn Society Chorus.

* * *

The glowing affection and intrinsic flow of the performances makes the *stereo debut of the Bach "Double" Concerto* a praiseworthy one (CONCERT HALL SOCIETY EX-46). Violinists S. Gawriloff and F. Wuehrer are matched and musically sensitive; their accompaniment by Goehr and the Hamburg Chamber Orchestra is well pointed-up and vigorous. Excellent stereo sonics separate (but by no means unravel) the work's beautifully woven lines, for a clearer and more complete appreciation of the whole of Bach's ever-wondrous score.

* * *

Fun! We turned the volume up on two new Victor tapes, the *Ibert "Divertissement"* and the *Rossini-Respighi "La Boutique Fantasque"* (RCA VICTOR ACS-54 and CCS-53) and found ourselves vividly at a Pops night in Symphony Hall, Boston. Vivid is indeed the word for these stereo tape versions of Fied-

ler's excellent performances with the Boston Pops Orchestra (in disc form on Victor LM 2084, with Piston's "Incredible Flutist"). Ibert's jazzy and satirical "Divertissement" and Respighi's ballet score of gay Rossini tunes emerges gloriously; here, even more than in the fine disc version, there is a bright clarity and differentiation in space of instrumental detail that makes for exciting listening. We feel today's stereo tape fan should settle for nothing less!

* * *

Another stereo debut is *Richard Strauss' "Bourgeois Gentleman,"* Reiner's robust and knowing portrayal with the Chicago Symphony (RCA VICTOR DCS-43). This performance in disc form (LM 6047) has some noteworthy competition, with the additional factor that some of these versions (as Leitner's, Markevitch's and others) of the nine-movement suite are complete. But the excellently done stereo sonics make up for much of, even if they do not surely replace, Reiner's omission of Lully's Minuet and the Courtane. Most worthwhile.

■ ■ ■

On the Hi-Fi Record

(Continued from page 18)

ler, Shapero's melodious, rhythmically lively work has its own personality, speaks its own message. The performance by the Arthur Winograd String Orchestra under Winograd seems very well shaped, the recording likewise.

* * *

Clara Haskil's recording of *Schumann's "Kinderszenen"* and "*Waldszenen*" is a gem. The pianist has a lovely feeling for this music, which never yields to extravagances. Note here especially the "Forest Scenes," much less well known than the much-loved "Scenes from Childhood," and utterly charming. The piano recording is of crystal purity, a true complement to the pianist's limpid performances and a service to listeners (EPIC LC 3358).

Columbia's recent reissue of *Mozart quintets* by the Budapest String Quartet (this time with Walter Trampler as violist) includes one it had not recorded before. The B flat Quintet, K. 174, is given a searching and revealing performance. This is its only recording at present (COLUMBIA ML 5191). Its poignant adagio movement makes one think both of Boccherini, and of Mozart's own later and greater efforts. Over-side, the performance of K. 406 is also deeply felt, even if owners of the Budapests' earlier effort (with violist Milton Katims, on ML 4143) may feel reluctant to replace it with this excellent new recording. Note: this quintet's original setting is for winds and is listed as the Serenade, K. 388.

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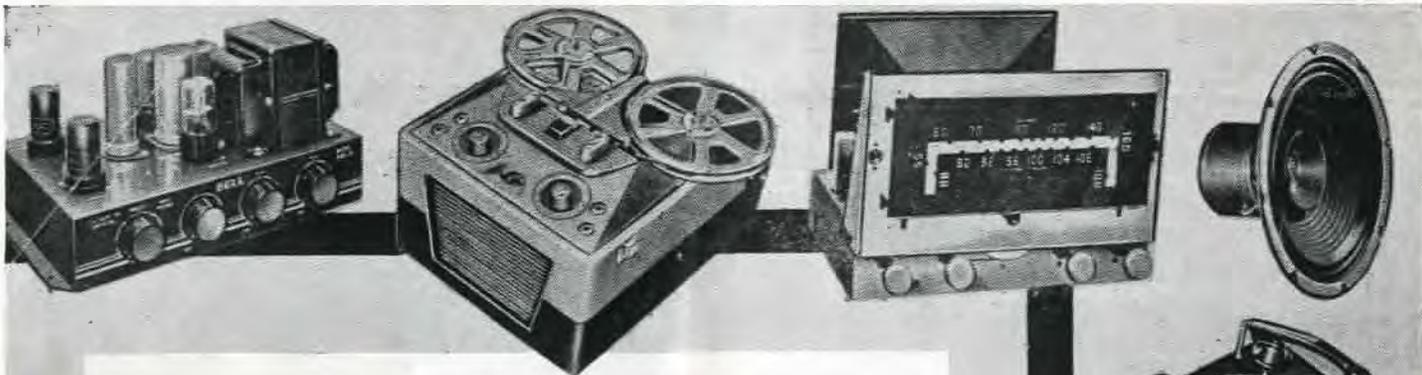
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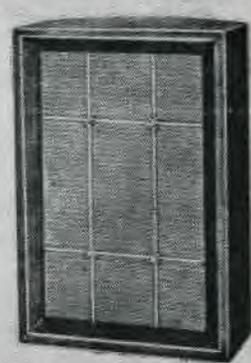
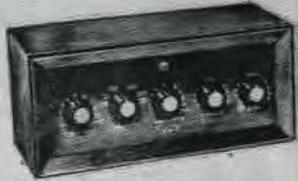
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