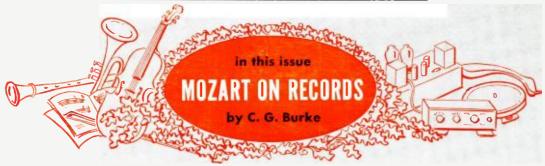
High Fidelity

MAY-JUNE VOL. 3 NO. 2 · PUBLISHED BY MILTON B. SLEEPER · PRICE \$1.00





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OF 1952*



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order

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hears him. Now comes the magnificent REVERE TAPE RECORDER,
with its lifelike reproduction, and the artist can hear his own playing
as never before. In this age of universal recording and broadcasting,
the REVERE TAPE RECORDER is invaluable to every performer."

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Landon-born Clifford Curzon is internationally acclaimed "among the greatest keyboard artists of the time." He was already famous throughout Europe when he made an instantaneous success at his New York debut in 1939. Since then, he has played self-out performances with almost every major American orchestra, and made numerous recordings and radio appearances—always interpreting music "with the speed of light in his fingers and in his hands the thunder of Jove."

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High Fidelity

THE MAGAZINE FOR MUSIC LISTENERS

This Issue. At 10:30 a.m. Sunday, February 22, while the chorus of the Broadway hit, Hazel Flagg was roaring "Where's Hazel?" (see page 30), Associate Editor John Conly was prowling



Hazel by Leo

around Manhattan Center whispering "Where's Leo?" Fortunately — since whispering at a recording session is a risky practice — Leo soon showed up. Now it's his turn to ask "Where's Leo?" Somehow, page 27 got into the magazine lacking a line of credit for the man who was practically co-author of the story: Leo Friedman, photographer.

Next Issue. One day before balmy weather set in, Edward T. Wallace, the Hi-Ho Fidelity man, foregathered in a cozy New York bistro with a lanky young Englishman whose name is sworn by wherever amplifier-fanciers meet: D. T. N. Williamson. As they chatted, Wallace conceived the idea of doing a series of personality articles on the men (and women) behind your music - notables in the field of audio equipment, recording and music. We seconded Wallace's notion, so he starts the series in July, with Mr. Williamson. In the same issue will be another profile-article, but not of a person. Its subject will be Station KPFA, Berkeley, Calif., one of the few (if indeed there are any others) FM good-music stations supported by listener-subscription. It's author: Alfred V. Frankenstein.

CHARLES FOWLER, Editor
JOHN M. CONLY, Associate Editor
ROY H. HOOPES, JR., Assistant Editor
ROY LINDSTROM, Art Director
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Volume 3 Number 2	May-June 1953
As the Editor Sees It	9
Readers' Forum	
Making Hazel, by John M. Conly There are few dull moments during to Broadway musical-comedy hit	be recording of a
WFMT: Chicago's Ivory Tower Station, by The story of a love-affair between two b preneurs and several thousand listeners	right young entre-
London Newsletter, by Donald W. Aldous	
Operation Yagi, by H. S. Rummell How a rooftop Nimrod stalked Mozart am	37
In One Ear, by James Hinton, Jr	
Music All Around the Home: Installation I	
How to Reduce Hum and Such, by Victor H. Multiple speakers, remote controls, sensit. equipment the connections must be right	ive
MUSIC AND RECORDS SECTION	
Records in Review: Serious Music on	Microgroove 49
The Best of Jazz	56
The Music Between	58
Dialing Your Disks: Record Equalization	on-Chart59
Building Your Record Library: Bach, by	David Randolph 60 (Part I) 61
Mozart on Microgroove, by C. G. Burke Beethoven Up-to-date, by C. G. Burke (Part II)
The Junior Air-Coupler, by Roy F. Allison.	
Big, full, air-coupler bass, from an enclos a Texan's suitcase	sure no larger than
Tested in the Home	_
The Scott Line	83
The Kelton Speaker	85
The Regency FM Signal Booster Two Demagnetizers	85 86
The Collaro Record Players	
The Pentron Tape Recorder	
The Brociner Model 4 Corner Reproduc	er 90
The Pickering Dual Cartridge	90
Audiophile's Bookshelf	104
Professional Directory	
Trader's Marketplace	
Important Books	
Advertisers' Index	127

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AS THE EDITOR SEES IT

F YOU want to have some fun, learn a good lesson, and wind up confused—gather together three or four loudspeakers and half a dozen people. Run any series of tests the audience wants. Play music, pure sound, white noise, anything—and have the listeners write down their impressions and reactions, independently. When the test is over, assemble these documents and try to write a majority report.

If the speakers so tested are of approximately the same quality, you are likely to find it impossible to get unanimous agreement that one speaker sounds best, all around. One person will like this speaker for voice, another speaker for chamber music, still another for full orchestral music. There will be disagreement as to which unit sounds best in the bass range, further disagreement about best reproduction of solo violin — and so on and on.

There are many reasons for such disagreement, and it is important to be aware of them. First, of all the components in an audio system, loudspeakers and enclosures are most subject to variation. Put identical speakers in three different cabinets and you will have three different qualities of sound. Reverse this: put different speakers in identical cabinets. Again, the interaction of speakers and cabinets will produce wide dissimilarity. One will sound brilliant, another muted.

We might call these variations technical ones. They can be controlled. It is technically possible to produce two speakers-and-enclosures almost identical in sound.

Another reason for apparent variations among speakers is the well-known factor of room acoustics. Acoustical properties vary not only from one room to another, but even within a single room. For a perfect example, try this dirty trick, which we played on a group of people not long ago. We ranged three speakers along one wall of our workshop: two corner enclosures, properly located, plus a bass reflex against the wall, centered between the two corner units. We fed one of the units with a low-frequency tone from an oscillator, and then found a spot in the room where this sound was almost completely inaudible. We ushered our human guinea pigs into the room one by one; made them stand in the dead spot, flipped a switch, and asked if they could hear anything. "Something, but not much." "All right. Now walk around the room and tell us which speaker is producing the sound you will hear."

In each corner of the room, that low tone really pounded out. There was some disagreement as to which of the two corner speakers produced the sound, but it was very definitely one of the two.

Only it wasn't. The sound really originated in the bass reflex.

And now to this second variable, we shall add the worst one of all: you. Not only is your hearing response un-

like anyone else's, but it varies in accordance with what you want to hear. If the person sitting next to you at a concert is sufficiently oblivious to the social amenities, he can carry on a conversation with you all through the concert. He won't have to raise his voice very much if at all, and you will understand everything he says. Yet, at your ear, the sound level of the orchestra will be hundreds of times louder than that of your neighbor's voice. Your psycho-auditory system simply blocks out the orchestra.

Add together these variables and you have important reasons for (1) selecting a speaker by listening tests, if possible; (2) experimenting with the enclosure unless you are positive it provides the best possible match to the speaker; and (3) trying the speaker and enclosure at different locations in the listening room.

 ${f R}$ EREADING the foregoing paragraphs brings up a matter with which we would like your help. HIGH FIDELITY does not have any official question-answering department. We mentioned such a possibility in our first issue and were promptly swamped so badly that we are still behind! Nevertheless, we do try to help readers with their audio problems, insofar as an extremely overburdened editor's time will permit. In this connection, it will be most helpful to us if, when you write, you will give complete details of your system, even to a detailed floor plan of the listening room if room acoustics may be a consideration. The sources of audio trouble, and the spots where improvements can be made, are legion and often unsuspected. Unusual but nevertheless somewhat typical was the case of the man who complained of an ailing tweeter. After several letters it became apparent that the tweeter was in fine health, but that his stylus was worn out.

The stock questions of "What is the best hi-fi system?" and "Which is the best amplifier (or whatever)?" have to go unsatisfactorily answered because too much depends on subjective factors.

AND, speaking of problems, the audio industry now has a problem-solving committee. Designated the Audio Industry Committee and chaired by Larry Epstein of University Loudspeakers, it has a twofold and worthwhile purpose: first, to define the problems and, second, to work toward a solution for them. HIGH FIDELITY wishes the Committee much success and will, of course, cooperate with them. Readers who have suggestions regarding manufacture, distribution, sales and servicing of audio equipment are urged to write to the Magazine, marking the letter "Attention AIC".

The beautiful Peruge

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Pivoted, tilting top panel opens with brass pull and mounts all conventional tuners. In open position, controls are at easy-to-read 65 degree angle. Amplifier is mounted on back panel which is readily removed. Changer drawer is directly below tuner panel and is mounted on roller slides for smooth operation.

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IT MAKES Good Sound ... AND Good Sense, too

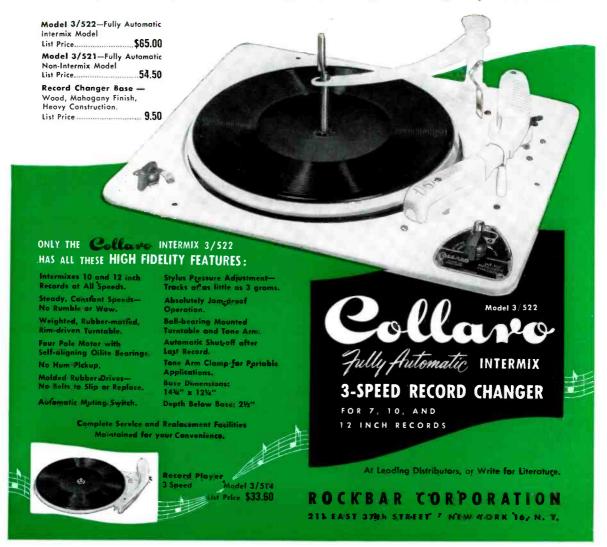
you buy good records so you can enjoy good sound. You fondle these records, and handle them ever so gently, because you know that once the surfaces are marred, the quality will be gone to you forever.

You must realize then, that your record changer becomes an all-important factor in the matter of record quality. It must treat with your records even more gently than you could yourself, and it must contribute nothing which might impair the quality of the sound. Its tone arm must track at light stylus pressures and with free lateral compliance to protect the groove walls from wear.

Its speed must be constant for correctness of pitch, and to avoid 'wow'. It must be free from rumble, and from audible resonances. It must retain and reproduce all of the quality in the record, protect it for future plays, and it must contribute no distortions of its own.

In the light of these requirements, examine the features of the COLLARO, and see if they don't meet all the exacting specifications that make this

The High Fidelity Record Changer for High Fidelity Reproduction



AUTHORitatively Speaking

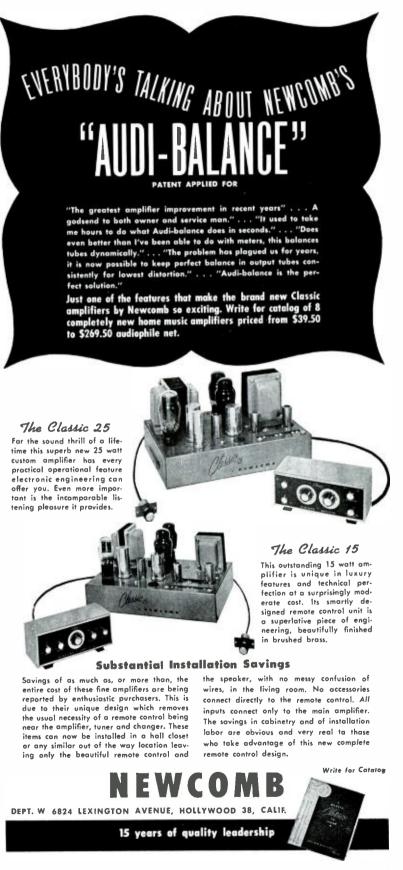
Anton Hafner Remenih, biographer of WFMT, Chicago's Ivory Tower Station (page 32) now lives, he says smugly, a prosaic suburban existence in which trimming rose bushes is high adventure. 'Twas not ever thus. A journalism school graduate (Illinois '38), Remenih was in Japan when World War II began. He got out just before Pearl Harbor, but the OSS promptly sent him back to the Far East, this time to the Northwest China front, held by our thenallies, now-enemies, the Chinese Communists. Remenih lived in a cave, exchanged many a gambei (toast) with such Red bigwigs as Mao Tse Tung and Chou En Lai, and danced with their wives. Now he dances with his own wife, such time as he isn't monitoring the air waves for the Chicago Tribune, where he serves as assistant TV-Radio editor.

Harry Rummell, the roof-climbing music-lover of Deansboro, N. Y., and author of the FM-antenna saga Operation Yagi (see page 37) is a Missourian by raising. He moved north, to join the sales staff of a Utica manufacturing company, last year. His writing is avocational, but he could hardly be called an amateur, having been published by Reader's Digest, Ladies' Home Journal, Esquire and American Mercury. Mostly his subjects have been flavored by the Great Outdoors—he's a hunter.

Victor Pomper, authority on Hum and Such (page 46) has appeared in these pages before, as author of Controls and the Amplifier (May, 1952). He is a large, curly-haired bachelor who serves currently as right hand to Herman Hosmer Scott, maker of amplifiers and such.

John S. Wilson, newest HIGH FIDELITY record reviewer, sells a short story every five years. Last one went to Collier's; next is due any day now. Meanwhile he reviews jazz disks for the New York Times and — well, we just told you. He was forced to become a reviewer by his conscience. A friend of his came into possession of a record of Missisippi Mud featuring Bix Beiderbecke. He didn't seem to appreciate it, so Wilson stole it. Now, as a reviewer — hmm, they don't call it stealing. He lives in Morristown, N. J., and — next to jazz — likes Bartok.

David Randolph, who begins the new record-page feature, Building Your Record Library, with ten basic Bach disks this issue (page 60), had a brainstorm recently. The second of England's Queen Elizabeths was about to be crowned. When the first one was crowned, he recalled, the nation's leading musicians were corralled to compose a coronation-bouquet of madrigals. It occurred to Randolph that there would never be a better time to reassemble this bouquet and put it on disks. He suggested this to Westminster Records, where prompt agreement was forthcoming, and alerted the Randolph Singers for work on what will be a two-disk set, published in May, called The Triumphs of Oriana. The 17th Century madrigalists, organized by Dr. Thos. Morley, called their queen Oriana, for reasons best known to themselves.





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Noted with Interest:

Roy, Roy, and Roy

We do not quite understand why, with life as confusing as it already is, we had to make it worse for ourselves. But we did, and we're glad we did, too.

Time was that when we yelled "Roy!" around the Publishing House (home of HIGH FIDELITY, Communication Engineering, and Television and Radio Engineering) one head appeared: that of Roy Allison, editor of CE and TV&R. Now when we yell, three heads appear . . . and it's a right wonderful if bewildering feeling.

The Roy Lindstrom head belongs to the chap with the wondrous art ability who won our enthusiasm with a cover design for the January-February issue, and then promptly created the art work for this month's cover. From then on, we called him up at weekly intervals, usually at about 1 a. m., to ask why he had to stop with the cover. He finally gave in (Roy L. values his sleep), and the effect of having him as a full-time member of our staff is more than apparent from the extra attractiveness of this issue. Roy L. is an amateur violinist, an advanced hi-fi amateur, and a definitely professional artist.

The third Roy head belongs to Roy Hoopes, Jr. We're not so enthusiastic about Roy H. He's a nice enough guy, at times. But too often he appears when we have not yelled "Roy!" He just shows up in the doorway, blocking most of it with his six feet, and looks at us. Frantically, we try to think just which piece of the editorial content of this issue we had promised to deliver to him at that specific moment, and what excuse we can offer for not having it ready.

You can see what Roy H. does around here. Carries a long, black whip. Wears an ugly mask. Crops up in feverish nightmares. Scares the daylights out of Ye Editor and even out of intrepid John Conly, who still insists he's been lashed by better men. Never does any work, of course. Just gets other people to do it. With perseverance, he'll probably get HIGH FIDELITY out to readers precisely on time. Make a better magazine out of it, too.

Roy H. used to be with Time-Life Internation, where he was Assistant to the Managing Director. Another one of those do-nowork-yourself jobs. It is reported that Life, in spite of Roy. managed to put out the first issue of the South American Life precisely on time.

Er...oh, welcome to HIGH FIDELITY's scatter-brained staff, Roy. In an unguarded moment, we'll admit we needed you desperately.

In the dither over having three Roy's around here, we have overlooked another confusion. We have, obviously, found it unsatisfactory to shout "Roy!", so we now send interoffice memos on which we scribble RA, RH, or RL, as the case may be. That's fairly clear, but the system breaks down when we come to MBS and WBS. The former initials belong to Milton Sleeper, our publisher. The WBS is claimed by Warren B. Syer, who says he's our Promotion Manager. He further states that that is what we said he would be when we hired him.

Continued on page 13



by UNIVERSITY

Now you can have good "looking" with good listening! Each University MUSICORNER design is authentic in every detail, and reflects the traditions of the old masters of fine furniture. All genuine woods—hand rubbed! Designed to flatter the decor with stylings that smartly blend with any existing interior.

University Musicorner gives you wide angle coverage, clarity and brilliance with its full front radiation. High power handling ability and distortion control, with an internal and extended horn. And, boosted low frequency response with high efficiency, from its unique integral bass reflex system.



the Traditional Model UR-311. In Cherry or Cordovan Mahogany. User Net: \$ 64.50

THE HEART OF THE Musicorner

Model 6201, 12" coaxial speaker system. A TRUE coaxial dual range system, with woofer, and driver type tweeter, bullt-in crossover network, and "balance" control. Finest to be had! User Net: \$ 45.00

The exclusive University Diffusicone-12 speaker is acclaimed by experts everywhere! Here, in the economy of one speaker you get dual-horn loading, radial projection, and diffraction—to give unsurpassed fidelity, range, and uniform sound distribution. User Net: \$ 27.00

Model 6200, 12" extended range speaker. Gives highly efficient full-bodied response throughout the operating spectrum. User Net: \$ 21.00

FREE BOOKLET!

describing these wonderful enclosures in greater detail.



The Greatest Name REK-O-KUT in Turntables designed for Quality in Record Reproduction.

Record Reproduction begins with the rotating motion of the record! This motion expresses passage of time. And each rotation is an interval or segment of that time. This important function is entrusted to the turntable.

The faithfulness with which the turntable, a purely mechanical device, can perform this task, is related entirely to its design and construction. It is pretty generally known that any mechanical vibration will impose itself as undesirable elements of distortion in the reproduced sound, and that speed deviation will result in a variation in time or tempo, and in undulating pitch.

There is no compromise with turntable quality if the best in sound reproduction will be had. Engineers know this, and the name of REK-O-KUT is a byword in professional circles as the standard of turntable quality. But whether professional sound engineer or simply a lover of good sound, only a fine turntable can justify the fine equipment of a modern high fidelity system.



and at Sound and Music Dealers

Among the seven REK-O-KUT Turntables available are: Model LP743 - Induction Motor

Three Speeds, 331/3, 45 and 78.... Model T-12H - Hysteresis Motor Two Speeds, 331/3 and 78..... Model T-43H — Hysteresis Motor Two Speeds, 331/3 and 45.....

REK-O-KUT CO. 38-03B QUEENS BOULEVARD . LONG ISLAND CITY 1, NEW YORK Export Division: 458 Broadway, New York 13, U. S. A. Cables: Morhanex In Canada: Atlas Radio Corp., Ltd., 560 King Street W., Toronto 2B

NOTED WITH INTEREST

Continued from page 11

What we don't understand is what promotion managing has got to do with bawling us out for picking up a package (clearly addressed to us) from the back porch and carrying it directly to our desk. Just because Warren has worked long and hard with a big organization (Sears, Roebuck) where everything was tidy and done strictly according to formula is no reason why we shouldn't be allowed to pick up our own packages from our own back porch, even if we do confuse the WBS-organized "shipping and receiving" department. Sears, Roebuck doesn't have editors, let alone back porches.

Somewhere between stints of systematizing the office in general. Warren does get in a few licks at promoting . . . so if you don't like the current crop of renewal letters, or the series of advertisements for HIGH FIDELITY now appearing in The Saturday Review. The Atlantic, and elsewhere, will you please address your remarks directly to Warren B. Syer.

You may also address your remarks to the same individual if you do like opera. A more fervent opera-lover we never saw!

Help Wanted

In spite of all the staff additions reported in the preceding item, we still can't keep up with the growth of HIGH FIDELITY, and are looking for one more paragon for the editorial side: someone who is heavy on the technical side of audio, knows his hi-fi, is familiar with electronic engineering in general, has perhaps had writing experience by this time and maybe has worked in or been associated with hi-fi equipment sales.

Hours (40 per week) are long and hard, salary sufficient for enjoyable living in the country (Great Barrington is HQ, and it's miles or 3 hours from New York, no nightclubs, hardly any movies, thousands of summer-only visitors, lots of fresh air). Prospects for the future seem to be bright indeed.

Interested readers please write to Ye Editor (Charles Fowler) with the customary résumé.

Calling Latin America

For an interesting booklet, in Spanish, about high fidelity equipment, drop a line to Rocke International Corp., 13 East 40th St., New York 16, N. Y. They are exporters of leading makes of hi-fi equipment and have prepared what they call rheir "Chopin" booklet to help newcomers to the hi-fi field ro select a matched combination of components.

Opening in New York

February 25th was the great day for Sun Radio: they opened their big radio and electronic center at 650 Sixth Avenue (Avenue of the Americas to some), corner of 20th Street. The store features three complete sound studios, 150 feet of counters. and "self-service, supermarket style".

Continued on page 15

Easy, Reliable ACOUSTIC MEASUREMENTS

with the SOUND-SURVEY METER

for Audio Enthusiasts and Acoustic Engineers

The Type 1555-A Sound-Survey Meter is a low-cost, portable and accurate sound meter. It enables every audio consultant or enthusiast to make measurements permitting proper installation of reproducing systems in theatres, halls, offices, plants, and living rooms. This instrument is extremely useful to sales engineers, acoustical field engineers and consultants for preliminary survey work where the refinements of the larger Type 1551-A Sound-Level Meter are not necessary.

There is no substitute for a good frequency-response characteristic. Yet, the accurate determination of overall system response is not easily accomplished.

If sound-pressure level is measured at a fixed point in a room as frequency is changed, the response curve so obtained will be very irregular, even in regions of frequency where the system response is actually flat. Significant characteristics, such as a "notch" produced by an improperly adjusted cross-over network, may be completely obscured. This effect is a result of rapidly changing standingwave patterns with changes in frequency. That is, combinations of in-phase and out-of-phase waves cancel and reinforce each other at certain frequencies, causing abnormal "highs" and "lows" in response curves.

With the aid of the pocket-size Sound-Survey Meter, measurements at each frequency may be made at several points within a room, and the results readily averaged. Results obtained may then be put in the form of a relatively smooth curve, representing the average sound level as a function of frequency, and illustrating the combined effects of speaker acoustic power output and total room losses. Such results represent the performance of the speaker system in its setting and thus help determine effects due to absorption, room-dimensions, speaker directivity, and standing-wave patterns. Fill in Coupon below for complete information complete information.

The G-R Type 1555-A Sound-Survey Meter permits -

* speaker placement for best coverage

* selection of optimum quantity of aborbing material for a given speaker housing

* adjusting of base-reflex systems for best performance

* detection of room absorption defects, enabling corrective measures

* adjusting of cross-over networks, and correct setting of levels in multiple-speaker systems

* determining levels for systems using tone-compensated volume controls

> Finger-tip control turns instrument on and off, selects one of three frequency characteristics, checks batteries — sound-pressure level is simply the sum of meter and attenuator readings—range is 40 to 136 db. — flush-mounted crystal microphone has good characteristics - instrument has stabilized amplifier and level indicator.

G-R Type 1555-A Sound-Survey Meter \$125



GENERAL RADIO COMPANY, 275 Massachusetts Ave., Cambridge 39, Mass.

Please	send	me	а	copy	\mathbf{of}	the	G-R	Sound	Measurement	Bulletin,
describ	ing th	e Ta	/ne	1555	-A 5	Soun	d Sur	vev Met	ter.	

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The GRAY "Viscous-Damped" 108-B Tone Arm

Gives you perfect contact and tracking on all records at lowest stylus pressure—virtually eliminates tone arm resonances—cannot damage record if accidentally dropped.

If your record collection includes old favorites, with grooves so worn that the stylus jumps or skids—or if your equipment is subject to floor vibrations that can cause groove-jumping—you'll welcome the new Gray 108-B. Its "viscous-damped" design provides perfect tracking, as well as eliminating any possibility of record damage if the arm is accidentally dropped.

The 108-B satisfies every requirement of high fidelity reproduction.

A plug-in feature permits instant change from 78-rpm to 33½-rpm or 45-rpm, with automatic adjustment to the correct stylus pressure. See and try this "viscous-damped" arm soon—treat your valuable records to the kind of tone arm they deserve!

AND DEVELOPMENT CO., INC., 598 HILLIARD STREET, MANCHESTER, CONN.
Division of The GRAY MANUFACTURING COMPANY—Originators of the
Gray Telephone Pay Station and the Gray Audograph and PhonAudograph

Gray	Research	& D	evelopment	Co.,	Inc.
598 I	tilliard St	reet.	Mancheste	r. Co	nn.

Please send me your Bulletin RE-5 on the new Gray "Viscous-Damped" 108-B Tone Arm.

NAME		N	A	м	E
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ADDRESS

CITY

STATE

NOTED WITH INTEREST

Continued from page 13

New Address

David Bogen Co. now occupies its own building at 29 Ninth Avenue, New York 14.

New in Westport, Conn.

Opened April 10th at the above address was the Audio Room of Music Systems of Westport, Inc. It's in the Green's Farms section of Westport, on the north side of the Post Road . . . drop in to see a wide selection of equipment at, we are told, New York prices.

New in Santa Monica, Calif.

Announcement of opening of Santa Monica Radio Parts Corp., 115-117 Santa Monica Blvd., was received a short while ago . . . drop in for a look-around . . . hi-fi equipment and all else.

Canadian Cabinet Maker

Add to the list of cabinet makers the name of P. R. Goodkin, of 4540 Carlton Avenue, Montreal 26, who writes: "As makers of custom-built furniture and special cabiners for custom sound installations, we would like you to place our name on your records."

California Cabinet Maker

Here's another cabinet maker (the list is growing rapidly!), this time in North Hollywood: Custom Sound of 5409 Morelia Avenue. Wilbur Deeds writes: "I should like to submit my name as a complete custom installationist. If only the cabinet work involved is desired, I feel not only qualified but shall be glad to do it for a nominal charge. However, my business ordinarily includes design and complete installation of home music systems."

Dept. of Fuller Information

In our New York Audio Fair report in the previous issue, we mentioned the really good sound to be heard in the "Danby of Philadelphia" exhibit. Result: some letters from the City of Brotherly Love and thereabouts, saying, in essence, Brother, we'd love you better if you'd tell us where in Philly, so we could go 'round and hear for ourselves. The address is: 2042 Chestnut St., Philadelphia 3. Danby sells components (some of which they manufacture themselves) in matched systems... and the sound shows it.

Exit Correspondence

It's no use writing to some people any more. They've got tape recorders, and if you want to talk to them, well, go ahead and say it — into a tape recorder.

The idea is catching on so fast that a world-wide organization has grown up around it: World Tape Pals in Dallas, Texas (P. O. Box 9211 if you want to write). The Secretary of World Tape Pals is Harry Matthews; by exchanging tapes throughout the world, he hopes to foster mutual understanding.



FULL FRONT-LOADED CORNER ENCLOSURE

This true exponential horn corner enclosure provides exceptionally smooth, well-balanced reproduction over the entire audio spectrum. The response from the rear of the speakers is directed into two separate volumes.

It is then used in a unique way to provide continuous loading to well below 35 cycles. The result is a clean, crisp, fundamental base that blends smoothly into clear undistorted highs ... faithfully reproduced by the exclusive Koustical Lens assembly.

See and hear these truly incomparable enclosures at your audio dealer's today!

Jim Tansing

JAMES B. LANSING SOUND, INC. 2439 FLETCHER DRIVE. LOS ANGELES 39. CALIFORNIA



REAR LOADED CORNER-CONSOLE ENCLOSURE

CORNER-CONSOLE ENCLOSURE
This versatile enclosure may be
used against a flat wall or in a
corner, with either a two-way
system or a single, general purpose
speaker. A completely enclosed, 6',
true exponential horn, smoothly
curved without sharp corners or
cavities, gives full, uniform reproduction of the low frequencies.
Used with the Jim Lansing 001 twoway system, the smooth, even highs
produced by the Koustical Lens
make this a truly outstanding unit.

coast to to coast

In Music, Listening Quality is Everything . . .

At the recent Audio Fair—Los Angeles, (as in New York) hundreds waited in line before each (every 20 minutes) Audax CHROMATIC performance—best described by the following excerpt from an editorial in AUDIO ENGINEERING.

"If we had to name the most popular display of the recent N. Y. Audio Fair, the top honors would most certainly go to the Audak Company. Maximilian Weil, A UDAX president, long known for his virtuosity in the creation of fine Electronic Music reproducers . . . had the riolinist David Sarser, (Toscanini's NBC Symphony), and the cellist, Sebe Sarser (New York City Opera Co.) in person, play for the AUDAX audience. Intermittently, they would put down their bows and the performance was then carried on by the new AUDAX CHROMATIC pickup, playing a discrecording of the same composition.

So startlingly realistic was the reproduction by the new AUDAX CHROMATIC reproducer that, invariably, the audience broke into spontaneous applause. Adding to the demonstration's dramatic proportions, was the fact that the musical instruments used by the artists were Stradivari, valued at well over a hundred thousand dollars. Strictly big-time . . ."

Only You can decide what sounds most pleasing— See and Hear the Audax CHROMATIC and— You be the judge . . . Audax costs no more than ordinary pickups.

Only AUDAX has individually replaceable Sapphire or Diamond styli.



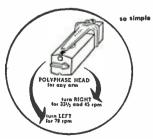
Available with the new Compass-Pivoted Andar arms and to fit the high quality record changers

No HP (hidden pull). See the 1953 ELEC-TRONIC PHONO FACTS now available from your favorite store.

AUDAK COMPANY

500 Fifth Avenue Dept. HF New York 36, N. Y. "Creator of Fine Audio-Electronic apparatus for over 25 years."

"The Standard by Which Others Are Judged and Valued."



One single magnetic pickup plays all home records

Readers' Forum

SIR:

I wish to congratulate you for this very fine magazine; I had no idea that it would be so satisfying. Especially useful to me are the record reviews, since local record shops do not carry large selections to choose from; with this record review, we can order a specific recording of any work and be sure that it will please, instead of hearing many recordings, or ordering one which may not please upon hearing.

I have shown my two copies of the magazine to other record collectors like myself, who are also delighted with HIGH FIDELITY Long life to you!

Charles A. Jones U.S. Naval Station, Guantanamo Bay, Cuba

SIR:

This, for me, is a noteworthy event. It is my second letter to an editor, and to the recipient of the first.

I have just finished re-reading, for the third time, the December 1952 issue of HIGH FIDELITY. The first time, I quickly located the articles of special interest to me; the second, I read the other articles and Readers' Forum, etc., the third, each advertisement. It was then that I decided to let you know just what an event the receiving of your magazine has been in my life.

I am a member of the U.S.A.F. in temporary duty as a student at Syracuse University, living in a large barracks with one hundred other men. Many of us have a genuine interest in fine music, which makes living three to a room a good deal easier than it might be. A friend of mine first introduced me to HIGH FIDELITY; he suggested that I glance through it because of the article "Tape vs. Wire" (HIGH FIDELITY No. 4), since I owned a "Wireway" recorder. Although I had often thought I would like a tape recorder, it was this article which crystalized my wish for one. I immediately began a pressure campaign on my father for a tape recorder, and won this Christmas. Since then, I have purchased a Garrard Model M player and a GE magnetic cartridge with diamond stylus; all largely, if not completely due to HIGH FIDELITY magazine, its articles and advertisements.

In addition to the foregoing, three of the last four records purchased by me were bought because of the reviews given them in your record section. I'm extremely satisfied with them.

Since my equipment is the only set in the barracks which even reasonably approaches a standard of high fidelity, my room has become the after-study gathering-place of many of my friends. One of the men here has played professionally with the Oklahoma City Symphony Orchestra under Victor Alessandro, and I have come to value his opinion on the musical worth of a composition (rather, the rendition) and on the tonal worth of reproducing equipment.

When he had finished reading your article "Three Times Nine", in the November-December issue, he said, "That I Like!". For him, that statement was the equivalent of ten praising adjectives; I considered it to be a fine tribute to the author of said article.

Continued on page 19





Here's one reason why BELL Model 2200 gives superior performance

Bell Model 2200 Radio-Phono Amplifier is rated tops in high fidelity performance! With its Audio Magic equalizer switch, your fingertips control a selection of electronic circuits designed to make any recording an adventure in listening pleasure. Selected curves can be modified or supplemented by use of the continuously variable bass and treble tone controls. Standard or LP, domestic or foreign, your records will sparkle with new, thrilling life.

Bell amplifiers do a superb job in any type of console or custom-built home music system. Each minute flexing of the pickup stylus is translated into vibrant tones that turn your speaker into a miniature theater stage. See this versatile, moderately priced unit at your dealer's, or write for information.

Frequency Res.: 20 to 20,000 cycles plus or minus 0.2 db.

Inputs	Sensitivity (Volts for 10 Watts)	Impe	dance
Radio	.125	200K	oh ms
Crystal Phono	.70	1	meg.
Mag #1	.032	27K	ohms
Mag #2	.007	47K	ahms
Television	.125	200K	ohms
Tape	.125	200K	ohms
Microphone	.022	1	meg.
Controls: (6)			·

Equalizer: 5-position, for all types of records. Selector: 5-position -- TV, mag., radia, crystal, tape. Volume: Continuously variable with compensation. Bass: Minus 17 db to plus 15 db at 40 cycles. Treble: Minus 28 db to plus 18 db at 15K cycles. Power: Rotary "off-on" switch.

Hum Level: 80 db below rated autput.

Output Impedances: 4 ohms: 8 ohms: 16 ohms. Damping Factor: 12.3.

Power Consumption: 150 watts, 117 volts, 50-60 cycles. Tubes: 1-12\$C7; 1-6\$N7GTA; 2-6\$L7GT; 2-5881; 1-5U4G. Dimensions: 8-34" deep; 7-44" high; 16" wide. Net Weight: 24 lbs.

Other BELL High Fidelity Amplifiers

are also built to answer any demand occasioned by the modern trend toward built-in home music systems. A choice of models, from economy-priced Model 21228 to remote-operated Model 2145A, offers a versatility of design for any arrangement of components, plus a range in price to fit ony pocketbook. For sound of its best, your best buy is Bell I

BELL SOUND SYSTEMS, Inc.

555-57 Marion Road, Columbus 7, Ohio



Export Office: 401 Broadway, New York 13, N. Y. Cable Address: UNIONTEX

READERS' FORUM

Continued from page 17

Incidentally, the article "Danger - Worn Needles" (HIGH FIDELITY NO. 4) has been directly responsible for the purchase of five diamond styli; three by me, (two for my own machines here in Syracuse, one for my Mother's machine in Los Angeles) and two by friends in the service living here.

You'll never publish this; it's far too long, and still doesn't say enough in praise of your magazine.

Clifford E. Hansen

Syracuse, New York

A couple of weeks ago I wrote you and enclosed a check for five dollars, requesting that you enter my name for a one year subscription to your magazine.

Because of considerable friction at home on the subject of high fidelity sound systems, I must ask you not to send me your magazine, lest further incidents be precipitated by its appearance.

In addition, would you be kind enough to return me my five dollars.

Thank you.

Name Witheld

California

We do not know if a magazine has ever been named co-respondent, but it does look as if we might be journeying to Reno any day now! P.S. Ye Ed's wife says she knows just bow Mrs..... feels!

The magazine is getting more interesting than ever. The article on "Recording Nature's Musicians" (HIGH FIDELITY NO. 8) by Mr. Canby was fascinating, and I intend to purchase some of these recordings. Your articles "Tested in the Home" are very good, and I hope you will continue testing new or improved audio products. On the strength of your testing, I purchased a Weathers pickup, arm, and oscillator, and get good results.

The twenty-one-foot air coupler built for an eighteen-inch Electro-Voice bass speaker is now complete. Had to extend the length in order to get smooth response down to twenty-five cps. Using the Weathers system the bass is a little too efficient. For Pickering it is fine. In the near future, I will try the Fairchild system. This is the best and most interesting hobby I have ever found. HIGH FIDELITY is the only publication I can find time to read.

A. Sutherland

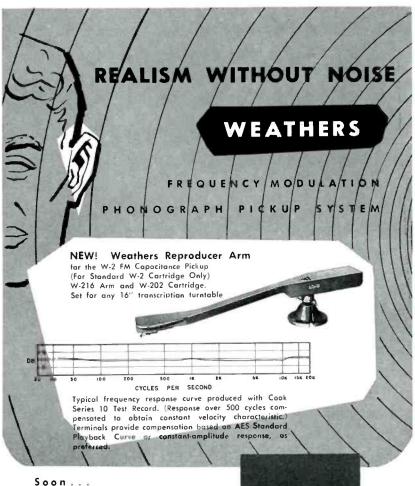
Bremerton, Washington

SIR:

In all of the articles on the air couplers in HIGH FIDELITY magazine, I have only once seen an even casual mention of a point which my experience shows to be of great importance.

The low-frequency response of my sixfoot air coupler was once clearly not what it should have been. For some time I attributed this to its somewhat unfavorable placement in the room, but couldn't try another spot for lack of space. Then one day I dragged it out and inspected in

Continued on page 21



You'll own a Weathers!

If you've heard the super-smooth, precision-engineered, realismwithout-noise performance of the Weathers, you'll soon join the thousands of happy people who own this finest of all performers.

First whispered about—then shouted about, the news is all over the country-from coast to coast, that the ultimate in performance can now be yours, with a Weathers.

Our fine new plant (doubled in size within the year) is enabling us to speed up our output daily. If we have not caught up with your order yet, please be patient. Write for our dealer list and then drop in to hear for yourself the reason why the full-range, noise-free Weathers is in such demand.

Send for technical information

WEATHERS INDUSTRIES

BOX 531, 66 EAST GLOUCESTER PIKE BARRINGTON, N. J.



W-2 FM Capacitance Pickup Cartridge

Weathers

Weathers Power Supply

How High can High Fidelity be?

F YOU could sit in with the select few on the staff of a major record company, you might hear the playback of a master tape of a great symphonic recording. You would be listening to the highest order of fidelity achieved in musical reproduction — something in a distinct class above even the best recorded music ordinarily heard elsewhere.

These master tapes are so near to perfect that their deviations from the original sound are beyond the perception of the human ear. The master tapes must not only satisfy the best record making techniques today — but they must anticipate the requirements of the finest reproduction methods of ten, twenty, or fifty years from today.



Ampex tape recorders in a studio of Capitol Records — typical of the demanding professional uses of this high fidelity machine.

It is an open secret how the extraordinary fidelity of these master recordings is achieved. The instrument is the Ampex Magnetic Tape Recorder which is now installed in practically all of the commercial recording studios in America. Although Ampex machines are thoroughly professional equipment — the finest tape recorders built — they are being installed in an increasing number of private homes where the ultimate in musical enjoyment is desired.

People in the music and entertainment fields were among the first to recognize that Ampex Recorders had a place in the home. Some of the great musicians of our time are among



An Ampex installed in a custom home music system. In this installation, sliding panels conceal the recorder and speaker when not in use.

the distinguished owners of Ampex Recorders For them it provides recorded music and personal performances with a perfection that fully satisfies their highly developed tastes.

In your home an Ampex Recorder can serve both as a recorder and a superlative playback instrument. Pre-recorded tapes are becoming available in an increasingly wide selection of symphonic and incidental music. Also, live F-M broadcasts bring to you a wealth of music of flawless quality and brilliance. While listening to a broadcast, you can make your own "master tapes" which can be replayed countless times. Their extraordinary fidelity is completely permanent, giving you a personal library that will be a lifelong source of tremendous satisfaction.

The answer to "How high can high fidelity be?" may also be your answer to how great can listening pleasure be. If you enjoy owning things that are undisputably the best in their field, an Ampex Recorder and a custom music system belong in your home.



for further details write today.

934 CHARTER ST. • REDWOOD CITY, CALIF.

READERS' FORUM

Continued from page 19

under a strong light. Between an endboard and one side there was a gap large enough to slip a thickness of paper into, and about a half inch long. In addition, there were a number of hair-thin cracks at other joints. I filled them all by smearing them with caulking putty and could hardly believe my ears when I heard the low-frequency improvement. Moreover, there was a very marked increase in definition at all frequencies, even those above

In true audiophile fashion, I didn't stay satisfied for more than twenty-four hours, but decided to tighten the seal around the speaker, a twelve-inch Warfedale. quick and simple operation of applying caulking putty around the edges of the speaker so that no pressure could leak out between the speaker rim and the back of the coupler brought about another astonishing improvement. There was a further increase in sound power below about 70 cps., but the most noticeable change was in the rransient response. The low transients had always sounded a little "muddy", as I had realized before, though I had not suspected the full extent of this condition until I heard the improved set-up.

Everyone knows, I suppose, that all these connections should be tight, but how many people realize how slight a leak is all that is necessary to ruin the deep bass?

Alex P. Hull, Jr.

University of Virginia Charlottesville, Virginia

SIR:

Received my first two issues of your HIGH FIDELITY magazine, and am well pleased with the contents. As one interested in high fidelity reproduction of music, I assume that you will tolerate my following diatribe while I'm in a facetious mood. Here goes:

What good is high fidelity as long as the records themselves contain flaws and are defective?

I have purchased LP records here in Davenport, in New York, in Chicago, in San Francisco and have had some sent direct from smaller manufacturers with whom I dealt directly by mail. All records contained "clicks" and "ticks" and there were even scratches on some. I have returned records as defective and when I played the new ones, I have found that they "click" and "tick" in places other than those on the original records.

Is it possible to obtain such a thing as a flawless recording of a violin solo, for instance? I say no! Students just love to go into a record shop and hear certain passages over and over again. The cadenzas and the slow movements of a concerto seem to suffer the most. Listen to a record: a cadenza comes—"click"— music— "clunk"—"tick"— music— "click", etc. Look at the record which is supposed to be new and fresh, and sure enough, there are tell-tale nicks and scratches at the starting groove and somewhere near the middle, where someone thought the cadenza started.

Continued on page 23



IT'S HERE! IT'S THE BEST!

MODEL 50-R

HISHF

FM-AM TUNER

■ We haven't the space here to give you all the details on the new FISHER 50-R. However, we can tell you there is no other like it, anywhere, and at any price! FEATURES IN BRIEF: Armstrong system, dual limiters, two IF stages, cascode RF stage, full limiting even on only 1 microvolt signal. Sensitivity, 2 microvolts for 30 db of quieting. AFC on switch and adjustable for locality. Adjustable selectivity on AM. Separate AM and FM front ends. fully shock-mounted. Response uniform, 20 to 20,000 cycles. Distortion less than 0.04% for 1 volt output. Hum level more than 100 db below two volts output. Cathode follower output. Fully shielded; bottom cover. Aluminum chassis. 12 tubes plus tuning eye and rectifier.

"The very best?" -HIGH FIDELITY MAGAZINE

FISHER PREAMPLIFIER EQUALIZER

■ "Either of these two units is of the very best," says High Fidelity Magazine of the FISHER 50-C Master Audio Control and 50-A Amplifier. The 50-C

can be used with any amplifier. Intermodulation distortion is virtually unmeasurable. Complete phono equalization, loudness control. 5 inputs, 5 input level controls, cathode follower outputs. Self-powered.

Chassis, \$89.50 With cabinet, \$97.50



40-WATT AMPLIFIER

THE FISHER Laboratory Standard Amplifier Model 50-A is, beyond a shadow of a doubt, the world's finest all-triode amplifier—and yet moderately priced. FEATURES: High output—



less than .3% harmonic distortion at 40 watts (.08% at 10 watts.) Intermodulation distortion below .8% at 40 watts. Uniform response within .1 db, 20-20,000 cycles; 1 db, 5 to 100,000 cycles. Hum and noise more than 96 db below full output. Quality components and beautiful workmanship throughout.

Write for illustrated brochure

FISHER RADIO CORPORATION 45 EAST 47th STREET - NEW YORK



Of course he's using Soundcraft Recording Tape ...it's **micro-polished***

Perfect reproduction — that's the reason why more and more engineers today demand Soundcraft Professional Recording Tape.

Soundcraft is the only professional tape that is Micro-Polished. The only tape that is polished, buffed and re-polished by a special process to produce a surface that is mirror-smooth, completely free of even the most minute irregularity. The results of Micro-Polishing are apparent to any sound engineer:

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READERS' FORUM

Continued from page 21

So you may have a speaker that cost you as much as a good used car, a woofer from Wharfedale, a tweeter from Tannoy, a pick-up by Pickering. an amplifier, equalizer pre-amplifier, etc., etc., and you will find that the higher the fidelity of the music, the higher too, the fidelity of the clicks and ticks on the record.

And all of these clicks and ticks are not the fault of the record manufacturer. They have been put there by audio-philes who "wanted to hear that record" — but who did not buy it!

Robert A. Petersen

Davenport, Iowa

SIR:

We sure got a laugh out of Ed Wallace's "Hi Ho Fidelity" and your magazine is read from cover to cover; the record reviews are especially appreciated, although this time I disagreed with Paul Affelder's review of the Dvorak Cello Concerto. I should be happy that I am not a cello player and a critic.

Have just written a long letter to London FFRR about sealing the record jackets.

We have two record stores in our small town, and the facilities for listening are very bad. There is no booth in either store, the players are cheap, and I never know how old the needle is.

In one record shop, I saw a customer pawing over a new shipment of a Tchaikowsky symphony — about fifteen records, each one pulled out of its jacket and looked over and piled up; he told me he was looking for a perfect copy. Discouraging to know that I might buy one of those.

Walter P. Bruning

Goldens Bridge, New York

SIR

Enclosed you will find my money order for a three year subscription to High-Fidelity. I have the latest issue, so please start my subscription with the next one.

While at this business of letter writing I'd like to offer my congratulations on your fine magazine. I've been reading the various letters from many readers who ask, "Let's have factory sealed records." Well, here in Philly, they are a reality. At the Wilf Brothers Germantown store there is a library of guaranteed unplayed records. Not only are they unplayed, but a substantial discount is available. They have no playback equipment, so one has to know beforehand what one wants. I believe most people have a good idea of what they intend to buy before entering a record shop. Your excellent record reviews help our in that line. The shop's records are all inspected upon their arrival at the store and upon their sale to a customer. If, upon being listened to at home a record is found to have factory defects a return to the store and a check on Hi Fi equipment (which they also sell), will produce another copy or a different record. I think this is the answer to many a discouraged record buyer's dream, and let us hope that other dealets will follow suit.

Continued on page 25





having the T-T*s?

*turntable troubles



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READERS' FORUM

Continued from page 23

I would like to add my vote for having the record review sections perforated so they can be inserted in loose leaf note books, which is what I do with mine at present.

Paul E. Burger

Philadelphia, Pennsylvania

SIR

I don't know whether I should cuss you out, thank you, or discontinue my subscription to HIGH FIDELITY. But deep in my Hi-Fi heart I want to thank you for the suggestions that are published in your magazine. For many months I have been planning to build a speaker cabinet. The air coupler always came into my mind, but I just couldn't find a place for it so I settled for an infinite type. A few days ago, I completed the construction of one, bought oils, varnishes, sandpapers, etc., and was just about to apply the stain when I received the January-February issue of HIGH FIDELITY, and began reading it. Well, sir, when I came to page thirty-three and looked at the pictures, top and bottom, I quietly laid the magazine aside, went to the basement where my infinite cabinet was standing, took one look at it, shook my head, and said to myself, "Too bad; good

That same night, what was once an infinite cabinet was turned into what is now a flat pile of lumber. Now I am building the six-inch Air Coupler Duplex, and adding a reflex with speaker port and reflex port on the same side. With luck, it will resemble a long, low table when I am through.

I wonder if there is anyone else besides me in Duluth, Minnesota, receiving HIGH FIDELITY magazine. If so, I would like to hear from them, because, believe it or not, I have no one to talk my language to. I've taken a radio and television course, and now it is all Hi Fi, but even to many radio men, high fidelity is a foreign language. The other day I made the fatal mistake of talking to a non-technical, non-radio man about folded horns and high fidelity, and I noticed a funny look in his eyes. He couldn't quite understand how I could place a speaker in a folded horn. He was actually thinking of a horn used in a brass band and after I tried unsuccessfully to explain it, he only answered me with, "It's all Greek to Me." No more of that kind of talk unless I know the person to whom I

I want to thank you again for the splendid job you and your associates are doing for us Hi Fi nuts.

S. Alex Janeczko

Duluth, Minnesota

SIR

Let me add my gripes to your readers' column, or what might be more properly called a "why don't they" column.

Some of the recording companies are doing an excellent job of recording productions of operas with all the spoken dialogue, duets, arias, etc., complete. Now, if you understood the language, and could see the

Continued on page 98

THERE 15 A Difference

type 210-B



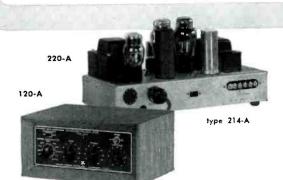
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MODEL 410 AUDIO INPUT SYSTEM ...

is designed to provide a complete audio control center. Model 410 may be used in any high quality playback system. Three input channels are provided—one for magnetic cartridges and 2 "flat" channels far other audio circuits. A 3-position equalizer network is built into the magnetic cartridge channel and provides accurate equalization for LP, AES and 78 rpm recording characteristics. Separate bass and treble controls are also provided. These are of the step-type and permit bass and treble adjustments in 2 db increments. The tone control circuits are intended to compensate for record characteristics and for listener-environment acoustical conditions. They are not intended to compensate for amplifier and/or loudspeaker deficiencies. Model 410 is intended for use with the highest quality professional type playback equipment. The output of the Model 410 is fed from a cothode-follower circuit and will work into any high quality audio or line amplifier having a high impedance input. It may also be used with a transformer far the purpose of feeding a 500 ohm line. Because of its flexibility, low noise and low distortion level, it is ideally suited for bridging and monitoring purposes and for critical listening applications.



THE MODEL 190 ARM ...

Is designed primarily for use with micrographye records. Its design has been recognized by leading audio engineers as that which incorporates all of the desirable tracking characteristics. Analysis has shown that for maximum performance with LP records the vertical mass of the moving arm element must be held to a minimum and further, that the arm must be counterbalanced about the vertical axis. This permits minimum stylus or tracking force and provides maximum record life. The Model 190 Arm embodies these all important features necessary for proper microgroove record playback.



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is unique in its accuracy of equalization and frequency response. The intermodulation distortion is .2 per cent at normal output level. It is Intended for use with high quality amplifiers having gain and tone controls. When used with the Pickering Model 132E Record Compensator the 230H is Ideal for radio station and recording studio use and for • applications requiring accurate low noise and distortion free playback.



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making HAZEL

A Broadway musical goes on the record

by JOHN M. CONLY

OU GOING in there?" asked the compassionate taxi driver. "That place looks positively hostile, you ask me!"

No one had asked him, but it did. Manhattan Center, on West 34th Street, New York City, is a huge rental auditorium and ballroom, designed for noise and merriment after nightfall, when the lights are on. At ten o'clock Sunday morning, February 22, it was not at its best. It looked, to borrow a phrase, positively hostile.

However, on the seventh floor, occupied by the ballroom, the hostility was thawing. There was the cheery, unmistakable smell of hot drugstore coffee, in numerous paper cups. A 28-piece orchestra was tuning up. A big, dark-skinned trumpeter limbered his lips, tentatively. and blew a playful series of licks. "Can I do that in the recording, same as I do in the show?" he asked the conductor. The conductor, a slight, durable-looking man, smiled noncommittally. "Let's try it straight," he said. He raised his baton and the band played three bars. Some-

thing bumped the podium, and he stopped. It was a massive, padded backstop, which looked as if it might have been designed to protect spectators at an archery match. Two technical prop men were pushing it. "Sorry," said one.

The great floor was full of these puffy barricades, to partition it acoustically, separating soloists, chorus and orchestra so that the final blending and balancing of sound might be governed from the control-room. Here and there, among the barriers, stuck up shining metal mi-Things were nearly ready for RCA crophone stands. Victor to start recording a complete show-album of Broadway's newest musical comedy. Hazel Flagg.

The conductor, Pembroke Davenport, left the podium and made his way through the maze to the control room, actually, the barroom of the dancehall. It was dimly and gruesomely illumined by indirect lighting, in the guise of phony-Bavarian stained glass windows, but it had sturdy, sound-proof doors. Along the wall opposite the







Howard unloads a low one



Venuta gets some steam up



Whiting supplies schmaltz

bar stood the recording equipment, presided over by Albert Pulley, RCA Victor's chief recording engineer. There was a rack of amplifiers, and a two-unit RCA 30-inch-persecond tape recorder, the latter attended in turns by two seasoned operators, Lester Chase and Ray Hall. A six-input mixer, with VU (volume unit) meter, fed by the six microphones (RCA, Western Electric and Telefunken) used in the session, was operated by engineer Fred Elsasser.

Next to Elsasser's mixer, at a card table strewn with notes and scores, worked Hugo Winterhalter, RCA Victor's "pop" musical director, and David Kapp, identified in respectful tones as "exec in charge of the division." He is the company's popular artist-and-repertory manager.

He served his show-album apprenticeship at Decca, working with his late brother, Jack Kapp, who first conceived the notion of putting complete Broadway scores, sung by the original casts, on disks for stage-struck Americans everywhere. Kapp looked fresh and brisk. He had driven 30 miles into town for the session.

"Here comes Julie," said someone, and in walked the composer and producer of *Hazel Flagg*, Jule Styne, short, bespectacled and already steaming gently with anxiety. Close behind him came the lyric writer, Bob Hilliard, a towering, eager young man, who switched off his overcoat and pitched it across the bar.

There was a resounding crash, which faded into a crystalline tinkling. A technician peered over the bar.







It's rough, having to work Sunday (note expressions, left) but most showalbum recording is done then, to avoid interference with performances. Above, at left, star Helen Gallagher has remarked that her voice sounds just terrible, and John Howard has told her oh shucks, it does not. At right, composer Jule Styne kibitzes as conductor Davenport and Howard try "How Do You Speak to an Angel?"



Albert Pulley checks mixer

At right, Benay Venuta and chorus get set for "Hello, Hazel!", welcoming famous radium girl to New York. Below, composer Styne, Venuta and RCA Victor's David Kapp settle a problem of (grrr!) diction. Below, right, Venuta is joined at mike by Jack Whiting. Note latter's likeness to late Mayor Jimmy Walker.





"Scratch six highball glasses," he said.

"They shouldn't stack them that way," said Hilliard.

"Let's make a record." said David Kapp.

OUT IN the hall, the orchestra launched into the overture. The sound was reproduced in the control room by an LC1a speaker. "That trumpet is playing a wrong note!" shrieked Styne immediately, and vanished into the ballroom. "Composers. Producers." murmured an RCA Victor man, not unsympathetically. "I'll bet that poor guy hasn't had a night's sleep in a month. Still, we have

to record soon as we possibly can, once the show's opened and looks like a hit."

"I'm not happy about the tuba, either," said Styne, reappearing, but Kapp already had pushed the remote-control switch of the red recording light, out beside Davenport's podium, and the overture was going on tape. After three run-through's, while the balance of instruments was adjusted, it was tagged and stacked away, complete. The orchestra began on the Rutland Bounce, assisted by rhythmic hand-clapping from the chorus.

"You know what this show is about, don't you?" explained Bob Hilliard. "It's Ben Hecht's adaptation of



Gallagher sings: Hazel has discovered



. She isn't going to die after all.



Gallagher listens: was she good enough?

his 1937 movie scenario, Nothing Sacred, Carole Lombard and Frederic March, you remember. The girl, Hazel, is supposed to have fatal radium poisoning. She lives in Vermont. This magazine publisher, a dame, hears about it and wants to bring her to New York to die, a publicity-stunt. A reporter goes to get her. But first her doctor, he's a genial sot type, finds she hasn't got radium poisoning at all. But she goes to New York anyway. As I put it in the song, she wants to get out of Vermont."

Meanwhile the orchestra finished the Rutland Bounce, a little piece of Styne orchestral virtuosity. Styne has written innumerable movie scores, 15 songs which reached No. 1 spot on the hit parade, and the music for High Button Shoes, Gentlemen Prefer Blondes and Two on the Aisle. But he doesn't want his colleagues to forget he started out as a classicist, a child prodigy pianist who played two major Mozart piano concerti with Frederick Stock and the Chicago Symphony before he was 15. Now he is deep in show business, having produced not only Hazel but the recent, very successful revival of Pal Joey.

David Kapp was standing in the doorway. "Benay!" he exclaimed suddenly, "You look wonderful!"

"I look a wreck!" said blonde Benay Venuta, sweeping

in, very handsome in a black crepe dress. "And I haven't any voice! Two performances yesterday, and I couldn't sleep last night at all!" Her part in the show was Laura Carew, the lady publisher. They weren't ready for her first song yet. She sat down with a cup of coffee. Meanwhile, the twenty young voices of the chorus were roaring the chant of the autograph-hunters, trailing down the celebrated Radium Girl. "Whe-e-r-r-re's HAZEL?"

They finished, and took a five minute break. Two of the girls began working on *New York Times* crossword puzzles. Another resumed reading an article about science and philosophy in the *Saturday Review*. One small, lovely blonde dug into a copy of Suetonius' *Lives of the Twelve Caesars*.

In the control room, Les Chase played back the tape of the Autograph Song. "That new directional mike really pulls 'em in," remarked Pulley.

"Too much," said Kapp, "I'm afraid they'll drown out the soloists."

"I'll move them back," said Winterhalter, going out.

Benay Venuta joined the chorus to sing A Little More Heart. "Bring her mike 'way up," Kapp told Elsasser at his six control knobs, "Soon as she comes in, cut the

Control room conference: Hugo Winterhalter (left) and David Kapp decide on next song, as Fred Elsasser and Les Chase look on.



Women at work. The old-style bird-brained chorus girl is but a memory. These decorative youngsters read The New York Times.



orchestra down to practically nothing. Hold the chorus down, too. We won't get it right the first time." They didn't, though Elsasser's fingers almost flew. The next time, Kapp conducted him, like an orchestra leader.

"We're not getting that first line, Benay," said Kapp through his microphone.

"Hold your hat, bub, you'll get it this time!" Venuta's voice answered. "Guess she's feeling better," said Winterhalter. "E3DBO590, Take Two," he intoned into the microphone. "Stand by. On the light, please."

"We only have fifteen minutes before lunch, Dave," announced Jule Styne, glumly. "We'll never make it." Kapp held up fingers and grinned. "I made Alfred Drake singing Oh, What a Beautiful Morning," he said in a flat voice. "Seven minutes."

THEY MADE it, but after lunch Venuta felt so much better that they made it again. Then she was replaced at the mike by Jack Whiting, who sounds much like Ted Lewis and looks very much indeed like the late James J. Walker, longtime mayor of New York. Appropriately, Whiting plays His Honor, or a reasonably exact facsimile. His song, *The Mayor of Your Town*, took the least trouble of all.

As he finished, a small, dark-haired, demure looking girl tiptoed into the hall. This was Helen Gallagher, one of the newest and brightest Broadway stars, the Hazel in Hazel Flagg. Brooklyn-born, now in her twenties, she is a tremendously hard worker. Styne, her discoverer, took her out of his production of Pal Joey and virtually built Hazel Flagg around her. She is primarily a dancer, though she has been studying singing since she was 18. In her first number of the afternoon, she seemed almost about to break into a dance at the microphone.

The song was You're Gonna Dance With Me, Willie. It is not accounted one of the show's "hit tunes" (which are How Do You Speak to an Angel, Salome, and I Feel Like I'm Gonna Live Forever) but it is undoubtedly the standout in the album-record. It was written only for Gallagher, and only Gallagher could put into it the absolutely electric rhythm it needs. At that, it took six takes before she had it precisely right. The chorus was beginning to show wear and tear. "Wish I had a lozenge, or something," said one throat-weary youth. "Wish I had a Sunday afternoon at home," said the girl next to him. "Never mind, dear, it's money," said another.

"We're almost through," Hugh Martin, the choral director, told them. "There's going to be another session Tuesday, but just for Miss Gallagher, John Howard and the orchestra." The chorus found strength to applaud softly. And they finished their tape of the Vermont farewell song, Goodbye, Hazel, just under the deadline.

"Let's get out of here," said Hugo Winterhalter, in the control room, stretching. "This was a tough one." "They're all tough ones," said David Kapp.

HOWEVER, Tuesday was less tough, though Kapp wasn't there to enjoy it. Helen Gallagher led off, with

I'm Glad I'm Leavin'. While she sang, John Howard, the reporter-hero of Hazel, (best-known, perhaps, as Hollywood's most durable Bulldog Drummond) lay stretched out on three camp-chairs at the end of the hall, dozing. There had been a Monday (Washington's Birthday) matinee. He got up to replace her and make How Do You Speak to an Angel, accompanied by the whole string-section, standing to give their best to a proven hit song. Then all repaired to the control room for playbacks. Winterhalter, who had given them free rein, now watched them critically.

"Wow!" said Howard, "Am I flat!"

"Me," said Helen Gallagher, "I'm just beginning to open up. Back to work!"

Back to work they went, Howard with his rich, powerful voice, Gallagher with her elfin, irresistible, little rhythmic shout. Pembroke Davenport beamed over his baton as they wrapped up, tied down and sealed the remaining songs. They finished early.

"I never know till I hear it," said Hugo Winterhalter, shrugging into his overcoat, "but I think we have an album."

Three weeks later, everyone knew they had.

This is actual stage shot of Helen Gallagher singing "You're Gonna Dance With Me, Willie!" Scene represents New York's Roseland dance-hall, where radio active Hazel, bored with role as doomed heroine, impulsively enters dance contest.





CHICAGO'S IVORY TOWER STATION

By Anton Remenih

THE SHORT, bright history of WFMT, Chicago's newest FM station, might be likened to the tale of the Babes in the Woods, with overtones from that of Orpheus, who charmed the beasts and demons with his lyre.

The babes in this tale are young Bernie and Rita Jacobs, WFMT's owners, and it must be admitted that they entered the woods with their eyes wide open. However, it was a pretty sinister woods, namely, the jungle of Chicago commercial broadcasting, which is noted for its extreme inhospitality to idealistic newcomers. The two Jacobs might well have left their bones bleaching there, and for a while, indeed, it was nip and tuck. But they had their own magic and, in the nick of time, it worked. Now the denizens of the woods are eating out of their hands.

Their magic was compounded from a formula of fairly exotic nature — high-grade sound, highbrow words and music. WFMT begins its high-fidelity broadcasting at 3 p.m. daily and keeps on until midnight, 1 a.m. — or later, if the Jacobs feel like it. Programs consist of folk, chamber, symphonic and operatic music; drama; poetry; literary readings (often by noted literary figures who happen to be locally available); lectures and classic short stories. Some listeners refer fondly to WFMT as Chicago's ivory broadcasting tower.

The station is commercial. It is not subsidized by an eccentric wealthy widow. If the Jacobs don't sell ads, they don't eat. The Jacobs are beginning to eat regularly and well. While their sponsors are not actually issued engraved invitations, they can come into the WFMT family only on WFMT terms. These terms, by conventional broadcasting standards, are somewhat high-handed, as you will see.

WFMT, located in a hotel near the geographical center of the city, began life in December, 1951, with an 8,000 watt (effective radiated power) signal. In February this year it boosted power to 34,000 watts. The antenna, a multi-V four bay array, is perched on top of the twelve-story hotel.

The staff originally consisted of Bernie and Rita. Later it was increased by several somewhat starry-eyed volunteers. Now it numbers nine — five regulars, four parttime. At the outset, Bernie, 34, was the engineer, business and advertising manager, maintenance crew, and lifter of all heavy objects. Rita, 25, a former neighborhood newspaper reporter, functioned as program director, disk-jockey, announcer, script writer, producer and, as she proudly likes to remind people, scrub woman.

"In those days before sponsors, we lived on an idea, hope, and the encouragement of listeners," says Bernie, "The work was grueling. When the first sponsor came along, we splurged on a luxury—a \$21 safety belt for my tower climbing."

It was through Rita's announcing that listeners became aware of the new station's character. Having no previous experience before a microphone, she unintentionally avoided the cliches and high-pressure mannerisms of the profession. Rita is about as pompous as a Strauss polka; she probably couldn't be stuffy if she tried.

"Bernie and I must work late tonight," she announces occasionally at what would normally be sign-off time. "We're going to listen to some music. Anything special somebody wants to hear?"

The telephone jingles and a listener suggests a record. The station stays on the air. This party-line approach paid off right from the start. In fact, it led to a love affair between WFMT and its listeners.



Program-planners, with record file cards, are WFMT's Arthur Weber, Norman Pellegrini, Bernie and Rita Jacobs, Mike Nichols.

Rita's intimate manner invited telephone calls, which began pouring in almost immediately from listeners offering encouragement, advice, and help. The Jacobs took listeners at their word. They accepted all three.

Two engineering students, with commercial licenses,



Gilbert & Sullivan hour. Announcer Mike Nichols (seated) and production mgr. Norman Pellegrini, ready to put on The Gondoliers.

offered to nurse the transmitter gratis, part of the time, so Bernie could spend more hours in search of sponsors A listener wandered into the station with program suggestions one day — and stayed to pound continuity out of a typewriter.

Four University of Illinois medical students, without being asked, canvassed book stores, record shops, banks, air lines, travel agencies and art shops in search of sponsors. They came up with two contracts — small ones, but still contracts.

A stranger walked in one morning and, while chatting with Rita, learned that the Jacobs had been too busy the night before to return to their apartment. They had slept on the studio floor. The visitor left. The next day two beds arrived, gifts from the stranger. With this as a start, the couple furnished a spare room as a hideaway for catnaps.

Other music lovers arrived to help paint, lick envelopes, carry out trash, and share vicariously in the adventure of this gay young couple, betting against such formidable odds on the brains and taste of unseen listeners in the sprawling metropolis around them. But the greatest manifestation of listener-love and loyalty occurred about two weeks after WFMT began broadcasting.

It was 9:45 p.m. Rita, nervous, tired and somewhat discouraged, plaintively asked over the air, "Is anyone really listening to us?" Having gone this far, she decided to carry frankness to the limit.

"We need money," she told the startled listeners, "until we get a few sponsors. Will anyone help us?"

The telephone jingled immediately. It continued ringing until well after 1 a.m. Money pledges rolled in. Ten

dollars. Five. Two. One. In three months, 1,500 listeners donated more than \$11,000. Greater love hath no fan.

Another early source of income came from a monthly program guide, which listeners subscribe to for \$5 a year. Circulation was high enough (3,000) after six months to drop the price to \$2, with advertising taking up the slack. The subscription list now numbers close to 5,000. The guide, in fact, was demanded initially by listeners, who wanted to be able to plan their listening.

"They wanted it even if it were only mimeographed," Bernie recalls.

Today WFMT lists 15 sponsors, about the limit permitted under Jacob's fascinating and unorthodox commercial formula.

Whereas most stations seek all the sponsors traffic will allow, Jacobs is striving to keep the number to a minimum. He accomplishes this by signing up firms willing to buy large hunks of time. Several have purchased entire days. Tuesday, for example, is Stop & Shop day. The Loop store sells exotic and luxury foods. Sundays are shared by Magnecord, Inc., and Radio Craftsman, Inc., makers of quality high-fidelity equipment.

Other typical sponsors include "art" theaters, Harper's Magazine, record, book and art shops, and sellers of home freezers, air conditioning units, quality furniture, and diamond phonograph styli. You find no soap, used car, or loan company on WFMT.

Sponsors willingly submit to terms that would bring only derisive snorts in the standard broadcasting world.

"We permit no repetitive phone numbers, lures, singing



Transmitter room at WFMT. The station has an effective radiating power of 34,000 watts. Equipment here is mostly General Electric.

commercials, noisy or attention-getting gimmicks on our station," Jacobs explains, "Our kind of listeners have brains and very keen ears. Once is enough."

Sponsors selling products of dubious quality cannot buy time on WFMT. No more than two, or three at the most, selling similar items are accepted, and only if they



Musicians of the India Association of Chicago, shoeless for comfort, play Indian instruments in one of WFMT's very popular "live" programs,

are located in non-competitive areas. "This is so our listeners needn't divide their loyalties," Rita says.

Sole control of program content rests with the station. Sponsors are guaranteed a minimum number of announcements but no more than 2½ minutes in any hour. Plugs—quiet, dignified, civilized plugs—are inserted before and after a selection, never during one. For an opera like

Wagner's Lohengrin, for example, this means no product plugs for more than four hours. Between records, the sponsor may, however, get an institutional commercial like this: "This program is being brought to you through the courtesy of Johnny's Record Shop." But sponsors who buy a full day don't know whether they will receive six or eighteen commercials.

The same policy of no interrupting commercials applies to dramas, which run up to three hours. These have included Miller's "Death of a Salesman", Ibsen's "Hedda Gabler", Goethe's "Faust" as recorded by the British Broadcasting Corporation and everything in Shakespeare from "Henry VIII" to "Twelfth Night".

Rita Jacobs inspects a new disk.



WFMT's sponsor-audience-station relationship is unique and mutually rewarding. "The audience has come to realize," Jacobs said, "that to perpetuate WFMT it must support the sponsors."

When Stop & Shop advertised a special blend of coffee, for instance, it received between 400 and 500 letter-orders from WFMT listeners. The unusual aspect of the transac-

tion rests not in the number of orders but in how many listeners thanked the shop for supporting the station!

Jacobs' broadcasting philosophy is as simple as his commercial policy is unorthodox. Bernie and Rita are simply applying the Golden Rule to radio broadcasting.

"We're trying to do the things we would enjoy if we were the listeners and somebody else were operating the station," the couple explains.

Today the Jacobs not only know that somebody is listening, but who is listening. A survey consisting of 1,350 detailed listener questionnaires provided some interesting answers to who listens to a station radiating Bertrand Continued on page 114

London Newsletter

D. W. ALDOUS

A LOUDSPEAKER is an electro-acoustic transducer designed to radiate acoustic energy into an enclosure or open-air, of which two general types are in use, namely, the direct radiator and the horn-loaded type.

This textbook definition of a loudspeaker came to my mind recently while preparing a lecture that necessitated some research into the history and personalities concerned with the development of loudspeaker design from the early experimental models that were no more than a small horn attached to a telephone receiver to the latest multicellular horns, woofers, tweeters, and various reflex cabinets and labyrinths.

The invention of a moving-coil drive for a loudspeaker is usually attributed to Sir Oliver Lodge (about 1898), but a patent specification (No. 4685 of 1877) due to Dr. Siemens contained a full description of a moving-coil reproducer. Other important names are the Americans Rice and Kellogg, Dr. Harry Olson, and engineers of the Western Electric Company, the Germans Vogt, Siemens and Meyer, and from this country such names as S. G. Brown, Capt. Round, Dr. N. W. McLachlan, Trouton, P.G.A.H. Voigt, P. K. Turner, and H. A. Hartley.

Of course, there are many other names but let us focus our attention on several of these British contributors to the progress of the loudspeaking reproducer. Trouton, for instance, is mentioned because he held a 1927 patent (No. 299,822) for, what was called, the "Amplion Lion" loudspeaker mechanism. Messrs Alfred Graham, of London, pioneer manufacturers of loudspeakers, produced this horn unit, in which an attempt was made to mount a reed armature in such a manner that the increase of magnetic pull due to the decrease of air-gap is compensated by a decrease in the leverage of the reed, thereby achieving a displacement proportional to the current.

Dr. Norman W. McLachlan, a brilliant mathematician, published a monumental tome on the theory, performance, testing and design of loudspeakers in 1934, as well as several simple nom-mathematical expositions of loudspeaker design, including a booklet, issued in 1930, when he was on the technical staff of the Star Engineering Company, Manchester.

ANOTHER LIVELY and original mind associated with loudspeaker design in Great Britain is Paul Gustavus

Adolphus Helmuth Voigt, now in Toronto, Canada. Paul Voigt, a friend of mine for many years, was with Edison Bell Ltd., London, from 1922 until May, 1933, when he purchased their stock of his patented devices (mainly loudspeakers and microphones) and set up in business on his own account.

The Voigt corner loudspeaker, which design is based on a straight horn having a mouth area of about 16 square feet, and by pointing the horn vertically upwards and dividing it by a plane through the axis, has made possible the reduction of the mouth area and the length without affecting the response. The bass chamber, operated from the back of the diaphragm, serves to extend the response from the horn cutoff, down to about 50 c/s. The double curve of the distributing reflector ensures that sounds concentrated near the axis are evenly distributed. This loudspeaker is today still employed in some laboratories and recording studios as the standard check reproducer for monitoring. We must pass on now, although with a promise that, in a later article, more information on the contribution of Paul Voigt to a high-quality sound reproduction will be given.

So WE COME to the names P. K. Turner and H. A. Hartley. The late P. K. Turner (he died in 1940), a first-class mathematician, engineer and music-lover was working with H. A. Hartley at Alfred Graham's research department in 1927, when they produced the first "high fidelity" loudspeaker, but this company concentrated its efforts on the "Amplion Lion" unit, already mentioned.

These two technicians decided that they would produce and market a really good loudspeaker themselves and so, in 1930, the firm of Hartley-Turner was born. Incidentally, Harold Hartley claims that he invented the term "high fidelity" about the end of 1926, when he and Turner were discussing sound reproduction and they both agreed that the "wireless" and the "gramophone" could, by very careful design, make a real contribution to serious musical entertainment. A name was needed for this improved reproduction and Hartley, who had (and still has) a flair for aphorisms and descriptive writing, suggested "high fidelity".

As he wrote to me recently, he is now an engineer hoist with his own petard, for the sins committed in the name of high fidelity are nobody's business! With the coming of

ultra-linearity, super-fidelity, and-what-have-you, Hartley feels inclined to stick to simple "realistic reproduction".

In the early 30's the first Hartley-Turner tweeter-woofer combination, with crossover network, was marketed, but after a year or two it was dropped and intensive development was started to perfect the single unit speaker, because they believed that all the sound should come from one source. The present Hartley 215 unit is, therefore, the result of more than twenty years' concentration on one idea.

In 1948, after years of selling loudspeakers and associated equipment for sound reproduction to English quality enthusiasts Hartley decided to try to enter the American audio market. His own distinctive style of advertising copywriting in an American technical magazine proved highly successful and, in January, 1953, his own American manufacturing and distributing company was incorporated, established, and equipped in New York — a remarkable achievement. His firm is, of course, a regular exhibitor at the New York Audio Fairs.

Harold Hartley, a keen music lover and ardent record collector, (now selling large numbers of LP's all over the world) compiled a highly individual selected record catalogue with G. N. Sharp, revised by the former with his wife in 1951. Another best-seller, although not generally known by his fellow engineers, is his book on astrology!

To complete the picture of H. A. Hartley, B.Sc., it must be said that there are some engineers and authorities who do not agree with what might be described as his audio philosophy, particularly in loudspeaker design, but Harold Hartley is nothing if not an individualist!

SEVERAL OF the new HMV (the well-known "Dog" label of the E.M.I. group) 33 1/3 rpm long playing issues have caused quite a stir in record circles here. For instance, the NBC Symphony Orchestra's, under Toscanini, version of Respighi's Feste Romane, and Raphael Kubelik's Chicago Symphony Orchestra recordings of the Mussorgsky-Ravel Pictures at an Exhibition and Dvorak's Symphony No. 5 in E Minor (From the New World).

The critics have described these last two disks as "sensational" from the technical standpoint, with their wide frequency and dynamic range and transient response.

As my American readers will know, the original recordings were made by the Mercury company, but it may not be general knowledge that the disk cutter head unit used is of British origin, known as the Grampian feedback head, handled in the U.S.A. by the Reeves Equipment Corporation, New York.

This negative feedback cutter head was developed by the BBC Research Department to meet their stringent requirements and Mr. Robert Bradford, of Grampian Reproducers, Ltd., Feltham, Middlesex, England, is chiefly responsible for the design of the R.A.3a., amplifier with a 75 VA peak output permitting up to 30 db. of negative feedback without instability in the cutter head feedback loop.

The special feature of this moving-iron head is that within the main or driving winding is a second coil, the

purpose of which is to provide a negative feedback voltage to an intermediate stage of the amplifier. Thus the cutter head is included in a feedback loop instead of being outside, as is normal practice. The voltage induced in the feedback winding of the head is proportional to the flux linked and the amplifier is therefore compensated to allow for the distortion in the flux waveform.

The method of damping the 10 kc/s mechanical resonance of the armature is by means of a Silicone fluid placed in the air gaps.

With the correct cutting-stylus, having a tip bevel not exceeding six microns, this cutter head is capable of recording frequencies up to at least 25,000 c/s with very low harmonic distortion.

It is interesting to note that Mr. Bradford prefers the harmonic distortion method of measurement to intermodulation-distortion methods, as his investigations both here and when in America led him to doubt the accuracy of the latter technique for disk recording. As the method requires a relatively high frequency for the second tone (often around 4,000 c/s), it is thought that the tracing distortion introduced by the pickup itself produces misleading results, as even two identical high-grade pickups will give different answers.

A favorite demonstration record at our British Sound Recording Association meetings is one of "smashing glass" which is so realistic that listeners start looking around for a broom to sweep up the fragments! This record was made by Mr. Bradford using a T.R.P. condenser microphone and the Grampian cutter head and amplifier. It certainly demonstrates the remarkable response of the head to transients.

I have just remembered that Bob Bradford is another audio engineer who hails from the county of Yorkshire!

As PREDICTED in the Sept.-October 1952 issue of HIGH-FIDELITY, the E.M.I. group has marketed a 7-in., 45 r.p.m. disk and 33 ½ r.p.m. records in several labels. The prices are 9s.8½d. inclusive of Purchase Tax for the 7R-Red Label category and 6s.10d. for the 7P-Plum Label type.

I have just attended a meeting of the British Sound Recording Association at which Mr. B. E. G. Mittell, of E.M.I. Ltd., released the first technical information on the new slow-speed disks. The material used for the pressings is a co-polymer vinyl resin, known as polyvinylchloroacetate (P.V.C. 85% and polyacetate 15%).

The dimensional specifications for the 7 in. 45 r.p.m. disks are summarized in an appendix to the forthcoming British standard on gramophone records and direct recordings, to be issued shortly. Finally, it is the opinion of E.M.I. engineers that recording characteristics are of little value, as they represent only a particular recorder curve, which may vary, so they have made available a microgroove reproducing curve, to which playback equipment should conform to give optimum quality.



It is my firm belief that FM is the greatest invention for the home since the watercloset, yet I hasten to add that it (FM, I mean) does take a bit more know-how to operate successfully. The good things you hear about FM are true: you can get beautiful high-fidelity reception free of static or fading, and the program material — at least the program material belonging properly to FM — is on an incomparably higher plane than that provided for listeners to network AM radio or the benighted watchers of TV. Proportionately, the benefits are harder to come by, but that's life for you.

Not every TV watcher, of course, is a prospect for the kind of FM broadcast we are concerned with here — no doubt for the same reasons that keep people away from chamber music concerts in such happy droves. There's probably no cure for this condition of the general public's taste. More distressing, though, is the fact that many thousands of potential FM enthusiasts simply do not know what they're missing. Or, if they have heard of FM, and have gone out and bought an attachment for their old radio, or invested in a 'combination' set, they haven't been able to see what's so wonderful about it.

The plain truth is that many programs sound little better on FM than on AM, and, even if they do, the difference doesn't matter much. FM cannot freshen a comedian's jokes, raise the price of hogs on a market report or add to the prowess of the Lone Ranger. But it can add everything (well, almost everything) that is lost between a live concert and the dulled, compressed, flattened reproduction that comes out of the average broadcast receiver. The difference between the vibrant quality of a symphony concert on FM and the dismal drone of the New York Philharmonic AM broadcasts on Sunday afternoons is beyond belief. If you're interested in this difference—if tone quality means anything to you—you should concern yourself seriously with FM.

I say "concern yourself" advisedly, for if, like myself, you live outside one of the big cities, you'll probably have a tough time finding anyone to help you with the problems you're bound to run into. Most servicemen are too busy keeping TV sets running to bother with 'high fidelity' or to monkey with FM; in fact, one well-qualified, progressive technician in my area informed me gravely that our region was a 'dead' spot for FM reception, that



there was no use bothering with it!

Now it happens that I moved to my present location a year ago, and I moved more wisely than I knew. Our little village is located in central New York State, an area favored, along with eastern Pennsylvania and Connecticut, with coverage by the Rural Radio Network, one of the most fabulous boons ever bestowed upon a strictly cow-corn-hog region. Formed and sponsored by the farm organizations of the State for the purpose of bringing farmers weather reports, market news and miscellaneous informa-

tion regarding their peculiar problems, the RRN also ties in with the New York Times station WQXR in Manhattan and relays, through high-quality FM stations scattered about the state, the excellent music programs of that station. (The writer, having no cow or hog problems below the butcher shop level, ungrudgingly hopes that the hints are helpful; on the other hand, he sometimes wonders what some of the farmers think of WQXR's fare.)

My problem, then, upon finding myself in this richlyblessed region and learning what was in the air, was to capture as much as possible of WQXR's Bach, Beethoven and Brahms for my personal consumption. Certainly, I had no intention of becoming a radio technician in the process. I wanted merely to hear music, not to study antenna theory, build funny-looking contraptions of tubing

and go clambering about on any rooftops. I had many years' background for the musical, or listening, phase of my enterprise, but beyond that — well, my ignorance was truly comprehensive, and I was content with it.

I did have, however, a pretty good amplifier and speaker for my record playing, and knew what a good LP could sound like. Figuring that all I needed to get into the FM business was a tuner, I ordered one, a kit, rather, from Collins Audio Products, and spent an interesting evening putting it together. I knew absolutely

nothing about FM technicana, of course (I don't yet; no doubt I will go to my grave wondering exactly how my discriminator works), but the instructions were so clear and complete that I exerted no more cerebral energy



on the operation than my wife does when she tackles a new cake recipe. As for an antenna, I hardly gave the matter a thought, having been assured by all the technicians I'd consulted that I wouldn't need one to get the two local stations located some ten miles away. For this I was glad; I didn't relish the idea of cluttering my rooftop with a

lightning attractor.

The new tuner worked upon being plugged in, just as our new pop-up toaster had. My speaker sang sweetly that first evening, and I admired my work rather extravagantly. Next evening, however, in a cooler, more appraising mood, I decided that one of my two stations offered no fare worthy of the FM medium, (or any other medium, for that matter) and that the other station offered high lows, low highs and a big fat hum.

The first of these stations I put on my "No music — don't bother with" list, but the second, a sort of reluc-

tant step-relation of the RRN, had me puzzled until I visited it and discovered that their professional-type receiver had gone on the blink and that they'd substituted, as a receiver for high-fidelity program material to be rebroadcast in my vicinity, an obsolete little box of a tuner that had sold in its prime for twenty-five bucks! I added Station No. 2 to my from-hunger list, which left me nothing for my



trouble and high hopes but a shiny new tuner to stare at. I decided to go back to my records and the hell with FM.

Somewhat later, however, (remember — I make no claim to an intelligent approach in any of this) I learned that WVCV, a bona-fide member of the RRN, was located in

Cherry Valley, a village some forty airline miles from mine. Obviously I needed to hook onto Cherry Valley for my WQXR music, even though its remoteness put it into what the experts called the 'fringe' or 'near-fringe' category.

The two or three FM owners I was able to locate had never heard a signal from Cherry Valley (most of them, indeed, had never even heard of the station), and the servicemen I approached with my new problem were no more than politely vague in their advice; matter of fact, they were too harrassed by owners of broken-

down Howdy-Doody machines to have any time for the likes of me. Finally, however, I found a man willing and able to give me some positive advice. He was a bold, uninhibited type, and he assured me that any little old kind of a dipole would do for FM, and made me one by hooking two pieces of TV downlead into a T shape. He told me to fasten it to the ceiling molding, broadside to Cherry Valley, and to use brads, not nails, unless I wanted to upset the impedance.

(Impedance! This was my first contact with that magical word. Nowadays I work it into my conversation whenever possible, reveling in the effect of my ignorant friends. The fact that I don't know what it means either doesn't bother me especially; after all, who knows exactly what electricity is?)

Apparently I drove my brads straight and true, as Hemingway would say, for my little old dipole brought in Cherry Valley with a signal that fairly sang with quality. It also brought, with crystal clarity, the ignition of every truck, tractor, motorcycle, scooter and fifty to sixty percent of the automobiles that used the busy highway in front of my house. The finer the day, the worse it was—the more traffic. Sundays, the day of my favorite program, the WQXR String Quartet, were plain awful. I'd be listening blissfully, say, to a Haydn string quartet, when suddenly—well, sitting in my music room (hah!) was like sitting inside a snare drum.

Reading on the subject of ignition interference (TV literature is full of it, naturally, but it's hard to find it mentioned more than off-handedly in FM books) convinced me that I had three courses open: (1) move the house farther back from the road, (2) move into a house already back from the road, (3) re-route the traffic. According to the written authorities, corroborated by local experts, there's very little you can do about a really bad case of ignition interference. It's like having a permanent skunk under the house; maybe you'd better just learn to live with it, and stop complaining.

This phase I now think of as the Phase of Resignation. I'd made a stout try, or so I thought, and had fallen flat on my face. Ah, the beauties of static-free FM! The velvety silence between numbers! Why didn't the rapturous writers on FM tell you that it really belonged back in the horse-and-buggy days? A horse can foul up a highway, admittedly, but he can't do it electronically.

In due time I rose from my dejection sufficiently to wonder if I was getting a really good grip on Cherry Valley with my little old dipole. Having read somewhere that a reflector had a certain effect upon a dipole, I made one of curtain rods (the curtains happened to be in the wash the night I got the inspiration), and found im-

mediately that the books, as usual, were correct: the reflector had an effect upon the dipole. Turned with the reflector toward Cherry Valley, the lash-up produced utter silence; turned clear around, it brought in the station about as well as if the reflector weren't there. So much for a dipole with reflector. What I wanted was something to improve reception, not a device to cut it out.

Gradually, exploring the literature, I formed the opinion that what I needed was either a rhombic or a yagi.

The former appealed immensely; there is a certain stateliness about a rhombic 90 feet to the leg — an assurance of adequacy in its very size — and I gave it up only after much surveying of my own premises and a discreet pricing of the vacant lot next door. My wife's practical viewpoint had its weight in my final decision to put my future in a yagi: even with the lot next door in my name, I'd have to chop down six century-old elms, would find the nose of my rhombic overhanging the highway, and would probably never be able to get the confounded thing aimed right

anyhow.

The rhombic having thus disposed of itself, I was free to turn my attention to yagis. They were shown in all the catalogs and displayed in the TV shops, but none were designed, I found to my disgust, for the FM band of frequencies. I took my problem to Gus, a serviceman who'd shown patience in dealing with me. He was deep in his work.

"Gus," I began firmly, addressing his denim posterior, "I want an FM yagi."

Gus backed out of the TV cabinet and looked around. "Still fightin' it, huh? Well, I haven't got any."

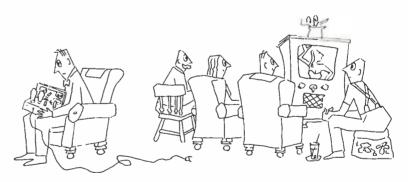
"But you can order me one, can't you?"

He shook his head. "I don't know where. They don't make 'em in production. If they had to stop production and make you one, it'd be a special and would cost you a pot full of money."

I tried another tack. "Couldn't you make me one?"

"Me? Me — I got no time to monkey makin' a yagi. I'd have to do a lot of readin', and I can't even keep up on important stuff that comes out." He picked up his soldering iron and held it close to his cheek, apparently to judge its heat. "You better get you one these all-wave TV jobs. They'll do you for FM well as any." He pointed to a double-V leaning against the wall.

I didn't want a double-V that would do as well as any; I wanted a yagi. Thrown back on my own pitiful resources, I came up finally with an idea that struck me as simple, direct and completely sound. From the advertising pages of the magazines, I selected the three yagi manufacturers with the most flamboyant claims (most decibels gained, sharpest directivity, stoutest construction, etc.) and wrote them for information as to how a man could go about remodelling one of their low-band TV yagis for FM. I put a lot of thought into my letters, achieving, I felt, a rather appealing note, and mailed them full of hope and



confidence. If you want help, go to the top! I kicked myself for the time I'd wasted before thinking of this approach.

One outfit replied promptly that they didn't make yagis for FM, only for TV, which I knew; the second, after considering my problem for six weeks, finally sent me a dodger describing their complete line of TV yagis, channels 2 to 13 inclusive; the third outfit, not a hasty type, apparently still has my problem under advisement.

So there I was. Only forty Continued on page 93



IN ONE EAR



By JAMES HINTON, JR.

Nasty is as Nasty Writes

People who go to concerts and read reviews, or people who just read reviews, for that matter, must sometimes wonder at what point legitimate criticism ends and libel begins. The answer isn't easy, but it is safe to say that the general tendency in this country has been toward milder and milder criticism of public personalities. If you don't believe that, just go back and read a sample of mid-nineteenth-century political oratory. The McCarthyite accusations of sedition and Communism-by-association read like courtly diplomatic communiqués beside some of the personal assaults delivered in pre- and post-Civil War days.

The British, as everybody knows, are given to more verbal restraint than Americans, in art as in politics, at least partly because the libel laws are far more stringent. Lately there has been a movement in Parliament to ease off the restraints on free speech and lower the barriers on protection of the individual, but it is still dangerous for British journalists to adopt other than the most cautiously dignified tone in writing about a recital, concert, or opera performance.

The reason for this is that in the British courts a tradition—or, rather, a body of judicial precedent—has grown up that any comment tending to deprive the reviewee of his or her livelihood is libelous and so entitles the injured party (the artist, not the people who bought tickets) to recover damages. And everything of a pejorative nature—if the writer, editor, and publisher are to be safe—must be cast clearly in the form of an opinion. Even then, if the question of livelihood enters into the case, a suit is likely, and the expertise of the critic is likely to be attacked. Since the livelihood of the critic is liable to be prejudiced if damages are awarded to the artist, the whole practice could become a vicious circle.

As a matter of fact, damages for libel are so easy to obtain under existing statutes and interpretations that most magazines and newspapers settle out of court as a general rule and allot in their budgets quite large sums to be paid out in settlements.

The result of all this is that British critics tend to tread softly and warily along the libel line and to look enviously over the Atlantic at particularly pungent criticisms by their American colleagues. I remember one of my reviews — a moderately descriptive one about a tenor at the City Center who was not secure in his part — that got reprinted (with names carefully deleted, to be sure) in a British magazine, for no other discernable reason than that a British critic saw it and wished enviously that he could be so free to mince no words.

Even in this country, the tone of musical criticism has become much more judicious and moderate than it once was. Nobody in the profession today writes reviews that are really vituperative, although there are very few lawsuits or even threats of lawsuits aroused by critical comments about performers. There is a sort of unwritten code, adhered to by most critics in the larger cities, that specifies the unfairness of making what might be called "absolute is" statements about performing musicians. The field of comment is limited to the specific event in question, and almost everybody writes, in spite of knowing better, that "Miss X's voice was tremulous, unsteady, and frequently far from the proper pitches," rather than that "Miss X's voice is tremulous, unsteady and frequently etc." The shading is delicate, but represents a deliberate concession to gallantry and fair-play.

However, if Miss X sings very often, without improvement, the gallantry becomes threadbare. Also, the charity is one-sided. Unless a reader follows closely on the critic's trail he may get the impression that Miss X is (people like to simplify) a good singer who had an off-night. It ain't necessarily so.

Record reviewers are both luckier and unluckier. People hardly ever seem to sue them, so it probably doesn't make much difference. Nevertheless, there is the fact that — since a recording, like a composition only more so, is an existent thing and presumably free from mutation — the reviewer can more safely and fairly write in the present tense. If John Conly writes that Mr. Z's playing in a cer-



tain recording is fast and percussive, any dispute boils down to metronome markings and verifiable judgement. The recording in question could be brought to court to testify against the critic, but on the other hand, everybody would know that the is referred to the single recording — not to Mr. Z's playing as it was, is now, and evermore shall be. Of course, if it came to a trial, a statement to the effect that "Mr. Z's playing is, as always, fast and percussive" would be a tort of a different color.

The only case that I know about of a lawsuit over a record review printed in this country took place in Italy. The leading soprano in a certain complete performance of a certain Italian opera realeased in this country by a certain firm (see how careful a writer can be) was adversely reviewed in a certain magazine by a certain critic, who alleged that her Fiora was not all it should be. She sued—not the critic, not the magazine, but the record company, which, she claimed, had ruined her career in the United States by releasing the recording. Since she in fact had no career here, had never appeared in this hemisphere north of Mexico City, and had profited from sales, her case was not very strong, but for ingenuity it would be had to beat

The music critics in smaller cities usually don't enter the picture at all, or only in a shadowy sort of way. The vast majority of them are nice old ladies with extensive music-club backgrounds, fresh young things who double as society columnists, or local piano teachers who are afraid they will get fired and lose pupils if they write anything bad. The level of music criticism in America is low indeed — not as low as the level of movie criticism, but low enough to merit a healthy shudder.

In looking back over the writings of music critics of the past it is easy to catch them in all sorts of miscalculations as to the worth or durability of compositions. It is customary to laugh at these, unless you are yourself a practicing critic sensitive enough to feel the cold breath of twenty-years-from-now snickering down your neck. Nevertheless, it is customary to read every yellowing statement about a *performer* as if it were gospel truth — unless, of course, it contains a judgment that tends to dispel cherished illusions.

Nobody wants to believe that Emmy Destinn ever sang flat, that Tamagno lacked certain niceties of style, and so on. People don't, either, even when they hear the evidence on records.

To make an end, here are a couple of reviews from the early years of the century. The Musical Record existed before there was any chance of its title being mistaken for that of a gramophone magazine, and it has long been dead and moldering, but these reviews are of a frankness and vitality seldom seen nowadays; their happy sadism must find some response in the heart of even the fairest, most colorless musical accountant of our own day.

"On April 10, Mme. Lilli Lehmann gave a song recital in Carnegie Hall, which she announced would be her last appearance before the New York public. An attendant at this afternoon recital would have been both amused and surprised. Amused at the credulousness of the New York public in assuming that Mme. Lehmann will give up so pro-

fitable a field, and surprised that those of really musical training could condone faults so glaring. (She) has got half down... the other side of the hill as far as the beauty of her voice is concerned. She has art, and in past days she has been an admirable interpreter of certain Wagnerian roles; but these times are passed and gone, and the truth of the whole matter is, that her last visit to this country and her recitals have been simply to acquaint people with the fact that she is to open a vocal school in Berlin, and is anxious for pupils. One of the most admirable characteristics of the German songstress is thrift, and Mme. Lehmann possesses it to a most extraordinary degree...," and so on.

Again, about a singer whose mother was more famous — and more gifted — then she:

"Mme. Blanche Marchesi gave her final song recital in New York on the afternoon of March 15. The event might well have been postponed, for the afternoon was one of the most inclement ones of the present season, and, in consequence, Mme. Marchesi suffered greatly in having chosen Carnegie Hall. Fully one-half of the auditorium was empty and all in all it was a decidedly gloomy event. Since Mme. Blanche Marchesi was heard, public opinion has crystallized, and it is generally admitted that a worse voice than hers has not been heard in some months. At her last performance she indulged too frequently in nasal tones which have a legitimate place in certain coster songs which she is wont to sing, but not in classic Lieder."

Not really very sweet-tempered, are they? Actionable? Yes. But they do have color denied to drabs the likes of us. Maybe it has something to do with writing with pens instead of on typewriters. Typewriters dissolve when dipped in vitriol.

Charivariety

Ingrid Bergman, always a young woman of parts, is adding another string to her bow — opera. Next winter, at the San Carlo in Naples, she is to appear in the title part of a stage production of Arthur Honegger's Saint Joan. Only catch is that Joan doesn't have to sing, not Honegger's Joan, anyway. This will give Miss Bergman, or Mrs. Rossellini, if you prefer, practically a corner on the world market; she has been Joan in Maxwell Anderson's play, on the screen, and now opera. Ballet only is left, unless you count TV.

- → Add favorite titles: Henry Purcell's Here I Lie in Abasement.
- The Omaha Symphony has, or did have a while back two double-bass players named Pierre Reiner and Fritz Monteux.
- → One of the few operas without a tenor in its cast is Nicolai Berezowsky's Babar the Elephant, scheduled to be given its premiere by the Little Orchestra Society as part of its series of children's concerts in New York. Strictly speaking, the work has elements of play, ballet and opera. "Who," says the composer, "ever heard of an elephant with a tenor voice"? Don't answer that question; even if he isn't at the Met any more, there's no need to hurt his feelings.

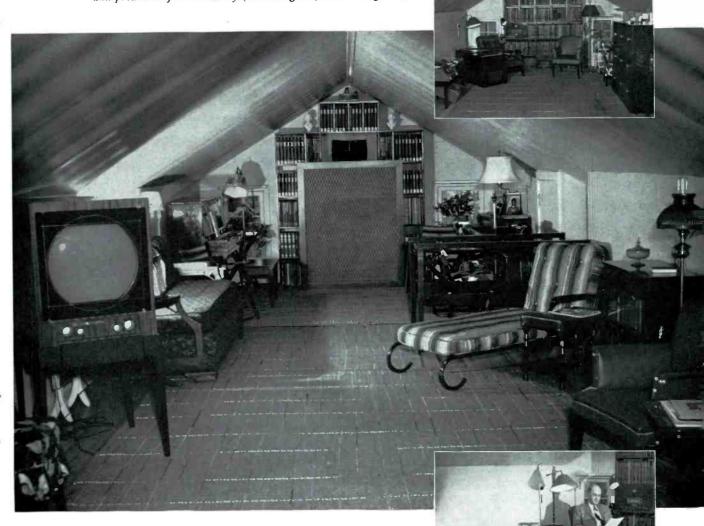


No one yet has sent us pictures of a bathroom wired for music, but nearly every other portion of a house has been represented. Below is the basement recreation-room set-up of Jack Dorland, cabinet maker of Niagara-on-the-Lake, Ontario, Canada. The model cabinetry is of mahogany and processed pine. Note the unconventional sound-diffusion device over the loudspeaker aperture.



In the attic

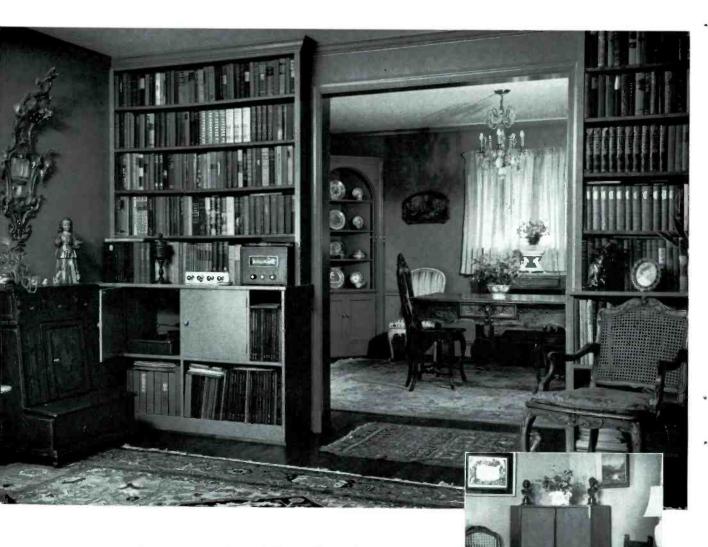
Dr. Paul N. Elbin is an organist, editor, writer on musical subjects, and president of West Liberty (West Virginia) State College. His



high fidelity room is tops — namely, the 40-foot attic of his house. It is so thoroughly insulated his wife calls it "the padded cell." One end holds a multi-speaker system, the other 78 rpm disks; LP's are in custom-made filing cabinets (top, right) Sole woe: summer heat.

...in the library

Both large pictures on these pages represent installations made by the Shrader Manufacturing Company, of Washington, D.C. Below, the lower portion of a bookcase has been built out to



accommodate equipment and record albums. The speaker system, pictured in inset, is diagonally across the room from equipment shelves, can be well heard in dining room.



... in the living room

In modern paneled room above, Shrader has concealed speaker in cupboard-space (top right). Below are two views of a moppet-sized rig built by Thomas Lucci, Avon Lake, Ohio, long-time hi-fi addict, for Thomas Jr., 2, Poet and Peasant Overture addict. It incorporates a Lucci-assembled push-pull amplifier, a 45 rpm changer, a standard 6-by-9-inch speaker in an Ozite-padded box cabinet. Mr. Lucci says the bass sounds fine. He painted the décor himself. Clown's nose lights up.



... in the children's room





Hum and Such

By VICTOR H. POMPER

EDITOR'S FOREWORD: In HIGH FIDELITY NO. 7 (November-December 1952), the authors described a superlative hi-fi music system which they engineered and installed in a Maine-coast summer home. Components included a Browning FM-AM tuner, Garrard changer with Pickering cartridges, Rek-O-Kut turntable plus Fairchild cartridges in a Fairchild arm, a Scott preamplifierequalizer, three Scott power amplifiers, two Electro-Voice Patrician speaker systems, and an outdoor speaker located 70 feet from the house. Readers have beseiged the authors with so many letters asking, in essence, "How'd you get all that stuff wired together so the fuses didn't blow?" and "Whew! The hum must have been wicked!" that they asked us to publish this résumé of the solutions to the principal problems they encountered. We are glad to - for the suggestions herewith will be of value to every home music listener in helping him to achieve optimum results from his system.

T MAY seem absurd, but in making the installation described in High Fidelity No. 7, only normal engineering precautions were observed. Of course, what may be normal to one person is distinctly abnormal to others. The photograph which appeared some time ago in High Fidelity No. 3 of C. G. Burke's hi-fi letter was, we believe, especially set up to demonstrate worst possible conditions — but we have seen many a hi-fi "installation" which bore an unfortunately close resemblance to Burke's nightmare. On the other hand, we have seen systems wired together with a precision and neatness which would be an engineer's dream come true.

Somewhere — far from the nightmare yet not an exact copy of the dream — is what *should be* considered normal. The precautions we took in laying out and interconnecting the components of the music system previously described were numerous, because of the complexity of the system, but they should not be considered abnormal.

Control of AC Power

To answer first the question about blowing fuses, the 120-A

preamplifier-equalizer unit draws its power from the 220-A power amplifier; a switch on the preamp controls the AC current to the power amplifier. One power amplifier was connected direct to the AC lines. The extra AC outlet on the 220-A was connected in turn to a relay-controlled power receptacle. To this were connected the two other power amplifiers, the ventilating blower, and the tuner.

Since both the Rek-O-Kut CVS-12 turntable and the Garrard RC-80 changer use rubber driving wheels, which will become bumpy if left engaged when the power is turned off, both units were connected direct to an AC outlet. Thus to turn them off, their own controls had to be used—and these controls automatically disengage the drive wheels in the off position.

With both turntable and changer, an annoying click could be heard from the speakers when the power was turned off. To eliminate this, 0.05 mmf condensers were connected across the contacts of their power switches, to filter out the clicks.

Hum and Shielding

Hum voltages are virtually infinitesimal but—a high-fidelity system is necessarily extremely sensitive. The outputs of high quality pickups are measured in terms of thousandths of a volt. Amplifiers have gains of well over 110 decibels—a power amplification of 100,000,000,000 times! This tremendous amplification is applied to hum as well as to music; therefore, the utmost care must be taken to shield the desired signals from the undesired hum voltages.

Certain portions of the high-fidelity system are far more susceptible to hum pickup than others. The most sensitive area is that portion of the system in which the electrical signals are of very low level: pickup cartridges, their connections to the amplifying equipment, and connections between tuner and amplifier. The primary sources of hum are the wires and connections carrying AC power, but secondary sources are the high-level signal lines from amplifier to speaker.

Hum pickup may be reduced efficiently by following straight-forward rules concerning three elements: shielding, grounding, and lead-dress.

Shielding and Grounding

Shielded wire consists of a center conductor carrying electrical signals, separated by insulation from an outer conductor of braided metal wire. This braided shield intercepts the hum signals, so to speak, and keeps them from the signal-carrying center conductor. The braid must be close-meshed to be effective and, if the circuits are of high impedance, the insulating material must have a low dielectric constant so that the shunting capacity of the cable will not be sufficient to effect the frequency response.

Moreover, for this shielding to be effective, it must be grounded and the points at which the shields are connected together or to ground is often critical.

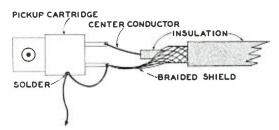


Fig. 1. Grounding cartridge frame will help reduce hum pickup.

The pickup cartridge is an exceptionally sensitive device and many hum pickup difficulties originate with it. Power transformers of associated equipment must be located as far from the pickup as possible. Hum pickup at the cartridge can be minimized by connecting the shield of the pickup lead to the case of the cartridge itself and also to both the chassis and motor frame of the turntable or changer, as shown in Fig. 1.

Whether or not the shields of the various input and output wires, and also the metal chassis of the different components in the system, should be interconnected by a single, separate ground wire, is best determined by experiment. Sometimes best results are obtained by interconnecting the chassis with a single ground wire; further help with the hum problem may be obtained by connecting the shields of the various shielded leads together, and in turn connecting them to the chassis ground wire. It is quicker (and simpler!) to experiment along these lines than to try to outline the conditions under which such grounding is likely to be helpful.

Leads and Lead Dress

The input leads and connections are extraordinarily sensitive. Lead dress, or the relative location of the various electrical connections of the system, is therefore very important. All high-level signal lines (e.g., from amplifier output to speakers) and AC power lines should be separated from the low-level input leads. Not only can AC hum be picked up from the 110-volt lines but also, if the amplifier high-level output leads are unduly close to the low-level input connections, some of the output signal may

be picked up at the input. The result is likely to be positive feedback which, in turn, results in oscillation. Such oscillation is often in the ultrasonic range and completely inaudible in itself, but it can cause the amplifier to operate in a condition of continuous overload, resulting in distorted, muddy reproduction of the sound.

As a matter of general policy, the shorter the lead lengths and connections between pickups, tuners, and amplifiers, the less the opportunity for hum pickup and pickup of extraneous signals.

Tube Selection

As a further refinement, low-level input tubes were tested until some giving virtually no hum at all were found. In this connection, it should be pointed out that the usual serviceman's tube tester is not a reliable means for determining all tube defects. It will indicate major faults, but many tube faults can be located only by replacing tubes one by one until the trouble ceases. For some reason, it is often assumed that tubes, of all the components used in high fidelity equipment, are the least likely to be defective. Yet the reverse is more often the case.

The low-level amplifying stages are very sensitive and even minor tube faults may cause defective performance from the standpoint of music reproduction. Similarly, in the output stages, the tubes are subject to high temperatures, which may accelerate any weakness in the tube.

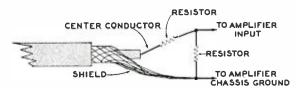


Fig. 2. Reducing output by voltage divider balances cartridges.

Normal tube life should be a matter of years; undue heating, caused by improper ventilation, can reduce this life considerably.

Pickup Equalization

Since the output levels and frequency response characteristics of the Fairchild and Pickering cartridges were not identical, equalizing networks were incorporated into the system. When used with a transformer, the Fairchild pickups have slightly greater output than the Pickering units. Therefore, a voltage divider, as shown in Fig. 2, was used across the Fairchild to reduce its output slightly. Such resistance voltage dividers require careful determination of resistor values to achieve the correct voltage drop; standard engineering texts should be consulted.

Adjustment of the high-frequency response of the pickup can be accomplished by means of a resistance directly across the connections from the pickup (or from the transformer secondary), as shown in Fig. 3. The lower this resistance, the greater the reduction in high frequency response. Final adjustment of resistor values for proper level and frequency equalization is best accomplished by using a wide-range test record on the phonograph and a VU meter, or good audio voltmeter, connected directly across the amplifier speaker terminals.

Speaker Phasing

In any installation involving two or more speakers, it is important that they be correctly phased. Identical program material is applied to each speaker. The cone is actuated by its voice coil. So, if a given voltage is applied in one polarity to one side of this voice coil, the speaker cone will move outward, but if the same voltage is applied to the opposite side of the voice coil (i.e., the connections to the speaker are reversed), the speaker cone will move inwards. When dual speaker systems are

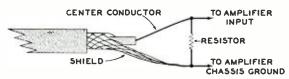


Fig. 3. Resistor across pickup leads cuts response at high end.

used, care should be taken that polarity of connections from amplifier to speaker voice coils correspond. Otherwise, for identical signals applied to the speaker systems, one cone will move inward while the other moves outward, and some cancellation of sound may result.

Many speakers are color coded, or some other indication given as to which side of the voice coil is which, so that correct connections are simple. Identical terminals on the speakers should be connected to the same terminal on the amplifier.

If speakers are not coded, either of two methods may be used. Connecting a flashlight cell across the speaker terminals will make the cone pop in or out. Note which terminal of the cell, connected to which terminal of the speaker, makes the cone pop outwards. Then determine the terminal on the second speaker which produces the same result. These two speaker terminals should then be connected to the same output terminal on the amplifier.

A second method is to check the sound at low frequencies with a sound level meter and pick the phasing which gives the smoothest response. This is the preferred method, since there are occasions—rare, but nevertheless!—when out-of-phase operation provides smoother response throughout the room as a whole.

Conclusion

In the foregoing paragraphs, we have endeavored to point out some of the many factors which go into achieving the superlative. The moral is that proper attention to a number of small points, each in itself relatively unimportant, will produce a marked improvement in overall result. The higher the fidelity, the more important these small factors become.

The Binaural Corner

HAVING made the startling discovery that human beings have two ears, and that two are better than one, the audio industry is now working itself into a lather over the idea that if two ears are better than one, then three must be better than two. So we have stereophonic, which is the tag applied to three-channel sound reproduction. One channel for the left side, one for the right, and one for the middle - to give depth. Three-channel tape, developed largely by Ampex with an eye on 3-D movies, was demonstrated at the West Coast Audio Fair in February. "Phenomenally sensational" writes that master of enthusiasm, Cap Kierulff. We heard it in New York at the IRE show in March; part of the tape involved a train coming into a station. We have often wondered how it would feel to fall in front of an on-rushing Twentieth Century Limited. . Now we know. We were run over for fair, but fortunately fell between the tracks and were uninjured except for slightly cracked eardrums. After the train-in-a-station episode, everything else seemed phenomenal but not sensational.

Since the present complications of recording and reproducing three-channel sound put it on the impractical side as far as the home hi-fi enthusiast is concerned, we'll leave it to super-duper demonstrations, the movies, and the like. No doubt it will find its way into quite a few homes, but we've got enough problems with two-channel.

Actually, the problems of two-channel or binaural sound are not great. It is entirely feasible for the average home music listener to have binaural sound today — and without spending a fortune.

Because we have had many letters asking for further information about equipment required for binaural, let's line up the components as clearly as we can. First, and for all program sources, we must have two loudspeakers in separate enclosures, and spaced six or more feet apart. Second, each loudspeaker must be driven by its own, separate power amplifier. The loudspeakers should cover essentially the same frequency range. It is possible to use only one speaker for the extreme low frequencies, say from 200 cycles down; but then two additional speakers are required for middle and high frequencies of each channel. It is not possible to divide a monaural woofer-tweeter system so that the tweeter carries one channel, the woofer another — unless the tweeter is an unusual one and can carry the frequencies down to at least 200 cycles.

Third, if the program source is RADIO: two radio tuners are necessary, either two FM units (if that is the way the binaural broadcasts are being made) or, more frequently, an AM and an FM unit. Each tuner is connected to a separate amplifier-speaker channel.

If the program source is RECORDS: a single turntable is required, but a binaural or two-headed pickup arm, such as the Livingston, is used. Two pickup cartridges, one for each channel, are connected to two separate preamplifiers, and the preamps connected, Continued on page 106

RECORDS

in REVIEW

PAUL AFFELDER • C. G. BURKE • RAY ERICSON

ALFRED FRANKENSTEIN • JAMES HINTON, JR. • J. F. INDCOX

EDWARD L. MERRITT, JR. • DAVID RANDOLPH • JOHN S. WILSON

CLASSICAL MUSIC ON LONG PLAYING RECORDS

BACH

French Suites

Fernando Valenti, harpsichord. Westminster wal 310. Three 12-in. 94 min. \$17.85.

There is nothing namby-pamby about Fernando Valenti's approach to the harpsichord. These are full-bodied readings, that make of the harpsichord no tinkling purveyor of antiquated sounds. The interpretations are searching, and the value of the album is enhanced immeasurably by the inclusion of the complete scote, for which Westminster is to be thanked.

The recording is startling in its tealism, and the engineers have brought us as close as ir is possible to come to the harpsichord without taking us actually *inside* ir. (Any closer would seem immoral!)

D. R.

BERLIOZ Symphonie Funèbre et Triomphale, Op. 15

The Great Symphonic Brass Orchestra of Cologne, String Orchestra of Cologne and Chorus of the Kölnischer Chor.; Fritz Straub, cond.

LYRICHORD LL 40, 12-in. \$5.95.

Something quite off the beaten path is this piece of occasional music composed by Berlioz in 1840 for the ceremonies dedicating the war memorial column at the Place de la Bastille in Paris. Originally written as symphonic music for a wind orchestra of 207 players, it had to be rescored later for a smaller aggregation, with strings and chorus added in the last movement. Nevertheless, because of its unusual instrumentation, it is seldom performed. Though it does not represent Berlioz's best efforts, it is still impressive, and contains moments of deeply moving beauty. The first movement is a heroic, but never bombastic, funeral cortège; the second is a recitative and aria — a sort of funeral oration — for tenor trombone, leading directly into the third movement, a stately triumphal procession with a brief choral finale.

Despite the number of performers involved, the music does not sound overblown in this distinguished presentation. And Lyrichord's claim that this will be a spectacular disk for demonstrating high-fidelity equipment is not unfounded. The large forces have been kept in careful balance, though the chorus sounds small and indistinct in the background. Particularly fine is the reproduction of the percussion instruments, with the most natural-sounding cymbal crashes I have ever heard on disks. The record need not be played at too high a level in order to gain the proper effect, yet never blasts. It is certainly worth investigating.

P. A.

BERNSTEIN

Fancy Free-see Copland

BORODIN

Symphony No. 1 in E flat Major †Dohnanyi: Symphonic Minutes, Op. 36

Bavarian Symphony Orchestra; Kurt Graunke, cond. URANIA URLP 7066. 12-in. \$5.95.

As a symphonist, Alexander Borodin is known almost exclusively by his Second Symphony in B Minor. This disk debut of the First Symphony, therefore, will come as an ear-opener to most music lovers. It is an undeservedly neglected work with many of the fine attributes of the Second, including some sparkling rhythms, pleasing thematic material and a deal of Russian color.

Symphonic Minutes, a four-movement miniature suite written in the 1930's by the Hungarian composer conductor-pianist, Erno Dohnànyi, now living and teaching in this country, is also attractive and often spirited, but does not represent the best efforts of this usually highly inventive creative musician.

Both works are performed with rapier-like incisiveness by Graunke and the Bavarian Symphony Orchestra. The reproduction, too, is first-rate, though it seems to show a sparseness of strings. P. A.

BOYCE

Symphony No. 2 in A Major Symphony No. 3 in C Major Symphony No. 5 in D Major Symphony No. 7 in B flat Major

The London Baroque Ensemble; Karl Haas, cond. WESTMINSTER WL 5159. 12 in. 31:20 min. \$5.95.

For the music lover who may wonder what was happening in music between the Bach-Handel period and the era of Haydn, this disk will supply one answer. Boyce was born in 1710, when Bach and Handel were each twenty-five, and Haydn was not to appear on the scene for another twenty-two years. Boyce lived until 1779, by which time Mozart had already made his mark and Beethoven was a boy of nine.

Do not expect these "Symphonies" to be earth-shaking, personal documents. They emerge as delightful miniatures, most akin to Handel in their style. Note that there are four complete symphonies on this single disk, totalling thirty-one and-a-half minutes! (This volume of four little symphonies completes the collection of eight by this composer, the other four having been previously issued by Westminster in performances by the same forces.) Aside from their historic interest, these symphonies make most pleasant listening.

The performances are spirited, and completely in keeping with the feeling of the music. The recording is on a level with Westminister's best, which means excellent.

BRUCKNER Great Mass No. 3 in F Minor

Dorothea Siebert (s); Dagmar Herrmann (a); Erich Majkut (t); Otto Wiener (b). Akademie Kammerchor-Vienna State Philharmonia; Ferdinand Grossmann, cond. VOX PL 7940. 12-in. 58 min. \$5.95.

There is little doubt that the Bruckner enthusiasts will find this record welcome. What seems more significant, however, is the fact that even those who do not genuflect before every note of Bruckner (in which group I count myself) may find the music to their liking. Somehow, this work seems a little less discursive than many of his other compositions, while lacking none of the characteristics that endear him to his adherents. There is, moreover, a certain "personal" feeling about this music that makes it quite appealing. Performance and recording are good.

D. R.

COPLAND

Rodeo †Bernstein: Fancy Free

Ballet Theatre Orchestra; Joseph Levine, cond. CAPITOL P 8196. 12-in. \$4.95.

Two of the very best American dance scores are played neatly enough in performances crisply reproduced.

J. H., Jr.

DONIZETTI Don Pasquale

Lina Aimaro (s), Juan Oncina (t), Josef Schmiedinger (t), Scipio Colombo (bne), Melchiorre Luise (bs). Vienna Kammerchor and Vienna Staatsoper Orchestra; Argeo Quadri, cond. Westminster wal 206. Two 12-in. \$11.90.

Along with L'Elisir d' Amore — or after it, depending on variations in personal taste — Don Pasquale is one of the pleasantest of operabuffe still in circulation. The plot, which concerns the plottings that result from fat old Don Pasquale's refusal to allow his nephewward to marry the girl of his choice, is as involved as any admirer of the genre could wish; and concealed identities, sentimental meetings, a fake marriage, vixenish assaults, and crafty plottings give rise to tunes as graceful as any.

The reproduction in this set is outstandingly good, the performance perfectly respectable but not incandescent. Lina Aimaro, whose Metropolitan career, a number of seasons back was sparse and brief, is the lady in the case. She sings with the will and facility typical of those nice, healthy Italian coloraturas; only at the top



Quadri: Donizetti's Don was more respectable than incandescent.

do her tones get edgy and slip off pitch. Juan Oncina, as the nephew Ernesto, sings well, if a little tearfully. The two low-voiced men, Melchiorre Luise, late of the Metropolitan's buffo department, as Don Pasquale, and Scipio Colombo, as the jovially scheming Docror Malatesta, both show that they know full well what they are about; both are vocally unsubtle and a little provincial sounding. Argeo Quadri keeps things going at a good pace, but he, too, lacks grace and subtlety.

J. H., Jr.

DOHNANYI

Symphonic Minutes. Op. 36-See Borodin

DVORAK

Serenade in D Minor, Op. 44

London Baroque Ensemble; Karl Haas, cond. DECCA DL 7533. 10-in. \$3.85.

Not to be confused with the earlier and better-known Serenade for Strings in E Major, Op. 22, the present charming and undeservedly neglected work is scored for two oboes, two clarinets, two bassoons, contra-bassoon, three horns, 'cello and bass. It comprises four short but inventive movements, and is full of simple, folk-like melodies and characteristic Czech rhythms. Here and there, one will find the influence of Brahms' two serenades. Sensitively played and recorded, this little chamber music gem will be cherished by everyone who takes the trouble to investigate it. P. A.

DVORAK

Slavonic Dances, Op. 46 and Op. 72

Czech Philharmonic Orchestra; Vaclav Talich, cond. URANIA URLP 604. Two 12-in. \$11.90.

The Golden Spinning Wheel — Symphonic Poem, Op, 109 The Midday Witch — Symphonic Poem, Op. 108 Waltzes, Op. 54, Nos. 1 and 4

Czech Philharmonic Orchestra; Vaclav Talich, cond., in the Symphonic Poems. Prgaue Soloists Orchestra; Vaclav Talich, cond., in the Waltzes.

URANIA URLP 7073. 12-in. \$5.95.

Urania has scored a coup in getting Vaclav Talich and the Czech Philharmonic to make new long-playing recordings of their famous interpretation of the sixteen Slavonic Dances by Dvorak, once available in two Victor 78 tpm. albums. No one can extract as much meaning and beauty from this infectious music as can Talich. Nothing is hurried; everything is carefully phrased, and the orchestral playing is among the best in Europe. What's more, Urania has provided exceptionally natural-sounding, expansive reproduction, with some of the finest string tone I have heard on disks. Here, indeed, is an interpretation and recording that will stand as a model for years to come.

Dvorak's two symphonic poems, which follow rather closely the melodramatic stories that inspired them, may also be enjoyed as pure music. Dating from his post-American period, they contain many melodic and dramatic elements, plus some of the Czech folk characteristics to be found in the Slavonic Dances and Slavonic Rhappodies. The Waltzes, originally written for piano, are extremely light, resembling high-type salon music. No. 4 must certainly have been inspired by one of the waltzes in Brahms' Op. 39. As might be expected, all of these works are superbly played under Talich's direction, and are accorded the same magnificent reproduction as the Slavonic Dances.

P. A.

GLAZOUNOFF

Concerto for Violin in A Minor, Op. 82 †Kabalevsky: Concerto for 'Cello, Op. 49

David Oistrakh, violin. State Orchestra of the USSR; Kiril Kondrashin, cond., in the Glazounoff. Daniel Shafran, 'cello. Same orch.; Dmitri Kabalevsky, cond., in the Kabalevsky. VANGUARD VRS 6005. 12-in. \$5.95.

Among the most melodiously beautiful of the violin concerti from the romantic school is the sole work in this form by Alexander Glazounoff. Following the pattern of the Liszt Piano Concerti, it is in one continuous movement, subdivided into several sections, each of which is almost a movement in its own right. Oistrakh, who is Russia's leading violinist, plays here with a wealth of tone. His conception of the Concerto is, not inappropriately, along rather broad, relaxed lines. Unfortunately, he has been given second-rate reproduction. There is too much hall resonance, causing a lack of definition in the orchestral accompaniment. Also, considerable sharpness of focus has been lost by filtering out the higher frequencies. Though it, too, is hampered by a limited tonal range, the more brilliant and forward-moving performance by Nathan Milstein with William Steinberg and the RCA Victor Symphony Orchestra will be preferred by many.

The Glazounoff concerto dates from 1904, the year when Dmitri Kabalevsky was born. The latter's concerto for 'cello and orchestra was composed in 1948-49, but sounds as if it were older than the Glazounoff work. Though it is conceived entirely in the nineteenth century style, this melodic concerto is a welcome addition to the meager literature for cello and orchestra. Daniel Shafran

turns out to be a young cellist with a warm tone and a virtuoso technique which allows him complete mastery of the work's many difficulties. The recording here is a trifle better than in the Glazounoff concerto, but is occasionally marred by distortion.

P. A.

GLUCK CORELLI HAYDN Concerto for Flute and Orchestra, in G Concerto for Oboe and Strings Toy Symphony

Jean-Pierre Rampall (flute), Pierre Pierlot (oboe); Paris Philharmonic Orchestra (G & C), Paris Radio Orchestra (H), René Leibowitz, cond.

OCEANIC 29. 12-in. 14. 9, 9 min. \$5.95.

Six months old, but these gaieties have earned a citation for all-around scintillance, Mr. Leibowitz having a light way with light things and the Oceanic supervisors having contrived a glib and rather exciting brilliance without excesses. The broad band of salt traced by the Pierlot oboe may be unique: it is certainly admirable. There are no other LP's of these things, and the pleasant Koussevitzky 45 of the Toy Symphony is pallid after the sensational virtuosity of Mr. Leibowitz's rattle, cuckoo, whistle, tin trumpet and drums.

C. G. B.

GOLDMARK "Rustic Wedding" Symphony, Op. 26

Royal Philharmonic Orchestra; Sir Thomas Beecham, cond. COLUMBIA ML 4626. 12-in. \$5.45.

The Hungarian composer, Karl Goldmark (1830-1915), called this work a symphony, when actually it is no more than a charming five-movement suite. Once extremely popular on orchestral programs, it is now seldom heard except at "pop" concerts. Those who feel that it has worn out its welcome, however, should hear this performance by Beecham. He has a way of interpreting old warhorses with such care, transparency and conviction that they take on new musical values and become masterpieces all over again. Such certainly is the case here. This performance of the Rustic Wedding is one of his most notable artistic achievements on disks. His reading has true elegance and clarity, and will probably be the definitive one for many, many years. He has been aided with magnificently live reproduction, among the best Columbia's engineers have achieved in England.

P. A.

(Dissent) Many a fine little disk, especially if on one of the smaller labels, is apt to get overlooked in the spate of LP's now pouring from the presses. Such a one was the ingratiating Viennese performance of this symphony, under Henry Swoboda's direction, on Concert Hall CHS 1138. I found this such a forthright and gusty realisation of this captivating, but not well known, work, that I failed to see how it could be bettered. The new Beecham issue will not cause me to change my mind. In fact, further playing of Swoboda's disk convinces me that his sturdy, earthy and rhythmically secure approach is far more appropriate to the work than the refined, delicately nuanced, and if one may say so, rather superior attitude of the English conductor.

Perhaps Columbia's sound has a slight edge over Concert Hall's, though I am not sure that its lushness is quite right, and the orchestral work has a little more polish; neither are enough for me to forswear allegiance to Swoboda and his men.

J. F. I.

GRIEG

Norwegian Dances, Op. 35 Symphonic Dances, Op. 64

Danish National Orchestra of the State Radio; Erik Tuxen, cond. MERCURY MG 10132. 12-in. \$4.85.

Norwegian Dances, Op. 35 †Sibelius: Valse Triste, Op. 44; Rakastava, Ob. 14

Vienna State Opera Orchestra; Franz Litschauer, cond. VANGUARD VRS 430. 12-in. \$5.95.

Grieg's imaginative use of folk elements in orchestral music is admirably demonstrated in his four Symphonic Dances and, in a somewhat lighter vein, in his four Norwegian Dances — the latter, however, were orchestrated not by Grieg but by Hans Sitt. The performance of this music by Tuxen and the Danish National Orchestra is a high artistic achievement. The playing is finely controlled, while the reproduction is natural-sounding and carefully balanced. Litschauer adopts faster tempi and puts more verve into

the Norwegian Dances, but his reading lacks the nobility and stature of Tuxen's. The Viennese conductor completely misses the boat on the two Sibelius trifles, treating them heavily and without sensitivity. Vanguard's recording is, perhaps, more brilliant than Mercury's, but it has a harsher, shallower sound, as if the microphones were placed close to the orchestra to compensate for a shortage of strings.

HANDEL Concerti Grossi No. 9 and 10

Boyd Neel String Orchestra, Boyd Neel, cond. LONDON LS 585. 10-in. 14, 16 min. \$4.95.

The same broad playing and deep, sweeping sound as in the last pair of these from Mr. Neel, who now has only two to go. Excellent on compensating apparatus which can unshimmer the violins.

C. G. B.

HANDEL Giulio Cesare

Sylvia Gähwiller (s), Margarete Witte-Waldbauer (ms), Maria Helbling (c), Friederich-Brückner-Ruggeberg (t), Rolf Snader (t), Paul Sandoz (bne), Kelch (bs), Siegfried Tappolet (bs). Orchestra and chorus of the Handel Society; Walter Goehr, cond.

CONCERT HALL HDL 18. Two 12-in. \$11.90.

Although a great deal of Handel's music is available on LP, his operas are not well represented; indeed, eighteenth-century Italian opera as a class of composition is not well represented. For Giulio Cesare is an Italian opera. In both text and style it springs from Handel's sojourn in Italy — a sojourn that led to success, to the Kapell-

Copenhagen's Erik Tuxen and Mercury's engineers gave Grieg noble interpretation and resoundingly natural reproduction.



meistership of Hanover, and eventually to England and the great oratories of his later career. It is a work of considerable beauty, full not only with what was to become known as the broad Handelian line and with florid coloratura, but, less to be expected, with passages in which a warm humanity glows through the formal outlines of da cape arias delivered by Casear, Cleopatra, Cornelia, and Ptolemy.

Like Handel himself, the society that bears his name went to Europe to find singers, but ro a different country (Switzerland) and with less than perfect results, especially as regards diction. On the whole, the performance is well representative of the music, and Paul Sandoz, the Caesar, and Maria Helbling, the Cornelia, sing very well once they are warmed up. The orchestra is good, and Walter Goehr conducts with scholarly precision if not the utmost vitality in a very worthwhile enterprise. The test pressings augur well for the final technical verdict.

J. H., Jt.

HANDEL Israel in Egypt

Jutta Welting (s); Irmgard Bialas (s); Ebba Munzig (a); Wilhelm Horst (t); Gerhard Raker (b); Hetbert Rungenhagen (b). Soloists and Combined Berlin Chamber Choirs, Berlin Symphony Orchestra; Helmut Koch, cond.

BACH GUILD BG 521/22. Two 12-in. 79 min. \$11.90.

Let us clear the air immediately by saying that this is as satisfactory a recording as one could hope for, from every standpoint, performance-wise and recording-wise. Let us acknowledge a few rather forced tones in the higher registers of the difficult bass duet, but let us also hasten to acknowledge that such complaints are so brief and infrequent that they hardly affect our enthusiasm for the

set. The performance is a devoted one and shows complete understanding; the recording is spacious, resonant and well balanced.

But now, let us devote the remainder of this space to comparing this recording with the one previously issued by the Handel Society, under Walter Goehr. If one wanted a demonstration of the difference between the Germanic and the English approach to choral music, it would be difficult to find two performances that point up that difference more clearly. The Koch version is tonally rich, full and opulent, with the orchestra as prominent as the chorus. The Goehr performance is typically English in its restraint, with everything on a smaller scale, and with the choral parts featured, while the orchestra is made to supply a discreet background. The English chorus is a little detached, concentrating on the purely musical values: the German one throws itself into the music, seeking its emotional implications. The Handel Society sings in impeccable English; the Berlin group sings in equally faultless German. Since Handel was a German who settled in England, and who set the style for most subsequent English choral singing, there is a question as to which tradition is the proper one. D. R.

JANACEK Slavonic Mass

Moravian Mixed Chorus; Btno Radio Symphony Orchestra; Brestislav Bakala, cond.; Frantisek Michalek, organ. URANIA URLP 7072. 12-in. 40 min. \$5.95.

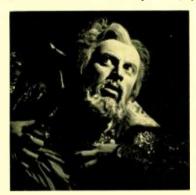
One of the most fascinating choral works of our time has been brought to light with this recording. Since Janacek is not too well known in this country, the style of this work might best be characterized by saying that it contains the massive ruggedness of Moussorgsky's Boris Godounoff, combined with a touch of Stravinsky's Sacre du Printemps.

The work was one of the last from Janacek's pen. He wrote it in 1926, just two years before his death. At the time of its first New York performance, in 1930, the conductor, Artur Bodansky made the following very apt statement: "It cannot be too strongly emphasized that this is not, except in form, a mass of the Church; ir is rather a highly nationalistic hymn of exultation and praise of God, fervid but not liturgical. I can realize that anyone who comes to hear this Mass of Janecek's with the Masses of Mozart or Palestrina or the Passions of Bach in mind, will be shocked by the barbaric peasant-like strength of this new music."

It is this very barbaric peasant-like strength that is the most fascinating aspect of this work. It abounds in unbridled emotionalism, painted in broad strokes, and with a master hand. All the performers throw themselves into the music of their compatriot with complete enthusiasm, and they are fully equal to the difficult task they have set themselves. The recording captures the massive quality of the music with great effectiveness.

D. R.

KABALEVSKY Concerto for 'Cello, Op. 49-See Glazounoff



Boris Christoff: in three roles, color, imagination, potent characterization.

MOUSSORGSKY Boris Godonnoff

Ludmilla Lebedeva (s), Eugenia Zareska (ms), Lydia Romanova (ms), André Bielcki (t), Nicolai Gedda (t), Wassili Pasternak (t), Gustav Ustinov (t), Raymond Bonte (t), Boris Chtistoff (bs), Kim Borg (bs), Stanislav Pieczora (bs), Eugene Bousquet (bs). Orchestre de la Radiodifusion Francaise and Choeurs Russes de Paris; Issay Dobrowen, cond. RCA VICTOR LHMV 6400. \$23.80.

For a work so demanding, Boris Godounoff has had more than fair treatment down the years of recording history. From Chaliapin

through Pinza and Kipnis, the great pivotal scenes have been available in versions by striking and individual artists. No one need discard his favorites, but the opera makes its most powerful effect as a totality; the present issue makes available almost such a totality, lacking only the unattainable — actual presence in the theatre.

Only last year, both Colosseum and Period released a complete version of Boris Godounoff in which the title role is sung to generally splendid effect by André Pirogov, supported by the Bolshoi Theatre forces. Much of it is very fine, particularly in terms of recreation of the atmosphere surrounding a stage performance, but the Iron Curtain sound is variable and not up to present western standards. The new HMV version, made in Paris, lacks only the geographical authority of its earlier competitor and surpasses it at almost every point.

The text is Russian, the orchestration that of Rimsky-Korsakoff's final edition; the cuts minimal (about eighteen pages of score in all, less than in most actual performances).

Boris Christoff, who sings not only the role of Boris but those of Varlaam and Pimenn, is very good always and really excellent most of the time. His voice is solid, his singing (as singing) without important flaws. Over and above these assets, he provides resources of imagination and color ample to sustain not only an extremely potent characterization of the Czar but equally believable portraits of his other characters. The scene between Pimenn and Boris in the last act is created by superimposition, but even here the illusion is not dispelled.

When Mr. Christoff is not on hand in one or the other of his persons, the performance is sustained, and well sustained, by the conducting of Issay Dobrowen and the efforts of the other singers.

The reproduction is darkly splendid.

J. H., Jr.

OFFENBACH La Vie Parisienne

(Comic Opera in 4 Acts, Abridged.) Soloisrs, Lamoureux Orchestra, Jules Gressier, cond. VOX PL 21000. 12-in. 43 min. \$5.95.

One of the most genuinely satisfying of all French opererras, due to the bubbling, infectiously rhythmic and melodious Offenbach score. Yet all the credit should not be apportioned to the composer, since, in its day, it is highly probably the wickedly satirical libretto of Meilhac and Halévy contributed considerably to the success of the work. The whole Parisian scene of the Second Empire seems to have been made for comic opera... and the librettists lost no chance to ridicule every facet of it—society, police, the Army the politicians—to the vast delight of theatre goers of the day.

The recorded performance is sparkling and vivacious. The vocalists, if something less than first rate, obviously enjoy the joke, and succeed in communicaring their enjoyment to the listener. Excellent team work — so essential here — and how pleasureable it is to hear the language so clearly and affectionately enunciated! Vox's sound is clear, if sometimes a trifle brittle and thin at the top, a matter that can easily be rectified. Clean, quiet surfaces. J.F.I.

PROKOFIEFF On Guard for Peace

Combined Choirs and State Orchestra of the USSR; Samuel Samossoud, Cond. Zara Dolokhanova, narrator; E. Talanov, alto. VANGUARD VRS 6003. 12-in. 31 min. \$5.95.

The oratorio has never played an important part in the Russian musical tradition, but the Soviet regime seems determined to remedy that lack. At all events, a number of latge-scale choral works by contemporary Russians have crossed the Iron Curtain via records, and On Guard for Peace is the largest of them. No translation of the text is provided, and one suspects that it actually does not, in its last movement, "tell of the desire of business men in all lands for peaceful trade," although that is the beguiling phrase which Vanguard's annotator uses. Its general drift, however, is clear enough: it is part of the current Soviet peace propaganda, and it is the work of a composer whose creative stature cannot be totally diminished even by so "official" an assignment as this. The score is a curious mixture of nobility, piquancy, and "official" declamation. It reminds one at times of Prokofieff's well-known choral piece Alexander Nevsky, although it lacks the dramatic punch of that earlier work.

A. F.

ROSSINI Il Barbiere di Siviglia

Victoria de Los Angeles (s), Anna Maria Canali (s), Nicola Monti (t), Erminio Bernatti (t), Gino Bechi (bne), Nicola Rossi-Lemeni (bs), Melchiorre Luisi (bs). Milan Symphony and chorus; Tullio Serafin, cond.
RCA VICTOR LM 6104. Three 12-in. \$17.16.

This HMV importation has numerous advantages and one disadvantage, but the disadvantage is so focal and so inescapable as to disqualify the whole enterprise. This, to get the dirty business done, is Gino Bechi's Figaro. Seldom has an atrocity of such magnitude been preserved, much less marketed. It is not that he is fundamentally a bad Figaro. He knows the role backwards. But when this recording was made his voice was in appalling condition—hoarse, coarse, heavy, and so stiff as to make his attempts to sing decorative figures both laughable and horrifying.

Mr. Bechi's defection to the ranks of the unacceptable is even sadder because several of his associates are better than merely worth hearing. Victoria de los Angeles is a really charming Rosina — not in the usual bright-as-a-new-penny, cute-as-a-kitten manner, but with a personality all her own that is gentle, warm and appealing. Although she is by trade a soprano, she sings the music in its original mezzo-soprano range, presumably because of her occasionally unlovely top tones rather than because of a yen for authenticity. This decision does not always seem a happy one, she seems ill-at-ease in the unfamiliar placement. But, after all, she is one of the very finest singers alive as well as one of the most sincere and winning artists, and these qualities predominate.

Nicola Rossi-Lemeni is, to put it simply, a fabulous Don Basilio. There may have been singers as good in this part, but when a certain level of excellence is attained comparisons become meaningless. At the conductor's stand, Tullio Serafin is in top form, and except when he has Mr. Bechi to deal with, it is difficult to imagine a reading more graceful and unfrenetic.

Few tenors ever have been able to put all of the notes in Almaviva's forature in precisely the right places at precisely the right times, and Nicola Monti is no exception. His voice is tractable and pleasant, though, and he has considerable style. Melchiorre Luisi is top-drawer present day routine as Doctor Bartolo, Anna Maria Canali a good sound Berta. The voices are a little close too, well reproduced.

It is a pity that a performance with so many good elements had to be spoiled; but, since it was, there is always the Cetra-Soria set to fall back on. Giulietta Simionato, who qualifies as a real, honest-to-goodness coloratura mezzo-soprano of great gifts, actually sings Rosina better than Miss De los Angeles; Giuseppe Taddei is far better than average as Figaro; and Luigi Infantino is on a par with his competitor, if not notably better.

J. H., Jr.

RUBINSTEIN Piano Concerto No. 4 in D Minor

Friedrich Wührer, piano. Vienna State Philharmonia, Rudolf Moralt, cond.

VOX PL 7780. 12-in. 33 mins. \$5.95.

Rubinstein's once-popular showpiece, which still haunts music conservatory halls, is now available in two recordings, this and Oscar Levant's with the New York Philharmonic-Symphony, conducted by Dimitri Mitropoulos. This is the better performance of the two, by virtue of Mr. Wührer's more poetic treatment of the slow movement and the smoother playing of the Viennese orchestra. Otherwise the two pianists are pretry well matched in strong-fingered, technically brilliant readings of the first and third movements. My Vox recording has an echo that sometimes blurs the sound, in contrast to the brilliant clarity of Columbia. R. E.

SCHUBERT-BERTE Das Dreimaederlhaus

Soloists, Akademie Kammerchor. Vienna State Philharmonic Orchestra. Karl V. Pauspertl, cond. VOX 20800. 12-in. 54 min. \$5.95.

Of the three productions I have seen of this operetta — Das Dremaederlbaus in Germany, Lilac Time in England and Blossom Time in America — this version, due to the resourceful Berte arrangements of the Schubert music, has always seemed the most delightful. (Romberg's arrangements struck me as being particularly hard on the melodic line, and perhaps justified his assuming credit for the composition of the Blossom Time score.) With the whole treasury of Schubert music to choose from, it is no surprise that every number is a melodic gem. A fortunate circumstance, for the libretto is preposterous, even for operetta, and succeeds in making its hero, Schubert, nothing but a simpleton. Fortunately, on records the listener need not bother with its inane ramifications,

but can relax and enjoy the melodies that have made this one of the outstanding musical successes of the past thirty years. A Mitteleuropa tradition seems to petvade this performance. It is forthright rather than subtle. Though reasonably well sung, it lacks vocal characterization; it's hard to tell who is who in the cast. I don't care much for the balance between orchestra and vocalists, the latter being far too prominent. Otherwise the sound qualities are satisfactory.

J. F. I.

SCHUMANN

Fantasy, Op. 17 Fantasiestücke, Op. 12

Joerg Demus, piano.

WESTMINSTER WL 5157. 12-in. 29, 28 mins. \$5.95.

The qualities of Mr. Demus' pianism that make his recordings of the Franck works so satisfactory are abundantly in evidence here. The conception of the Fantasy is indicated with the opening theme,





Victoria de los Angeles and Tullio Serafin: betrayed by the barber.

taken more deliberately than usual. Whenever it returns, it is stated more urgently, so that the music gains in intensity as it develops and never grows repetitious — quite an achievement in a reading of this work and a measure of Mr. Demus' architectonic thinking. The performance may not have every ounce of stormy abandon the Fantasy calls for, but it is eloquent enough; and the deliberation allows plenty of room for Mr. Demus' rewardingly sensitive ruminations. The Fantasiestücke prove how omnipresent are the pianist's beautiful tone, meticulous balancing of voices, superbly molded phrasing, and refined sentiment. Considering the music, the performances, and Westminster's ideal recording, this disk is a really superior buy.

R. E.

SIBELIUS

Symphony No. 3 in C Major, Op. 52 Symphony No. 7 in C Major, Op. 105

Stockholm Radio Symphony Orchestra; Sixten Ehrling, cond. MERCURY MG 10125, 12-in. \$4.85.

This, the first in the complete series of Sibelius symphony recordings by this same conductor and orchestra, marks the initial long-playing appearance of the Third and the first modern recording of the Seventh. The old Sibelius Society set of these two symphonies ran to seven 78 rpm. disks: the present record is quite a space-saver and a bargain. Ehrling's readings are tasteful, sound and fairly straight-forward, and both the playing and recording are good. I am still impressed, however, with Beecham's old recording with the New York Philharmonic-Symphony; those who are interested might do well to compare the two versions before making a choice.

P. A'

SIBELIUS

Valse Triste, Op. 44; Rakastava, Op. 14
— See Grieg

STRAUSS

Der Rosenkavalier (excerpts)

Lotte Lehmann (s), Elisabeth Schumann (s), Anne Michalsky (s), Maria Olszewska (ms), Bella Paalen (c), William Wernigk (t) Richard Mayr (bs), Karl Ettl (bs). Vienna Philharmonic

and chorus of the Vienna Staatsoper; Roger Heger, cond.

RCA VICTOR LCT 6005. Two 12-in. \$11.44.

No matter what later versions of *Der Rosenkavalier* may appear, this performance is one that should be first claim on all who love the opera, for it is one of the great classics. It is as if one could go



Monique de la Bruchollerie: Dazzling technique - and exauisite delicacy.

out and buy the most important parts of a performance of Otello with Maurel and Tamagno, of I Puritani with Rubini, of Fidelio with Schröder-Devrient, or Norma with the original cast. At least three of the singers - Lotte Lehmann, Elisabeth Schumann, and Richard Mayr (the original Ochs) - are on that untouchable plane in the roles they sing here. If they were only half audible (as a matter of fact, the quality of reproduction, originally quite high, has not been benefitted by transfer to LP) the price would still be a bargain. Be sure you buy a copy of the libretto; no opera, and especially this one, should be listened to in ignorance of the words, and Victor has skimped by providing only a synopsis. J. H., Jr.

STRAUSS, RICHARD Ein Heldenleben, Op. 40

Vienna Philharmonic Orchestra; Clemens Krauss, cond. LONDON LL 659. 12-in. \$5.95.

Strauss' giant autobiographical tone poem is here given one of its better performances on disks. Krauss' reading is generally distinguished. His approach is broad and careful - occasionally too careful, thereby sacrificing some necessary excitement in the score. This is not an easy work to play or record, so it is to the credit of the orchestra and the engineers that it comes off so well. P.A.

An Alpine Symphony, Op. 64 STRAUSS, R.

Munich State Opera Orchestra; Franz Konwitschny, cond. URANIA URLP 7064. 12-in. \$5.95.

Despite its title, An Alpine Symphony is really a tone poem in one continuous movement. Begun in 1911, but not completed until 1915, it is program music that depicts the events accompanying the ascent and descent of one of the high Alps. Though it is not Strauss at his inspired best, it contains some good writing and some very appealing themes. Since it calls for a huge orchestra, complete with wind and thunder machines, it is seldom heard in concert. The work's debut on longplaying disks is auspicious. With a first-rate orchestra at his disposal, Konwitschny gives the music a glowing and imaginative interpretation. The recorded sound is extremely natural and well-balanced even in the loudest passages.

TCHAIKOVSKY Piano Concerto No. 1 in B flat Minor

Monique de la Bruchollerie, piano. Vienna State Philharmonia, Rudolf Moralt, cond.

VOX PL 7720. 12-in. 30 mins. \$5.95.

There were surely enough recordings of this concerto by now, but apparently Vox felt it had to have its own, so here is another one. It is among the best. Miss De la Bruchollerie had a big success with it when she made her American debut last season, and well she might. She has a really dazzling technique and - when she wants to - can play with the most exquisite delicacy. first movement is straightforward, driving, and fast, with much beautiful detail. There is some lack of breadth, and the tone gets twangy in spots. The slow movement seems cold as it opens, but later it becomes quite melting, and the little scherzo is breathtaking. The final movement begins too fast, for the turn in the rondo theme is not distinct, but from there on the performance is stunning. The balance between the well-conducted orchestra and the piano is excellent, and the recording is clean.

TCHAIKOVSKY Symphony No. 6 in B Minor, Op. 74 ("Pathétique")

Chicago Symphony Orchestra; Rafael Kubelik, cond. MERCURY MG 50006. 12-in. \$5.95.

This is a contender in what might be called the "Duel of the Sounds," for there are two new Pathétiques vying with each other for tonal supremacy. The other is Columbia's Ormandy-Philadelphia version, reviewed in January. Ormandy's reading of this thrice-familiar symphony is broad and lyrical, sometimes a trifle slow. The sumptuous tone of the Philadelphians has been recreated by Columbia in what is just about the most natural-sounding, best balanced orchestral recording I have heard anywhere. Kubelik's approach to the music is more dramatic. To match his interpretation, Mercury has accorded him more dramatic reproduction - a little more brilliant than Columbia's, but also a little more strident. balance is also not as equitable, favoring high woodwinds, brasses and percussion at the expense of a warm string tone. It will probably depend on the characteristics of your phonograph as to which of these two versions you select. At any rate, be sure to hear both.

VERDI Aïda

Renata Tebaldi (s), Ebe Srignani (ms), Mario del Monaco (t), Piero di Palma (t), Aldo Protti (bne), Dario Caselli (bs), Fernando Corena (bs). Orchestra and Chorus of L'Academia di Santa Cecilia, Rome; Alberto Erede, cond.

LONDON LLA 13. Three 12-in. \$17.85.

This most recent operatic release from London brings to three the number of acceptable complete versions on LP of what is perhaps Verdi's best-loved opera. Since everyone who has any affinity at all for Italian opera knows at least large Chunks of Aida, there is no need to expatiate on its musical and dramatic qualities.

The new London recording is very good in many ways, good enough to eliminate all of its three rivals except the Cetra-Soria. The older RCA Victor issue, despite a name-studded cast, was always disappointing, and it is now technically obsolescent. Tullio Serafin's treatment of the score is beautifully molded, and Gino Bechi's Amonasro is the best on records, but Maria Caniglia and Ebe Stignani sound tired, and only occasionally does Beniamino Gigli sound like a Radames. The Capitol issue, which has Stella Roman, in frightful voice, and a supporting cast of nonentities, is not worth consideration.

That leaves the choice between London and Cetra-Soria. The choice is by no means an easy one to make, especially since both are well reproduced.

Renata Tebaldi, the London Aïda, is a singer of exceptional gifts, as everyone who has heard her lovely recorded Mimi and Cio-Cio-San knows. Her voice has a lovely, sympathetic quality except when occasionally at the top in forte passages; her feeling for line and phrase is exquisite; her pianissimos shimmer. Beguiling as they are, these qualities go only part way toward making her a first-class Aïda; lovely though her voice can be, it is not a full-scale Aida voice. There are many places in the score that call for the resources of a real dramatic soprano, with weight and darkness of color at the bottom and propulsive force at the top. This is the kind of voice Caterina Mancini, in the Cetra set, has. When all is said and sung, Miss Mancini is an effective and ligitimate, if imperfect, Aīda, while Miss Tebaldi is magnificently equipped to

The London tenor, Mario del Monaco, is better than Mario Filippeschi, his Cetra competitor. Both have brilliant top notes; both are on the crude side. But Mr. Del Monaco's explosiveness and tendency to rush are almost endearing beside Mr. Filippeschi's scooping, and his characterization is far betrer vocal theatre.

In her London reincarnation as Amneris, Ebe Stignani sings with her customary majesty (now verging on placicity) but so carefully that she seldom makes her full effect either in weight of tone or meaningfulness of diction. In the Cetra set, Giulietta Sinionato uses her more lyric voice to better dramatic effect and summons up plenty of volume in the climaxes.

Neither of the Amonasros is very good, but Rolando Panerai (Cetra) delivers his music in a solid, vigorously accented fashion that partly makes up for his tendency to sing sharp. Aleo Protti, his opposite number, does a routine job. Of the basses, Giulio Neri, the Cetra Ramfis, is by far the most impressive; his voluminous tones and sober security outweigh anything that Dario Caselli has to offer. Fernando Corena, the London King of Egypt, seems light-voiced for the part, but his tones stay steady, which Antonio Massaria's do not.

From the over-all musical standpoint, the Cetra performance is better, and by no small margin. Vittorio Gui conducts a broadly paced, spacious Aida, not unlike that of Mr. Serafin at his best. Sometimes he seems sluggish, but his climaxes are big and controlled, and without impeding the singers he always has a firm, incisive beat when the dramatic chips are down.

Alberto Erede, on the other hand, conducts a clear, transparent, almost chamber-musical interpretation of the score but nevet seems to be able to settle on tempos that please him — or the singers, for that matter. His reading has great cultivation, but what is apparently intended as flexibility becomes mere vacillation. The result is a performance that has lovely textures but neither musical shape nor inner dramatic force.

If I had to give up one or the other, I would probably keep the London version; Miss Tebaldi's beautiful moments, Miss Stignani's authority, and Mr. Del Monaco's tingling dramatic accents would be too much to part with. Nevertheless, the Cetra set contains a better total presentation of the score, a performance that is more representative of the true musical and dramatic dimensions of Aida as Verdi wrote it.

J. H., Jr.

VERDI Il Trovatore

Zinka Milanov (s), Fedora Barbieri (ms), Margaret Roggero (ms), Jussi Bjoerling (t), Paul Franke (t), Nathaniel Sprinzena (t), Leonard Warren (bne), George Cehanovsky (bne), Nicola Moscona (bs), RCA Victor Orchestra and Robert Shaw Chorale; Renato Cellini, cond.

RCA VICTOR LM 6008. Two 12-in. \$11.44.

Il Trovatore is a sort of distillate of Italian opera. The listener is offered a tragic sequence of situations in which Azucena, Manrico, Leonora, and the Count di Luna find themselves. Each scene is composed in closed forms; each time the formula is repeated: there is a brief exposition of what has gone before; then there is an incident; than a blazing account of the emotions aroused. Such a procedure offers few handles for practicioners of what has aptly been called the music appreciation racket. The colors are primary, the appeal direct. There is nothing to analyze, everything to experience, and no explanation possible except the obvious one that Verdi was a great theatrical genius.

There was great excitement when word filtered down from Rockefeller Center that RCA Victor was planning to make a complete recording of *Il Trovatore*; there was then no Troubador to be heard on LP. In the interval between rumor and release, however, three competitive versions have appeared — one by Cetta-Soria, with Caterina Mancini, Giacomo Lauri-Volpi, and Carlo Tagliabue; one by Capitol, with Stella Roman and various Rome Opera functionaries; and one by Columbia, a reissue from 78's, with Bianca Scacciati, Francesco Merli, and Enrico Molinari.

None of these is good enough to challenge the new Victor performance although there are merits and demerits all around.

In the Cetra album, Miss Mancini has some superb moments, juxtaposed with others in which her enthusiasm is greater than her accuracy, and Mr. Previtali conducts with fire and good pace; but Mr. Tagliabue sounds tired and elderly, and Mr. Lauri-Volpi's brutal singing has only a loud top C to recommend it. The old Columbia recording never was either very well sung or very well recorded. The Capitol set has Stella Roman, an artist of great scope and communicative power, laboring under extreme vocal difficulties; the rest of the participants are third-rate.

The new Victor issue, while not the be-all and end-all of *Trovatore* performances, is extremely well recorded, with only a few imperfect balances to disturb its general brilliance of sound; the principals will be familiar in their roles to people who have listened to Metropolitan broadcasts in recent seasons.

As Leonora, Zinka Melanov employs her superb voice with the authority and stylistic awareness of one schooled rigorously in the best traditions. The most beautiful sounds she makes here are perhaps not quite so beautiful as some she made a few years ago. but they are quite beautiful enough for the ears of sinful man. She is, characteristically, at her best in passages of broad, sweeping line.

Fedora Barbieri's Azucena is much the best available on LP. She has not the supreme vocal mastery of Ebe Stignani nor the impassioned vehemance of Cloe Elmo in this role; but she splits the difference nicely, and the other ladies' performances are not to be heard on records.

Mario del Monaco: tingling dramatic accents in the latest of a trio of Aïda's.



Jussi Bjoerling's voice has never had quite the robustness to make Manrico one of his best roles, but he is a singer of sound artistic qualities, precise articulation and rare good taste. Intentions aside, he is one of the few who is technically able to sing Ah, si be mio with real style and one of the few who actually does interpolate a high C in Di quella pira instead of transposing down and favoring the trusting public with a B or B flat.

As the Count di Luna, Leonard Warren is variable. When he sings out like a good, honest dramatic baritone he is impressive indeed, but he was apparently in one of his hyper-artistic spells during some of the sessions for this recording and occasionally covers the tone so much that he seems to be singing out of the back of his head. The character he presents is a real one, though, and his last two acts are magnificently sung.

Even given the fact that he is sometimes limited interpretatively by Miss Milanov's lack of vocal mobility and Mr. Warren's insistence on having things his own way, Renato Cellini's reading is seldom very exciting. The tempos are brisk, the ensembles tidy, the total effect musical but lacking in guts. But no matter what exceptions may be taken on absolute ground, this is as good as most Metropolitan Trovatores of the day, which is to say, that it is well worth the price.

J. H., Jr.

MISCELLANY

BRITISH TRADITIONAL BALLADS IN AMERICA

The Golden Willow Tree; The Cruel Mother; Lord Bateman; Edward; Lord Randall; Lord Thomas and Fair Elinore.

Sung by Shep Ginandes.

ELEKTRA EKLP 4. 10-in. 27 min. \$4.45.

I do not recall having heard this singer before... but it is immediately apparent that he is a highly sensitive musician, well versed in, and respectful of, the art of folk singing. The voice, sweet and clear, is pleasantly colored to the texts, and never drops into the commercial tricks so distressing in many who try this particular art. Most of the songs, or their variants, will be well known. One might wish for a little more adventurous spirit being shown in selecting items from the famous "Child" collection. Both in performance and recording, this would be a difficult record to fault. The singer is well placed in relation to the microphone. Elektra has packaged the record in a cellophane wrapper, similar to Concert Hall. It's an idea that other companies would do well to follow.

J. F. I.

AMERICAN MUSIC FOR STRING ORCHESTRA

Eastman-Rochester Symphony Orchestra, Howard Hanson cond. MERCURY MG 40001. 12-in. \$4.95.

This collection contains three pieces — Thomas Canning's Fantasia on a Hymn by Justin Morgan, Louis Mennini's Arioso for Strings, and Atthut Foote's Suite in E Major.

Canning and Mennini ate both members of the faculty of the Eastman School in Rochester. Mennini's work is a well-made lytical affair, but Canning's is rather mote distinguished. It is based upon a tune called "Amanda", by one of the 18th century contemporaties of William Billings. It is scored for double string quartet and string orchestra, and is confessedly planned after Vaughan Williams' Fantasia on a Theme by Thomas Tallis. It is smaller in scale than the Vaughan Williams, but it is quite moving and effective, and its resemblance to its model is in no sense a sign of weakness.

Atthur Foote's suite, which has been recorded before and is occasionally to be found on concert programs, is one of the few surviving works of that generation of American composers who filled the gap between MacDowell and the generation of Copland, Harris and Sessions. Except for Ives and Griffes, they were generally regarded as academicians and empty imitators of European romanticism, but it is very likely that they had much more to say than they have ever been given credit for, and a second round for the music of such as Foote, Atthut Farwell, David Stanley Smith, Horatio Parker, and Henry F. Gilbert might prove surprisingly worthwhile. At all events, the Foote suite, despite the reflections of Tschaikowsky in its plucked-string scherzo and its echoes of Tristan here and there, is a work of considerable vitality. Its opening prelude and concluding fugue, when compared to those of Bloch's famous Concerto Gross, suggests that the difference between the academic style of 1907 and the neo-classic style of 1925 is all in the name of the composer.



Heinrich Schlusnus: Decca's reprints are a boon to those who love lieder.

SCHLUSNUS SINGS — VOLUME 3

Schubert: An die Leyer, Lied eines Schiffers an die Dioskuren; Brahms: Von ewiger Liebe, Der Gang zum Liebehen, Am Sonntag Morgen, Feldeinsamkeit, Die Misnacht; Beethoven: Der Wachtelschlag, Andenken; R. Strauss: Nachtgang, Freundliche Vision; Wolf: Fussreise, Auch kleine Dinge.

Heinrich Schlusnus, baritone. Sebastian Peschko, piano. DECCA DL 9622. 12-in. \$5.85.

SCHLUSNUS SINGS — VOLUME 4

Schubert: Der Wanderer, Wohin, Der Musensohn; R. Strauss: Winterliebe, Traum durch die Dänumerung, Ich trage meine Minne. Zueignung; Schumann: Wanderlied; Radecke: Aus der Jugendzeit; Humperdinck: Am Rhein; Loewe: Die Uhr, Tom der Reimer.

Heinrich Schlusnus, baritone. Sebastian Peschko, Otto Braun, Franz Rupp, piano.

DECCA DL 9623. 12-in. \$5.85.

After releasing two disks of songs recorded by the late Heinrich Schlusnus during the 1930s, Decca now happily doubles the riches,

thereby providing further evidence that here was one of the gteatest male Lieder singets of out day. As was the case with the two ptevious issues, the quality of recording is more than passable, while the interpretations are, of course, superb. Volume 3 seems to be the most rewarding of the lot. The only flaw I found anywhere was a considerable "wow" in Schubett's Der Wanderer on the first band of Volume 4.

CRITIC'S CHOICE

"Unforgettable" vocal petformances selected for reprint by Irving Kolodin. They include: Tito Schipa singing Alessandro Scarlatti's Le Violette; Lawrence Tibbett singing Handel's Where'er You Walk: Dorothy Maynor singing Handel's Oh, Sleep, Why Dost Thou Leave Me; Elizabeth Schumannn singing Mozart's Venite, Inginocchiateti (from Nozze di Figaro); Maria Cebotari singing Dove Sono, from the same opera; Sigrid Onegin singing Chopin's A-Flat Impromptu; Kerstin Thorborg singing Wolf's Kennst du das Land?; John Charles Thomas singing Massenet's Salome!; Richard Crooks singing Wagner's Infernem Land (Lohengrin); Leonard Warren singing Verdi's E 1000 (Falstaff); Maria Ivogün singing Richard Strauss' Sowar es mit Pagliazzo (Ariadne).

RCA VICTOR LCT 1115. 12-in. \$5.72.

This disk is the result of a half-jocular suggestion to Kolodin by RCA Victor's George Marek, that he, Kolodin, select a dozen "unforgettable" performances from the company's unreprinted 78 rpm files. What came forth, finally, represents a game, a delightful game, that every record-lover and collector has played. It consists of bringing forth a series of records - saved and cherished for the purpose - and playing them for a group of friends. The objective is to fascinate them. Each record must contain something unique, to amaze, amuse, endear or deeply move: and each must prepare the listeners' attention precisely for the next. This is called program-making, and it is an atr at which Mr. Kolodin is a wizard. His collection traps the attention like a kaleidoscope. There is the delightfully unexpected, for instance, in the Crooks, Thomas and Tibbett arias. There is the triple mastery of voice, music and dramatic anguish in the Cebotari Mozart. There is the preposterous perfection of Onegin, a coloratura-contralto, in the Chopin transcription . . . and so on. The whole thing is entranc-I. M. C.

The Best of Jazz

THIS IS DUKE ELLINGTON

RCA VICTOR LPT 3017. 10-in. 25 min. \$3.15.

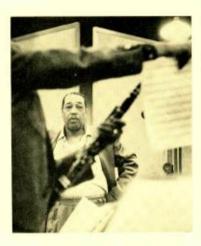
Wallace Jones, Cootie Williams, Rex Stewart, trumpets; Joe Nanton, Juan Tizol, Lawrence Brown, trombones; Barney Bigard, Otto Hardwick, Johnny Hodges, Ben Webster, Harry Carney, reeds; Duke Ellington, piano; Fred Guy, guitar; Jimmy Blanton, bass; Sonny Greer, drums:

Jimmy Blanton, bass; Sonny Greer, drums:
Do Nothin' Till You Hear from Me; Jack the Bear; Bojangles;
Harlem Air Shaft; Dusk; Ko-Ko; Across the Tracks Blues; Chine

There is a school, in which this reviewer is enrolled, which holds that the peak of all Ellingron peaks was reached by the Duke's 1940 band, which turned out one remarkable side after another for Victor. Some of the finest products of that vintage year have been gathered on this LP. Musically, there is not a dud among the eight numbers, although the label writer fluffed badly in one instance: the number identified on the record as Warm Valley is actually Dusk.

The great range and depth of musical coloration of which this Ellington team was capable is given full display here, both in its

ensemble and solo aspects. At least half of these sides have taken their place as jazz classics: the marvelous display of the various facets of Cootie Williams' trumpet technique in Do Nothin' Till You Hear from Me (a later title for the recording originally, and more appropriately, issued as Concerto for Cootie); the glorious meeting of two who were obviously meant for each other when Tricky Sam Nanton's swampy trombone encounters Chloe; the fas-



This is The Duke: No duds in eight releases of 1940 band Ellingtonia.

cinating introduction to the Ellington band, on Jack the Bear, of the tragically short-lived bassist, Jimmy Blanton; and one of the loveliest and most relaxed of all big band blues arrangements, Across the Tracks Blues. If any one record so far issued can be said to display the definitive Ellington, this is it.

THIS IS BENNY GOODMAN AND HIS QUARTET

RCA VICTOR LPT 3004. 10-in. 25 min. \$3.15.

Benny Goodman, clarinet; Lionel Hampton, vibraphone; Teddy Wilson, piano; Gene Krupa, drums:

Whispering: The Man I Love; Dinah; Sweet Sue, Just You; Smiles; Runnin' Wild.

Same personnel except Dave Tough, drums, in place of Krupa: Opus V2: Sweet Georgia Brown.

This is mostly the earliest Benny Goodman Quartet, the 1936-37 version, consisting of rhe original ground-breaking Goodman trio plus Lionel Hampton. Goodman, Hampton, Wilson and Krupa are at their happiest in this period in slow and moderately paced numbers such as The Man I Love and Whispering. In the more-than-moderately paced standards, Dinah and Sweet Sue, a flatness seems to come over their work. But the unit perks up as the tempo quickens, and shows more cohesion and color in Opus ½ and Sweet Georgia Brown, both later recordings (1938) and, significantly, with Dave Tough on drums in place of Krupa.

This is basic material for anyone interested in small group jazz. The recording is one-dimensional, by present standards, but it still manages to catch the soloists, particularly Goodman, in sugges-

tively full fashion.

THIS IS ARTIE SHAW AND HIS GRAMERCY FIVE

RCA VICTOR LPT 3013. 10-in. 24 min. \$3.15.

Artie Shaw, clarinet; Billy Butterfield, trumpet; Johnny Guarnieri, harpsichord; Al Hendrickson, guitar; Jud De Naut, bass; Nick Fatool, drums:

Cross My Heart: My Blue Heaven; When the Quail Come Back to San Quentin; Dr. Livingstone, I Presume?: Keepin' Myself for You.

Artie Shaw, clarinet; Roy Eldridge, trumpet; Dodo Marmarosa, piano; Barney Kessel, guitar; Morris Rayman, bass; Lou Fromm, drums:

The Grabtown Grapple; The Sad Sack; Scuttlebutt.

Given a pleasantly melodic show tune, or its equivalent. Artie Shaw usually can be trusted to produce a neatly lyrical clarinet reading. It's only natural, then, that he appears on this disk to

excellent advantage on Cross Your Heart, Keepin' Muself for You, and My Blue Heaven. On the originals, however, Shaw does not have much of interest to say. This disk displays two Gramercy Fives—the 1940 group which includes Billy Butterfield on trumpet and a harpsichord under the guidance of Johnny Guarnieri, and the 1945 Five in which Roy Eldridge has the trumpet chair and the harpsichord has given way to Dodo Marmarosa's piano. The idea of using a harpsichord was briefly amusing (and, in Smoke Gets in Your Eyes, a Gramercy Five number not included in this collection, it was quite effective) but, on the whole, it is not suited to the material at hand. This, plus the superiority in ideas and execution of the Eldridge trumpet over the Butterfield trumpet, gives the 1945 products a decided edge in interest. This collections has its points, but they're relatively minor.

Bob Scobey and trumpet: What a difference a year makes.



NEW FACES - NEW SOUNDS Horace Silver Trio

BLUE NOTE BLP 5018. 10-in. 21 min. \$4.00.

Horace Silver, piano; Curley Russell, Gene Ramey, bass; Art Blakey, drums:

Safari: Ecaroh; Prelude to a Kiss; Thou Swell; Quick-silver; Horoscope; Yeah; Knowledge Box.

These eight numbers introduce to records an engaging new talent in the modern school of jazz piano. Silver has the facile right hand which is the sine qua non of this craft, and he also has taste and imagination, attributes which protect him from the excesses of some of his schoolmates and brighten his essays with light and cheer. He appears to be least happy when tied down by some other composer's creation (Ellington and Richard Rodgers are the only foreigners represented on this disk). He glides with pleasure into his own compositions, which are usually blessed with lively musical ideas. On these two sides, he gets particularly noteworthy support from drummer Art Blakey, who shows a great deal of feeling for the fresh and rather perky quality of Silver's playing.

RALPH SUTTON AT THE PIANO

CIRCLE L 413. 10-in. 25 min. \$3.85.

Fascination; "A Flat" Dream; Drop Me off in Harlem; Love Me or Leave Me; African Ripples; I'm Coming Virginia; Sugar Rose; Bee's Knees.

Ralph Sutton, the young master of the piano style associated with Fats Waller and James P. Johnson, has the advantage of working with much better recording techniques than were available to his predecessors. And, possibly because he spent a lot of time concentrating on this fascinating phase of jazz, he has developed into a more finished interpreter of the style than the rough-hewn, creative pioneers he is following. He is in fine fettle in these eight numbers, riding hard or fingering featherily as the mood requires. A slight surface hiss intrudes on what would otherwise be an excellent recording.

BOB SCOBEY'S FRISCO BAND NO. 1

GOOD TIME JAZZ LP 9. 10-in. 23 min. \$3.00.

Bob Scobey, trumpet; Jack Buck, trombone; Darnell Howard, clarinet; Burt Bales, piano; Clancy Hayes, guitar; Squire Gersback, bass; Gordon Edwards, drums:

Pretty Baby; St. Louis Blues; Some of These Days; Dippermouth

Same personnel except Albert Nicholas, clarinet, in place of Howard; Fred Huguera, drums, in place of Edwards:

Coney Island Washboard; That's a Plenty; Beale Street Mama;
Wolverine Blues.

BOB SCOBEY AND HIS FRISCO BAND

GOOD TIME JAZZ 71. 10-in. 78rpm. 896.

Bob Scobey, trumpet; Jack Buck, trombone; George Probert, clarinet and soprano saxophone; Wally Rose, piano; Clancy Hayes, banjo and vocal; Dick Lammi, bass; Fred Higuera, drums: Chicago; Sailing Down Chesapeake Bay.

Trumpeter Bob Scobey, a graduate of Lu Watters' Yerba Buena Jazz Band, leads a traditionalist group which plays with immense verve and cleanliness of line. The long-playing disk is particularly interesting, not only because it is a triumphantly happy experience, but because the two sides show the band in two stages of development, a year apart. The Pretty Baby-St. Louis Blues side was out in 1950 and reveals a group of lively-minded musicians doing a much better than average job of driving out these standards. But a year later, when the That's a Plenty-Beale Street Mama side was recorded, they had developed into a truly remarkable, relaxed combination

with an inner spark that flares and dances throughout their work. They are helped on these latter numbers, too, by better balanced, fuller recording and by the excellent clarinet of Albert Nicholas. The 78 rpm Chicago is, to these ears, the acme of the happy, punching music this band plays so well.

THE LAST TESTAMENT OF A GREAT JAZZMAN: Bunk Johnson

COLUMBIA GL 520. 12-in. 32 min. \$4.85.

Bunk Johnson, trumpet; Ed Cuffee, trombone; Garvin Bushell, clarinet; Don Kirkpatrick, piano; Danny Barker, guitar; Wellman Braud, bass; Alphonso Steele, drums:

The Entertainer; Chloe; The Minstrel Man; You're Driving Me Crazy; Someday; Till We Meet Again; That Teasin' Rag; Out of Nowhere; Kinklets; Some of These Days; Hilarity Rag; Marie Elena.

This, reputedly, is the music Bunk Johnson really wanted to play and the way he wanted to play it. It wasn't Bunk's fault that the recording in this case is amateurish (it's not Columbia's fault; the session was privately financed) and, as a consequence, what he plays comes out of the speaker under a handicap. But even so, it is evident that much of what Bunk has chosen to play and the way he has chosen to play it hardly rates as inspiring. Despite the fine musicians with which he has surrounded himself, there is a leaden quality to much of the group's playing and it is only the horn of the aging Bunk himself which occasionally brings a note of vitality to their work. We can thank Bunk for leaving us some traditional rags played as written in the standard "Red Back Book of Rags", but otherwise this record adds little to his aurumn glory.

JOHN S. WILSON

The Music Between

THE DESERT SONG

CAPITOL L 351. 10-in.

Gordon MacRae, Lucille Norman, Bob Sands, Thurl Ravenscroft; Orchestra and chorus conducted by George Greeley. Music by Sigmund Romberg. Book and lyrics by Otto Harbach, Oscar Hammerstein II and Fred Mandel.

Prologue; Riff Song; Why Did We Marry Soldiers?; French Military Marching Song; Romance; Then You'll Know; The Desert Song; Let Love Come; One Flower; One Alone; Duet; Sabre Song; Finale.

Erstwhile Radio City page-boy Gordon MacRae is one of the few singing stars of radio and TV who really can sing. This present album is one of a series of five stemming from his weekly radio show and, incidentally, marks his emergence as a full-fledged movie performer. Capitol gives MacRae a full-sounding recording, backing him with a tastefully arranged orchestration by George Greeley. It is easy to see how young MacRae has made himself a favorite of millions without much in the way of promotion gimmicks. His is a splendidly attractive voice, used with intelligence and restraint. To be simple about it, it is a pleasure to listen. Lucille Norman and the other supporting artists do a nice job, too.

The recording of this capsule show-album is good, though the voices are perhaps unduly prominent. The surfaces of the review copy were very good indeed.

Desert Songbirds
Lucille Norman
and Gordon MacRae with Production Supervisor
Walt Heebner.



THIS IS MY VIENNA

LONDON LS 680. 10-in. \$4.95.

Hilde Gueden, soprano, with orchestra conducted by Kurt Adler.

Bruderlein fein; Weiner Kunstler; O du lieber Augustin; Die Banda Kommt; Wiener Wald; Das ist mein Wein; Ich und der Mond; Kunst und Natur; Wenn's die Geigen heimlich streicheln; Wie sich der Weiner den Himmel vorstellt; Herz von an echten Weana; Hergott, wie schon bist du, Wein; Vogerl, slieg in'd Welt hinaus; Wein, Weih, Wein; s' Mailusterl weht.

INSIDE VIENNA: Schrammel music of the heurigen

COOK SOUNDS OF OUR TIMES. 1026. 10-in.

The Wiener Konzerschrammeln Ensemble. Im Wiener Dialekt; Schusterbuben Gallopp; Fischertoni Marsch; Gruss aus Wien Medley; Wienberln und Zibeben.

STRAUSS WALTZES: Vol. 2

DECCA DL 4041. 10-in. \$2.50.

Berlin Philharmonic Orchestra, Ferenc Fricsay, conductor. Wilma Lipp, soprano.

Bamberg Symphony Orchestra, Ferdinand Leitner, conductor. Rudy Knabl, zither.

Voices of Spring, op. 410; Tales From The Vienna Woods, op. 325.

STRAUSS WALTZES: Vol. 3

DECCA DL 4042. 10-in. \$2.50.

RIAS Symphony Orchestra, Ferenc Fricsay, conductor. Wurttemberg State Orchestra, Ferdinand Leitner, conductor. Roses From The South, op. 388: Wine, Women and Song, op. 333.

STRAUSS POLKAS

DECCA DL 4043. 10-in. \$2.50.

Berlin Philharmonic Orchestra, Ferenc Fricsay, conductor; Wurttemberg State Orchestra, Ferdinand Leitner, conductor; RIAS Symphony Orchestra, Ferenc Fricsay, conductor. Pizzicato Polka, If You Please; High Spirits Polka; Annen Polka; Tritsch-Tratsch Polka.

A JOHANN STRAUSS CONCERT

REGENT MG 5052. 12-in. \$5.45.

Stockholm Philharmonic Orchestra, Sixten Ehrling, conductor. Overture to "Der Fledermaus"; Perpetuum Mobile; Pizzicato Polka; Overture to "The Gypsy Baron"; Citronen Waltz.

MANTOVANI PLAYS STRAUSS WALTZES

LONDON LL 685. 12-in. \$5.95.

Mantovani and his orchestra.

Blue Danube; Voices of Spring; Roses From The South; Village Swallows; A Thousand and One Nights; Treasure Waltz; Emperor Waltz; Wine, Women and Song; Accelerations; Tales From The Vienna Woods: You and You; Morning Papers.

A WALTZ DREAM: Oscar Straus

PERIOD RL 1903. 12-in. \$5.95.

The Viennese Light Opera Company conducted by the composer. Georg Oeggl (b), Karl Wagner (t), Marta Rohs (c), Rudolf Christ (t), Ruthilde Boesch (s), Gerhard Engel (b), Margit Opawsky (s), and Franz Boeheim with orchestra and chorus.

THE LAST WALTZ: Oscar Straus

PERIOD RL 1904. 12-in. \$5.95.

The Viennese Light Opera Company conducted by the composer. Rudolf Christ (t), Margit Opawsky (s), Lisa Brunner (s), Liselotte Maikl (s), Carla Busoni (c), Eva Goerner (c), Norman Foster (bs), Carol Caroli (t), Vera Benda (s), Kurt Preger (t) with orchestra and chorus.

THE SINGING BIRD: Six Gypsy Pictures arr. Korda

ORFEO LP 12. 10-in. \$4.00.

Murray Korda and his Gypsy Orchestra.

The Singing Bird; The Sunrise; Shepherd's Song; Fly, My Love; The Little Gate; Gypsy Dance.

Every so often there is a phonographic outburst of music from Vienna. This spring offers such diverse entries as folk music from an Austrian wine festival and a full dress parade of the Mantovani orchestra in a dozen Strauss waltzes. Leading the ten items in the present list (chosen from a much larger selection) are four collections of standard Strauss compositions. Among these, my preference goes to the Regent record featuring Sixten Ehrling and his Stockholm Orchestra, followed by Ferenc Fricsay on all three of the Decca records. The two orchestras directed by Herr Leitner rank next in a listing based both on performance and sound. These Decca disks pose a problem. Fricsay enjoys a brilliant, live auditorium sound, while the Bamberg and Wurttemberg recordings sound tubby and remote. However, so far as content is concerned, the Bamberg recording of Tales from the Vienna Woods, with the traditional scoring for zither, holds the greatest interest, backed, as it is, with a fine vocal Voices of Spring by agile-voiced Wilma Lipp.

If it's variety you crave, the Strauss Concert from Sweden lines up as best value. The Mantovani record offers less - to Strausslovers. The performance is heavily accented with the popular London maestro's musical mannerisms. The English company has devoted some of its finest engineering and surfaces to bringing out the well-known Mantovani touch — a very salable commodity. But it isn't Strauss.

In the vocal department, there are the two Oscar Straus operettas and the single by Hilde Gueden, all disappointing. So far as actual recording and surfaces are concerned, London has done well. However, for these ears, the folk songs are sung a little too coyly, and there are simperings, slidings from note to note and so on. Miss Gueden doesn't always sing this way - wirness her opera performances. Why did she do it here?

The two Oscar Straus operettas would be most welcome in the long-playing catalogue - reasonably well presented. Here we have a flawed performance of the lovely Waltz Dream score. And The Last Waltz as represented here, is just one dance too many. With the exception of the title tune, which shows up on the second side, the score is a collection of Viennese clichés. In both these disks

the orchestra moves along well enough, but the singing sounds tired and labored. Perhaps some day we will be blessed with these and other Oscar Straus scores presented with the charm they so

The remaining pair of disks, by Cook and Orfeo, come under the heading of specialties. Both are fine samples of the recording art; their musical content isn't to be taken seriously. Inside Vienna offers some attractive glimpses of the unsophisticated Viennese winegrowing suburbs. The music itself is played by two violins, accordion and contra-guitar. It is safe to call it beguiling. Somewhat the same flavor is provided by Murray Korda's gypsies. If you like this particular type of musical nostalgia, you should enjoy The Singing Bird and the five other tunes arranged by Korda.

EDWARD L. MERRITT, JR.

Dialing Your Disks

This column lists latest available data on the recorded frequency characteristics used by record manufacturers. The BASS column refers to low-frequency turnover, the TREBLE column to high-frequency preemphasis.

The NAB curve has a turnover point of 500 cycles and a treble boost of 16 db. The AES turnover is at 400 cycles, its treble boost is 12 db at 10,000 cycles. In imprecise terms (for people with imprecise amplifier controls), NAB records need more treble cut and more bass boost than AES disks; LON and COL need less bass boost than NAB; COL and NAB are the same at the high end bur LON and AES need less treble cut than COL.

LABEL	BASS	TREBLE
Atlantic 1	NAB	NAB
Bartok	629 ²	16 db8
Blue Note Jazz	AES	AES
Caedmon	629 ²	11 db4
Canyon	AES	AES
Capitol	AES	AES
Capitol-Cetra	AES	AES
Cetra-Soria	AES	AES
Columbia	COL	NAB
Cook Laboratories 1	NAB	AES
Decca	COL	NAB
EMS*	AES	AES
Elektra	629 ²	16 db ⁸
Esoteric	NAB	AES
Haydn Society	COL	NAB
London	COL	LON
Lyrichord*, new ⁵	629 ²	16 qP ₈
Mercury*	AES	AES
M-G-M	NAB	AES
Oceanic	COL	NAB
Philharmonia	AES	AES
Polymusic 1	NAB	NAB
RCA Victor	Ortho ⁶	Ortho ⁷
Remington	NAB	NAB
Tempo	NAB	Ortho ⁷
Urania*, most	COL	NAB
Urania*, some	AES	AES
Vanguard — Bach Guild*	COL	NAB
Vox	COL	NAB
Westminster*	NAB ⁸	NAB ⁸

¹Binaural records produced by this label are recorded to NAB standards on the outside band. On the inside band, NAB is used for low frequencies, but the treble is recorded flat, without pre-emphasis.

²AES position on equalizer is close match.

³NAB position on equalizer is close match.

⁴Use LON position on equalizer, or AES with slight treble cut.

⁴Some older records of this label were recorded to COL curve, others to AES.

⁵Very close to NAB on lows.

⁷Very close to AES on highs; cut treble slightly.

⁸Unless jacket indicates AES.

building your record library

DAVID RANDOLPH SUGGESTS TEN BASIC BACH SELECTIONS



LET IT BE understood at the very outset that to attempt to suggest a list of ten recordings for the person who is beginning to collect Bach is not only a thankless task, but perhaps even a dangerous one. Tastes being as personal as they are, my choices may or may not be to your liking. However, with bravery verging on foolhardiness, I will suggest here a few works in various categories, in the hope that they may be of some value to the person planning the Bach section of his record shelf.

The six Brandenburg Concerti supply about as pleasant and vivacious an introduction to Bach as one could hope for. You cannot go wrong with either Fritz Reiner's incisive performances for Columbia, using a group of solo players, or the somewhat more opulent readings for Westminster by Karl Haas and the London Baroque Ensemble. The Brandenburgs come (from either company) in three 12-inch disks, but the couplings are not the same. Reiner couples them in succession, No. 1 with No. 2, and so on. Haas has No. 2 and No. 4 together, No. 3 and No. 5, No. 1 and No. 6 — making it difficult to sample from both companies without duplicating.

Next I suggest two very appealing concerti for solo keyboard and strings, well recorded by the pianist Lukas Foss, with the Zimbler Sinfonietta. They are the Concerti No. 1 and No. 5, the second of which contains the wonderful melody popularly known as the "Arioso". (Decca DL 9601; 12-in.).

One of the most immediately ingratiating of Bach's works is the Suite No. 2 in B Minor, for Flute and Strings. The suite is actually a succession of short dance movements, all melodic, mostly playful and abounding in contrast, especially in the matter of rhythms. Casals has recorded the Suite with his Prades Festival Orchestra. Fritz Reiner has made it with the Pittsburgh Symphony Orchestra. Both are good. The Casals disk offers the Suite No. 1 on the reverse (Columbia ML 4348; 12-in.); the Reiner has Mozart's Symphony No. 35 (Colujbia ML 4156; 12-in.).

Two of Bach's Suites for Unaccompanied Cello have been recorded by the violist Lillian Fuchs. To my ears, the works lose nothing by being transcribed for the somewhat higher instruments, the performances are expert and the music charming. (Decca DI. 9660: 12-in.).

Of the one hundred-ninety-nine cantatas by Bach, one of the most immediately accessible is the one numbered 133, called "Ich Freue Mich in Dir" ("I Rejoice in Thee"). Its melodies have an ingratiating quality suggestive of folk music, making this work an ideal introduction to the entire body of cantatas. There is a

thoroughly satisfying recording of it by the Vienna State Opera Orchestra and the Vienna Chamber Choir, under the knowing direction of Michael Gielen. The other side of the disk is devoted to the Cantata No. 122, "Das Neugebor'ne Kindelein" ("The New-Born Child"), which contains an especially beautiful vocal trio, (Bach Guild BG 523; 12-in.).

Performance-wise, Hermann Scherchen's reading of the Cantata No. 106, the very beautiful Actus Tragicus with the same orchestra and the Akademiechor, will probably remain a model for some time to come. If you have ever been annoyed by the fuzziness that characterizes so many choral performances, listen to the clarity and lightness of his treatment of the closing chorus of this work. The recording does full justice to the music and the performance (Westminster WL 5125: 12-in.).

For those who may have been kept away from Bach's organ music because of the ponderous, sluggish sounds produced by so many modern organs, I would most enthusiastically suggest listening to any one of Helmut Walcha's recordings made by Decca on true, crisp baroque organs. I suspect that the clarity of the lines, plus the pleasing "unoverloaded" sound of the instrument will be a revelation to many listeners. As a sample, try the Passacaglia and Fugue in C Minor, which is combined with Pastorale in F on Decca 9560 (12-in.).

If you'd like to hear some of Bach's keyboard works as he himself must have heard them, you'll find a refreshing experience in Ralph Kirkpatrick's recording of Fifteen Two-Part Inventions, played on the *clavichord!* (Concert Hall Society CHS 1088; 10-in.). The tiny, cheery, string-voices of the little instrument are a delight.

A more vigorous sound, because of the difference in the nature of the instruments, is captured in Fernando Valenti's powerful recording of six French Suites, for harpsichord. This three-record set comes complete with score. (Westminster WAL 310). Or, should you prefer your Bach on the modern piano, Alexander Borovsky has recorded the English Suites on a two-record set issued by Vox. (PL 7852).

While it might be argued that a work such as the B Minor Mass is not really for the "beginner", I should still like to include it on my basic list. There is no reason for insisting that it be listened to complete at one sitting. Each of its six LP sides can be listened to as a separate unit, and enjoyed for the beauties that it offers. There is a fine recording of it by the Vienna Symphony Orchestra, Akademie Kammerchor and soloists, under Hermann Scherchen (Westminster WL 50-37-39).

ozart on microgroove

By C. G. BURKE

Part I: Symphonies and Violin Concertos



The short life of Wolfgang Amadeus Mozart began in 1756 and ended in 1791. He began with the beginning of the British Empire and ended with the end of monarchy. His interests were not political: he responded to the dying values of his age as its most consummate musician, but he never knew that he was of it, or indeed that it was. Rossbach and Leuthen and Quebec guaranteed shape to this age; eventually a march of women on Versailles, to coerce an indiscreet queen who had been a vivacious archduchess, cancelled the guarantee and nullified absolutism as a practical course for western politics.

The age's music ran beyond the age, as is the way with art. It was spasmodically still in production in 1810 and even later, but the year 1805 gave an incontrovertible symbol of its anachronism with the first performance of the *Eroica* Symphony.

That age to which Mozart entirely belonged, and the only one he knew, could properly have been called the Age of Grace. The victory of England and Prussia was the triumph of Protestantism, which politically had become a faith in material well-being. Europe could contemplate the accession with pleasure. It meant the end of five centuries of religious wars, the end of a continuous hunt for heretics, for the Protestants were now too strong to be extirpated. Suddenly men were secure in their houses, and rulers and princelings safe in their courts. Those with means settled down to enjoy life, under the tacit protection of England, who tolerated everything which did not attack stability and trade.

The relief of the well-to-do populations described itself in art. Art and the half-arts became diversions. The grand turgidity in the esthetics of the century before the Seven Years' War was repudiated with a shudder. The vast moving mountains of Handel and the mighty rivers of Bach were not for the first of a score of generations to perceive an escape from stress. A massive polyphony with heavy and ordained embellishments was repellent to ruling classes whose men made witty epigrams and frothy vers de société, whose women with headdresses a foot in height played gracefully among perfumed ewes at being shepherdesses, but preferred Valenciennes to wool.

Philosophy, even the deadliest, became urbane. No kind of morality would be impugned if it were manifested with refinement. Eminent pastors rewarded the favors of chambermaids by teaching them a pretty curtsey; a king's counsellor would consult the king's mistress before ad-

vising the king. Everyone danced and everyone gamed, for enormous stakes, losing with entire imperturbability. Everyone read and toyed with ideas, which to be acceptable had to be heady and engagingly turned. Dr. Franklin, who had manufactured a reputation in the revolted Colonies as a creator of suffocating platitudes, manufactured another in France, where republicanism was so fashionable, as a statesman whose sober wisdom was exactly balanced by worldly wit

This was Mozart's age, and he did not think of challenging it. He was the greatest exponent of its art, and his reputation has been tainted by his association with it. The music of his period is characterized above all by a worldly, sophisticated, aristocratic demeanor; by refinement, grace, elegance, reticence; by a depreciation of profundity and the rougher emotions; by decoration, smoothness, ease and nicety. Mozart naturally assumed the guise of his age, and superficial judgment has been severe to him because he was not born in another. Yet he patently transcended the pleasant prejudices of his era. Most of his contemporaries in this prolific time confected a music of decorative grace, much of it fine; but to Mozart decorative grace was no more than an ingredient. He had an elegance such as never was anywhere else, but it was often a facade, and where it was substance too it seems an aberration of criticism to call supremacy a defect.

No question at all that his prestige has been tarnished by the universal knowledge that he was the most prodigious of child prodigies. We cannot efface the damned image of a tiny, girlish figure at a harpsichord, of a great composer eternally six years old. The tales of his precocity are the most preposterous, and the best-authenticated, of all the tales on prodigies. They hide the great man who followed the great boy. They obscure the startling, the unique, the truly significant feature of his precocity: he was a volunteer composer. That is, after learning to play he created his own music without command—at four. Others, particularly Schubert, did this later in childhood, and a number were forced by their teachers to compose while still children, but Mozart was born with a bent for creation that could not be straightened. Man is not equipped to analyze the nature of genius or its cause. The easy perfection of Mozart's incalculable gifts, his infallible taste and spongelike memory, are beyond comprehension.

Everyone knows something of his life, spent all over Europe making music, never making a living. Perhaps his penury indicates a defect of character — perhaps it indicates a particularly lofty virtue. At any rate, we his inheritors have gained from it: had he been paid as civilization paradoxically rewards those who harm it, he would not have been lashed to write so much great music so often, even being possessed.

He proliferated five hundred masterpieces and a good quantity of other music. On the phonograph we have a great proportion of it, and it may be assumed that in ten years we shall have it all. The records dispel any concept of the legendary sweet, harmless child so very gifted, over whom we must slobber because he never grew up. The man could put anything into music, characterize anybody, and make everything felt. But he never learned to rail.

At the completion of the first part of this discography, the Mozart repertory on LP consists of about seven hundred sides, nearly as formidable a pile as Beethoven's, which had doubled in a year. No doubt the Mozart collection will have had substantial additions before the third part of this is printed. There are more Mozart titles, fewer duplications (in spite of the impressive total for Eine kleine Nachtmusik, fourteen).

The judgments inscribed here, like those in the foregoing discographies, are based on the consideration of a record as a unique musical experience, good or bad, more complex in its aspects than a public performance of the same music. The better performance in the poorer sound may be judged more desirable, or less, than the poorer performance in the better sound, depending on the respective degrees of goodness and badness, and depending also on the kind of work under consideration. The writer warns again that his prejudices implacably determine his opinion of an interpretation no matter how objective his terminology may be. He believes them reasonable, but we all do. He has listened to every disk, grimly to many,

and to many several times. When sonic quality in seconds has seemed dubious he has made changes in reproducing equipment to discover if they were not satisfactory; for if a record is not to be libeled, its potential must be indicated, and certain kinds of equipment, including some of the best, distort records not adapted to them.

As usual, preference is indicated by the position of a disk in the column describing all the records of a given composition, except in a few cases where preference is ambiguous and ordination is of no significance. When this is true it is so noted.

It had been hoped to survey every Mozart LP available to the American public, but this was found to be impracticable. Perhaps a score of disks were not received for study, besides the entire list of one company whose product seemed to have no serious place here. Almost without exception manufacturers were gracious and generous in providing records to be scrutinized, and it seems to the writer that they are entitled to some special acknowledgement for their gallantry. Gallantry, because in many cases they are disparching their color-bearers to sure defeat, and in some to very humiliating exposure. Every manufacturer has some lemons of which he cannot be proud, which he cannot send out into the cruel glare of competition without wincing. The only reward he can have for this kind of courage is recognition of it.

A number of the records not obtained are scheduled for withdrawal after the present stock will have been exhausted. They are probably not to be lamented. Certain others included here may be withdrawn by the time this appears in print or shortly after. None of the best seems to be in this jeopardy.

The invaluable numbers applied by Ludwig von Köchel in his Chronological and Thematic Catalogue of Mozart's works have invariably been used here: KV stands for Köchel-Verzeichnis (Köchel Catalogue); KA for Köchel-Anhang (Köchel Annex).

THE BEST-

In the recording industry it is expected that every Mozart record will be successful. The expectation has naturally produced a surfeit of surprisingly bad records. Works have been entrusted to incompetent or indifferent musicians, or to the wrong ones; good soloists have been made to work with dreary conductors and vice versa; engineering has been hurried in the rush to be the first to produce and skim the cream from the market. There are not many disks of which it can be said, This is It, the ultimate, as fine as we may dare hope.

However, the following are outstanding:

Clarinet Concerto. Cahuzac with Orch. from Danish Nat. Radio, Wöldike cond. Haydn Society 1047.

(The Same). Kell with Zimbler Sinfonietta. Decca

Piano Concerto No. 2. Balsam with Winterthur Orch., Goehr cond. Concert Hall CHS 1119.

Piano Concerto No. 14. Istomin with Perpignan Fest. Orch., Casals cond. Columbia ML 4567.

Piano Concerto No. 17. Kirkpatrick with Dumbarton Oaks

Orch., Schneider cond., Haydn Society 1040.

Piano Concerto No. 23. Gieseking with Philharmonia Orch., Karajan cond. Columbia ML 4536.

Piano Concerto No. 25. Fischer with Philharmonia Orch., Krips cond. Victor LHMV 1004.

Sinfonia Concertante for Violin and Viola. Stern and Primrose with Perpignan Fest. Orch., Casals cond. Columbia ML 4564.

Symphony No. 10. Winterthur Orch., Otto Ackermann cond. Concert Hall CHS 1166.

Symphony No. 31. Royal Philharmonic Orch., Beecham cond. Columbia ML 4474.

Symphony No. 36. Danish Nat. Radio Orch., Busch cond. Victor LHMV 1019.

Symphony No. 38. Royal Philharmonic Orch., Beecham cond. Columbia ML 4313.

Symphony No. 41. London Sym. Orch., Krips cond. London LS 86.

(20) German Dances. Vienna Nat. Op. Orch., Litschauer cond. Vanguard 426.

SYMPHONIES

No. 1, IN E FLAT, KV 16 (1 Edition) The year after the Peace of Paris (1763) had conveyed to Great Britain an imperial hegemony grander than any the world had known, the Mozart family. including the one who counts, then eight years old, were in London on one of those continual musical journeys undertaken by the composer or his father, which always won esteem and never made fortune. London in fete admired Leopold Mozart's two prodigies - the gifted daughter Maria Anna and the miraculous son who is not yet entirely believable and the boy played for George III and Charlotte the Queen. More important, he won the love and admiration of the Queen's music-master, Johann Christian Bach, a composer whose tragic laziness thwarted the florescence of an elegant talent not exceeded in grace by Boccherini or Mozart himself. The influence of the London Bach on Mozart was enormous and cannot be calculated. Mozart acquired musical approaches from this man such as his father Leopold could not have taught him. The little First Symphony, produced during the first London year, sounds like Christian Bach in its unforced progressions and easy Italicism. How much of it Wolfgang Mozart wrote we do not know, or how much his father, who never wrote anything better. The London Bach may have helped, or may have revised, or perhaps he was only imitated. But there it is, a sound little work, three movements, a restricted orchestra of strings with horns and oboes in pairs - dimensions agreeable to Mozart for many years.

Mr. Otto Ackermann, brought forward by Concert Hall for these early Mozart works, himself brings the gift of reticence to a simple music which would suffer equally from a shove or a barrier. The orchestra plays well and with apparent spontaneity, the winds nicely fitted to the strings in a real piquancy. Agreeably recorded without strain: an excess of bass is easily curbed

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1165. 12-in. (with Syms. 2, 5 & 6). 10 min. \$5.95.

No. 2, IN B FLAT, KV 17 (1 Edition) Is hard to describe differently from No. 1, except that its four movements include two contrasting minuets (in a later terminology, minuet and trio) as the third. The same circumspection from Mr. Ackermann, which seemingly permits the orchestra to practise their own expansion, and the same quality of sound with the same enlarged bass.

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1165. 12-in. (with Syms. 1, 5 & 6). 12 min. \$5.95.

No. 4, IN D, KV 19 (1 Edition)
Fast, slow, fast—the Italian overture as
the young Mozart learned it from J. C. Bach.
The comments attached to Nos. 1 and 2
are applicable here.

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1166. 12-in. (with Syms. 10, 11 & 14). 8 min. \$5.95.

No. 5, IN B FLAT, KV 22 (1 Edition) This was written in the Netherlands when the boy was nine, and shows clearly how well the style of Christian Bach had been absorbed, since the older composer was not present to help him. — The record has an engaging violin tone, and somewhat less bass than the preceding symphonies in this series.

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1165. 12-in. (with Syms. 1, 2 & 6). 9 min. \$5.95.

No. 6, IN F, KV 43 (1 Edition)

The repeated foursquare decisiveness of the first movement is a musical tic of Leopold Mozart: the andante has some suggestion of the Mozart we know. There is a rudimentary minuet, and the finale has breeze but no character. The composer was eleven. It is moot whether or not Mr. Ackermann should have been more forceful in the external movements: a Symphony without consistent individuality perhaps should not be endowed with the conductor's. Excellent orchestral sound.

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1165. 12-in. (with Syms. 1, 2 & 5). 14 min. \$5.95.

No. 10, IN G, KV 74 (1 Edition)
Short and inventive, not very remarkable except that its composer was fourteen,



Mogens Wöldike: Imperturbable classicism.

KV 74 is bolder, more mature, than its predecessors, and reveals in each of its three movements the unmistakable signature of its author, closing with a flourished cadence he was to use again and again throughout his short life. Two oboes, two horns, and strings are well played and sound fine.

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1166. 12-in. (with Syms. 4, 11 & 14). 8 min. \$5.95.

NO. 11, IN D, KV 84 (I Edition)
Composed like KV 74 in Italy, KV 84 is decidedly Italianate, and it is interesting how its sparkle resembles Grétry's, himself a visitor in Italy a little earlier. Mr. Ackermann puts a nice dash of spirit into this, but the engineers have allowed an acidity to the violins in progressive measure, re-

quiring progressive adjustment of the amplifier in reproduction.

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1166. 12-in. (with Syms. 4, 10, & 14). 10 min. \$5.95.

No. 14, IN A, KV 114 (1 Edition) No one would say other than Mozart. At fifteen he has become a symphonist, if not a Haydn, who in 1771 had written forty-two, a composer capable of challenging the senior before long, perhaps of surpassing him, with a decent grant of years (denied). Not a great Symphony, No. 14, but a symphony of greater promise than anyone had ever built so young: confident and ingenious, making much of the flutes and horns added to the available strings, and singing an andante already of mozartean eloquence. - Mr. Ackermann could have done better with this in the matter of nuance and dynamics; reticence is no longer so laudable. His performance is fair, the sound of his orchestra coarser than in the earlier works where they had no need to worry. Strong treble reduction is necessary to make the violins tolerable in an otherwise reasonably-good recording. (An old Concert Hall disk limited to subscribers had this better played by Dr. Swoboda, in a sound pretty drab by our later standards.)

—Winterthur Sym. Orch., Otto Ackermann, cond. Concert Hall CHS 1166. 12-in. (with Syms. 4, 10 & 11). 18 min. \$5.95.

No. 18, IN F, KV 130 (1 Edition)
For the first time in the symphonies recorded, the voice of Haydn seems to have reached Mozart: in the structure of the first movement and the good-humored snap of the finale. In fact it is possible to mistake the finale for Haydn. When Mozart admired he absorbed before expanding. The only recording is an early Westminster good for its period and still satisfactory, of a typical Swoboda performance—imaginative and careful of details here, disdainful there; sensitive to dynamics, careless on accent, fair as a whole.

—Vienna Sym. Orch., Henry Swoboda, cond. Westminster WI 5012. 12-in. (with Sym. 30). 14 min. \$5.95.

No. 19, IN E FLAT, KV 132 (1 Edition) At sixteen the composer has achieved facile mastery of the brilliant and beguiling fluff most characteristic of the last three decades of the Eighteenth Century's music: a marvelous fluff, reassuring to a hundred anciens régimes but not salvational. From now on Mozart could always make this sort of delight and at will transcend it. — The recorded performance is laggard: the conductor has hopes and expectations not realized by a band without shading and without tone. It is a good amateur performance, its deficiencies the plainer for a close and accurate sound.

—Ton-Studio Orch., Stuttgart, Hans Michael, cond. Period 538. 12-in. (with Sym. 21). 16 min. \$5.95.

No. 21, IN A, KV 134 (I Edition) Another divertimento-symphony, with a beautiful andante and some startling episodes, played with spirit and no finesse at all. The players can play, but not as a responsive orchestra: rehearsals help. The dynamics range from mf to f, and the engineers have had no difficulty in making this apparent.

—Ton-Studio Orch., Stuttgart, Gustav Lund, cond. Period 538. 12-in. (with Sym. 19). 19 min. \$5.95.

NO. 22, IN C, KV 162 (1 Edition) Very skillful and nearly empty of substance, this Symphony, and so played, with offhand vigor, in a recording hard and clear as the northwest wind in the American northeast.

-Vienna Sym. Orch., Henry Swoboda, cond. Westminster WL 5005. 12-in. (with Serenade 5). 8 min. \$5.95.

No. 23, IN D, KV 181 (1 Edition) If this amounts to nothing, it sounds like something. The alchemist of seventeen turns small beer into champagne. Swoboda brings out the zest in a dashing performance not devoid of roughness from the orchestra, but roundly reproduced and impressive for its age. (Not that it matters; but the overside does.)

—Vienna Sym. Orch., Henry Swoboda, cond Westminster WL 5013. 12-in. (with Concertone, KV 190). 9 min. \$5.95.

NO. 24, IN B FLAT, KV 182 (1 Edition) Prepossessing foam filling the contours of the Italian overture, dutifully stirred by Mr. Michael in an unimaginative way, in a bright recording of a very small orchestra. (Dr. Swoboda showed how to whip this up in an old Concert Hall disk available to subscribers only.)

—Ton-Studio Orch., Stuttgart, Hans Michael, cond. Period 545. 12-in. (with Divert. 10 & March, KV 248). 9 min. \$5.95.

No. 25, IN G MINOR, KV 183 (4 Editions) Mozart wrote two symphonies in G Minor, and no others in a minor key. This No. 25, from his eighteenth year, is a taut, agitated and angry work inspirational of a relentless gush of woebegone musicography. Some thousands of men have said and are still saying, with different degrees of authority, that Mozart composed like this because he felt bad, thus denying to the unexcelled musician imagination, memory and judgment. Figaro would have taken ten years to write if the composer to compose it had had to experience the situations he was describing musically. He would have had to decorate a change of lodgings, to resist two seducers and attempt four seductions, to go off to war, to have been count and countess, chambermaid and factotum. notary and gardener; to have been contented, enraged, joyous, murderous, philosophical, animal, vindictive, compassionate and dispassionate. He would have had to be in one of those throes before he could indite a note; and they require time to be felt as Mozart expressed them.

The anguished intensity of Mozart's Symphony No. 25 is in imitation of a greater symphony in G Minor, Haydn's "Fist", No. 39, a wonderful imitation for a youth of eighteen; and everyone is invited to play the records in consecution (for the Haydn, Haydn Society No. 1010), to hear how instinctive is Mozart's torment in ky 183.

The distinctive appreciation of Mr. Celibidache for this music is patent and arresting, and it is too bad that the sound of the London Philharmonic Orchestra under his direction is so murky in reproduction. The immensely superior sonance of the Wöldike orchestra gives a pungency to the Danish conductor's staider utterance that the engineers have denied to Mr. Celibidache. Admirers of Mr. Wöldike's imperturbable classicism may be disappointed in it here,

NO. 28, IN C, KV 200 (3 Editions)
The disks represent a struggle to the death
among three deaf recording engineers. All
are successful: the delectable KV 200 is three
times slain. Restraint assigns no stronger
epithet to the Remington and Mercury
sound than "hideous", restraint hand-inhand with mercy. London presents a more
exasperating aberration. Fundamentally her

Casals at Perpignan: Performances of varying value, but all gracious, caressing, devotional to Mozart.



but there is no doubt that his is the most effective edition. — The old Mercury disk requires finical fussing with controls before the odd combination is found which will give a satisfactory sonic result.

—Ch. Orch. of the Danish Nat. Radio, Mogens Wöldike, cond. Haydn Society 1055. 12-in. (with Sym. 29). 24 min. \$5.95. —London Philh. Orch., Sergiu Celibidache, cond. London LL 88. 12-in. (with Sym. 38). 21 min. \$5.95.

—Munich Philh. Orch., Kurt Eichhorn, cond. Mercury 10032. 12-in. (with Sym.

28). 18 min. \$4.85.

—(Pro Musica Orch., Otto Klemperer, cond. Vox PL 6280. 12-in. (with Sym. 36). \$5.95.)

No. 26, IN E FLAT, KV 184 (1 Edition)
Some of the rebellious storm of No. 25 is
carried over into a slighter work whose
threats seem to seek a reassurance never
completely accorded. Mr. Lehmann's is
the only recording this Symphony has ever
had. Using an orchestra of substantial
complement he provides a routine performance and receives a strong, welldifferentiated synthesis of sound, albeit with
somewhat shrill violins.

—Bamberg Sym. Orch., Fritz Lehmann, cond. Decca DL 4045. 10-in. (with Sym. 32). 9 min. \$2.50.

No. 27, IN G, KV 199 (1 Edition)
A knowing performance here, supple and integrated, but the grossly overladen bass unites with double-edged violins to nullify other values.

—Bamberg Sym. Orch., Ludwig Georg Jochum, cond. Oiseau-Lyre 6. 12-in. (with Sym. 30). 14 min. \$5.95.

reproduction is satisfactory, but is tormented throughout this Symphony (and so are we) by a cursed low-frequency noise and an astonishing, gratuitous metallic quiver from the violins, a plague on any pickup and any amplifier. — A richly detestable trio of records.

—Suisse Romande Orch., Peter Maag, cond. London LL 389. 12-in. (with Sym. 34). 16 min. \$5.95.

—Bavarian Radio Orch., Rudolf Albert, cond. Mercury 10032. 12-in. (with Sym. 25). 17 min. \$4.85.

—Mozarteum Orch., Salzburg, Paul Walter, cond. Remington 199-56. 12-in. (with Haydn: Sym. 104). 19 min. \$2.49.

No. 29, IN A, KV 201 (4 Editions) The agitated distress of KV 183 has won for that Symphony a greater repute than any until No. 35. That it is a finer work than KV 201 is apparent principally to those who esteem distress more highly than vivacity. Of the first thirty symphonies No. 29 is the most happily ingenious, the most fecund in surprises; and withal as fastidious as any. The phonograph is unusually rich in interesting interpretations without much similarity. Mr. Wöldike is austere in a crisp etching of line and finely balanced choirs, exaggerating nothing and almost convictive that his way is the way. There is a cold sparkle to this, except in the minuet which is staid; and this classicism has been aided by condign recording, clear and clean, uncushioned. As far away as Rousillon from Denmark is the warmly affectionate romanticism of the venerable Catalonian Pau Casals, lingering, caressing, harmonically fuller, its linearity distended. Concede that this hurts a concept of propriety: it remains juicy and captivating. Between these two Maag and Keilberth strike a mean of reasonable warmth which excites no problems and brings a soft satisfaction.

—Ch. Orch. of the Danish Nat. Radio, Mogens Wöldike, cond. Haydn Society 1055. 12-in. (with Sym. 25). 25 min. \$5.95. —Perpignan Fest. Orch., Pablo Casals, cond. Columbia ML 4563. 12-in. (with Eine K N). 28 min. \$5.45.

—Suisse Romande Orch., Peter Maag, cond. London LL 286. 12-in. (with Sym. 36). 18 min. \$5.95.

—Bamberg Sym. Orch., Joseph Keilberth, cond. Oiseau-Lyre 37. 12-in. (with German Dances, KV 509). 22 min. \$5.95.

No. 30, IN D, KV 202 (2 Editions)
No conductor can make much of as sugary
and aimless a composition as Mozart ever
wrote. Mr. Jochum's effort is obscured by
an appallingly distorted sound: the early
Westminster bearing the Swoboda struggle
against futility is fair — good for its period.

—Vienna Sym. Orch., Henry Swoboda, cond. Westminster WL 5012. 12-in. (with Sym. 18). 17 min. \$5.95.

Sym. 18). 17 min. \$5.95.

—Bamberg Sym. Orch., Ludwig Georg Jochum, cond. Oiseau-Lyre 6. 12-in. (with Sym. 27). 16 min. \$5.95.

No. 31, IN D, "PARIS", KV 297 (4 Editions) A shining pinnacle of objective art, a disciplined refinement of showiness, brilliance without garishness, and no more feeling than a wisp of regret and a pleasure of spectacle: the "Paris" Symphony of 1778. Of three recorded versions heard, none is bad, although music-lovers might with an appearance of reason think that two are, after contrasting them with the one outstanding, led by a specialist in this kind of music. Mr. Dorati has a brisk, direct and hard capability, by no means misplaced here. Mr. Krips has that soft acquiescence in music that sometimes makes us think he is reclining in the staves - a not unpleasant looseness suggesting that the orchestra is conducting him. This is particularly revealed in a disinclination to extort the ultimate value from a phrase, to push an accent hardily. These are secondary to an even sinuousness, a deep harmonic bloom.

The renowned musical baronet, if not a martinet, wins a martinet's results. He is exigent of clarity and precision; he habitually alleviates harmony to give value to design. In reducing the bulk of texture the loss is net if the texture is not refined. Sir Thomas evoking the Eighteenth Century seeks a sparkle, not a glare. His "Paris" Symphony sparkles: if the reader will kindly imagine that this Symphony is a jeweled coronet, a metaphor ought not to harm. Mr. Dorati's coroner is on display in Cartier's window, Mr. Krips' snug in its quilted étui; Sir Thomas's adorns a living - and if the reader will kindly imagine againlovely, lively duchess, and dances teasing lights from the candelabra.

Engineering quality is hardly a determinant here. All are pretty good and none is salient. Columbia is clearer and harsher than the others, London softer, more reverberant, Victor indefinably the easiest to hear.

—Royal Philh. Orch., Sir Thomas Beecham, cond. Columbia ML 4474. 12-in. (with Schubert: Unfinished Sym.). 18 min. \$5.45.
—London Sym. Orch., Josef Krips, cond.

London II. 542. 12-in. (with Sym. 39). 16 min. \$5.95.

-Minneapolis Sym. Orch., Antal Dorati, cond. Victor LM 1185. 12-in. (with Bartok: Divertimento). 16 min. \$5.72.

—(Hastings Sym. Orch., John Bath, cond. Allegro ALG 3049. 12-in. (with Beethoven: Sym. 8). \$5.95.)

No. 32, IN G, KV 318 (2 Editions)
Short and rather beautiful in a slick offhandedness, Symphony No. 32 is the perfect product of a perfect musical mechanic.
It is also the last symphony cast in the simple
form of the Italian overture. The two recorded versions are in conflict, Benda's
lusciously played in a transcript from SP,
good for the type but with the faults of the
type, Lehmann's comparatively prosy in a
more compelling sound of a later day.

—Berlin Philh. Orch., Hans von Benda, cond. Capitol H 8131. 10-in. (with Wolf: Italian Serenade). 8 min. \$2.98.

—Bamberg Sym. Orch., Fritz Lehmann, cond. Decca DL 4045. 10-in. (with Sym. 26). 8 min. \$2.50.

No. 33, IN B FLAT, KV 319 (4 Editions) A mock gravity, a fakery of portent, spices the good cheer of this Tokay which has a germ of the "Jupiter" Symphony and tints a television vaudeville called "Mr. Peepers". In three recorded performances the conductors amiably accord rather consistently. Heger has a mellow bent, Beinum a nervous; Karajan is most decisive. The Beinum disk has a strong extra appeal in the polished playing of the Concertgebouw Orchestra, and this is the decisive element in selection. The engineering is flawed somewhere in every case, with London's basically the best but complicated by low-frequency pulsation and a very weak level of sound that many pickup-amplifier associations will not be able to enlarge to effectiveness. Remington's sound is the clearest, but the treble requires reduction beyond the capacity of most compensators, and low-frequency noise is a nuisance here too. Columbia's synthesis of harshness and obscurity is not

—Concertgebouw Orch., Amsterdam, Eduard van Beinum, cond. London LL 491. 12-in. (with Haydn: Sym. 94). 20 min. \$5.95.
—"Austrian" Sym. Orch., Robert Heger, cond. Remington 199-71. 12-in. (with Haydn: Sym. 7). 21 min. \$2.49.
—Vienna Philh. Orch., Herbert von Kara-

—Vienna Philh. Orch., Herbert von Karajan, cond. Columbia ML 4370. 12-in. (with Eine K N; Adagio and Fugue, KV 546). 19 min. \$5.45.

—(Bamberg Sym. Orch., Hans Weisbach, cond. Mercury 10077. 12-in. (with Haydn: Sym. 19). \$4.85.)

No. 34, IN C, KV 338 (1 Edition)

That there is only one version of such a brilliant and exciting Symphony may cause surprise. Perhaps conductors are coy of incurring an inevitable comparison with a Beecham disk to come, KV 338 being one of his specialties. Mr. Maag does well with the external fast movements and is curiously prosaic in the andante. The sound is bedeviled by an ineradicable tinny shimmer mocking the violins.

—Suisse Romande Orch., Peter Maag, cond. London LL 389. 12-in. (with Sym. 28). 18 min. \$5.95.

No. 35, IN D, "HAFFNER", KV 385 (6 Editions)

The Symphony is brilliant and seems guileless, but like the iceberg which received the Titanic's rush, hides a peril beneath the surface. Careful steering is necessary: plain linearity will not do. The orchestration especially needs a judicious guide: its light is hard if it is not filtered; its sparkle becomes the glare of the midday sun on desert dunes. Two of the recording conductors have contrived the sparkle and the others glare. Messrs. Reiner and van Beinum are the discerning ones, and by a happy chance they have been fortified by the best engineering. Clearing away the clutter we find Mr. Wolf rushing to distance the acid of his violins, Prof. von Karajan and his engineers dispirited and dull after the conductor's rather fancy exercise; and Mr. Toscanini polishing granite in a tent. But Beinum is flexible and delicate in spite of an overgrand sound; and Fritz Reiner, with the Pittsburgh orchestra he made, shows how an analytic conductor can hide his analysis when he has sense and poetry in him, and can create a whole by elaborating the parts, without Reinerizing Mozart. - This Columbia is the oldest record, but its sound is clean and substantial.

—Pittsburgh Sym. Orch., Fritz Reiner, cond. Columbia ML 4156. 12-in. (with Bach: Suite No. 2). 16 min. \$5.45.

—London Philh. Orch., Eduard van Beinum, cond. London LL 214. 12-in. (with Handel-Harty: The Water Music). 17 min. \$5.95.
—EIAR Orch., Turin, Herbert von Karajan, cond. Decca DL 9513. 12-in. (with Eine K N). 16 min. \$5.85.

—NBC Orch., Arturo Toscanini, cond. Victot LM 1038. 12-in. (with Haydn: Sym. 101). 17 min. \$5.72.

Sym. Orch., Hans Wolf, cond. Remington 199-79. 12-in. (with Haydn: Cello Conc.). 16 min. \$2.49.

—(Bamberg Sym. Orch., Robert Heger, cond. Mercury 10057. 12-in. (with Sym. 36). \$4.85.)

No. 36, IN C, "LINZ", KV 425 (5 Editions) The Eroica Symphony imposed upon listeners a concept, never lost after its advent, of grandeur as an element inseparable from the symphonic form. What was occasional in Haydn his massive pupil made into a tradition for the entire Nineteenth Century. Mozart's genius was not hampered by a concept he had never heard, and grandeur is more frequently a component of his concertos than of his symphonies. No. 39 has it, when it is played to show it: and the quality earned a title for No. 41. The "Linz" Symphony was the first one grand: in the square cut of its themes, the decision of its meter and a brawny assertiveness of orchestration it differs from its predecessors as a cavalry saber from a foil. Happily it receives a robust statement from at least three conductors on records of satisfactory if not admirable tonal appeal. That the grandeur of Prof. Böhm is somewhat leaden afoot we do not notice until we have heard Serge Koussevitzky spicing power with grace; and that power can ripple benignly is the revelation of a truly great Mozart conductor Fritz Busch, who left us too soon. His is the record to have.

—Danish Nat. Radio Orch., Fritz Busch, cond. Victor LHMV 1019. 12-in. (with

Haydn: Sym. 88). 23 min. \$5.95.

—Boston Sym. Orch., Serge Koussevitzky, cond. Victor LM 1141. 12-in. (with Sym. 39). 23 min. \$5.72.

—Vienna Philh. Orch., Karl Böhm, cond. London LL 286. 12-in. (with Sym. 29). 25 min. \$5.95.

—(Bamberg Sym. Orch., Robert Heger, cond. Mercury 10057. 12-in. (with Sym. 35). \$4.85).

—(Pro Musica Orch., Otto Klemperer, cond. Vox PL 6280. 12-in. (with Sym. 25). \$5.95.)

No. 37, IN G, KV 444 (1 Edition)

A proficient composer and mechanical symphonist, Michael Haydn, wrote this depressingly routine thing and Mozart borrowed it. Ludwig von Köchel included it in his catalogue, and Westminster has provided a musicological if not musical service in recording it, fairly well, in a temperate and dutiful performance directed by Dr. Swoboda.

—Vienna Sym. Orch., Henry Swoboda, cond. Westminster WL 5016. 12-in. (with M. Haydn: Turkish Music from "Zaire"). 14 min. \$5.95.

No. 38, IN D, "PRAGUE", KV 504 (5 Editions)

The "Prague" Symphony is a masterly light score, effervescent, brisk and demanding in its external movements, clement and lyrical in its andante. One of the five recordings is saliently excellent in several directions: Sir Thomas Beecham's, which has a performance

—Royal Philh. Orch., Sir Thomas Beecham, cond. Columbia ML 4313. 12-in. (with Sym. 41). 25 min. \$5.45.

—Northwest German Radio Orch., Hamburg, Hans Schmidt-Isserstedt, cond. Decca DL 9535. 12-in. (with Concert Rondo, KV 382). 25 min. \$5.85.

—Suisse Romande Orch., Ernest Ansermet, cond. London t 88. 12-in. (with Sym. 25). 23 min. \$5.95.

—Chicago Sym. Orch., Frederick Stock, cond. Columbia RL 3026. 12-in. (with Schumann: Sym. 4). 22 min. \$3.08.
—St. Louis Sym. Orch., Vladimir Golsch-

mann, cond. Victor LM 27. 10-in. 24 min. \$4.67.

No. 39, IN E FLAT, KV 543 (4 Editions) 39, 40 and 41 were composed consecutively during six weeks of the summer of 1788. Music knows only one other composer, Schubert, who could have been capable of a corresponding accomplishment of prodigious Olympian prodigality. This was a miserable period for Mozart, physically and spiritually, and the knowledge of his misery has caused a festering pullulation of infantile comment by writers on music who do not know how art is made. Such invidious, automatic verbosity implies that if Velasquez had, say, a grief of boils, he would have applied them to his effigies of the Spanish Bourbons: that Shakespeare could not have written Lear without simultaneously submitting to the same piercing excitation that ravaged the dilapidated king; and that Beethoven, to compose his two wonder-

Mozartean baronet: Sir Thomas Beecham provides e l e g a n c e, precision, strong orchestral sound.

of elegance-in-precision, the best sound (as a whole), and notably the best orchestral playing. The Schmidt-Isserstedt interpretation vies with Sir Thomas's in a delightful opposition of airiness to calculated weight; but the Hamburg orchestra does not challenge the London, and the Decca sound is rather wooden. Mr. Ansermet's work is absolutely honest - an unfancy projection of a sort that never displeases, but the engineers have clouded detail here, overloaded the bass and curiously unbalanced the whole. The late Frederick Stock's performance is better than the acoustic qualities lifted from the old 78's. Mr. Golschmann's hurried, slurred, perfunctory and ungracious execution is bravely novel, and drab.

ful funeral marches, would first have had to be buried. Such solemn cant denies to an artist his right to imagination: it interprets creation in terms of the limitations of the non-creator. Mozart, feeling like very hell, would yet have that miraculous musical brain to lance its inquiry at anything that is, and to publish the results in a finality of tonal illumination.

Symphony No. 39 is the first Mozart symphony to offer more than fragments of a quality we may call sturdiness. It is a stern and peremptory manifesto, although that is not what we hear in its customary performance. Conductors have unconsciously absorbed the fulsome tradition of the child prodigy who remained forever a retarded

boy — of Dear Little Wolfgangerl dandled by princesses and writing the divinest Gavottes ("Did you ever see anything so cute as his teeny-teeny sword?"); of a simp in ribbons to whom Mr. Sacheverell Sitvell could condescend throughout a duodecimo of sickening libel; of a mincing hermaphrodite ideally and primarily designed for masquerade by tin-can, chain-store and cosmetic heiresses and the most pretentious actresses; of an epicene Fauntleroy who wrote with a quaint old quill in watered sugar.

It is true that the composer of Don Giovanni was once a child, and incredibly precocious. But precocity and childishness are not the historical essence of this mighty man, any more than the bountiful goodlooks, the charming manners and the appealing human-fellowship of the young emperor Nero and the young king Henry VIII constitute the historical essence of those imposing figures, who also changed

in aging.

Richard Strauss used to play the E Flat Symphony as if he were conducting Beethoven. A music critic, hearing this, exclaimed in appalled repudiation: "It's not Mozart!" It was; but the critic was prepared only for the satin simpleton. The aggressiveness of kv 543 is right there in the score, but the generality of conductors refuse to pluck it.

On our records, Dr. Krips - who admittedly has some tendency to interpret music in his own likeness - excises the backbone from the Symphony with the lyrical skill of a fishmonger fileting a flounder. This is an exaggeration of the Mozart of legend. Serge Koussevitzky gave us this Mozart without exaggeration, and so does Hans Rosbaud. The great orchestra from Boston sings so eloquently we almost think its song uncounterfeit. Dr. Szell, that underrated man, has an instinct or a mind or both properly directed, but the influence of a tradition is strong enough to restrain him from the asseverations required without concession. His is easily the best version, and the brave old Columbia recording is as good as any.

—Cleveland Orch., George Szell, cond. Columbia ML 4109. 12-in. (with Haydn: Sym. 88). 24 min. \$5.45.

—Boston Sym. Orch., Serge Koussevitzky, cond. Victor LM 1141. 12-in. (with Sym. 36). 25 min. \$5.72.

—Bavarian Radio Orch., Hans Rosbaud, cond. Mercury 10038. 12-in. (with Sym. 41). 25 min. \$4.85.

—London Sym. Orch., Josef Krips, cond. London LL 542. 12-in. (with Sym. 31). 25 min. \$5.95.

No. 40, IN G MINOR, KV 550 (7 Editions) If KV 543 is vitiated in most performances, its G Minor follower is generally acknowledged to be pretty grim stuff, and is so played and properly. The key itself causes this interpretational discernment: when a rococo composer ventures into minor he trumpets conflict. The early Symphony No. 25 has a greater prestige than Nos. 29 and 31 although those are better symphonies: 25 is in G Minor, and proclaims a disturbance. The later G Minor, KV 550, is a struggle in its four movements against something implacable. The taut form, the restrained orchestration (in this dramatic Symphony the dramatic trumpets and drums

are not used), and the breathless economy of material contribute to enhance the decorative deadliness of Symphony No. 40, like an emerald in the hilt of a poniard.

The phonograph can show five performances of different degrees and sorts of acceptability. Estimation of the records is facilitated by the unusual fact that the two poor performances are also inadequately engineered. Another, Mr. Jochum's, is well played, but its sound is fading with the years. Among the other four it is hard to fix a choice. Prof. Furtwängler directs with no tampering of a kind we sometimes dread to hear from him. His tempos and dynamics are alive and unburdened by conceits. He infuses a rare luminosity by lightening bass and giving clear voice to the wood, and the fully developed phrasing of the strings is in beautiful unison. The sound of the Vienna Philharmonic in the HMV recording is good, and the second best of these disks. Mercury has given the best sound of all to its version by the Minneapolis orchestra. This has not the magisterial magnificence of others in Mercury's superb Olympian series - it has, in fact, a violinshimmer apparent here and there - but in nicety of timbre, distinctness of detail and architectural rectitude of blocks of sound this is not challenged by the others. Mr. Dorati's direction is competent but does not shine. The old Reiner record, like the Jochum, splits the andante, but its substantial sound has resisted the decay of time admirably, and there is delectable thaumaturgy in the hypersensitive manipulation of the orchestra by the man who built it. Here are the purest contours, the finest pianos, the most cubic fortes, the most euphonic tonal syntheses. Beautiful and remarkable, and perhaps a little too, if we stay aware of ir.

The Kleiber interpretation is bold and original. It is the most exciting, in its fast pace and forceful accents. The texture of its comfortable nap is a little thick in the London recording, but does not bar a satisfactory clarity. The Kleiber finale has an intensity of fever hard to resist, exerting retroactive influence in judgment, like the lastround tumultuous offensive of a valiant pug in a box-fight.

Ordination of the first four disks following has not been dogmatically established. It is felt that the Furtwängler will best meet the tastes of most Mozarteans. The others are interchangeable according to individual bent.

-Vienna Philh. Orch., Wilhelm Furtwängler, cond. Victor LHMV 1010. 12-in. (with Brahms: Haydn Variations). 24 min. \$5.95.

-Pittsburgh Sym. Orch., Fritz Reiner, cond. Columbia ML 2008. 10-in. 24 min. \$4.00.

-London Philh. Orch., Erich Kleiber, cond. London LS 89. 10-in. 21 min. \$4.95. -Minneapolis Sym. Orch., Antal Dorati, cond. Mercury 50010. 12-in. (with Mendelssohn: Sym. 4). 25 min. \$5.95.

-Concertgebouw Orch., Amsterdam, Eugen Jochum, cond. Capitol L 8016. 10-in. 25 min. \$3.98.

-"Sonor" Sym. Orch., Hans Ledermann. cond. (According to the label. The envelope attributes the dreary performance to "l'Orchestre Nationale -sic- de France. Henri Tomasi, cond.) Parade 2001. 12-in.

26 min. \$2.19.

-Salzburg Fest. Orch., Paul Walter, cond. Remington 149-23. 10-in. 23 min. \$1.89.

No. 41, IN C, "JUPITER", KV 551 (8 Editions) On the assumption that discophiles who have read this far must know something of the well-named Jupiter with its declaration of Olympian rights in the first movement, a litany without lament in the second, a minuet of clenched fists, and a fugue of convoluted defiances, this consideration will go directly to the records. - Prof. Krips on London hits the hardest, thanks to his energy and the huge sound. The speed of the first movement is nervous but not detrimental; and if some background noise is present it is covered most of the time by the orchestral billows. Sir Thomas Beecham essays some tricks of tempo which do not improve on his earlier great performance recorded in the late 30's, but his orchestra is the most responsive and the recording the neatest in detail. Prof. Böhm's average excellent exposition is matched by an average good recording; and Bruno Walrer's interpretation, steady, deliberate and noble (perhaps the best) suffers from the high-frequency shriek that beset the earliest LP's, particularly on the first side of this disk. The others have flagrant faults, worse than those of the four versions mentioned, with some unmentionable, and nearly unhearable. -London Sym. Orch., Josef Krips, cond. London LS 86. 10-in. 25 min. \$4.95.

Royal Philh. Orch., Sir Thomas Beecham, cond. Columbia ML 4313. 12-in. (with Sym. 38). 29 min. \$5.45.

Vienna Philh. Orch., Karl Böhm, cond. Victor LBC 1018. 12-in. (with Beethoven: Sym. 5). 27 min. \$3.10.

-NBC Orch., Arturo Toscanini, cond. Victor LM 1030. 12-in. (with Bassoon Concerto No. 1). 25 min. \$5.72.

-N. Y. Philh.-Sym. Orch., Bruno Walter, cond. Columbia ML 4035. 12-in. 27 min.

-Sym. Orch., Kurt Wöss, cond. Remington 149-16. 10-in. 27 min. \$1.89. -(Bavarian Radio Orch., Hans Rosbaud, cond. Mercury 10038. 12-in. (with Sym. 39). \$4.85.)

-(Vienna Philh. Orch., Karl Böhm, cond. Vox PL 7760. 12-in. (with Eine K N).

CONCERTOS FOR VIOLIN AND ORCHESTRA

No. 1, IN B FLAT, KV 207 (1 Edition) In this recording the violinist's tone has been built up by a favored position, weaken-

ing the harmonic structure and edging Miss Stucki's instrument. Thus a pleasant, unpretentious performance is adversely modified by an officious auxiliary. The orchestra plays together, and its sound is not disagreeable, but more clarity would have been achieved by proper placement. The tentative and decorous Concerto, with Mozart writing carefully for the instrument he feared would enslave him, needs all the help it can get.

-Aīda Stucki; Ton-Studio Orch., Stuttgart, Gustav Lund, cond. Period 549. 12in. (with V. Conc. 2). 20 min. \$5.95.

No. 2, IN D, KV 211 (1 Edition) Like its obverse, No. 1, this would have been better for less emphasis on the solo violin, but unlike the obverse it would not then have been good. Mr. Lund, the conductor, is an incalculable fellow who has acquiesced here in an orchestral exposition as limp as a hangover. The Concerto is the weakest that Mozart composed for violin.

-Aïda Stucki; Ton-Studio Orch., Stuttgarr, Gustav Lund, cond. Period 549. 12-in. (with V. Conc. 1). 19 min. \$5.95.

No. 3, IN G, KV 216 (3 Editions)

No more futile pastime than trying to analyze the incomprehensible alchemy which compounded this Concerto and its two immediate successors out of that same grey matter responsible for the first innocuous pair. A few months of 1775 drift into history, and Mozart without preparation or warning unveils in succession three intimate and inimitable masterpieces of design and tint; as if the author of The Young Visiters had produced next after that romance Twelfth Night.

Establishing a preference between the Goldberg and Stern disks is difficult. There is more exhilaration in the gaiety of the Goldberg-Süsskind external movements, but the lovely tone wrought by Mr. Stern in the adagio has an individual value. In this miniature what we demand from the engineers is first clarity, and Columbia has chased her record with a greater, if unremarkable nicety, not decisive. Perhaps the over-sides will be determinative in resolving what seems a draw.

-Szymon Goldberg; Philharmonia Orch., Walter Süsskind, cond. Decca DI. 9609. 12-in. (with V. Conc. 4). 24 min. \$5.85. -Isaac Stern; Ch. Orch., Isaac Stern, cond. Columbia ML 4326. 12-in. (with Beethoven: P.-V. Sonata 7). 25 min. \$5.45.

His own main rival: in the Fifth Concerto, Heifetz · Sargent edged out Heifetz -Barbirolli.



No. 4, IN D, KV 218 (6 Editions)

In this congeries of fit and famous fiddles only two were recorded with LP as the original destination. The Schneider and the Barchet are those versions, and theirs is the clearest sound, with Schneider for the Haydn Society comfortably leading all. Curiously and unluckily these have the least distinguished performances in this high company, although both have enough merit to make them acceptable. Mr. Barchet is brisk and guileless, and a little inflexible. Mr. Schneider's orchestra is more dutiful than eloquent. The third best sound, and pretty good, is Heifetz-Beecham's; and this record has the most animated, sparkling performance, and a delectable tone from the soloist. The old Kreisler version is decidedly different from any other, beautifully sung in a persistently sweet restraint that makes one movement resemble another and has no climaxes. Rather wonderful and rather dull, and a throttled sound. Fusty sonics spoil too the superb musicianship of Mr. Szigeti, but cannot quite extinguish the glory of his slow movement, a thread of gossamer in the dew. Goldberg-Süsskind, in a fair recording, have the liveliest response to change and the smallest complacency, the widest examination.

—Jascha Heifetz; Royal Philh. Orch., Sir Thomas Beecham, cond. Victor LM 1051. 12-in. (with Bach: Conc. for 2 V.'s). 21 min.

—Szymon Goldberg; Philharmonia Orch., Walter Süsskind, cond. Decca DL 9609. 12-in. (with *V. Conc.* 3). 25 min. \$5.85. —Joseph Szigeti; London Philh. Orch., Sir Thomas Beecham, cond. Columbia ML 4533. 12-in. (with *Prokofieff: V. Conc.*).

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Schneider: the orchestra was dutiful.

-Reinhold Barchet; Pro Musica Orch., Wilhelm Seegelken, cond. Vox PL 7240. 12-in. (with V. Conc. 6). 23 min. \$5.95.
-Fritz Kreisler; London Philh. Orch., (not then Sir) Malcolm Sargent, cond. Victor LCT 1117. 12-in. (with Mendelssohn: V. Conc.). 27 min. \$5.72.

No. 5, IN A, "TURKISH", KV 219 (3 Editions) In the mid-30's Jascha Heifetz collaborated with John Barbirolli and the London Philharmonic Orchestra in a 78 exposition of Mozart's most dashing Violin Concerto. This seemed an ultimate satisfaction of the requirements of a score impeccable and spontaneous in its dialectics. The preëminence of that performance is now confronted by a Heifetz twenty years older, and if we disregard sonics, we shall find that the older version by the younger man is still preëminent. It is more relaxed, and more submissive to the music, less intent on tonal glory than the LP. The latter seems nevertheless the best record to have, in its clear sound of an expert if rather insistent elegance. Miss Morini contributes beautiful fiddling to the Perpignan record which has also the nicest orchestral delineation; but the very slow adagio makes this a heartfelt plaint odorous of humanity, touching but incongruous, as valuable but less valid than the urbane regret of Heifetz-Sargent. The Hitzker-Weidlich disk is not bad, but its paucity of luster becomes an impossible handicap after the other editions

—Jascha Heifetz; London Sym. Orch., Sir Malcolm Sargent, cond. Victor LM 9014. 12-in. (with Beethoven: 2 Romances). 26 min. \$5.72.

—Erica Morini; Perpignan Fest. Orch., Pablo Casals, cond. Columbia ML 4565. 12-in. 31 min. \$5.45.

—Eva Hitzker; Salzburg Fest. Orch., Fritz Weidlich, cond. Remington 149-37. 10-in. 27 min. \$1.89.

No. 6, IN E FLAT, KV 268 (1 Edition) The first movement is Mozart, and his hand has been at work in the rondo. The adulteration by someone unknown has discouraged frequent performance of a lively and engaging Concerto, pleasant but far from definitive in a phonographic version which dots all the i's but does not shade the letters. The solo violin has been placed to dominate more than it should. The sound is satisfactory.

—Reinhold Barchet; Pro Musica Orch., Stuttgart, Rolf Reinhardt, cond. Vox PL 7240. 12-in. (with V. Conc. 4). 26 min. \$5.95.

No. 7, IN D, KV 271a (2 Editions)
Although the authorship is disputed, Mozart plainly wrote this beguiling work, apparently doctored by someone else. The records are sorry essays. Miss Stucki is a capable violinist, but she has been given that prominence at the expense of her orchestra which no discophile has ever praised. Miss Airoff is a brave woman. The conductors compete in an exhibition of flabby muscles, won by Mr. Wöss. The Period sound is good enough of what it offers.

—Aida Stucki; Ton-Studio Orch., Stuttgart, Gustav Lund, cond. Period 548. 12-in. (with Adagio, KV 261; and Rondos, KV 269 & 373). 26 min. \$5.95.
—Helen Airoff; Sym. Orch., Kurt Wöss,

—Helen Airoff; Sym. Orch., Kurt Wöss, cond. Remington 199-46. 12-in. (with 2 Minuets and a Gavotte). 34 min. \$2.49.

In the July-August issue, Mr. Burke will continue the Mozart discography with the concertos for piano and other instrumental works.

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Beethoven Up-to-date

By C. G. BURKE

Part II: Orchestral Addenda; Sonatas

THE NINE SYMPHONIES

—NBC Orchestra, Arturo Toscanini, cond. RCA Victor LM 6900 (Limited Edition). Seven 12-in. 24, 29, 46, 31, 29, 40, 33, 25, 1 hr. 4 min. \$52.40.

This edition, beyond cavil one of the most imposing and important in the history of recorded music, has been preceded by a tantalizing prolongation of its inevitability. Ever since Mr. Toscanini, back in the thirties with the New York Philharmonic Orchestra. committed a sensational Seventh Symphony to disks, there has been a prescience among music-lovers, fertilized and nourished by their own hopes and the coy hints of the conductor's sponsor, that the others would follow. The two hazards were the conductor's mortality and his fractiousness. With the years the first has seemed ever less vulnerable, and the second has yielded occasional concessions to a surexcited public, as the demurest girl must accord some measure of palliation to the importunities of a generous sweetheart. We all know that Mr. Toscanini has withheld from the public recorded essays he believed overflawed, and we have all been puzzled by the appearance of disks - which to be issued had to have his imprimatur quite cheerfully teeming with flaws.

We may give thanks that the long period of bashfulness is done. Mr. Toscanini follows the generous romantic, Bruno Walter, in following the great pioneer, Felix Weingartner, through the hazards of exposing to perpetuity what they can do with the Nine Symphonies. We need no longer imagine the Toscanini records: we can hear them.

After hearing, we are stringently at a loss to designate a living conductor who could realize the Beethoven symphonies better.

Naturally this does not mean that the Toscanini versions are necessarily the best. He is one of thirty-odd conductors who have made Beethoven symphonies for LP, and it cannot be expected that anyone can lead a pack of that size in nine heats. But he is distanced only twice, at the beginning, and either leads or is on the heels of the leaders in all the others.

Of the nine symphonies in the album, the First, Third and Ninth have already appeared in these recordings, and were considered in the Beethoven discography which appeared in the last issue of this magazine. The Fourth, Fifth, Sixth, Seventh and Eighth Symphonies, previously recorded by Mr. Toscanini (the first and last not on LP) are here presented in new editions. The Second under the Toscanini stick appears here on disks for the first time. Examined in order, they seem to these ears so:

No. 1, noticed earlier in the discography without enthusiasm, still seems inferior to several versions.

No. 2, hitherto neglected by Mr. Toscanini is still waiting for a thoroughly satisfactory The external movements, apt to edition. the lively exactitude of the Italian conductor's style, are more than satisfactory, bur Beethovenians will find the lovely romantic exigencies of the larghetto thwarted by the same lively exactitude, and the mechanical perfection of the scherzo as taken here is stern to its fun. This is the least appealing of the Toscanini performances. Low-level sound, but pretty good. (Indeed, there is not a truly bad orchestral semblance in the whole album, in spite of a wide variation in the sound of its components.)

No. 3, the oldest of these recordings, has proved remarkably resistant and is still the most effective of the many *Eroicas* on disks. The excellent Bruno Walter version (Columbia ML 4228) will be preferred by people to whom the Toscanini intensity is disturbing, and the beautiful subtleties of Felix Weingartner (Columbia ML 4503) are not entirely concealed by the deficiencies of acoustics nearly twenty years old.

nearly twenty years old.

No. 4—well! If the requirements of perfection are satisfied by the absence of obvious faults, this is perfection. Not even Mr. Toscanini has ever chiseled a temple of such logical exactitude, such nobly proportioned elements. The infinitely small gradations by which this master builder swells or subdues a line, the solidity and cohesion of his punctuations, the illumination of corollary patterns within an undimmed contour—these familiar attributes are flawlessly concentrated in a Symbol.

phony whose own balanced form seems best suited to them, and a certain austerity of tenderness in the first two movements, which surely could not have been obtained by any other conductor, wholly thwart criticism. The orchestral sonance — which is from a broadcast — has a gracious insinuation which is the players' and not the engineers', since volume is low and the bass is slighted. That this perfect performance appeals less to the writer than the plainly imperfect formations of Mr. George Solti's romantic exuberance for London (IL 316) may be attributed to merely personal predilection. Both are superb: one a Jovian asseveration, the other a human appeal.

No. 5. Here the Macedonian phalanx advances a geometrical bristle of spears at Issus; the oars of the quinqueremes flash in majestic unison at Actium. Here the linear ranks of Pakenham's grenadiers move and fall with stately unanimity before the works of New Orleans; here are not the motley individualists behind the works, the militiamen, the smugglers and the pirates, the frontiersmen and the Indians who striped the ground with scarlet tunics and crimson blood. Never was battle so orderly, and never was order so intensely mobilized for victory. Nothing is misplaced in this perfection of discipline, but nothing is mollified either. It may not be the way to lead the Fifth Symphony, but no one else could lead it so. It is wonderful even when we cannot help thinking of Richard Strauss's admiring reproach to the Boston Symphony Orchestra: "Gentlemen, could you not please be a little rough?"

Unluckily the sonics are short of the virility a battle must have. The disk is from a broadcast, and Mr. Toscanini has given much more than the engineers have been able to take. It is not a bad recording, but it does not ring; it does not compel as the Fifth Symphony should. This is great music, but it is also a great noise, whose struggle and triumph must on occasion bludgeon. The bludgeon cannot be disinterred from the groove; there is no overwhelmingness to be liberated: the disk cannot but take second place.

No. 6 in the Toscanini performance earns an adjective not often applied to Toscanini performances: pleasant. No stress here, and we hear what we ought to hear, the music leading the conductor at one with it. This Pastoral is all rippled with spontaneous light, and it flows with the brook as the

THERE'S MANY A SLIP . . .

What happened to Page 66 of the March-April issue, somewhere between the copy-desk and the composing-room, we wouldn't wish on Pravda. Here is a description of the mess, which will also serve long-suffering Beethoven concerto lovers as a guide to Mr. Burke's discussion. The page opens serenely enough with a comparison of performances of the Fourth Piano Concerto. Without warning, this suddenly breaks into a list of pianists and conductors who have recorded the Fifth Concerto. Next come mentions of the early E Flat Concerto and the Triple Concerto. Then follows a discussion of the Violin Concerto, and the beginning of a list of its performers. Impatiently, at this juncture, recommences the discussion of the Fourth Concerto, followed by the performers who play it on disks. After this follows the comparison of "Emperors", trailed disconsolately by the remainder of the list of performers of the Violin Concerto. Got it?

gentle, irresistible force of gravity makes it. — Luscious orchestral playing, the best on any Pastoral record, but the wanton pipes and undisciplined spring-urgings of Otto Klemperer's less efficient band make a warmer countryside and emphasize again that in romanticism the parts ought to overcome the whole.

No. 7. Music-lovers who will have their Toscanini regardless are advised to avoid hearing Dr. Scherchen's edition for Westminster. The fulfilled orchestral presentation of the latter will make any other Seventh now on records pallid in comparison. This in spite of the fact that this new Victor is robustly made to a good standard. But the full orchestra has not the columnar construction nor the illuminated detail of the Viennese, and we only think its ecstatic tumult one before we have been enveloped by Dr. Scherchen. - The Toscanini performance is excellent, and much like the old one with the Philharmonic; superb in the first movement and curiously fast in the trio; as good as any including the Scherchen, which is curiously slow in the first movement. But the vitality of the experience is proportionate to the vitality of the sound - in this case a vitality made in Vienna.

No. 8 inverts the values of the Seventh: here a triumphant sound dominates a brilliant and vivacious but obdurate performance. The vivid delineation of choirs obtained by the engineers, the clean articulation of the strings and the shining timbre of the winds put this record in the front rank of orchestral disks: it is the best sound in the Toscanini series, and its detailed realism forces every other version to take a step downward, including the warmly human interpretation of Pierre Monteux, hitherto the most desirable. Had this engineering technique been applied to the Fifth and Seventh Symphonies, Mr. Toscanini's versions of five would be the dictated choice: a stupendous proportion for one conductor against the field.

No. 9, another masterly recording, will probably never be surpassed in the vehement galvanism of its import and the taut plotting of its architecture.

In summary of these opinions, three of the Toscanini editions lead all rivals: Nos. 3, 8 and 9. Two are not excelled in performance, but are eclipsed by someone else's superior sound: 5 and 7. Two are very beautiful, but preference is given to others of freer flight and looser fabric: 4 and 6. Two are not engaging: 1 and 2.

The seven disks are housed in a handsome album of twice the usual substance, equipped with notes on the music and biographical data and photographs celebrating Mr. Toscanini and the orchestra. In the limited edition the obverse surfaces are in numerical sequence from the front. for continuous playing of the nine Symphonies if anyone wishes that. Individual records of the six symphonies newly recorded will not be available until fall: Nos. 2 and 4 will share a disk, as will 5 and 8, with two sides apiece for 6 and 7.

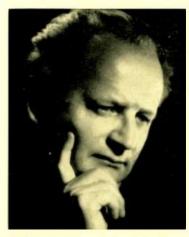
SONATAS FOR PIANO

No. 1, IN F MINOR, Op. 2, No. 1 (2 Editions) Prof. Kempff is the only pianist yet to have a playing of each of the Thirty-Two on LP.

Repetition being abhorrent to the restricted space here, let it be said at No. 1 that this pianist has a sympathy for form, an instinct for time and a sense of geometric construction remarkable in pianists who play Beethoven and perhaps unique. These traits are found in all his interpretations, even the most romantic. It is a skeletal symmetry, warmly fleshed, that identifies his Beethoven. In his recordings the piano tone is small although otherwise true. The reduction of bulk is an attribute of the engineering and not of the player. It hurts some of the Sonatas and helps none. Unquestionably a fuller sound in several instances could have proved a superiority in performance only implied by what was audible.

The small tone is adequate for the First Sonata, wherein the nice proportions and beautiful timing of the Kempff flash gemilike and hint portents too. The other performance has not the finish of the Kempff design, and the piano-sound is inferior.

-Wilhelm Kempff. Decca DL 9583. 12-in. (with Sonata No. 3). 17 min. \$5.85.
-*Adolph Baller. Allegro AL 43. 10-in. (with Sonata No. 9). 14 min. \$4.45.



Wilhelm Kempff: against sonic handicaps, a full 14 firsts out of a possible 32.

No. 2, IN A, OP. 2, No. 2 (2 Editions) A strong and resonant sound gives to the Appelbaum disk an allure not in the Kempff. Nevertheless, the lighter tone of the latter's piano is entirely congruous with the glittering finesse of his playing. Mr. Appelbaum is both looser and more decided in a spirited address forcefully convictive until the Kempff is heard again. The favor here is for Prof. Kempff, but those with a bias for richer sound may prefer Mr. Appelbaum and ger a good performance.

—Wilhelm Kempff. Decca DL 9585. 12-in. (with Sonata No. 15). 24 min. \$5.85.
—*Kurt Appelbaum. Westminster WL 5075. 12-in. (with Sonata No. 32). 23 min. \$5.95.

No. 3, IN C, OP. 2, No. 3 (2 Editions) Beethoven in a tussle with the Eighteenth Century. Wilhelm Backhaus gives exuberant support to his effort to burst out; Wilhelm Kempff resists with something like coruscating propriety. What we call Beethoven is emphasized by Backhaus; what suggests

Haydn is forwarded by Kempff. Both are very fine, and both have excellent sound, the Kempff stronger than in most of the Decca series.

—Wilhelm Backhaus. London LL 627. 12-in. (with Sonata No. 17). 22 min. \$5.95. —Wilhelm Kempff. Decca DL 9583. 12-in. (with Sonata No. 1). 23 min. \$5.85.

No. 4, IN E FLAT, OP. 7 (2 Editions) The Decca sound here is poorer than in the preceding Kempff records - weak, disproportionately so in the bass, and here and there metallic in the treble. Opposed to this is a Urania sound of robust, vibrating and imposing piano tone. Mr. Steurer is a player of stature, and his transmission of this long Sonata is frank and bold and does not fail in poetry. But Prof. Kempff has manipulated with heart, brain and hands an interpretation of subtle perception and mechanical mastery that puts the neglected Op. 7 into a condition requiring new evaluation. The proportion proposes a brutal problem: Kempff is to Steurer here inversely as the Urania recording is to the Decca.

-Wilhelm Kempff. Decca DL 9588. 12-in. (with Sonata No. 9). 29 min. \$5.85. -Hugo Steurer. Urania 7055. 12-in. (with Sonata No. 19; Polonaise, Op. 89). 31 min. \$5.95.

No. 5, IN C MINOR, Op. 10, No. 1 (2 Editions)

Interpretations of no significant difference in engineering of dissimilar types but equivalent values. Backhaus is more expansive and his piano has more volume; Kempff makes the clearer design.

-*Wilhelm Backhaus. London LL 393. 12-in. (with Sonatas No. 6 and 25). 14 min. \$5.95.

—Wilhelm Kempff. Decca DL 9587. 12-in. (with Sonata No. 32). 16 min. \$5.85.

No. 6, IN F, Op. 10, No. 2 (3 Editions) A superb three-movement Sonata, with Beethoven growling between two wide grins. The finale is brilliant sport. Two of the recorded excursions are exhilarating, Backhaus in a strong, bluff way and Kempff as telling or more in a subdued jaunt of tickling sophistication. Saloon versus salon. The Decca sound is short of bass and much less outspoken than the London, which is sticky at points in the treble.

—Wilhelm Kempff. Decca DL 9591. 12-in. (with Sonatas No. 22 and 30). 13-min. \$5.85. —*Wilhelm Backhaus. London LL 393. 12-in. (with Sonatas No. 5 and 25). 10 min. \$5.95.

No. 7, IN D, OP. 10, No. 3 (3 Editions) With repeated hearings the tiny sound that Decca has accorded Prof. Kempff's beautifully articulated exposition seems progressively less satisfacrory. After all, a piano should resound: it is a pianoforte. This recording has no capacity for forte, no resonance. The good—the open and romantic—performance of Mr. Appelbaum, in Westminster's substantial re-statement of a pianoforte, must be preferred by everyone who can distinguish that instrument from a mandoline.

-*Kurt Appelbaum. Westminster WL 5044. 12-in. (with Sonata No. 21). 25 min. \$5.95.

Asteriaks indicate works reviewed in Beethoven Discography I, May 1952

-Wilhelm Kempff. Decca DL 9584. 12-in. (with Sonata No. 13). 20 min. \$5.85.

No. 8, IN C MINOR, "PATHETIQUE", Op. 13
(7 Editions)

This one is so familiar that the most spectacular virtuosos are wary of improving it. Most of the records follow a decent course, with Messrs. Kempff, Rubinstein and Solomon operating at a particularly high level of conscientious skill. But the Kempff sound is too small to represent a piano successfully, and Miss Dorfmann's instrument has a little more reality than any other.

—Cutner Solomon. Victor LM 1222. 12-in. (with Sonata No. 32). 19 min. \$5.72. —*Artur Rubinstein. Victor LM 1072. 12-in. (with Schumann: Fantasiestücke). 17 min. \$5.72.

—Ania Dorfmann. Victor LBC 1029. 12-in. (with Sonata No. 14). 21 min. \$3.10.

—Wilhelm Kempff. Decca DL 9578. 12-in. (with Sonatas No. 24 and 25). 17 min. \$5.85.

—(Andor Foldes. Mercury 10121. 12-in. (with Sonatas No. 17, 24 and 25). \$4.85.)

No. 9, IN E, OP. 14, No. 1 (3 Editions) These three will excite no great enthusiasm. Mr. Appelbaum strains more than the Sonata needs but the engineers have helped with a pretty realistic piano. Mr. Baller is engagingly light and deft, but his piano as recorded lacks volume and contributes a frequent spatter to the treble. The composed and dynamic grace of Prof. Kempff needs more power to carry it than the Decca engineers accorded. Appelbaum or nothing.

—*Kurt Appelbaum. Westminster WL 5090. 12-in. (with Sonatas No. 24 and 31). 14 min. \$5.95.

-Wilhelm Kempff. Decca DL 9588. 12-in. (with Sonata No. 4). 14 min. \$5.85.

No. 10, IN G, OP. 14, No. 2 (2 Editions) A belling treble on the Backhaus piano and a feeble output from the Kempff, who has all the advantage in a pleasing, airy and skipping performance alive with light, the other in contrast a little grudging and measured.

—Wilhelm Kempff. Decca DL 9592. 12-in. (with Sonata No. 31). 16 min. \$5.85.

—Wilhelm Backhaus. London LL 603. 12-in. (with Sonatas No. 22 and 24; and Schumann: Warum? from the Fantasiestücke).

13 min. \$5.95.

No. 11, IN B FLAT, OP. 22 (2 Editions) Big in size and substance, this Sonata fares much better in the decisive, resounding and heady statement by Westminster-Appelbaum than in Decca-Kempff's near miniature, notwithstanding that the Decca piano here has more strength than usual.

-*Kurt Appelbaum. Westminster WL 5078. 12-in. (with Sonata No. 14). 26 min. \$5.95. -Wilhelm Kempff. Decca DL 9590. 12-in. (with Sonatas No. 19 and 20). 25 min. \$5.85.

No. 12, IN A FLAT, "FUNERAL MARCH", Op. 26 (3 Editions)

Gieseking: glittering, icy pianism; and the best piano tone of three which should have been better.

Backhaus: weighty, unalert, casual but not repellent like Gieseking above; sound a little dull but not bad although hard in the treble. Kempff: an interpretation of grand design and sentiment, unsurpassable, every measure felt and thought and realized: one of the few supreme utterances of the Thirty-Two Sonatas. Piano true but weak although not very; the version to have.

—Wilhelm Kempff. Decca DL 9589. 12-in. (with Sonata No. 16). 19 min. \$5.85.
—*Wilhelm Backhaus. London LL 265. 12-in. (with Sonata No. 21). 19 min. \$5.95.
—*Walter Gieseking. Columbia ML 4334. 12-in. (with Grieg: Lyric Pieces). 18 min. \$5.45.

No. 13 (Quasi una Fantasia), in E Flat, Op. 27, No. 1 (2 Editions)

No first movement is more enticing than No. 13's, a tasty Sonata shaded by a spurious moonlight sharing the opus-number. It ought to be used as bait for potential Beethovenians, and either of these excellent performances would serve. Prof. Kempff has all his poetry and mathematics on lovely display, and everyone would prefer what he has done to what Mr. Steurer has done if Prof. Kempff had the benefit of the Steurer sound. Still, Decca has allowed more volume here than in preceding sonatas, although the tone is hard and hardly in the class of the Urania disk, superb below the middle octave and entirely satisfactory above. With the couplings in mind one would certainly prefer Urania. Without such a consideration Kempff would be the choice.

—Wilhelm Kempff. Decca DL 9584. 12-in. (with Sonata No. 7). 16 min. \$5.85.

—Hugo Steurer. Urania 7033. 12-in. (with Sonata No. 20; Variations, Op. 76; 3 Rondos, Opp. 51 and 129). 16 min. \$5.95.

No. 14 (Quasi una Fantasia), in C Sharp Minor, "Moonlight", Op. 27, No. 2 (10 Editions)

Incursions by Miss Dorfmann and Prof. Kempff inject some new complications into evaluation without effecting the removal of Messrs. Gulda and Appelbaum from the top of the list on the basis of the rounded merit of their records. Miss Dorfmann's competence is the more impressive for a rich piano tone, which, until the finale where the treble clashes, is the best of all. Prof. Kempff's beautifully poised and graduated construction is disfigured by clatter in the reproduction.

Friedrich Gulda: the best Hammerklavier



—*Friedrich Gulda. London LL 150. 12-in. (with Sonata No. 31). 16 min. \$5.95.
—*Kurt Appelbaum. Westminster WL 5078. 12-in. (with Sonata No. 11). 17 min. \$5.95.

—Ania Dorfmann. Victor LBC 1029. 12-in. (with Sonata No. 8). 17 min. \$3.10.

—Wilhelm Kempff. Decca DL 9582. 12-in. (with Sonata No. 26). 13 min. \$5.85.

—(Alfred Kitchin. Plymouth 12-16. 12-in. (with Sonata No. 23). \$1.89).

No. 15, IN D, "PASTORAL", Op. 28
(2 Editions)

Another sad instance of a tonal conveyance too frail to give a lift to the Kempff equipment. Mr. Sandor's engaging disk must be preferred because Columbia in 1949 gave a big and pretty accurate piano sound to it.

-*Gyorgy Sandor. Columbia ML 4193. 12-in. (with 3 pieces by Chopin). 21 min. \$5.45.

-Wilhelm Kempff. Decca DL 9585. 12-in. (with Sonata No. 2). 22 min. \$5.85.

No. 16, IN G, OP. 31, No. 1 (3 Editions) In sound: Decca, fair; Westminster, very good; Urania, outstanding. The last is the forty-eighth version so far heard in this survey of the piano sonatas: it offers the most realistic piano of all. Mr. Appelbaum is out of the competition, for his roughter sport has not the appeal of Prof. Kempff's subdued, glossy grace. Mr. Steurer is nearer to A than to K, but with his endowment of sound, and a prim neatness very effective where it is applicable, makes his the favored record.

—Hugo Steurer. Urania 7051. 12-in. (with Sonatas No. 22 and 27). 22 min. \$5.95.

—Wilhelm Kempff. Decca DL 9589. 12-in. (with Sonata No. 12). 24 min. \$5.85.

—Kurt Appelbaum. Westminster WL 5133. 12-in. (with Sonata No. 23). 25 min. \$5.95.

No. 17, IN D MINOR, "THE TEMPEST", Op. 31, No. 2 (6 Editions)

There are performances here of a high order, with two outstanding: Kempff and Novaes. The former has that adjustment of unvexed, aërial linearity to the dramatic and emotional substance of Beethoven's music — the Book of Genesis in fastidious script — which we cannot but admire, while we are forced to deplore the feeble acoustic mechanics that only half state it. —Mr. Backhaus is not to be disdained although he has no poetry to match that of Mme. Novaes: he has the best overall sound despite a treble sometimes uncertain.

—Wilhelm Kempff. Decca DL 9586. 12-in. (with Sonata No. 18). 20 min. \$5.85.

*Guiomar Novaes. Vox PL 6270. 12-in. (with Sonata No. 26). 21 min. \$5.95.

—Wilhelm Backhaus. London LL 627. 12-in. (with Sonata No. 3). 22 min. \$5.95.

—(Andor Foldes. Mercury 10121. 12-in. (with Sonatas No. 8, 24 and 25). \$4.85.)

No. 18, IN E FLAT, OP. 31, No. 3 (2 Editions) The handsome figurations of Mr. Rubinstein, chiseled and abstract, were bound to give way before the first pianist intent on the greatness of a great Sonata neglected because it is so cheerful. In Op. 31, Prof. Kempff is It, and thanks to an improvement in the piano sound the third of that number is almost indispensable in his version. This playing is classic — in a calculated impetuo-

sity of headlong precision. The resources of pianism are mobilized not to show themselves but to reveal the music. The symmetry of the ripples is hardly noticed in the course of the principal streams. The plan is dominant, but the ornaments contribute without obtrusion, like the mechlin edging linen. — In short, salient among recorded performances of the Thirty-Two Sonatas.

—Wilhelm Kempff. Decca DL 9586. 12-in. (with Sonata No. 17). 22 min. \$5.85.

*Artur Rubinstein. Victor LM 1071. 12-in. (with Sonata No. 23). 19 min. \$5.72.

No. 19, IN G MINOR, Op. 49, No. 1 (2 Editions)

The frailest of the Sonatas demands little from its executants, but a better similitude of a piano than Decca provides for Wilhelm Kempff. The Urania sound is excellent.

—Hugo Steurer. Urania 7055. 12-in. (with Sonata No. 4; Polonaise, Op. 89). 9 min. \$5.95.

-Wilhelm Kempff. Decca DL 9590. 12-in. (with Sonatas No. 11 and 20). 8 min. \$5.85.

No. 20, IN G, Op. 49, No. 2 (2 Editions) This has a fragrance more engaging than the predecessor, and familiar to everyone who knows the Septet or who has worked at "Beethoven" on the piano. It hardly needs a great pianist, but the Kempff imagination has contrived a little revelation of taste and adroitness, not, alas, appreciated by the engineers. Mr. Steurer's playing is not distinctive, but his piano sounds like one. —Hugo Steurer. Urania 7033. 12-in. (with Sonata No. 13; Variations, Op. 76; 3 Rondos, Opp. 51 and 129). 8 min. \$5.95.

-Wilhelm Kempff. Decca DL 9590. 12-in. (with Sonatas No. 11 and 19). 8 min. \$5.85.

No. 21, IN C, "WALDSTEIN", Op. 53
(5 Editions)

Westminster, Remington and Columbia, in that order, offer satisfactory representations of a piano. Decca is puny without precedent, impossible for the "Waldstein"; and the metallic treble given by London to Mr. Backhaus is less endurable this year than last. Mr. Kilenyi gives us something new, right out of his own head, something showy, pointless and preposterous, all piano, no music. Let the showmaket stick to his Liszt

-*Kurt Appelbaum. Westminster WL 5044. 12-in. (with *Sonata No.* 7). 24 min. \$5.95. -*Claudio Arrau. Columbia ML 2078. 10-in. 25 min. \$4.00.

—Wilhelm Kempff. Decca DL 9581. 12-in. (with Sonata No. 28). 24 min. \$5.85. —Edward Kilenyi. Remington 199-83. 12-in. (with Sonata No. 26). 22 min. \$2.49.

No. 22, IN F, OP. 54 (3 Editions)
Beethoven had gone far indeed, by 1804, to offer a disjointed minuet and a one-theme allegretto as a "Sonata". It requires playing of a superior order to make its impression, and that it certainly receives from Prof. Kempff, here giving the others a lesson in subdued and poetic scansion, in grace, in formal nicety and analytical good sense. Here he is for once helped by quite adequate recording. Mr. Backhaus, remembering the "Hammerklavier", batters the little piece into insentiency, he too helped by the recording, harsh and effective. Between

these extremes Mr. Steurer seems commonplace, but there is nothing common-place in the remarkably vivid sound contributed by Urania.

—Wilhelm Kempff. Decca DL 9591. 12-in. (with Sonatas No. 6 and 30). 12 min. \$5.85. —Hugo Steurer. Urania 7051. 12-in. (with Sonatas No. 16 and 27). 9 min. \$5.95. —Wilhelm Backhaus. London LL 603. 12-in. (with Sonatas No. 10 and 24). 10 min.

in. (with Sonatas No. 10 and 24). 10 min. \$5.95.

No. 23, IN F MINOR, "APPASSIONATA", Op. 57 (10 Editions)

Is there other piano music as resilient, as toughly durable as this? If pianists avoid it they are thought to fear its rigors, and so they cease avoidance, joining a thousand recital-giving competitors in engraving these tormented notes into the very walls of the Brahms-Saal, Town Hall and the Salle Gaveau. Six recruits for records during the year, with the four heard of unusually high standards in play and sound. Messrs. Appelbaum and Backhaus are in the grand manner, the latter florid but formidable as the surf. The former maintains a moving eloquence of phrase amid a tumult of muscular asseveration, beautiful and unusual, the catch in the voice heard above the thudding of fisrs. Mr. Schiöler is comparatively subdued, his emotion more fluent, but an overemphasis of the left hand - which may be an engineer's overemphasis - often obscures the clarity of a basically excellent interpretation.

The Kempff record, with good sound, strong enough, offers an exposition of organized fury, a tirade in euphonious and symmetrical vehemence, a refinement of poise like amenities during battle. The achievement is one of intensity without violence, of titanic disturbance without disorder. The excited heart is expressed by serene fingers; heartbreak by a mind intact. Promethean and Miltonian: a definitive statement of L. van Beethoven.

-Wilhelm Kempff. Decca DL 9580. 12-in. (with Sonata No. 27). 21 min. \$5.85.
-Kurt Appelbaum. Westminster WL 5133.

-Kurt Appelbaum. Westminster WL 5133. 12-in. (with Sonata No. 16). 25 min. \$5.95. -Wilhelm Backhaus. London LL 597. 12-in. (with Sonata No. 28). 20 min. \$5.95. -Victor Schiöler. Victor LHMV 1031. 12-in. (with Liszt: Concerto No. 1). 22 min. \$5.95. -(Nicholas Medtner. Victor LBC 1031. 12-in. (with a Chopin miscellany). \$3.10.) -(Alfred Kitchin. Plymouth 12-16. 12-in. (with Sonata No. 14). \$1.89.)

NO. 24, IN F SHARP, OP. 78 (6 Editions) Apparently this thin one (which Beethoven professed to admire particularly, out of reaction from the gooey popularity of No. 14) dedicated to Theresa von Brunswick is puzzling: no one plays it like another pianist's version. Kempff has the grace, Appelbaum some violence and Backhaus neither; but B's piano is truest. Schnabel played it with a grace equivalent to Kempff's and a greater conviction; and the venerable sound of that recording, in its LP rebirth, is distant but surprisingly good.

—Artur Schnabel. Victor LCT 1109. 12-in. (with Sonatas No. 27 and 32). 10 min. \$5,72. Wilhelm Backhaus. London LL 603. 12-in. (with Sonatas No. 10 and 22). 10 min. \$5.95. —Wilhelm Kempff. Decca DL 9578. 12-in.

(with Sonatas No. 8 and 25). 8 min. \$5.85. —(Andor Foldes. Mercury 10121. 12-in. (with Sonatas No. 8, 17, and 25). \$4.85.)

No. 25, IN G, Op. 79 (3 Editions)

This sonatina is short, and everyone condescends to it because a considerable duration is expected from the later Sonatas. But the heart gasping in rhapsodic expectation in the first movement of Op. 79 is not for condescension although the minutes are all too short. It is magic in miniature. — Two performances are sensitive to this, with Wilhelm Kempff superb in his exact, light way, and Wilhelm Backhaus endearing in a hearty way that glitters less. — For those who can tolerate extrinsic noise or who have a good noise-suppressor, the Decca with volume up is the better record soundwise.

—Wilhelm Kempff. Decca DL 9578. 12-in. (with Sonatas No. 8 and 24). 7 min. \$5.85. —*Wilhelm Backhaus. London LL 393. 12-in. (with Sonatas No. 5 and 6). 9 min. \$5.95.

—(Andor Foldes. Mercury 10 121. 12-in. (with Sonatas No. 8, 17 and 24). \$4.85.)

No. 26, IN E FLAT, "FAREWELL, ABSENCE AND RETURN", OP. 81a (5 Editions) Mr. Kilenyi, his Magyar glow fanned by competent engineering, lets go his four limbs in an exuberance of uncompromising and brilliant confused fatuity. Mr. Gulda's fine performance and a basically first-class sound of the piano are eclipsed by excessive background noise and an amusing (not to Mr. Gulda or purchasers of the disk) progressive diminution of volume. Mme. Novaes retains her poetry and Prof. Kempff contributes his; hers soft as befits a friend, his blazing as becomes a friend coroneted in diamonds.

—Wilhelm Kempff. Decca DL 9582. 12-in. (with Sonata No. 14). 15 min. \$5.85.

*Guiomar Novaes. Vox PL 6270. 12-in. (with Sonata No. 17). 16 min. \$5.95.

—Friedrich Gulda. London LL 322. 12-in. (with Variations, Op. 35). 14 min. \$5.95.

—Edward Kilenyi. Remington 199-83. 12-in. (with Sonata No. 21). 15 min. \$2.49.

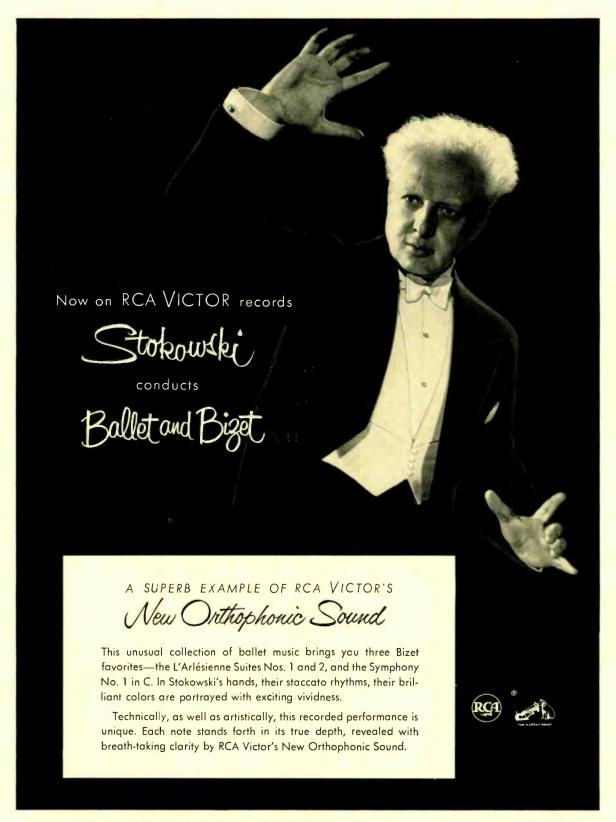
No. 27, IN E MINOR, OP. 90 (3 Editions) This is a tolerant, sentimental Sonata whose principal demands are of sympathy, a quality abundantly contributed by the three recording pianists. The rippling fluency of Prof. Kempff may entitle his work to the greatest esteem, but the experience here was that the splendid registration of the Steurer piano, against the mediocrity of the others, overbalanced small differences in manipulation.

—Hugo Steurer. Urania 7051. 12-in. (with Sonatas No. 16 and 22). 14 min. \$5.95.

—Wilhelm Kempff. Decca Dt. 9580. 12-in. (with Sonata No. 23). 13 min. \$5.85.

—Artur Schnabel. Victor LCT 1109. 12-in. (with Sonatas No. 24 and 32). 12 min. \$5.72.

No. 28, IN A, OP. 101 (3 Editions)
Neat in form, wayward and unruly in mood, the Sonata is more comfortable in the exact analysis of Wilhelm Kempff than in the hearty extrospection of Backhaus. Allegro's Mr. Hambro, closer to K than to B, is nevertheless caught unenviably between. — The piano is good in all these, K's small, B's



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—Wilhelm Kempff. Decca DL 9581. 12-in. (with Sonata No. 21). 19 min. \$5.85.

—Wilhelm Backhaus. London LL 597. 12-in. (with Sonata No. 23). 17 min. \$5.95.

No. 29, IN B FLAT, "HAMMERKLAVIER",

OP. 106 (5 Editions) Some of the works of Beethoven's full deafness — especially Op. 102, 106, 109, 111, 121a, 131 and 132 — overflowing tradition and sensing everything, cosmic and microcosmic, are to be described only in their own notes and by the sentiments they must incise into hearers. But one hearer will not agree with another on the sentiments excited, and a critic is, or should be, chary of a dogmatism expressing his own emotional and musical limitations. The ruthless clamor of Op. 106 requires a personal translation, and a responsible person will not demur at its rejection by other persons. Thus the writing person here, qualifying Mr. Appelbaum's Op. 106 as gesticulatory, and Mr. Petri's as complacent in the pianist's pianism, does not expect every person to qualify those playings in those terms. Unhappily for the critic, there are no spectacular flaws in this lot of records to reduce the field, to eliminate until inexorably only one is left, the inescapable nonpareil. Columbia's sound is the best, and very fine; but that aids Mr. Petri's complacency. London gives a background rumble, but otherwise her piano is rich and is played by Mr. Gulda with grand and animated conviction. London and Vox split the adagio; but better Gulda and Horszowski split than Appelbaum and Petri intact. Prof. Kempff, who knows more about Beethoven than the others combined, has a record which for proper sonance needs the volume lifted on the amplifier, which makes the record noisy; but a suppressor will ameliorate the noise. (Prof. Kempff has organized, arranged, phalanxed, proportioned, the chaos of the Hammer, in an astonishing and unique venture of cool temerity.) Mr. Horszowski is poetic, vital and logical, and the Vox piano is warmly registered.

Here are the personal predilections:

-*Friedrich Gulda. London LL 422. 12-in.
38 min. \$5.95.

-Mieczyslaw Horszowski. Vox PL 6750. 12-in. 43 min. \$5.95.

—Wilhelm Kempff. Decca DL 9579. 12-in. 38 min. \$5.85.

-- Egon Petri. Columbia ML 4479. 12-in. 40 min. \$5.45. -- Kurt Appelbaum. Westminster WL 5150.

-Kurt Appelbaum. Westminster WL 5150 12-in. 43 min. \$5.95.

No. 30, IN E, OP. 109 (4 Editions) A year ago an injustice was done to the London record of Backhaus on the basis of a defective copy which vilified the sound. A new copy reveals a truer piano than the others, although it cannot convince rhat Mr. Backhaus's main force is ideal here. Prof. Kempff has a record which cannot express what he can. Demus-Remington is still the recommendation, when it is on a

—*Joerg Demus. Remington 199-29. 12-in. (with Sonata No. 31). 21 min. \$2.49. —*Mieczysław Horszowski. Vox PL 7050. 12-in. (with Sonata No. 32). 19 min. \$5.95. —Wilhelm Kempff. Decca DL 9591. 12-in. (with Sonatas No. 6 and 22). 17 min. \$5.85.

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No. 31, IN A FLAT, OP. 110 (5 Editions) Prof. Kempff, the only newcomer, brings expected qualities to his interpretation: inner seriousness and external sparkle; an authority of consummate poise that conveys a conviction, and leaves an impression, of finality. Unluckily the finality of statement needs a force of sound that Decca has not granted. The opulent tone achieved for Mr. Appelbaum imposes maintenance of last year's preference.

-*Kurt Appelbaum. Westminster WL 5090. 12-in. (with Sonatas No. 9 and 24). 21 min. \$5.95.

—Wilhelm Kempff. Decca DL 9592. 12-in. (with Sonata No. 10). 18 min. \$5.85.

No. 32, IN C MINOR, OP. 111 (6 Editions) The anticipated Olympian contest between Schnabel and Kempff in one of the mightiest Sonatas proves sadly lopsided. Prof. Kempff has chosen to lighten the romantic burden and polish the contours of a work all vital and heartfelt substance, and the sound of his piano is inadequate even for this dubious and diminished execution. Schna-

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bel's wonderfully warm and absolutely syllogistic exposition, unaffected and infinitely moving, seems as intact a realization as we could have. The original recording was of 1932, and if its LP reestablishment is inevitably deficient in vibrancy, it nevertheless offers a good similitude of piano tone, and one decidedly more effective than that allotted to Kempff. Solomon plays with a poetic instinct not untouched by cerebral affectation, and very well as a whole; but the engineers have handicaped his record with an added weight of rather amazing noise. Mr. Appelbaum's big performance seems to improve with repetition, and the sound of this is admirably real. Mr. Lateiner's disk was judged last year capable of the most effective delivery of Op. 111, on the combined excellences of playing and sound, first in the one and second in the other. Now second and second, the record elicits the same judgment, against Schnabel first and fifth.

—*Jacob Lateiner. Columbia ML 4335. 12in. (with Andante favori). 30 min. \$5.45. —Artur Schnabel. Victor LCT 1109. 12-in. (with Sonatas No. 24 and 27). 26 min. \$5.72.

-Cutner Solomon. Victor LM 1222. 12-in. (with Sonata No. 8). 27 min. \$5,72. -Wilhelm Kempff. Decca DL 9587. 12-in. (with Sonata No. 5). 22 min. \$5,85.

SONATA FOR PIANO AND FLUTE, IN B FLAT
(1 Edition)

It is more probable that this harmless salon music is by Beethoven in his teens than by another, but it is hardly worth dispute. The disk has playing which excites compassion, and recording values that march in opposite directions. The piano sound is admirably true, but the flute is close enough to the microphone to distort its harmonics and make clearly audible the gasps of the poor devil playing it.

—Alfred Brendel, Camillo Wanausek. SPA 28. 12-in. (with Trio for P, Fl & Bsn.). 23 min. \$5.95.

SONATAS FOR PIANO AND VIOLIN

No. 1, IN D, OP. 12, No. 1 (4 Editions) Messrs. Balsam and Fuchs, in their limited, autographed edition of the ten Sonatas, dispute here the hegemony of Horszowsk Szigeti. Mr. Fuchs seems never to play anything badly, and the restless mind of Mr. Szigeti often compels his bow to extract more meaning from music than we knew was there until he showed us. Mr. Horszowski has an allotment of musical brains exceeding most pianists', and his musical fingers are given full equality by the Szigeti conscience. But the Fuchs sound is pretty regularly a sensuous pleasure in itself, while it is the Szigeti architecture rather than his material that we admire. In this first Sonata, if we have a greater variety of tone from Szigeti, some of it is a disagreeable variety; and if Fuchs' notes are honeyed, they are assembled with less imperious persuasion, and Mr. Balsam is light where Mr. Horszowski is bold. Decca has the acoustical advantage to be expected from the relative age of the disks. It requires bass support, and aside from the trouble to be expected from any violin record re... to those who are especially particular about their LP records

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-Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 18 min. \$29.25.

*Mieczyslaw Horszowski, Joseph Szigeti. Columbia ML 4133. 12-in. (with Schubert: Sonatina No. 1). 17 min. \$5.45.

No. 2, IN A, OP. 12, No. 2 (2 Editions) More force from the piano would have helped both records, although Mr. Bay is less subdued than in his usual work with Mr. Heifetz. The latter is overly preoccupied with making handsome tone, and his poised animation suggests that of an admirable mechanism. Little bass is apparent from the piano, a detail in which Decca is also deficient. In all other elements Decca is comfortably better, from a livelier interpretation to a much livelier sound.

—Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 17 min. \$29.25. - *Emanuel Bay, Jascha Heifetz. LM 1015. 12-in. (with Sonata No. 1). 16 min.

No. 3, IN E FLAT, OP. 12, No. 3 (2 Editions) It is at once a pity and a gratification when the only two versions of a comparatively neglected work are as good as these. Either would serve well, but the Decca recording of Mr. Fuch's silvery tone is not quite so sensitive as the sound that Columbia has permitted to the complex texture woven by the Francescatti bow. Mr. Casadesus wins on both poetry and force, and Columbia on the registration of the piano, impressively

Robert Casadesus, Zino Francescatti. Columbia ML 4478. 12-in. (with Sonata No. 4). 18 min. \$5.45.

-Artur Balsam, Joseph Fuchs. Decca Dx 150. Five 12-in. (Complete Edition of the ten Sonatas). 15 min. \$29.25.

No. 4, IN A MINOR, Op. 23 (5 Editions) In the first part of this study the Fourth P-V Sonata was not represented. Your critic regrets the outburst of compensatory fervor that has presented four (and perhaps five) good versions for consideration. Critical effort is slighter, and the critical conscience sleeps better, when competition is frivolous. Here four duos have earned commendation: how shall they be ordered?

According to truth of sound, easier to judge than musicianly accomplishment, this seems to be the precedence: Westminster, London, Columbia, Decca. According to technical ease: Casadesus-Francescatti (Columbia), Balsam-Fuchs (Decca), Osborn-Rostal (London), Doyen-Fournier (Westminster). According to poetic imag-ination: Osborn-Rostal, Doyen-Fournier, Casadesus-Francescatti, Balsam-Fuchs. According to pleasant suavity of tone (the musicians' not the recordists' property): Casadesus-Francescatti, Balsam-Fuchs, Doyen-Fournier, Obsorn-Rostal. But the most delightful scherzo belongs to Doyen-Fournier, and the slow sections are to Casadesus-Francescatti.

The order implied below is primarily a guide to the writer's prejudices, which incline to purity of sound, particularly when he is otherwise baffled. The sonic exactitude of the first is in its subdued way as impressive as the most spectacular presentation of a full orchestra. On a basis primarily of interpretation, Casadesus-Francescatti are the leaders, and they have been equipped with good sound, although not so good as that of the overside Sonata No. 3.

-Ginette Doyen, Jean Fournier. Westminster WL 5164. 12-in. (with Sonata No. 6). 19 min. \$5.95.

Robert Casadesus, Zino Francescatti. Columbia ML 4478. 12-in. (with Sonata No. 3). 18 min. \$5.45.

-Franz Osborn, Max Rostal. London LL 471. 12-in. (with Sonata No. 8). 16 min. \$5.95.

-Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the

ten Sonatas). 15 min. \$29.25.

—(Heinrich Herz, Richard Odnoposoff. Allegro ALG 3047. 12-in. (with Sonata No. 8). \$5.95.)

No. 5, IN F, "SPRING", Op. 24 (5 Editions) The superiority of the Balsam-Fuchs record in Decca's limited Complete Edition of the P & V Sonatas is not likely to be disputed since it is manifested in several aspects. It has the best sound, the best compound of tone and meaning, the most natural grace. Wolf-Wolf have a becoming dash in the quick movements, and their interplay of instruments is excellent. But the strong

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piano-sound is not resonant; it tends to explode in the upper octaves, and there is little of the Fuchs suavity in the Wolf violin. Three other versions are poorer.

—Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 21 min. \$29.25.

-Antoinette Wolf, Endré Wolf. 10120. 12-in. (with Sonata No. 9). 24 min.

No. 6, IN A, Op. 30, No. 1 (3 Editions)

The Doven-Fournier realization is characterized by a semblance of simple belief which makes the Balsam-Fuchs fluency seem offhand in direct comparison. Blessed besides wirh a sound of sculptured entirety which shades Decca's creditable re-creation, the Westminster really imposes itself. The faults of a third version, an older recording, become more apparent with this opposition.

Ginette Doyen, Jean Fournier. Westminster WL 5164. 12-in, (with Sonata No. 4). 23 min. \$5.95.

-Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 21 min. \$29.25.

No. 7, IN C MINOR, OP. 30, No. 2 (6 Editions)

Two not heard last year, from London and Remington, have excellent reproduction, with London the best of all. The recording granted to Balsam-Fuchs is harsher to their playing than most of the others in the Decca edition. The extraordinary imagination of the Horszowski-Szigeti interpretation retains their disk in a high isolation, although the superior sound accorded to Osborn-Rostal makes the intelligent animation of the London team's disk tempting. The Berg-Schneiderhan record, with its agreeable engineering, has no other fault than a certain staidness. The only edition ttuly bad is Bay-Heifetz.

-*Mieczyslaw Horszowski, Joseph Szigeti. Columbia ML 2097. 10-in. 26 min. \$4.00. Franz Osborn, Max Rostal. London LL 162. 12-in. (with Rondo, G 155; and Brahms: Sonata Movement). 27 min. \$5.95.

-Heinrich Berg, Walter Schneiderhan. Remington 149-35. 10-in. 27 min. \$1.89. -Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 24 min. \$29.25.

No. 8, IN G, Op. 30, No. 3 (4 Editions) Opposition has served to corroborate the appeal of the Cornman-Spivakovsky record which is still comfortably the best; for while Balsam-Fuchs are at their very good best, the engineers have intervened with acid for the violin; and Osborn-Rostal, whose sound has been most capably engraved, could not concoct grace-in-drama of the C-S sort.

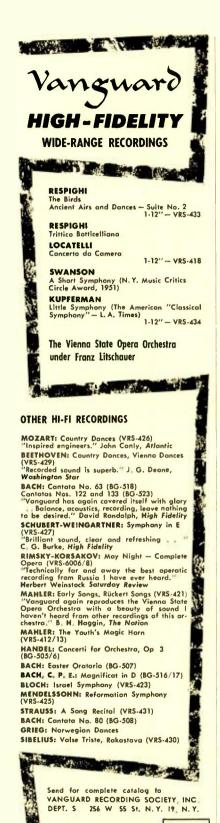
-*Robert Cornman, Tossy Spivakovsky. Columbia ML 2089. 10-in. (with Bach: Sonata in G Minor for Violin Alone). 16 min. \$4.00.

-Franz Osborn, Max Rostal. London LL 471. 12-in. (with Sonata No. 4). 18 min. \$5.95.

-Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 16 min. \$29.25.

—(Heinrich Herz, Richard Odnoposoff.





Allegro ALG 3047. 12-in. (with Sonata No. 4). \$5.95.)

No. 9, IN A, "KREUTZER", Op. 47
(6 Editions)

One of the oddities uncovered in the initial Beethoven discography was Columbia's monopoly of this work, so direly celebrated by Tolstoy's curious literaty use of it. The monopoly has been alleviated, but the four newcomers do not displace Columbia from leadership, with the version of Robert Casadesus and Zino Francescatti. The Moiséiwitsch-Heifetz record is a disappointment: it had been hoped that a pianist of this stature would temper the exuberant Heifetz preëminence, but this has not oc-We have too much violin for a curred. muffled piano, and a performance in essence prim. Messrs. Osborn and Rostal enter a strong challenge in the two prestos, with their domineering big attack, grand dynamics and rude melodrama helped by forward engineering, but their andante con variazioni which London true to her tradition of proud perversity interrupts for the change of sides is awkward, gingety and lachrymose. Wolf-Wolf benefit from a rich and vital sound, but their mannerisms are tiresome. Balsam-Fuchs are impressive, but the engineers have made the violin scream when it is loud, beyond the capacity of compensators to correct.

-*Robert Casadesus, Zino Francescatti. Columbia ML 4327. 12-in. 32 min. \$5.45. -Franz Osborn, Max Rostal. London LL 575. 12-in. 33 min. \$5.95.

—Antoinette Wolf, Endré Wolf. Mercury 10120. 12-in. (with Sonata No. 5). 31 min. \$4.85.

—Benno Moiséiwitsch, Jascha Heifetz. Victor LM 1193. 12-in. 31 min. \$5.72.

—Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 30 min. \$29.25.

No. 10, IN G, OP. 96 (3 Editions)
The writer's preference for Balsam-Fuchs is based on a leaning towards the kind of unostentatious grace abounding in their playing of the last and most assured Sonata. It is not easy to defend this leaning, which implies that the splendid Firkusny-Spivakovsky edition is inferior. There is a difference of manner; and indeed the bigger, more animated way of F-S has a quicker appeal and perhaps a wider. The sonic features of both are satisfactory, conventional. The conjoined material, staggering in one case and preposterous in the other, will have more than usual influence in effecting a decision.

—Artur Balsam, Joseph Fuchs. Decca DX 150. Five 12-in. (Complete Edition of the ten Sonatas). 25 min. \$29.25.

-*Rudolf Firkusny, Tossy Spivakovsky. Columbia ML 4402. 12-in. (with "Violin Favorites"). 24 min. \$5.45.

SONATAS FOR PIANO AND VIOLONCELLO

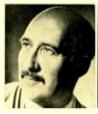
No. 1, IN F, Op. 5, No. 1 (3 Editions) The sad sound of an old version is unable to stand comparison with two new ones. These are in basic accord on the shape and substance of the Sonata. The difference in realization seems to be largely the result of differences in acoustics and recording techniques. The Janigro tone is enormous, but it has been matched by a carefully enunciated piano always audible, while Mr. Starker's companion is not infrequently inaudible in the bass. Perhaps Mr. Bogin has forgotten the added responsibilities of the left hand when a piano is to withstand a cello.

—Carlo Zecchi, Antonio Janigro. Westminster WL 5170. 12-in. (with Sonata No. 2). 21 min. \$5.95.

—Abba Bogin, Janos Starker. Period 561. 12-in. (with Sonatas No. 4 and 5). 20 min. \$5.95.

No. 2, IN G MINOR, Op. 5, No. 2 (5 Editions)

With Baller-Rejto demoted for an explosive upper piano now archaic in recording, the contest is fairly even between two unaffected and finely-grained performances, with a preference for Bogin-Starker on the basis of the cheerful vivacity of their rondo. Mr. Bogin is to better advantage here than in No. 1, and although the Westminster sound





Westminster's Zecchi and Janigro: their piano-cello sonata series is now complete.

is more distinct than the Period, the superiority is not great enough to dictate choice. The respective couplings would have bearing on this; and it ought to be pointed out that Period's album, No. 562, already issued, containing all five Sonatas, contains no bad performances and is worth having; and that Westminster, having issued the first three, which are worth having, may reasonably be expected to follow with the last two, in accordance with the present trend to systemization.

Another new version, from the Perpignan Festival of 1951, Serkin-Casals, is spec-tacular, and bad. It is remarkable and interesting and perhaps important how many conductors, aging past sixty, instinctively retard music's pace as if to prolong what has sustained their spirit. These come to memory: Furtwängler, Beecham, Mengelberg, Klemperer, Scherchen, Walter, Casals. Their tempo slowed as they dropped their youth. Cellist and not conductor in this Sonata, Mr. Casals plays like the greatest of cellists chained by the oldest of conductors. His immense sound, in a hundred variations of tone and intensity, in the chastest linearity and the most singing cantabile, is a magnificent model for cellists; and his lingering tempos, regretfully creeping onward in time, immune to the command of the composer, trickle a curiosity of abstraction. Somewhere in the vicinity Mr. Serkin, no doubt carried away by the noble old man's exquisite meaninglessness, feebly tinkles a timid and ill-sounding treble, his left arm

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not improbably in a sling. The whole is a curio of the recorded repertory.

—Abba Bogin, Janos Starker. Period 560. 12-in. (with Sonata No. 3). 21 min. \$5.95. —Carlo Zecchi, Antonio Janigro. Westminster 5170. 12-in. (with Sonata No. 1). 23 min. \$5.95.

23 min. \$5.95.

—Rudolf Serkin, Pablo Casals. Columbia
ML 4572. 12-in. (with Variations, Op. 66).
31 min. \$5.45.

No. 3, IN A, Op. 69 (3 Editions)

In an effort to refresh the familiarity of this Sonata, Zecchi-Janigro put forth admirable energy without establishing much illumination, and their athletic prowess produces moments which must be called ungainly. Theirs is the best sound, but the easy lyricism of Bogin-Starker is the best performance, with Mr. Bogin's piano quite in evidence here and reproduction entirely satisfactory. The early LP of Baller-Rejto may be forgotten.

—Abba Bogin, Janos Starker. Period 560. 12-in. (with Sonata No. 1). 25 min. \$5.95. —Carlo Zecchi, Antonio Janigro. Westminster 5173. 12-in. (with Variations, G 158) 30 min. \$5.95.

No. 4, IN C, OP. 102, No. 1 (3 Editions) The Baller-Rejto disk has a sound not deficient in realism, but the more positive and resonant recording of Bogin-Starker permits a revelation of the emotional scope of the great Sonata denied to confined dynamics. Mr. Bogin is resolute, and the even poise of Mr. Starker's line is to be noted in a performance that adheres to a concept of decent, unlashed imagination.

—Abba Bogin, Janos Starker. Period 561.
12-in. (with Sonatas No. 1 and 5). 14 min.

\$5.95.

-*Adolph Baller, Gabor Rejto. Allegro
AL 50. 12-in. (with Sonata No. 2). 14 min.
\$5.45.

No. 5, IN D, OP. 102, No. 2 (2 Editions) This is one of those premonitions of the last years of Beethoven which appear so frequently throughout his life, to the disconcertion of an accountancy relying on the 'three periods'. Messrs. Bogin and Starker provide an intelligent exposition of its peripeties, the former challenging, the latter ingratiating, in a contrast that may be just right. It is certainly not dull. Sound is like the others of the series — good, not the best: a little obtuse in the deep bass, with a tendency to chatter at the top of the piano.

—Abba Bogin, Janos Starker. Period 561. 12-in. (with Sonatas No. 1 and 4). 18 min.

—(Adolph Baller, Gabor Rejto. Allegro AL 75. 12-in. (with 3 sets of P & Vo Variations). \$5.45.)

Again, available space could not quite contain the productivity of Messrs. Beethoven and Burke. Next issue, with the string quartets and miscellany, the discography will finally end.



UITE SOME time ago, soon after Charles Fowler, Alan Macy, and I had finished work on the dual air-coupler, Alan remarked wistfully that the six-foot monster we had assembled was just fine for a man who had a place in which to put it — but, as for him, he'd like to get his hands on something considerably less elephantine, something that would fit comfortably in his apartment-sized apartment. Of course (he added quickly), it would have to act like an air-coupler.

It was agreed that such a miniature was highly desirable but equally improbable. We hadn't done any serious work on miniaturization, but we had heard that others had, with results that were invariably somewhere short of remarkable. Then, too, the blisters from our last stint at woodworking were yet fresh in our minds, if not on our hands. We suggested sympathetically to Alan that he scout for a larger apartment.

A short time later Marsh Giddings, a mutual friend, was bitten by the hi-fi bug. In the process of providing moral support while he writhed in the agonies of equipment selection and installation, we discovered that Marsh was a first-rate wood craftsman, and that he had wonderful and complicated tools for the work. It was inevitable that

references to a miniature air-coupler should once again appear in our conversations, particularly those in which Alan had a part. Finally, under the influence of some of his very good Scotch, Marsh and I agreed to work with Alan on a condensed air-coupler.

In order to eliminate obvious

impossibilities and to make certain we would use all our energies in working toward a desired goal, we spent several evenings in discussion before a piece of wood was cut. It was fairly obvious that air columns of large cross-section would be more efficient than those of smaller effective diameter. On the other hand, a large air column has sharper resonant peaks than a small one. We might get by with a smaller speaker driving a single column, if the latter were small enough — but would it then be hopelessly inefficient? We thought that this should be our first line of attack. If it failed, then we would try a larger column, and then two medium-sized columns.

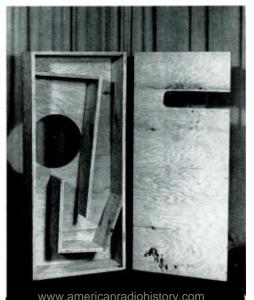
We decided to fix a maximum size for the overall enclosure. If it were to offer no real advantage in space-saving over the standard six-foot model, the whole project would be pointless. Arbitrarily, we limited the size to what could be installed, with the rest of the equipment, in a space no longer than that taken up by a typical radio-phonograph console. Thus, maximum dimensions were set at 42 by 18 by 12 inches. With this somewhat hazy plan, we began cutting plywood and cultivating more screwdriver blisters.

First, as agreed, we tried columns of small cross-section driven by an 8-inch speaker. The speaker was coupled to

the column at various points from top to bottom, and the port was varied in size and position, with unvarying results — practically nothing. After a good many unsatisfactory hours, we became tired of hearing the speaker cone flutter violently as soon as the oscillator disk was set below 40 cycles, and went on to bigger things.

It is certain that the Editor would cut out the horrible details of the larger single-column trials if I were to relate them. Therefore, I shall simply say that while they did show that a small air-coupler could produce quite

Apartment-size Air Coupler measures 42 by 18 by 12 inches



'That saga was related in the Winter 1951 issue of HIGH FIDELITY. For the benefit of any audiophile who may have been living underwater for the past two years, an air-coupler is a bass enclosure—for sub-woofer use only—which contains closed air-columns. We tried models with one air-column; we tried them with two. But almost invariably we found that performance improved as size increased. Of one of our later models, a visitor said he'd hesitate to open it up; it looked as if Boris Karloff might walk out.

a lot of low-frequency sound, these models were all disconcertingly prone to favor one or two specific frequencies at the expense of the rest of the bass range. In short, they were boomy as a rainbarrel.

The problem then was to discover some magical shoehorn that would enable us to squeeze two or more distinct columns of reasonable length and cross-section into our allotted volume. There followed many discussions some spirited, others tinged with an if-we-had-any-sensewe'd-go-home tone. Eventually, of course, the shoe-horn was found. Someone had drawn a series of long v's in a half-hearted doodle. He stared at the drawing for a few moments and the idea dawned slowly; he showed the doodle to the others, who caught the idea at once. It was basically quite simple, after all: the air at the closed end of a quarter-wavelength column cannot move longitudinally at all, and for that reason does not require any crosssectional area. There is little air movement but high pressure anywhere near the closed end, so that the column need have only a small cross-section there. At the open end, of course, most air motion occurs, and this should be as large in area as possible to minimize frictional losses. Why not use a tapered column, provided that the taper can be made gradual? Up to twice as much effective column could be then contained as in an equivalent rectangular space.

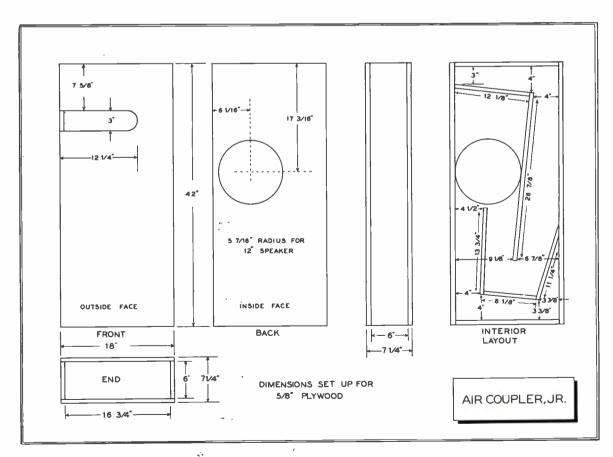
Our first model utilizing this principle showed us that we were on the right track at last, and also that the tapered-column design yielded an additional benefit. It tended to reduce the high-amplitude harmonic resonances which had always been troublesome with columns of uniform cross-section. The result is a smoother frequency response.

At this stage, the sawdust really began to fly. We determined the optimum column thickness (i.e., from speakerwall to vent-wall) early in this part of the work by gradually reducing it from the maximum of 12 inches in steps of ½ inch, making relative output and frequency response tests at each decrement.² The optimal thickness, considering efficiency smoothness, and convenience, seemed to be 5¼ inches inside. Using ¾-inch plywood, this results in an outside thickness of 7 inches. It was then relatively simple, if time-consuming, to adjust column lengths, port area, and speaker and port placement for best results. The final design is shown in the drawings and photographs.

All the later tests were made with a University 6200 speaker, with which we are very well satisfied. We didn't make exhaustive tests with other 12-inch speakers, since we were certain that they would work also, as they do with the six-foot model. We did try an 8-incher, to see what would happen. Just a flutter.

Continued on page 111

²Basically, these tests were made in the same way and with the same equipment as described by Charles Fowler in the Winter 1951 HIGH FIDELITY





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Scott Amplifiers

A goodly number of years ago, a manufacturer of electronic laboratory equipment developed a circuit which, in effect, turned tone controls on and off, depending on the loudness of the sound. When the music was loud, the gadget was wide open, and frequency response was flat. When the music was soft, the circuit cut the very low and very high frequencies. For high fidelity fans of the pre-LP era, such a device was a blessing: it took most of the rumble and hissing surface noise out of the soft passages on shellac 78's, yet left the loud passages unaltered.

Today, Hermon Hosmer Scott will still tell you that he is a manufacturer of laboratory equipment (he has plenty of engineering awards to prove it, too) and if asked what his 210-B amplifier is, will probably say that it is laboratory equipment. Which, no doubt, it may well be, but it's astonishing (even to Scott) how many hi-fi enthusiasts like laboratory equipment. They have liked Scott's laboratory equipment ever since he developed the Dynaural noise suppressor and subsequently built an amplifier to go with it.

The single-chassis 210-B, shown on the next page, is the oldest member of the hi-fi family, but its offspring, the 214-A, is fast achieving equal if not greater recognition among music lovers. What are the differences between

the two units? This is a question often asked, not only of the Scott organization but also of the writer of this report!

First, the 210 is a single-chassis amplifier; the 214 uses one chassis for the power amplifier section, and a second, small chassis for the preamplifier-tone control components.

Second, the noise suppressor is an accessory which can be attached, easily, to the 214; it is built into the 210.

Third, the 210 incorporates a high-frequency cut-off control (see description below); the 214 does not.

Fourth, the 214 provides an input selector and a record equalization control; the 210 provides neither.

Fifth, the 214 without the noise suppressor accessory is less expensive than the 210. With the noise suppressor, the 214 will set you back exactly 35 cents more than the 210.

The power sections of both amplifiers are identical; the effect of the tone controls is the same on both; both utilize loudness controls rather than straight volume controls.

Both amplifiers have been slightly modified during recent months to keep up with changes in high fidelity reproducing conditions, specifically: loudspeakers and their enclosures. Today's loudspeakers and enclosures are considerably more efficient in the extreme low-frequency range than those available a couple of years ago. Therefore the bass tone control circuit on both the 214 and the 210 has been changed to move the boosting effect down the frequency scale slightly. The curve has been sharpened slightly. Thus, at 30 cycles, the amount of boost will be the same, but there will be less boost at 200 cycles on current Scott amplifiers.

Improving loudspeaker response at low—and also high—frequencies has made turntable rumble and record hiss more noticeable than in days of yore. Under such circumstances, the noise suppressor comes into its own. Its action was discussed in detail in HIGH FIDELITY No. 4 (Spring 1952); briefly, it is an electrically-varied

Fig. 1. The complete amplifier system: preamplifier equalizer at left, noise suppressor at center, and power amplifier at right.



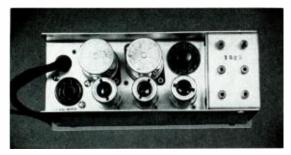


Fig. 2. Rear view of preamplifier-equalizer with case removed.

double (bass and treble) cut-off filter whose degree of cut (suppression) is determined by the loudness of the music. Furthermore, the amount of suppression can be adjusted by the operator; a continuously-variable manual control predetermines the general "activity" of the noise suppressor.

To keep up with improved loudspeaker response, Scott has modified the noise suppressor so that it is more sensitive at the high end, and more "suppressive" at the low end. When the manual control is turned full on, the suppressor's behavior is the same as on the older models, but when it is only half-way on, the suppression of very low frequencies is greater than before, the range of frequencies left untouched is wider than before, and slight changes in high frequency volume levels produce greater suppression than in previous noise suppressor units. For example, in the halfway-on position, there is more than twice as much suppression below 100 cycles in the new model as in the old.

The loudness control has been modified slightly so that it, too, will produce improved results with modern, improved speakers and enclosures.

The Scott high fidelity equipment catalogue includes many units. First, there is the self-contained 210-B. Then there is the 220-A power amplifier, which is the right hand unit in Fig. 1 on page 83. When used in conjunction with the 120-A equalizer-preamplifier (at the left in the same illustration), the two units constitute the 214-A remote control amplifier. The preamp normally takes its power from the 220-A power amplifier, but the power may be taken from another power amplifier, or from the 20-D power supply. The 111-B Dynaural converter is an accessory which operates with the 120-A or with almost any other amplifier; it provides noise suppression alone. Power is taken for it from the 120-A, from the main power amplifier, or from a separate power supply such as the 20-D. It is shown at the top center in Fig. 1; the associated control knob is in the center front of the picture.

The 112-B Dynaural preamplifier is a noise suppressor unit *plus* a phonograph preamplifier. Three controls are provided: adjustable turnover (300, 500, and 800 cycles), dynaural, and range. The range control cuts off the highs sharply, at 5000, 9,000, and 15,000 cycles. Power is taken from a separate supply or from a main power amplifier.

Other accessories in the Scott line include the 214-X-8 variable speaker crossover which was described in detail in High Fidelity No. 8 (January-February 1953) and

20-foot lengths of extension cable with which to interconnect the 120-A preamplifier-equalizer and the 220-A power amplifier.

The Single Chassis Amplifier

It is not necessary to go into great detail about the 210-B because its basic principles have already been discussed. Looking at the front, Fig. 3, the knobs are, reading from left to right: bass tone, treble tone, both continuously adjustable; loudness in the middle; noise suppressor; and, finally, power on-off and range — this providing sharp cut-off at 6,000, 12,000 and 22,000 cycles.

At the rear of the chassis is an output strip which provides impedance match to speakers of 2, 4, 8, and 16 ohms. Also on the rear are the input connections: preamplifier input and output, and amplifier input. There is a separate level control on the preamp input.

The Remote Control Amplifier

The 214-A remote control amplifier, along with its accessory dynaural noise suppressor, is shown in Fig. 1. The preamplifier is at the left; it is available either with or without cabinet. The knob at the left serves as phonograph equalization and input selection control. The first eight positions are divided into two groups, five positions providing equalization for 78 rpm records and three, equalization for long-playing disks. The phono input is connected when the switch is in any one of these eight positions. The remaining three positions are connected to three input jacks on the rear of the chassis, Fig. 2, for FM tuner, TV tuner, tape recorder output, and the like.



Fig. 3. Single-chassis amplifier with built-in noise suppressor.

The 78 rpm equalization positions are labelled: EUR, LON, RCA, CAP, and COL. The three 33 ½ rpm positions are marked: RCA, COL, and LON. Which ones should be used with which labels is best indicated by an equalization settings sheet drawn up by John Thornton of FM Station WXHR. WXHR uses two of these preamplifiers (modified for broadcast station Continued on page 109)

Kelton Loudspeaker

The black box shown hereabouts with a chair alongside and a pack of cigarettes on top, to give you an idea of relative size, is quite a speaker system. Yes, it's a system—two speakers and an enclosure, all for \$49.50 in lacquered birch. In gleaming mahogany or blond finish, with grille-cloth, the price is \$69.75. Like the \$2,000 watch with a diamond bracelet, the works are the same as in the \$49.50 model.

The Kelton, for \$49.50, definitely belongs in the remarkable class. First, it's extremely compact and small:
11 by 11 by 23 inches. Second, it's a complete system
— speakers and enclosure. Third, the sound, considering size and cost, is exceptionally good.

The Kelton system has been developed by Henry Lang, of the Baruch-Lang team who startled the audio world more than a year ago with a tiny corner enclosure which utilized four 5-inch speakers. After much experiment-



Two speakers in this tiny cabinet produce remarkably good sound.

ing, Lang evolved the Kelton. It uses a 6 and an 8-inch speaker. The 6 faces outward, at the top of the enclosure. Halfway down the enclosure is a dividing board on which is mounted, face toward the floor, an 8-inch unit. This plays into a padded cavity, so that all high frequencies are absorbed and only the lows emitted, through a very carefully designed array of small holes. Running diagonally from the upper rear corners to the junction of the board on which the 8-inch speaker is mounted, is a solid dividing partition. Thus the two speakers are completely separated; the areas in back of each are filled in with sound absorbing material. Back radiations are not utilized in any way.

The secret of the smooth response from the speaker is to be found in the precise match of speaker characteristics with enclosure characteristics. Those who have experimented with bass reflex enclosures, in particular, will know that a small change in port size may mean the difference between a resounding boominess and relatively smooth response. In a speaker such as the Kelton, this factor of balance is far more important. One of Lang's worst problems, at first, was standardizing speakers; reasonably priced ready-made ones simply weren't manufactured to sufficiently close tolerances. Even when he contracted for specially designed ones, he was obliged to reject as much as 50% of some shipments.

It would not be sensible to try to compare the Kelton with any standard speaker-and-enclosure. It is a speaker system for the person who must keep down cost and size. As such it fills a very real need and fills it more than adequately. It is better, in sound, than many of our group thought possible in so small a unit. The bass is good and goes deep; the high Continued on page 121

Regency Signal Booster

We're going to send one of these little boosters to a man by the name of Rummell, who lives in up-state New York and has written at length, elsewhere in this issue, about his trials and tribulations with FM antennas. In his article, Mr. Rummell says that the only advantage he found in a reflector for his dipole was that it cut out the signal from one direction; it didn't improve anything. With a Regency booster, the signal would probably come back in!

That is an exaggeration of course, but the Regency does pull FM stations out of the fog of background noise.

There is no need to explain boosters to TV addicts. Their purpose is to improve or boost the strength of the signal before it reaches the tuner They help television re-



Boosters mean better FM reception.

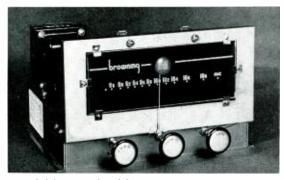
ception in fringe or weak-signal areas very appreciably. Hence, it is strange that manufacturers have not paid more attention to the possibility of improving FM reception similarly. The Regency FM booster is evidence that it can be done.

Several of the HIGH FIDELITY staff tried it out, on everything ranging from a table model AM-FM commercial set to a professional monitor-model REL. Surprisingly enough, the REL user noticed the greatest overall improvement—but that can be traced, no doubt, to the fact that he had the poorest antenna installation of any; hence, the booster had more to work on. Results for the rest of us agreed: the booster was Continued on page 121

Browning RV-31 Tuner

About the new Browning RV-31 FM tuner, much can be said in a very few words: it is definitely better than the previous model. Since the old one was outstanding in the field, the new one deserves a very high rating indeed.

Essentially, sensitivity has been approximately doubled. That is a noticeable improvement. The effect, in our A-B tests comparing the new with the older model, was this: Speech that was unintelligibly buried in background noise on the older model became intelligible on the new one, although without emerging completely from the background. Speech that was barely intelligible, though deep in noise, on the older model, came out clear, with full limiting, on the RV-31. Sensitivity is claimed to be 3 microvolts for 20 db quieting. One of our staff had the thrill of picking up a Philadelphia station from Great Barrington - an airline distance of about 200 miles working off a simple roof dipole. In his enthusiasm for the RV-31, he gave full credit to the tuner. However, reason must rule: freak atmospheric conditions should get due credit.



A restyled front panel and larger knobs dresses up this FM tuner.

The audio output stage of the RV-31 has been changed to a cathode follower design, so that the tuner may be operated at a considerable distance from the amplifier. As with the previous model, three input connections are provided at the rear of the chassis; selection is controlled by a knob on the front. For instance, a phonograph preamplifier, television tuner, and tape recorder may be connected through the RV-31 to an amplifier. The volume control on the Browning will then regulate the loudness of each input.

Another new convenience on the RV-31 is the addition of two AC outlets to the rear of the chassis. One is live all the time, the other turns on and off with the tuner. A dress-up feature is the edge-lighted dial, which makes the dial calibration numbers, in megacycles, appear to glow. Knobs have been slightly enlarged, and include the four-position input selector mentioned above, volume-on-off, and tuning.

As with the older model, automatic frequency control (AFC) can be switched in or out by a switch on the rear of the chassis.



Clean workmanship shows in this view. Note four input terminals.

Also carried over: the double and very accurate tuning eye; the Armstrong circuit with double limiting — and the usual evidence throughout of Browning care and precision in the assembly. — C. F.

Two Demagnetizers

The world would grind to a sudden, screeching halt if it weren't for magnetism. So it's dandy, in the right places — but it's a pain in the neck when it's in the wrong places. The two units shown here are designed to remove all traces of magnetism, efficiently, from the wrong places — specifically, from tape and tape recording heads. The importance of demagnetizing tape recording heads is not given nearly enough attention by the average home recording enthusiast.

At the left in the illustration is the head demagnetizer developed and marketed by Audio Devices¹ at list price of \$12.00. It performs a function described explicitly in the instruction sheet which accompanies each unit: "Properly used, this head demagnetizer will remove any permanent magnetism which may have accumulated in the recording head, thereby reducing noise level which is attributable to this cause."

For the studio or broadcast station, permanent magnetization of recording heads to a noticeable degree occurs rapidly — within a week of steady use. But even the home recordist can easily use his machine frequently enough so that demagnitization of — Continued on page 96

1444 Madison Avenue, New York 22, N. Y.

Demagnetize: recording heads at the left, bulk tape at the right.



Collaro Changer

The British-made Collaro line includes four record-changer models and a single-record turntable. Two changers, the 521 and 522 are designed for the European-Asiatic



Fig. 1. Record changer is easy to operate, gives excellent results.

market, and play 78 rpm disks only. The other two changers handle all three speeds — 33, 45, and 78 rpm — and are identified as Models 3/521 and 3/522. Big feature of the 3/522, shown in Fig. 1, is its ability to intermix 10 and 12-inch records. So long as all records are of the same speed, you can pile up on the spindle whatever assortment of 10 and 12 inchers your musical whim dictates, and the Collaro 3/522 will put the pickup stylus down on the right lead-in groove every time. It will also handle 7-inch records, but they cannot be intermixed with other sizes.

We suppose we should call the Collaro plug-in head arrangement another "feature", but we're inclined to be firm on this point and say that any changer which cannot accommodate various pickup cartridges should not qualify as a hi-fi unit. Nearly all units with unchangeable heads employ crystal cartridges — and only one or two special crystals can qualify as hi-fi. Anyway, Collaro uses plug-

Fig. 2. Leads from pickup connect to muter switch terminals.



in heads, and has available shells for all the major cartridges. For the photograph, Fig. 1, we used a brown shell on purpose — so it would show up better. Normally, the shell matches the arm.

The knob at the front left in Fig. 1 is the turntable speed control. At the extreme right is the function control. Twist to the left for START or REJECT; twist to the right for STOP.

The difference between REJECT and STOP is this: during the reject cycle, the arm is lifted from the record, moved away from the stack, another record dropped, and the arm dropped back into the lead-in groove. During the stop cycle, the arm is brought back to its rest position and the motor is turned off. Note that the motor is also turned off automatically after the last record has been played; it is not necessary to touch the function control knob. Directly behind this knob is the size selector button. Push to the right for 7-inch, to the left for either 10 or 12 inch disks.

On the outside edge of the pickup arm, near the base, is a little lever which adjusts stylus weight for 33 or 78 rpm records. This is a noteworthy feature, particularly for the user of dual-purpose or turnover cartridges. If you use one plug-in head for LP's and another for 78's, you can add a extra weight to the 78 head, if necessary. However, that is not possible with a cartridge which combines microgroove and 78 styli (e.g., Audak, G-E, etc.).

Between the pickup arm base and the record balancing arm post is a "feeler". Small records clear it completely; 12-inchers bump it lightly as they drop. Thus the set-down position of the cartridge is determined.

The balancing arm lifts up above the spindle, and is shifted to one side while records are stacked on the spindle, then the arm is turned back and dropped over the spindle. It serves a two-fold purpose: first, it keeps the records in a flat position while they are stacked on the spindle and, second, it "feels" the last record: when that last



Fig. 3. Light weight is an attractive feature of this turntable.

record drops, the balancing arms falls an extra ¾ inch, to actuate a control in the changer mechanism which initiates the STOP cycle at the end of the record. Incidentally, if you want to play the last record, or a single record, over and over again (for experimental purposes only, we hope!) you can fool the changer mechanism by propping up the balancing arm a half-inch or so.

The 3/522 incorporates a muting switch, so that all is silence during the change cycle. This works very well except on the last record. Here, the STOP cycle is required, and when the motor is turned off (automatically), that switch is not muted — with the result that a loudish plop is heard over the loudspeaker. We understand that the U. S. importers, the Rockbar Corporation¹, have suggested to the manufacturers

Continued on page 117

¹²¹¹ East 37th Street, New York 16, N. Y.

Pentron Tape Recorder

The Pentron 9T-3C tape recorder is one of the least expensive units on the market today, yet it incorporates several interesting features and, because of a wide range of low-cost attachments, can perform many useful functions. Most novel attachment is a 10½-inch reel adapter kit which, at a tape speed of 3¼ ips, permits 2 hours of uninterrupted recording on one track. Since standard equipment on a Pentron is a dual track head, one reel



Many accessories make this tape recorder an instrument of wide usefulness.

will hold 4 hours. One can think of many occasions — from business conferences to surreptitious recording of bridge parties — when 2 hours without touching the machine would be a real convenience.

As shown in the illustration, several accessories have been attached simultaneously - an abnormal condition, but handy from the photographic point of view! The disk-like protuberances, to the left and right rear of the carrying case are the 101/2-inch reel adapters. To the rear of the case is a continuous tape mechanism manufactured by the Connecticut Telephone & Electric Company¹ which can be adapted to most of the popular tape recorders and is here shown on the Pentron. It contains a continuous loop of tape, 200 feet long, which will repeat its message every 5 minutes at 71/2 ips, or every 10 minutes at 314 ips. Principal use at present is in the business and sales world, as for instance a selling message repeated over and over again during the course of a demonstration or exhibit. A home use might well be running commentary to go along with the showing of a specific group of photographic slides or a movie film. Since tape cartridges are available for about \$6 each, different tapes could be made up for different "lectures"; threading is quick and simple, and no rewinding is required.

Other accessories for the Pentron include an AM tuner which plays through the recorder's amplifier section; a foot pedal remote switch; and an audio input mixer, which controls four separate microphone-input channels.

The recorder itself utilizes reels up to 7 inches in diameter without additional accessories. Feed is from the right hand reel to take-up reel at the left. A scale is imprinted below each reel indicating minutes of playing time left at 3½ ips (under supply reel) and 7½ ips (under take-up reel). The speed control gearshift lever is at the left edge

of the machine, about halfway between front and back.

At the extreme left forward edge are two input jacks, one for microphone and one for radio. The microphone input is connected only to the recording circuit; the radio input can be switched either to the recording or to the amplifier circuit.

Immediately to the right of the input jacks is the volume control. In its completely "off" position, it turns off the motors.

In center front is a blinking-eye recording-level indicator. If the dark V-shaped wedge closes tight, the tape is being overloaded. To the right is a continuous tone control knob; completely counterclockwise boosts the treble, completely clockwise boosts the bass. In its full counterclockwise position, this control turns off the amplifier section as well as the motors.

To the right of this control are two output jacks: one for headphones or

separate amplifier, the lower one for external speaker. Plugging into the external speaker jack cuts out the built-in 6-inch speaker; plugging into the headphone jack keeps the built-in speaker in the circuit but permits monitoring when recording (the built-in speaker is inoperative when recording).

Above the control knobs are three function selector switches and, directly behind them, the slot through which the tape passes. The left-hand switch "plays" to the left and "records" to the right. The rectangular button in the middle is a record safety lock; it must be pushed down before the left-hand control can be turned into the record position. Incidentally, the erase head is activated whenever the lock button is depressed. Thus, even when the recording is playing back, sections can be erased simply by pushing down this button for as long as desired.

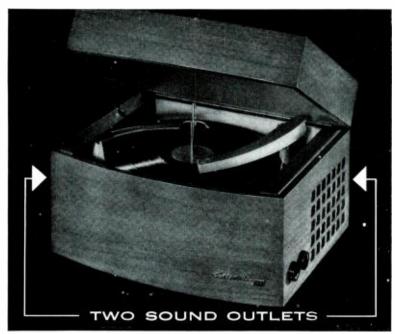
The right-hand control in this bank gives, to the left, fast rewind (1200 ft. in 2½ mins.) and, to the right, fast wind (1200 ft. in 1½ mins.).

In conclusion, the Pentron 9T-3C, with its accessories, will serve many useful purposes around the home, office, and school. It is in the very-low-cost Continued on page 106

¹Meriden, Conn.

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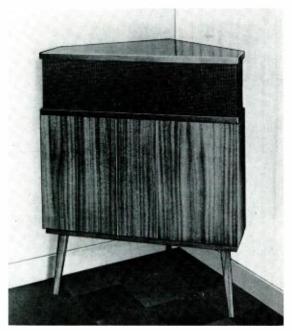
COLUMBIA RECORDS

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Brociner Model 4

The first draft of this Tested-in-the-Home report on the Brociner Model 4 corner enclosure started off with a discussion of how nearly impossible it was to get a group of people to agree on which of several speakers sounds best. Then we decided that such a philosophic preamble to a TITH report was out of place; we did a little more philosophizing and made an editorial out of it.

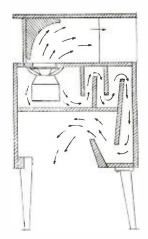
Be it said here, however, that choice of a loudspeaker



Compact, attractive corner enclosure provides exceptional sound.

and enclosure (the two should be considered together) is an extremely personal matter. What the writer likes, and what you the reader may like, may be quite different. So read these reports with an ample supply of salt at hand.

The Brociner enclosure shown here is an unusual speaker system. To begin with, it uses a 6-inch speaker! It happens, however, that the speaker is extraordinary. It is a British-made Lowther, with a magnet structure which is almost as large in diameter as the cone itself. The magnet produces a flux of 20,000 gauss in the gap. As G. A. Briggs demonstrated in his article in HIGH FIDELITY No. 4, increasing flux density goes a long way toward removing resonances and cleaning up, generally, the sound output of a speaker; his tests showed a remarkable improvement when the magnet on an 8-inch speaker was changed from one having 8,000 gauss to one having 13,000 gauss. Therefore, the speaker used in the Brociner is exceptionally clean and crisp in sound. This is particularly noticeable with percussive music in the middle and high frequency range. The piano, for instance, cleans up and becomes vibrant; Columbia's now-famuos hi-fi test record, the Gamelan Orchestra (ML 4618) changes sound perceptibly. Construction of corner born
is complex: low notes follow a long path from rear
of speaker to floor and
corners of room.

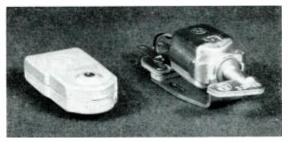


Now, this 6-inch Lowther speaker is mounted at the rear corner of the enclosure, facing up into the grille-covered top quarter of the enclosure. The sound bounces off a curved surface, yielding excellent dispersion. The radiation from the rear of speaker is led out through a labyrinthine path. This expands until it opens into a large horn mouth, which uses the floor and corners of the room as part of the horn sides. The structure is definitely complicated, but the sketch may help to give a rough idea of how it works.

The theory is that the frequencies upward from about 150 cycles emerge from the front of the speaker and through the grille-covered area. The frequencies below 150 cycles are generated by the back Continued on page 121

Pickering Double Cartridge

For the many, many people who like Pickering cartridges, and have a mixed collection of 78's and LP's, the unit at the right below will be a blessing. It's the long awaited double cartridge unit, developed by Pickering and called the Model 260 turnover pickup.



The single, left, and, right, miniaturized double cartridges.

Frankly, Mr. Pickering, it's been a darn nuisance having to plug and unplug your cartridges all these years. We were glad to see the new unit last Fall, and are delighted to report to our readers that the Continued on page 94



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"Scotch" High Output Tape offers you:



YAGI

Continued from page 39

miles from Cherry Valley, yet as remote as the moon as far as practical reception was concerned. If I wanted a yagi I'd have to make it myself. I began to peer purposefully at those on house tops as I drove to work, trying to decide on a pattern to try. Backing up this scientific approach with collateral reading, I learned that yagis are tricky affairs not to be fooled with by the unknowing, but the books were all silenr on the subject of acquiring the needed knowhow. This was confusing to me, as were also my observations from the street: how could these yagis all work and yet differ so widely with their various types of dipoles, spacing schemes, numbers of elements? Mulling the matter, I concluded that what a Japanese could invent, an American could imitate, so I pilfered some more curtain rods, a piece of copper tubing I could bend, a wooden pole, and made a yagi, a five-element affair with all three directors painstakingly cut the same length. It was really quite simple, I assured myself; anyone with the most rudimentary mechanical gifts could make a yagi.

As it turned out, my yagi worked about the same as my dipole had with the reflector stern-foremost, to wit: not at all. I felt no more kindly toward the Nipponese than I had right after Pearl Harbor. My bitterness gave way gradually, however, to The Phase or Frustration and Self-Doubt. This lasted until, through closer peering and deeper reading, it dawned on me that all the better yagis have a sort of tapered effect, i.e., its considered proper to cut the second and third directors about five percent shorter than the driven element and the leading director still shorter. These changes were duly made, and my curtain-rod yagi brought in Cherry Valley with a firmness and clarity I hadn't imagined possible, and, in proportion, ignition noise went down. It didn't disappear, mind you; but now the snare drums were muffled.

This was a New Phase - no question about it. I was getting somewhere. was like the fellow who finally switched to gasoline after trying to run his car on coal oil. My homely yagi, mounted on a swivelled pipe in my music room, afforded me countless hours of simple-minded pleasure just in swinging it around and observing its directional feature, which was approximately that of aiming a rifle; in fact, I became so attached to it that I was rather reluctant to put it up on the roof out of sight.

My old box-type, flat-roofed house was built in the 1870's by a fellow who must have visualized a future owner who wanted to hear music the hard way. It was a cinch, one fine summer evening, to lug my tuner, amplifier and a little six-inch speaker up there and connect them with the yagi, which was rigged, as it had been downstairs, as a whirling yagi. We were some forty feet above ground now, and could sweep the entire horizon in a matter of seconds. Stations popped in from all sides, Cherry Valley fairly roared in and - faintly, through the rush but unmistakable - came the voice

Continued on page 94



Browning FM/AM Tuner

The ideal mate to the modern, full-control amplifier.



Model RJ-42

Only two controls are used with the RJ-42 FM/AM Tuner -- one for tuning, the other for switching. The latter has four positions: OFF -AM - FM with AFC - FM without AFC. Duplicating none of the controls of the audio amplifier, this new tuner is particularly suited to use in custom installations. A feature of convenience for such installations is a pre-settable output-level control, at the rear of the chassis, to adjust tuner output to amplifier input requirements.

The FM section of the RJ-42 gives you

- New, all-triode RF section, for extremely low noise level.
- Higher sensitivity—3 microvolts for 20 db. quietingdesirable in fringe areas and noisy urban locations.

. . . and, of course, the standard Browning features: true Armstrong circuit, selectable AFC, compensation for drift-free operation, and sensitive tuning eye for fast, precise tuning. Audio response, flat ± 1/9 db. from 20 to 20,000 cycles, satisfies the most critical high-fidelity

In the AM section, covering 540 to 1650 kilocycles

- Superhet circuit with triple-tuned IF's and separate AVC detector to minimize distortion.
- Sensitivity 1 to 2 microvolts with audio output flat within 3 db. from 20 to 5500 cycles, down 6 db. at 6800 cycles.
- Effective 10-kilocycle whistle filter that does not affect AM fidelity.

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For detailed specifications, write us for Bulletin HF-4.

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the master amplifier

Rated Pawer Output ... 20 watts Frequency Response . . . \pm 0.3 db, 20 to 40,000

Harmonic Distortion . . . less than 0.5% at rated output, less than 0.3% at 10 watts

Intermodulation Distortion . . . less than 0.3% at 1/4 watt (home level), 0.7% at rated output —measured at 60 and 7,000 cycles, 4 to 1

Hum and Naise Level ... 80 db below roted

Output Impedance... 8 and 16 ohms

Input Selector...4-position on 5-ft. extension cord: No. 1, magnetic pickup; No. 2, crystal pickup; Nos. 3 & 4, auxiliary.

Input Valtage ... 0.5 volts for 20 watt output Tubes . . . 2-12AX7, 1-12AU7, 2-6AL5, 2-6L6, 1-5U4G, 1-5Y3GT

Dimensions ... 14" x 9" x 8" high AC Power Switch ... on 5-ft. extension cord

Uniquely fashioned in the form of a lavishly bound book, Uniquely fashioned in the form of a lavishly bound book, in rich Morocco leotherethe with metallic gold-finished backbone and sides. Backbone lifts on piono hinge to give occess to convenient tuning controls. Can be operated in either horizontal or vertical position. The LIBRETIO is a true remote control, completely self-powered, and capable of operation up to several hundred feel from the amplifier. The unit is amazingly compact—no larger than a book—only 8½" x 11" x 2" thick. Lies 3.12 AX7 tubes. Complete with 7" power cord and 7" connector cable and plus.

CONTROL FUNCTIONS:

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No. 2. Treble Tone from +18 db to -30 db at 10,000 cps (dial calibrated in db)
No. 3. Crossaver Control: flat, 150, 300, 450, 700, 1000

cycles (with chart for proper setting—see below).

o. 4. Rall-off Contral: flat, —5 db, —8db, —12 db, —16 db, —24 db at 10,000 cps (supplied with chart — 10 db, — 24 db at 10,000 cps (supplied with chort showing proper setting applicable to various records) No. 5. Valume Control—instant choice of conventional valume control or laudness control (bass and/or treble fletcher-Munson correction individually, or simultane-ously selective)

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YAGI

Continued from page 93

of WQXR in New York City, practically two hundred miles away! Steadying my trembling hand, my curtain-rod yagi resolutely pointing toward the southeast. I tuned across the dial, and, inside an hour, had identified four other stations in New York City.

This, of course, was not supposed to be. New York City is far too far away, with the Catskills between us, even to dream about. Surely, I figured, this was a fluke and wouldn't happen again. But the next night was the same except that, in addition to the New York stations, I identified others still more distant, in Canada, Massachusetts and Pennsylvania.

The rest is quickly told, I bought a pair of channel-6 yagis from a manufacturer who puts little flamboyance into his ads, noted all dimensions carefully and scaled them down by simple arithmetic from 85MC to 95MC which is about midway between WQXR and WNYC, my two favorite music stations. These were stacked atop my house on a rhirty-foot mast, with openwire lead running down to my music room. Not wanting to invest in a rotator, and having found out by trying (I consumed some ninety feet of 1/8 inch copper tubing last summer, making yagis) that I couldn't make a yagi that would cover the whole FM band anyway, I made a second one, single bay, for another pair of stations that lie over the hills to the southwest about 90 degrees from New York City. A doublepole-double-throw switch by my tuner gives me whatever I want — if it happens to be coming in.

DOUBLE CARTRIDGE

Continued from page 90

unit - which plays 33, 45, and 78 rpm records with equal facility - works splendidly, sounds appreciably better than the old cartridges, and is easy to install.

A couple of points to readers (one of them valuable, thank you!): the double cartridge is a little heavier than the old one, so readjust your weights. And (this is the valuable one), pay but little attention to the mounting instructions which come with the cartridge. The instructions read, in part, "In order to install the pickup it is necessary to . . . " and then follow details for removing the two cartridges, contact spacers, and whatnot, so that the mounting frame is denuded. Instructions are given for reassembly - but all this will probably not be necessary if you use (1) a long, small screwdriver, (2) a bit of patience, and (3) a lot of care to see that the screwdriver doesn't slip. Just turn the cartridge at a slight angle, first one side rhen the other, and the screwdriver will get at the screwhead without much difficulty. The screwdriver will have to be angled slightly, hence the danger of slipping. It took us about five munites to take out the old cartridge and mount the new one.

Been working fine ever since. - C. F.

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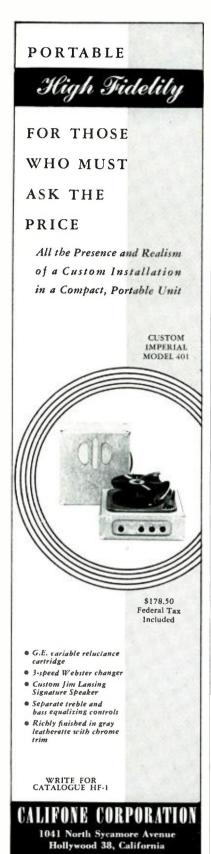
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ALLIED RADIO



DEMAGNETIZERS

Continued from page 86

the recording head will result in general reduction of the noise level and slight reduction of harmonic distortion. For oprimum results, the home enthusiast would do well to demagnetize once every three to six months - depending, obviously, on how much he uses his equipment.

The explanatory data sheet which accompanies the head demagnetizer is exceptionally clear, so we'll quote from it again to explain how recording heads get magne-"Music and speech consist of a series of transients, often not symmetrical in peak value; other asymmetrical transients may occur in line noise, in starting and stopping the machine, and particularly during tests." It's the "symmetrical" which is important there: if the impulse into the recording head were symmetrical, the to-andfro of electrical or magnetic pull would be equal. When it's asymmetrical, the "to' is greater than the "fro", and so some audible magnetic signal is left behind.

To the right in the illustration is a tape demagnetizer, or degausser, made by the Amplifier Corporation of America² to erase tape in bulk quantities. To operate, the button on the top is pushed while the unit is about three feet from the reel of tape, it is then moved slowly toward the tape until the under surface of the demagnetizer is as close to the tape as possible, then moved around and around the flat sides of the reel, covering all areas, then slowly withdrawn. The reel is flopped over and the process repeated. The result is a completely clean magnetically speaking - tape.

One reason why a bulk eraser is desirable is that it clears everything off the tape at once. Even though the erase heads used on practically all recorders clear the path, so to speak, when a recording is made, there is likely to be a bloop of sound from the previous recording, left on the tape every time the machine is stopped. Further, bulk erasing helps to reduce background noise.

The "Magneraser", as the unit shown here is called, has an unorthodox use which is very valuable to the hobbyist: it will demagnetize tools! Anyone who has played around with loudspeakers for even a few minutes knows that screwdrivers, pliers, and almost everything else in the toolbox soon become magnetized. The method is simple: hold the pliers or what have you on a flat surface such as a table, push the button on the Magneraser, bring it slowly into and then out of contact with the tool, and release the button. Hold onto the tool being demagnetized very firmly; the Magneraser is decidedly powerful and will snap the tool right off the table without a moment's hesitation!

The magneraser measures 4 inches in diameter; net price is \$18.00.

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READERS' FORUM

Continued from page 25

opera as a stage performance, it would no doubt be quite entertaining, but as very few of the people who buy these records understand the Italian language, and as we do not often see the stage performances, it sounds like an ordinary back alley dog fight when a beautiful duet by, say, Pagliughi and Valletti, is followed by an argument between a basso and tenor in Italian.

Some of the most beautiful vocal music ever written is found in the operatic works of the old masters, and it is the music in which I am interested, not the plot ot sentiment expressed in the words of an aria, although these could be translated for the information of the listenet.

As I understand it, these words are recotded on tape which can be cut and spliced at will and finally issued on two, three, and four LP disks, costing up to twenty-five dollars. That, to me, is pretty expensive music when you are buying a lot of uninteresting and disagreeable dialogue mixed in with good vocal music that you enjoy.

There are various so-called "Highlights"

being issued, but they are usually the efforts of a soprano or bass. To bring this ro a close, let me ask, Why don't they get busy and extract the music from these operas, the overture, the duets, the quartets, the arias, the chorus, etc.? I have several of these operas, complete, and I would add several dollars to their first cost if I could black out this undesirable gobble-de-gook. In a stage performance before an audience which understands the language as the composers intended it, that is all well and good, but a damyankee can't stand it.

Walter E. Sellens

Bismarck, North Dakota

SIR:

On January 28th, I sent a check for five dollars for a subscription to your magazine, but due to some mental lapse on my part I sent a duplicate check several days later

If the second check has been deposited will you please refund the amount? Dr. Hyde enjoys the magazine, but not that much!

Incidentally, he took the second copy, when it arrived, to the Memorial Hospital, so that soon-to-be-fathers could stop their pacing and enjoy an interesting and worthwhile magazine.

Ruth M. Hyde

South Bend, Indiana

A new purpose for HIGH FIDELITY! Your check has been returned, and we are happy that you passed on the extra copy for the perusal of the expectant fathers. Hope they enjoyed it.

SIR:

I see it is time to renew my subscription to the only magazine which can claim me as a subscriber. You may add my testimony to the many others you no doubt have. I have read your publication since its first issue, and hope to for many years to come.

Your record review section is my prime

Continued on page 100

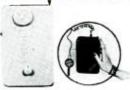
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Measuring only 1 1/8 x 4 1/8 x 6 1/8, and weighing only 2 lbs. 7 ozs., the Minifan is just about the world's smallest sound recording instrument. Records, rewinds, erases, and plays back through either a pair of stethoscope type earphones ar an external amplifier. Capacity 21/2 haurs uninterrupted recording. Powered by 11/2 v. A battery, standard 30 v. B bottery, and 7 Mallory RM-4Z mercury batteries. An ideal tool for executives, engineers, doctors, and wherever there is need for recording notes, interviews, and other data.

Complete with microphone, stethoscope type earphones, I hour spool of wire, tubes, batteries, and instructions.	\$289.50
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1/4	hour	 	\$	5.00	- 1	hour				 	\$ 9.00
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		21/2	hour				21	.5	0		



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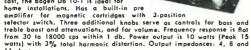
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put Transformer specified by Williamson in his original design. Assemble
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Operates from a tuner, phono-preamp, crystal pick-up, or other signal
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Separately HR-15T Williamson Kit — Furnished as above, with TRIAD \$69.50

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After ten years of research, Altec has perfected three speakers to provide wide frequency range, smoother response, and lower distartion than has been previously attained. These speakers are unconditionally guaranteed by the manufacturer to reproduce all frequencies from 30 to 22,000 cycles when mounted in a suitable enclosure.

These speakers are all effectively self-contained two-way systems and are supplied with dividing networks. The Model 601A and the Model 602A are respectively 12 and 15 inches in diameter. Impedance in both cases is 8 ohms and power rating is 20 watts (30 watts peak). Crossover fre-

The Model 604C (illustrated) is designed for high power handling re-autrements with a rating of 35 watts (50 watts peak). Diameter of speaker is 15 inches; impedance, 16 ohms, and crossover frequency, 1600 cycles.

Model 602A

Model 606 Carner Cabinet was designed and engineered specifically for use with the duplex speaker. Available in either mahogany, walnut or bland, its appearance and finish will harmonize with the interior and furnishings of the home.

Dimensions: Height, 361/2"; Overall Width, 36"; Depth to Corner, 231/2" Mahagany or Walnu

Specify for 12 or 15 inch speaker

The New PILOT FM-AM TUNER-Model AF-723

Designed for high quality reception of both FM and AM broadcasts. Slide-rule dial has individually illuminated scales indicating band in use. Provided with Cathode-follower output (900 ohms) permitting up to in use. Provided with cathode-tollower output (YVO ohms) permitting up to 100 feet connecting coble to main amplifier. Has two inputs for through channeling of phono and TV audio signals. Five knobs provide the following controls: 'on/off' switch and volume... continuous trebbe attenuation from flat to —24db at 20Kc... selector switch for AM, FM, phono and TV... tuning... AFC 'on/off' switch. Has built-in Loop-Stick AM antenna, and built-in FM antenna, plus 300-ohm input for external FM antenna. Power supply is built-in.

Dimensions: 14" wide, $7\frac{1}{4}$ " high, and $8\frac{1}{2}$ " deep.

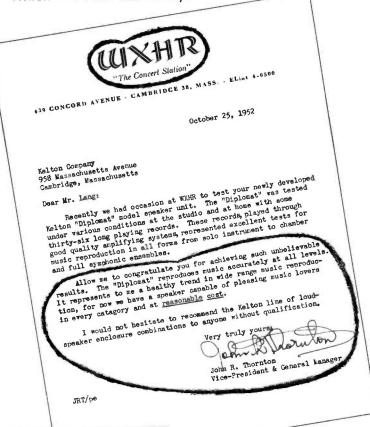
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READERS' FORUM

Continued from page 98

guide to buying records. The selection offered by the local dealers is very narrow, and their sampling equipment is more than inadequate. Regarding your record reviews, I would like to second the motion of Mr. Senick for an index. It seems to me that an alphaberical listing by composer, giving rhe issue number in which the review can be found would be quite adequate. Might I also suggest that ir be retroactive ro cover all your reviews up to date, and then published annually or semiannually.

With best wishes for your continued success.

John A. Stanberry

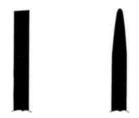
Manhattan, Kansas

SIR:

May I suggest to your readers a very efficient and thorough method of cleaning LP's or 78's? I have rejuvenated all of my microgroove library with this technique and it really works.

The equipment consists of one large sheet of No. 2/0 sandpaper and one three-inch long-bristled, new paint brush.

This good quality paint brush must be conditioned to change the shape of the bristle ends from the square shoulder which would damage the record, to the finely rounded tip that penetrates deep down into the grooves:



Original bristle

Conditioned bristle

Place the fine sandpaper sheet on a flat wood surface and fasten down the four corners with thumb tacks, Then rotate the paint brush lightly over the sandpaper for about twenty minutes until the brush end assumes this shape:



From this.....to this

The brush is then closely examined for any recalcitrant hairs and washed throughly

Continued on page 102

TOPS IN HI-FI...UNDER \$50.!



UNIVERSITY 4401 TWEETER \$11.76 net

Here's an inexpensive way of adding undistorted high frequency to your present single-cone speaker. Frequency response: 2,000-15,000 cps; impedance: 12 ohms; size: $4\frac{1}{2}$ " x $2\frac{5}{8}$ " x 5"; weight: 2 lbs.

4405-2000 cycle crossover network 5.88 net

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superb complement far either the 4408, 4409. or any other tweeter, the University 4410 crossesover at 600 cycles, 6-16 ohms. Genuine L/C network equipped with completely wired "balance" control. Weight: 4 lbs.



H. H. SCOTT 111-B DYNAURAL CONVERTER \$29.99 net

The III-B Dynaural Converter offers to the audio enthusiast scratch free recording reproduction. Frequency range: 30-10,000 cycles flat, the adapter can obtain power from an amplifier or radio employing 6V6, 6F6, 6L6 and 6K6. Size: 7" x 3\\"x 43/4"; weight: 21/2 lbs.

BROCINER A-100-P **EQUALIZER PRE-AMPLIFIER** \$49.99 net

This pre-amplifier equalizer provides amplification of magnetic pickups having low output. Full equalization down to 30 cycles; Maximum Output: 10 volts undistorted: Output Impedance: 15,000 ohms; Power Requirements: 110 volts 50-60 cycles. Size:



RECORD COMPENSATOR



\$12.00

This Record Compensator equalizes for the different recording characteristics used by the various record manufacturers. Correctly equalizes for: 1. European - 2. Victor 45 Records - 3. Victor 78 Records -4. Columbia — Capital — 5. Microgroove - 6. Noisy Records.



CABINART 61 COVER **FOLDED** HORN ENCLOSURE KIT

Model 61 \$19.95 net Model 63 \$23.95 net

Assemble your own folded horn and gain a full octave of clean bass... never reproduced by ordinary cobinets. Kit includes: lumber cut to size, baffle pre-cut for 12" or 15" speaker, grill cloth, hardware, plastic wood, qlue, kinad acoustic insulation, assembly and finishing instructions.

Instructions.

Model 61 for 12" speaker — size, 32" x 22½ x 32". Weight: 26 lbs.

Model 63 for 15" speaker — size; 32" x 24½" x 36". Weight: 28 lbs.

GENERAL ELECTRIC A 1-900 RECORD COMPENSATOR \$8.97 net

The A1-900 Compensator is designed for connection between the pickup cartridge and the preamplifier input. Size: 21/2" x 2" 2". Weight: 6 ozs. Maximum depth behind panel: 4".



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READERS' FORUM

Continued from page 100

in a non-soapy, non-film-forming hot solution such as Duz or Tide, and hung up to dry, putting a loose elastic band over the bristle end of the brush to keep the hairs bunched together.

To clean the records, place the disc on the turntable and hold the brush lightly on the surface while moving it slowly back and forth from the record edge to the center pin. About five revolutions are sufficient. A word of caution: the brush picks up a terrific amount of foreign matter and should be washed after six to eight records have been processed. I have made up three of these paintbrushes and I always have two ready for service. It is very important to clean the turntable surface before use.

Once a month I now spend an evening cleaning my disks. I can say that it makes a world of difference in quality and removes the high frequency piff and paff that get on my nerves.

Hoping that by this time you are not piff and paff.

Louis Julius Cote

Ottawa, Ontario, Canada

SIR:

My husband and I are engaged in designing a cabinet for housing phonograph, radio, records, files, and music reference material. Our LP's pose the sixty-four dollar question at this point; is there a steel drawer file or are there individual steel file drawers with tracks which can be mounted in custom-built cabinets for filing twelve-inch LP's? We visualize one which would pull toward the user like a steel file drawer, in which the LP's, in their alphabetically filed cardboard cases, could be flipped back and forth and lifted out as desired as folders can be lifted from a letter file. The ordinary letter file is actually wide enough, but about an inch and a half too short from top to bottom.

We have never seen such a file advertised but perhaps we have missed it. If you know of one, I would most greatly appreciate if if you would send me the name of the manufacturer. And if you don't know of one, don't you think it should be invented?

Mrs. Bruce Burns

Yucca Valley, California

What do readers know about this sort of thing? Any inventors in the crew? Let us know.

SIR:

Ach! How mine heart bulleeds and boins for allufda boor souls vot can only listen to vun or two FM stations yet.

Soon you must gum to Milwarkee var ve haff umpah umpah vrum mornink until comes nacht. Zumtimes ve goes to town in polka style und zumtimes ve makes like a valse. Undin between, zuch bargains you neffer saw. TV zets for nottink down und half brice per veek. Toasters und roasters und cars und zuits all der zame.

Mine radio I am drading for ear-muffs!

C. C. Fraser

Milwaukee, Wisconsin

Continued on page 122

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Build the finest amplifier ever developed. Complete with all components, punched chassis, and easy-to-follow instructions. Get the full benefits of Acrosound TO-300 performance as shown by specifications listed below.

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 Response 1 db. 2 cps. to 200 kc.
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 Less than 1% lM at 20 watts.
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ACRO TO-300 net \$24.75 ACRO TO-310 net \$18.75

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Write for reprint of Ultra-Linear Operation of Williamson Amplifier and conversion information.

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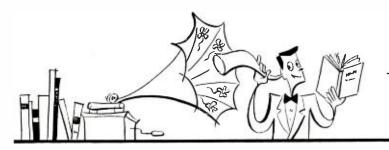
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AUDIOPHILE'S

NOTES

FIFTY BEST DESIGNS: This brochure has been planned to answer three questions that more and more people are asking today: How do you start finding out about high-fidelity? What do high-fidelity installations look like? How should you go about selecting equipment that will provide the greatest enjoyment at the lowest cost? Write for it, c/o HIGH FIDELITY Magazine, Box BD, Great Barrington, Mass. Price: 50 cents.

GOOD NEWS! You've pleaded with us to reprint the original Burke-Beethoven discography, which was largely responsible for the fact that our May, 1952 issue is completely out of print. We could no longer close our ears to the demand. WE'VE DONE IT! The reprint, in the form of a 16 page excerpt, is available now. Write for it, c/o HIGH FIDELITY Magazine, Box BD, Great Barrington, Mass. Price: 50 cents.

SPECIAL OFFER: Effective as of April 1st, your order for the book HIGH FIDELITY SIMPLIFIED, No. 101 on our book list, will entitle you to a coupon, included in the book. When you send this coupon. accompanied by twenty-five cents, to the publisher, you will receive a special Columbia 7-inch long playing high fidelity test record. Available through no other source, this specially recorded record enables the individual to make definitive performance tests of the audio equipment he owns. A section of HIGH FIDELITY SIMPLIFIED tells the reader what to listen for when making the tests. This special offer expires September 1, 1953.

You'll be pleased to know, as we were, that the book, "Make Music Live" is once again available. It's Number 70 on our book list, priced as before at only \$4.50, and our new supply has just arrived.

THE RECORDING AND REPRODUCTION OF SOUND: Oliver Read, Second Edition, 805 pages, over 700 illustrations, $6\frac{1}{2} \times 9\frac{1}{4}$, cloth.

SOUND RECORDING: Frayne and Wolfe,

PIANOS, PIANISTS AND SONICS: G. A. Briggs, 190 pages, 102 illustrations, $5\frac{1}{2}$ x $8\frac{1}{2}$, cloth.

Written in non-technical terms, this book is intended for all music lovers and sound enthusiasts. The complete story of the piano, including history, construction, aids in selection and care, and the relationship between the instrument and sound-recording, reproduction, and room acoustics.

No. 55.....\$2.50

LOUDSPEAKERS: G. A. Briggs, 88 pages, paper.

WORLD ENCYCLOPEDIA OF RECORDED MUSIC: F. F. Clough and G. J. Cuming, 890 pages.

"Definitive" is an inadequate description of this compendium of recorded music. This is not light reading; it is the most all-inclusive reference work for libraries and serious record collectors ever published. Every recorded work — 78, 45, or 33 1/3, U. S. or foreign — is listed in all its versions. Truly encyclopedic.

MICROPHONES by Engineering Staff, BBC, 114 pages, cloth.

WHAT TO LISTEN FOR IN MUSIC: Aaron Copland, 281 pages, $5\frac{1}{2} \times 8$.

SELECTIVE RECORD GUIDE: Moses Smith, 5½ x 8½, cloth.

RELAX AND LISTEN: John Hallstrom, 53/4 x 81/2, cloth.

LISTENING TO MUSIC CREATIVELY: Edwin J. Stringham, 479 pages, illustrated, cloth.

ACOUSTICS OF MUSIC: Wilmer T. Bartholomew, 242 pages, illustrated. cloth.

This books fills the need for clarifying the fundamentals of acoustics, and gives to music lovers, in readable form, the materials for understanding acoustical problems of composition, performance, teaching and appreciation.

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A list of books which will be of interest and value to you, carefully selected from the many publications related to music, records, and sound. Using our Book Service, you can have your choice by return mail. Just send the coupon with your remittance.

WILLIAMSON AMPLIFIER BOOKLET: D. T. N. Williamson, 36 pages, 31 illustrations, new edition, paper.

This booklet contains complete design data for constructing this famous high-fidelity amplifier. In this new edition, the author has added a considerable amount of information on tone controls, low pass filters, and record compensating circuits.

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MUSICAL ENGINEERING: Harry F. Olson 357 pages, well illustrated with 303 figures and 28 tables, 6 x $9\frac{1}{4}$, cloth.

Musical Engineering will serve as an excellent reference book for those interested in every aspect of music, whether student, teacher, musician, engineer or layman. Acoustics, sound reproduction and musical instruments, with facts on their construction, range and characteristics, are some of the many phases of musical engineering now clearly explained and interrelated in this book.

SAT. REV. HOME BOOK OF MUSIC, etc.: Canby, Burke, and Kolodin. 308 pages, 25 illus., $6\frac{1}{4} \times 9\frac{1}{4}$, cloth.

Three top experts tell the story of music, its recording and its reproduction in the home. One of the most authoritative, helpful, and widely discussed books yet published for the music lover and high fidelity enthusiasts. In addition to a detailed discussion of the theory and practice of sound recording and reproduction, specific suggestions are given for selection of high fidelity components.

AMPLIFIERS: Briggs and Garner, 216 pages, 174 illustrations, $5\frac{1}{2} \times 8\frac{3}{4}$, cloth.

This book covers, in characteristic non-technical language, the myriad considerations involved in amplifier design and construction. Details are given for the construction of a recommended amplifier. Essential reading.

MAKE MUSIC LIVE: Green, Radcliffe and Scharff, 256 pages, illustrated, cloth. A practical guide for planning, assembling and installing high-fidelity home music systems. Also methods of concealing elements in existing furniture.

PRICE GUIDE TO COLLECTORS' RECORDS: Edited by Julian Morton Moses. Lists artists, numbers, values. Over 7,300 collectors' items listed. Caruso, Melba, Gluck, McCormack, Kreisler, Toscanini, and hundreds of other famous artists. Indispensable to buyer and seller — an ideal gift for the collector.

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HIGH FIDELITY MAGAZINE'S Most Popular BOOK OF THE MONTH

HIGH FIDELITY SIMPLIFIED: Harold Weiler, 209 pages, 104 illustrations.

The latest and most understandable discussion of the fundamental theories of high-fidelity sound reproduction. Special chapters devoted to each type of equipment, describing various makes and explaining how each works. Working designs for speaker enclosure.

No. 101 \$2.50

LATEST RELEASE

HOME MUSIC SYSTEMS: Edward Tatnall Canby. 300 pages, illustrated. How to assemble and enjoy high-fidelity equipment at tremendous sayings. This new book explains the operation of a radio-phonograph, where to buy the separate parts. and how to house them. Mr. Canby's advice and suggestions can help you to avoid making expensive mistakes.

No. 109.....\$3.95

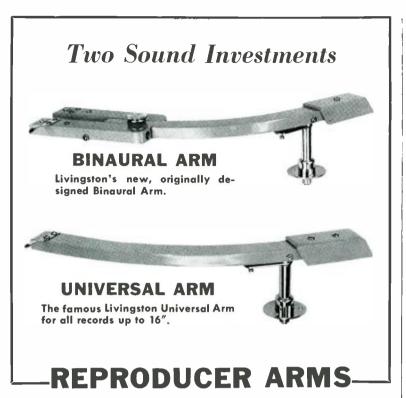
THE BOOK YOU'VE BEEN WAITING FOR!! We now have in stock, for immediate delivery, the completely revised and greatly expanded THIRD cdition of G. A. Briggs' famous SOUND REPRODUCTION. The first edition, published in July 1949, can rightfully claim to be the first book to explain in non-technical language the intricacies of high fidelity sound reproduction.

Whether you already have the second edition or not, you will want the third: there are many new chapters . . . 368 pages instead of 246 . . . 175 new and original illustrations, for a total of 315, lending added clarity to chapters on loudspeakers, their enclosures, room acoustics, tape and disc recording, pickups . . in short, Mr. Briggs, aided by hundreds of photographs and drawings, brings his usual flair for lucid, readable explanation to all the essential elements of high fidelity reproduction.

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BINAURAL

Continued from page 48

requirements here depend on the tape equipment being used. Two manufacturers are active, at time of writing, in the binaural field: Ampex and Magnecord. A third company makes "binaural" recorders, but they are intended primarily for educational use. Both Ampex and Magnecord record two (at least) channels on one strip of tape. Both require for playback the same two amplifier-and-speaker channels which we've been discussing.

Thus, essential equipment is two amplifier and speaker systems, plus such ahead-of-the-amplifier equipment as may be required by the program source. It is not necessary to have identical amplifiers or identical speakers, but the problem of balancing the sound from each channel will be simplified and the overall sound effect will be better if the two channels are as much alike as possible.

PROGRAM SOURCES: at the present time, binaural tapes are available through Magnecord. Binaural disks are being recorded by Emory Cook, and many pressed under his Sounds of our Times label. New binaural release from Audiosphere, Inc. of Newark, N. J. is Voices from Vienna, which features Leo Lehner and his Young Vienna Choir. Write Chet Smiley of Livingston Electronics about this one.

Cook's latest include a series of six 12-in. sides of the new Orchestral Society of Bosron, led by Willis Page. There's some wonderfully brilliant sound on these records (listen to them monaurally for some weird effects!). Selections include Mozart's Symphony No. 40 in G Minor (on No. 2065); Bizet, Introduction to Act I, Carmen: Rossini, Overture to La Gazza Ladra; Mendelssohn, Scherzo from Midsummer Night's Dream; and von Weber, Overture to Euryanthe (on No. 2064). The third record, No. 2066, includes Rimsky-Korsakov, Dance of the Buffoons; Strauss, Emperor Waltz; Saint-Saens, Danse Macabre; and Brahms, Ilungarian Dance No. 6.

The Cook binaural catalogue also includes several selections already familiar to monaural listeners: two Pipe Organ disks, the Hufstader Singers, Inside Vienna, and Two Famous European Pianos. — C. F.

TAPE RECORDER

Continued from page 88

bracket (about \$135) and cannot be expected to provide flat, wide-frequency range recording or playback. With its own microphone and speaker, it does its job. It is not an inexpensive answer for the man who wants to record 30 to 15,000 cycles within 1 db; there just isn't any low-cost answer for him. Because the Pentron relies somewhat on microphone and speaker response characteristics to flatten its overall response, using different microphones or external speakers may or may not help matters.

Pentron recently announced separately available tape transport mechanisms and preamplifier sections. This would seem to make an excellent artangement for the beginner at tape recording, and as soon as both units are available for a test, we shall have a report on them. — C. F.



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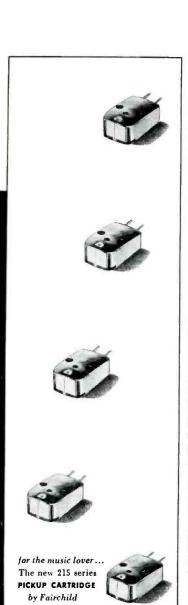
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AMPLIFIER SYSTEM

Continued from page 84

use) . . . see the previous issue of HIGH FIDELITY.

The "t" and "b" used in some cases in the following table refers to positions of the treble and bass tone controls, respectively.

Allegro	COL
Bach Guild	COL
Bartok	COL
Capitol	COL
Cetra-Soria	COL (t-1)
Colliseum	COL
Columbia, early	LON (b-3)
Columbia, since 1950	COL
Concert Hall	COL
Decca	LON (b-1, t-1)
Festival	COL
Handel Society	COL
Harvard	COL
Haydn Society	COL
London	LON
Lyrichord	COL
Mercury	COL
MGM	COL
New Records	COL
Oceanic	COL
Osieau-Lyre	COL (t-11/2)
Period	COL (t-1)
Rachmaninoff	COL
RCA, new Ortho.	RCA
RCA, most	RCA $(b+1, t+\frac{1}{2})$
Renaissance	COL (t-t)
Stradivari	COL
Transtadio	COL
Urania	COL(t-2)
Vanguard	COL
Vox-Polydor	COL
WCFM	COL
W'estminster	COL

In our own set-up, we found that we liked a little less treble than indicated by the WXHR listings — which means that we cut the treble tone control a little, from one to three "notches", depending on the record.

Above the equalizer-selector knob is a slide switch which cuts the noise suppressor in or out.

The two center controls are bass and treble tone adjustments. They are of the continuous type, and they provide an exceptional range of cut and boost.

Above them is a pilot light; in the extreme right-hand upper corner is the on-off switch. This controls the amplifier and the noise suppressor as well as the preamplifier. Below the on-off switch is the loudness

or compensated volume control.

In Fig. 1, the knob and escutcheon in the center belong to the noise suppressor unit; the suppressor chassis can be located at a distance from the control.

To the right is the power amplifier. Speaker connections, to match 2, 4, 8, and 16 ohm voice coils, are made to the row of screws at the left of the chassis. The input level control for the power amplifier is next in line; then come two input connections. One is for the 120-A equalizer-preamplifier,

Continued on page 110



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Literature upon request.

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AMPLIFIER SYSTEM

Continued from page 109

the other is for standard preamplifier or control units.

A spare fuse, clipped to the chassis, is next, and then a power socket to which the 120-A is normally connected. An extra AC outlet, controlled by the switch on the preamp, is located directly below the transformer. Fuse and line cord are at the extreme right edge of the chassis.

The back of the preamplifier chassis is shown in Fig. 2. At the lower left is a power take-off socket to which is connected the noise suppressor. Cables to the power amplifier come out of the chassis at the extreme upper left.

At the right-hand side of the chassis are six input jacks. The top two are for interconnection with the noise suppressor unit. The one at the extreme lower left is phono input; the remaining three are for high level inputs such as FM and TV tuners.

To the left of this panel is a knob and escutcheon regularing phono input level.

Speaking of input level controls, here is the procedure we found best for adjusting the level controls on the 214 system. First, connect up the pickup to the preamp. Set the level control on the back of the preamp chassis in accordance with instructions supplied by the manufacturer. Second, turn the level control on the power amplifier chassis all the way off. Third, turn the loudness control on the front panel of the pre-

amp-equalizer up to about 3 o'cclock. Start the record spinning. If the Dynaural unit is used, be sure the switch on the front panel of the equalizer is off. Fourth, advance the power amplifier level control until full room volume is reached.

To adjust the suppressor level control, follow the steps outlined above, turn the loudness control to reasonable level, turn the suppressor level control all the way down, switch on the suppressor with the front-of-panel slide switch, and bring up the level control on the suppressor chassis until approximately equal loudness is reached. Make final adjustments by switching the suppressor on and off with the slide switch until no difference in volume level is observable, regardless of whether the Dynaural unit is on or off. During the suppressor level adjustment procedure, no changes should be made in any of the other level or volume controls.

It is obvious from the discussion of the details of the 214-A system that it has plenty of flexibility, but we discovered a few tricks to extend its usefulness.

For instance, we do quite a bit of tape recording. The output of the recorder can be connected, of course, to one of the high level input connections (FM tuner, etc.). But input to the recorder was not so simple, until we determined out that the input to the accessory Dynaural unit (the upper left-hand jack in Fig. 2) could be used to feed a tape recorder with complete success.

Continued on page 111



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AMPLIFIER SYSTEM

Continued from page 110

After consulting with the Scott engineers, this hitherto unclaimed feature boils down to this: with recorders which have separate playback heads, the high level input of the recorder can be connected to the upper lefthand jack shown in Fig. 2. The output of such recorders can be connected to the upper right-hand jack. With these connections, the Dynaural on-off switch on the front panel performs some peculiar functions: in the OFF position, the input to the recorder can be monitored; in the ON position, the output of the recorder can be monitored.

With recorders which do not have separate record and playback heads, the output of the recorder should be connected, not to the upper right jack but to one of the high level inputs (two center and lower right jacks, Fig. 2). The Dynaural switch should be left in its OFF position.

In either case, the tone and volume controls will have no effect on what is fed to the tape. The input selector switch and the equalization positions will effect tape input.

The foregoing presupposes that the Dynaural unit is not being used. In some cases — such as transferring old 78's to tape — it is desirable to have it in the circuit. Then, the input to the Dynaural unit should be left connected to the upper left hand jack, as usual; the output from the suppressor can be connected to the input of the tape recorder.

Summary

It goes without saying that the Scott equipment is excellent, in design and workmanship, as is the sound it produces. It is flexible - and listenable. It has deservedly won a great deal of praise for the flexibility of its "front end" — there is plenty of control in the tone controls. With proper use of the noise suppressor, many an old or worn record can be brought out of the hopeless category and provide enjoyable listening. — C. F.

JUNIOR COUPLER

Continued from page 82

 ${f A}$ CCORDING to our tests, made at comfortable living-room level, the junior aircoupler appears to have a response flat within ±3 db from 28 to 180 cycles, and within ±5 db from 25 to 200 cycles. Above 200 cycles, strange things happen (as they do with all air-couplers above their useful ranges). Consequently, a crossover frequency of 175 cycles or lower is recommended. Both 175and 125-cycle crossover networks have been tested, and there seems to be very little apparent difference. Those who have mid-range speakers good down to 60 cycles or better will undoubtably prefer to use a 125-cycle network; those who are not so forrunate will find it safer to use the 175-cycle network.

We who have worked with the junior air-

Continued on page 112

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JUNIOR COUPLER

Continued from page 111

coupler for so long are convinced that it sounds as good as the standard six-foot model; perhaps better at medium and low volume levels. Allowance must be made, of course, for the fact that we are familiar with it, and familiarity (in audio) breeds not contempt, but acceptance.

Certainly, the junior model does not have the tremendous maximum output of the large dual or triple air-couplers, nor quite the room-shaking capacity. Two factors are responsible for this; first, it is somewhat less efficient and, second, it is not so heavy, so that less mechanical coupling to the floor is obtained. We don't know what the result would be if it were fastened rigidly to a wall or the floor, or made a part of a very heavy cabinet. This has not been attempted because it was designed specifically for those who cannot make such installations, or prefer not to. However, when fastened in the base of a console-type cabinet, or simply finished as a separate small enclosure, the junior air-coupler is still a most satisfactory bass reproducer.

LIKE ANY air-coupler, the junior model must be assembled with both screws and glue. With either alone, joints are likely to loosen in a matter of weeks. Screws should be placed no more than 12 inches apart, and at least two should be used on each side of all internal partitions. About a half gross are recommended. Glue should preferably be of a waterproof type.

Dimensions shown in the drawings are for % plywood. If desired, the front and back panels can be of ½-inch plywood (or glued hardwood) and the sides, ends, and internal partitions of 1-inch nominal hardwood.

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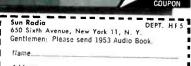
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WFMT

Continued from page 34

Russell's "Portraits from Memory", Verdi's Macbeth, or John Jacob Niles singing American folk songs.

More than 55 percent are professional people, 14 percent are executives, and 13 percent are students. Almost 87 percent have college educations. Thirty percent have incomes between \$5,000 and \$8,000; an equal number lists earnings of more than \$8,000.

The most surprising statistic — 74 percent of WFMT's audience do not own television sets, obviously by preference in most cases.

Compiling a month's broadcasting schedule is a pooled effort at the station. Staff members, all serious music lovers, comb such authoritative publications as the New York Times, Saturday Review, and HIGH FIDELITY for new record reviews.

The program is then made out, with many a spirited argument, at a bull session presided over by Rita. No selection is repeated in any three-month period, unless requests from fans are too clamorous to ignore.

The program schedule lists eight major works for any one day, leaving gaps which are filled with recordings issued after the guide is published, by worthy disks contributed by listeners, or something a staff member, on impulse, feels like playing.

All records, except collector's items loaned to the station by its listeners, must pass Bernie's own high fidelity standards before they are played on the air.

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The Jacobs have made amazing progress in acceptance in little more than a year. In fact, they are as far along now as they initially had hoped to be three or four years hence. The University of Chicago recently tecognized WFMT's uncompromising insistence on quality by selecting it as the outlet for an ambitious new radio series, developed in part on campus with a \$6,500 grant from the National Association of Educational Broadcasts.

This series includes talks on history, the arts, literature, poetry, anthropology, and archeology, recorded under the supervision and participation of the University's division of humanities and social sciences. As a result of this association, program material from the N.A.E.B. and B.B.C. not generally distributed to commercial stations has been made available to WFMT, as well as musical items from Italy, France, and Switzerland.

What are the Jacobs dreaming of these days? They hope soon to broadcast live music from their studio and are exploring the feasibility of issuing program guides in braille

"Some of our most critical listeners are

Continued on page 117





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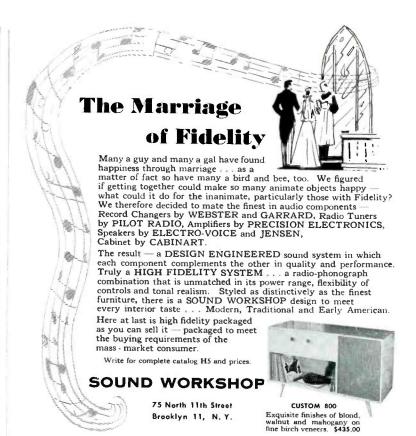
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WFMT

Continued from page 114

blind," Rita said. "No one as far as we know has ever thought of a guide for these people who need it even more than the non-afflicted."

Now that they are established as a success, Bernie and Rita will admit that starting WFMT in the beginning was an almost hare-brained venture. "We were in trouble," says Rita, "actually before we started broadcasting."

But Bernie had long yearned to have his own high fidelity, good music station. For years he worked for WFMT's predecessor, WOAK, and bought its stock in such chunks as he could afford. Finally he controlled it. Forthwith he dissolved it and statted WFMT in its stead.

"We hocked everything that was hockable from our cat to our suitcases," Jacobs said. "Friends called the venture idiotic. Who would listen to an exclusively high brow station, anyway? And with only 150 seconds of advertising an hour, who would buy time?"

But, as we said in the beginning, this is a Hans Christian Andersen story. Today, the station is in the black and the Jacobs are making a respectable living. They never expect to get rich with WFMT, first because that is not their objective; and second, because it probably couldn't be done, without diluting the quality of their broadcasts. Thousands of Chicago area music lovers,

Thousands of Chicago area music lovers, who cherish this civilized station radiating some of the highest level programming in the country, have their fingers crossed. The Jacobs swear they will never let them down.

RECORD CHANGER

Continued from page 87

that they incorporate that age-old remedy for noisy switches: a condenser (of 0.05 mfd or thereabouts) across the switch terminals

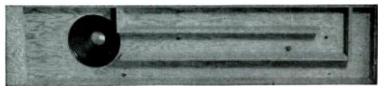
Importers of delicate equipment like record-changers have certain problems to meet, as Rockbar's staff found out the hard way. But they are meeting them. For example, they now inspect all units before shipping them to customers. Some of the early ones got seasick during the ocean crossing, or objected to being dropped on docks, or something - anyway, they suffered from dislocation of various shafts and spindles, resulting in excessive rumble, for one thing. Rumble on the model we worked with was not noticeable except on a super-rig which, if anything, overemphasized the low frequencies. Be it said, however, that the rumble from the turntable, on this rig, was no worse than that from some of the more famous rumble-full records.

Another thing heing done by Rockbar is to rewrite the instructions. The instruction and repair manual shipped with the units from England is almost too complete; there is so much detail that it becomes confusing.

Continued on page 118



FAS Air-Coupler for Bass Reinforcement



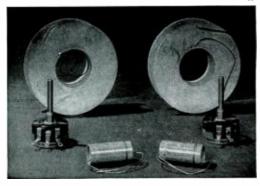
WHEREVER IT IS DEMONSTRATED, the most critical audio experts and designers of custom installations choose the Dual Air-Coupler as the most effective type of enclosure for bass response because 1) it delivers musical bass reproduction down to the lowest organ pedal notes, and 2) the bass does not drop out at low volume.

THE G.A. DUAL AIR-COUPLER, illustrated here with the front plate removed, is an exact duplicate of the original FAS design. It can be mounted under the floor, laid on edge to form part of a seat or low table, or spaced out 6 to 8 ins. from the wall. Dimensions are 72 by 16 by 6 ins.

DUAL AIR-COUPLER, KNOCKED DOWN, all parts precision-cut from high-quality 34-in. plywood. Can be assembled with only simple tools. Opening cut for a 12-in. speakermow only \$34.50

DUAL AIR-COUPLER, COMPLETELY ASSEMBLED as speaker. Can be stained or painted, as preferred. Opening cut for a 12-in. speaker now only \$47.50 Opening cut for a 12-in. speaker new only \$47.50 NEW, COMPACT AIR-COUPLER, supplied completely assembled. A revised design for limited space, measures 42 by 18 by 7 ins. thick. Power-handling capacity is slightly less than standard design, but more than adequate for home use. Without speaker, but cut for mounting a 12-in. speaker..........\$49.90 ASSOCIATED ITEMS. Altec 600-8 speaker for Air-Coupler and intermediate speaker, \$46.50 . . . Veriess C-455A power choke, \$6.90 . . . Peerless R-560A power transformer, \$10.98 . . . Peerless S-230Q output transformer, \$16.98 . . . English KT-66 output tube, \$4.95. For immediate delivery.

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By a judicious selection of associated components, the three coil sizes on which G.A. has standardized enable our customers to secure low-cost crossover networks which will operate at 14 different crossover frequencies! For the experimenter, that means a wide range of choice without having to break the bank to buy dozens of coils. For the man who wants to install his system once and for all, it means money saved, because GA. saves money by making only three coil sizes (10.2, 5.1, and 1.6 Mh) — and it passes on those savings direct to its customers.

Mh) — and it passes on those savings direct to its customers.

If you want to use three speakers with crossover points at 350 and 1,100 cycles, for example, just order two of the networks listed above (for a system employing an 8-ohm woofer, it would be No. 6 and No. 8).

No. 6 and No. 8).

As most everyone has found out by now, G.A. is headquarters for crossover networks. As far as we know, we're the only organization stocking networks specifically designed for use with Air-Couplers.

If you are in doubt about the selection of a network for your particular speakers, send 10c for the G.A. Network Data Sheet, from which you can deserving your requirements, event.

determine your requirements exactly.

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12 db droop per octave. These networks use two

Impedance of low frequency speaker		Crossover Frequency	Order by Number	Price 2 Coils Only	Price Com- plete*
16	ohms	2,200 1,100 700 350 175	No. 1 2 3 4 5	\$7.00 7.00 12.00 12.00 20.00	\$11.50 12.00 16.00 17.50 24.00
8	ohm#	1,100 550 350 175 85	6 7 8 9	7.00 7.00 12.00 20.00 20.00	12.00 13.00 17.50 24.00 26.50
4	ohm#	550 275 175 85	11 12 13 14	7.00 7.00 12.00 20.00	13.00 15.00 19.00 26.50

* Complete networks include necessary capacitors and level controls. Be sure to indicate whether you want just the coils or the complete network.

Air-Couplers are shipped via Railway Express, FOB Great Barrington, Mass.

Apparatus

State Road, Great Barrington, Massachusetts

RECORD CHANGER

Continued from page 117

Just the same, we never did find any reference to connecting the pickup leads to the amplifier. The wires from the cartridge head disappear in the body of the arm and emerge in the middle of the intricate mechanism below; it took some searching and figuring to find the correct terminals of the muting switch, to which we should connect the shielded lead to our preamplifier. Lest any of our readers have the same problem, we took the picture in Fig. 2.

The Collaro changers are available in brown, ivory, or gray. List price of the intermix model (3/522) is \$65.00; of the nonintermix model (3/521), \$54.50. Bases, like the one shown in Fig. 1, are available separately. Space requirements, including the base shown in the illustration, are 161/4 wide, 131/4 deep, and 73/4 inches high. Base plate is 1414 wide by 1214 deep, and is mounted by three double springs to the subbase or cabinet.

Large-hole 45 rpm records can be played by inserting standard "spider" adaptors into the records.

The changer will handle from 5 to 8 records at one time, depending on the type of pickup used. That may seem to be a strange deciding factor, but the point is that, specifically, G-E dual-play cartridges have a knob which projects above the cartridge (to change from 3-mil to 1-mil styli, you push the knob down and twist) and so, the pickup can be lifted only so far by the changer before it hits the underside of record stacked on the spindle. Thus, with a cartridge such as the G-E RPX-052 (shown in Fig. 1), the total lift must be reduced. So doing cuts down the number of records which can fall onto the turntable and still leave the stylus room to rise and sweep back to rest position.

HE Collaro single-record player, Fig. 3, is simply the essential mechanism from the changer. Motor, turntable, and arm are identical. A speed change button (33, 45, and 78) is located near the pickup arm base. To start the motor, the arm is pushed gently away from the record; when the cartridge gets to the lead-out grooves near the record label, the motor shuts off automatically. The arm uses plug-in heads, and incorporates the desirable weight-adjusting feature used on the changer arm. Motor to turntable drive is the same as on the changer of course: from motor shaft through rubber and metal rollers to a large rubber drive wheel. The drive wheel retracts when the motor is shut off. List price is slightly under \$35. With turntable (10-inch diameter) in place, the single-record player will fit inside a 10 by 131/2-inch rectangle. (Note, however, that 12-inch records overhang the edges of the turntable, so that minimum rectangular space required for clearance would be about 12 by 141/2 inches.) It is also one of the lightest high-quality threespeed players on the market, recommending it strongly to anyone who is putting together a portable hi-fi for summer vacation use. — C. F.



Records worth buying ... are records worth protecting. Only a diamond needle has a tip so perfectly rounded ... so durable that it gives you thousands of plays without damage to your records.

What causes damage to a record? One play with a worn needle is only the beginning ... when you can hear it, the record is already ruined.

How fast do needles start to wear and damage records? The facts—an osmium (precious metal) needle gives about 25 safe plays. A sapphire gives about 50 safe plays. A diamond, giving thousands of safe plays, is 90 times more durable than sapphire. Yet a Duotone diamond costs but oneninth the price of 90 sapphires. This means true economy for you ... lasting protection for your records. Remember, whatever you use . . . there is no such thing as a permanent needle. And when you think of needles . . . think of Duotone whose reputation for quality is based on performance. Duotone has the correct replacement needle for any record player . . . at your dealers now.



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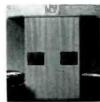
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Danby Rear-Loaded (bottom-vented) and Corner dual loudspeaker systems faithfully reproduce every nuance of sound free of distortion and without sacrifice of any frequency from below 35 to above 16,000 cps.

Rour Loude

Solidly constructed of 34" furniture plywoods, these folded-horn enclosures combine high quality acoustic engineering and fine cabinetry. Originally built on a custom basis for various Philadelphia musicians, teachers, and engineers, they are now available for mail-order purchase.



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Two plug-in heads, adaptable for your favorite cartridge.

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For the latest in record players see our CBA-83 Automatic Player.

Compare these features:

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- EXACT SPEED maintained through specially designed centrifugal governor which automatically compensates for variations in line voltage, heat and load.
- CAREFULLY ENGINEERED long, law mass tonearm provides excellent tracking and complete freedom from parasitical resonances.
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CORNER ENCLOSURE

Continued from page 90

of the speaker through the long horn. (Of course, they also come through the front, but from a 6-inch diaghram, without horn-loading, very feebly.)

The theory works. Everything from 150 cycles up comes through with a clarity that is startling. Below 150 cycles, well, Brocine himself says that the bass is not intended to be phenomenal; it is intended to be as natural as possible and to balance the middles and highs. Which it does. Organ pedal notes are there, but they do not shake the house. Violins sound—as one violinist-listener put it—actually musical. Extremely critical listeners may find occasional holes in the response below 150 cycles and, compared to the middles and highs, may note a tendency for the lows to blur slightly. The sound is never hard.

The overall result is some of the most pleasant and enjoyable listening we've had. The listening has been done in a relatively small living room, at moderate (for a hi-fi bug!) volume levels. Perhaps the most significant comment we can make is that after the first few minutes, we forgot to listen for the "fidelity" and just listened to the music.

The Model 4 sells for \$365 — by no means inexpensive, but not extreme. Incidentally, it is available in several furniture styles. It's well worth listening to, carefully and at length, before any final decision is made.

FM BOOSTER

Continued from page 85

most effective at the low end of the FM band, progressively less useful at the high end. At our own location, with a directional antenna aimed at Boston (about 120 miles distant, airline), we were barely able to distinguish a voice through the background noise when tuned to station WGBH, 89.7 mc. With the booster, the voice came out of the noise so that, except during periods of complete fading out, it was strong and clear as a local emission.

All of this — Mr. Rummell's article, and our brief experimentation with the Regency booster — adds up to one thing: we shall do a job on antennas. A round-up article is already in the making for the July issue, and we're going to get WGBH up out of the soup, permanently — even if it takes a 100-foot tower and six boosters in series! — C. F.

SMALL SPEAKER

Continued from page 85

frequency range goes well over the fivefigure mark. It will handle a volume level ample for the average size living room, although it will not answer the needs of hi-fiphreniacs who like to have their eardrums flapping on their jaw-bones. If somebody steps on the bottom pedal of the organ, there's likely to be some shuddering and quaking. All the rest of the way, however, it's certainly multum in parvo. — C. F.

Attention, Music Lovers!

The finest performance that money can buy no longer costs so much!

The sensation in tape recorders will be introduced at the Chicago Radio Parts Show in May.

There, three incomparable new Crestwood Models will be seen-and heard-for the first time.

With them will come a new era in tape recording. The new Crestwoods offer the ultimate in high-fidelity reproduction—frequency response of 30 to 12,000 cycles at 7½" per second tape-speed. Sets with similar performance have appeared before—but at prices many times higher than the new Crestwoods.

These beautiful new recorders are priced from only \$199.50 to \$299.50. Now Crestwood gives you by far the greatest value ever offered in tape recorders.

The new Crestwoods have two speeds—10-watt power output—complete dependability. Your dealer will have them in stock on or about August 10th. Watch for them. For further information, send coupon.



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READERS' FORUM

Continued from page 102

SIR:

Your feature article, "Hi-Ho, Fidelity" by Ed Wallace in the January issue, was much enjoyed, but this reader felt somewhat let down upon reaching the end to find that Mr. Wallace failed to list the components of his system by manufacturer and model number. Unless this information is "top secret", I would be grateful for the details.

Joseph L. McCormick

Clarks Summit, Pennsylvania

This is typical of the many requests we have had for the names of Mr. Wallace's choice of parts. To save him from further typewriter's cramp, we are listing his final components:

Speaker System: Electro Voice Aristocrat

Wharfedale Super 12/CS/AL Jensen RP 302 Ultra High Frequency

Jensen RP 302 Ultra High Frequence Unit

Jensen A 402 Crossover Network Record Changer: Garrard Triumph RC-80 3 speed automatic

Audax DL-6 Chromatic Polyphase with diamond stylus for LP's and sapphire for 78's

Amplifier: Radio Craftsmen C500 basic amplifier

Radio Craftsmen C300 Equalizer Preamplifier

Supplying us with this list, Mr. Wallace also pointed out that the Craftsman C300 preamplifier was no longer in production, and suggested as an alternate choice (both pre-amp and amplifier) the Scott 214-A. Radio Craftsmen, Inc., informs us that the C300 was discontinued because it was to difficult to mass-produce; a substitute unit will appear soon.

Mr. Wallace also threw in a wee bit of a moral, free (he is a true Scot, and such behavior is unusual), to wit: if a person keeps his attention on the fact that Tosca is coming to him by way of Audak out of Tannoy, or GE out of Altec, it will sound mechanical. If he simply sits down to enjoy an hour or so of music, even by way of (horrors!) an elderly low-fi machine, it is likely to sound delightful. The most important component, in even the best rig, is the listener's imagination.

SIR:

We all enjoy reading the magazine; got a very special kick out of the article by Ed Wallace — who lives in these apartments, although we have not had the pleasure of meeting him.

I am glad to know that the magazine is gaining in circulation.

M. Soulsby

New York, New York

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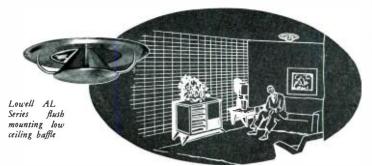






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Ask your Sound Dealer about Lowell speaker baffles, or, write for complere details (enclosing a dimensioned sketch of your music room), to

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For complete information regarding the Hartley 215, and the new Boffle Speaker Enclosure, Preamplifier, and Main Amplifier, write to Department HF-5.

Prices slightly higher West of the Rockies



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No doubt you have learned by now that the needle in your record player is not permanent. It is tipped with either sapphire or osminm metal which should be changed after about 20 hours of playing, in order to protect your valuable records.

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Sound Reproduction: Third Edition, by G. A. Briggs. 368 pages, 51/2 by 81/2; 315 illustrations. Cloth. Published by Wharfedale Wireless Works, England. 1953. \$3.50. HIGH FIDELITY Book Department No. 110.

For a great many non-technical high fidelity enthusiasts, the series of books by G. A. Briggs has been a prime source of education and enlightenment.

This, the third edition of "Sound Reproduction" is more than up to expectations. Not only has the size of the book been increased by over 100 pages, but it benefits from many more illustrations and, in particular, from a method of pictorializing sound which the author developed about

A large part of "Sound Reproduction" is devoted to loudspeakers and speaker enclosures (there are plenty of working drawings for practical as well as experimental enclosures). There are many additional chapters on a whole range of subjects — from crossover networks to pickup tracking error. Magnetic and disk recording is described much more fully than in the previous edition.

Readers of HIGH FIDELITY will not need to be told about some chapters: they formed part of a series of articles which appeared in earlier issues.

Price Guide to Collectors' Records, edited by Julian Morton Moses. 31 pages, 6 by 9. Published by American Record Collectors' Exchange, New York

Despite the continuing issuance on longplaying disks of famous recorded performances of the past, collecting originals still retains its lure. And there is still money in it. Anyone who finds himself in possession of any of three 1903 Columbia records of the basso Edouard de Reszke can demand for it an "average" price of \$150! There are six records of the baritone Charles Gilibert, four of contralto Ada Crossley and five of mezzo-soprano Zelie De Lussan worth \$40 apiece. And so on. This little paper-back book put together by Julian Moses is, in effect, nothing but a catalogue of reasonable prices for the 7,000 collectors' records he listed in his 1949 Collectors' Guide to American Recordings, 1895-1925 (same publisher; \$3.75; both books: \$5.50). For the novice who thinks he may have uncovered a treasure trove in Grandma's attic, the Price | Guide will suffice. J. M. C.

Worlds of Music, by Cecil Smith. 328 pages, 51/2 by 81/4. No illus. J. B. Lippincott Co., Philadelphia. \$5.

There is a cockeyed but durable notion current that in America music is slighted. Actually, there isn't and never has been a place in the world where music is listened

Continued on page 126



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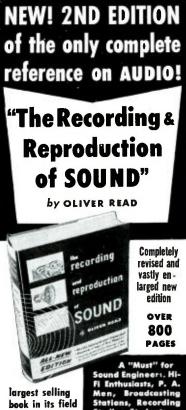
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CONTENTS

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Continued from page 124

to so much as in present-day America. And this goes for live music as well as for recorded and broadcast music. Indeed, the concert business' annual earnings are substantially larger than those of professional baseball. All of which makes music in America not only an important cultural phenomenon, but a truly enormous industry. It is also - another surprise - one of the most profitably organized industries ever seen, and one of the least well-known. Cecil Smith, who has served as music critic of the Chicago Tribune and editor of Musical America, probably knows as much about it as anyone alive. In this book (dedicated, incidentally, to two of HIGH FIDELITY's reviewers, Hinton and Ericson), Smith takes the music business apart - not maliciously, just analytically. He divides it into "worlds" those of the music managers, of the organized audience (of which YOU may well be a part, without realizing it), of the performer, of the composer, of the opera, of New York and the "sticks"; of the ballet, of the music educator. The worlds he explores are all fascinating, even with their glamor peeled off. L. M. C.

Home Music Systems, by Edward Tatnall Canby. 300 pages, 5½ by 8 inches. 26 page plates; numerous sketches by the author. Harper and Brothers, New York. \$3.95.

Ed Canby began writing record reviews for the Saturday Review just before World War II. After the war, he had a useful idea. He divided his capsule reviews into two parts—music and engineering. And he began occasionally to run a sort of footnote paragraph about such devices as new magnetic pickup cartridges. As far as can be discovered, this was the first time a word had been written about high fidelity equipment in a layman's publication in the United States. Canby started something!

Later he became record reviewer for Audio Engineering, then for Harper's Magazine, and collaborated on a book about home music listening. Now he has written one of his own, about hi-fi rigs or, as the trade would like to have them called, home-music systems. Canby is not an engineer, he was trained as a musician, and this is a book not for the technically erudite but for the literate layman who wants to buy or to build — and to enjoy — a home music system. Notice the number of instances in the book where Canby points out that you can get a slight electric shock from such-and-such a connection. This is the mark of the man who has acquired his audio education by experiment, by tinkering. Such information is very useful to novice readers, but a professional engineer simply wouldn't think of including it. He never got a shock; he knew how not to, in advance.

Practical Mr. Canby, aware of where the bulk of his readership will be, properly devotes most of his space to modestly priced components and contributes as many moneysaving ideas as he can.

It must be added that, inevitably, between when he wrote the book and when it appeared in print, sundry of his specific equipment recommendations became obsolete. But some of his general recommendations never will, and are invaluable.

J. M. C

ADVERTISING INDEX

Allied Radio Corp.	. 95
Allied Radio Corp. Asco Sound Corp. Altec Lansing Corp.	. 128
Altec Lansing Corp	. 23
Amney Electric Corp.	20
Angle Genesee Corp.	. 10
Audak Co	. 115
Audio Devices, Inc inside Front	Cover
Audio Exchange, Inc.	
-	
Beam Instruments Corp.	.114
Beam Instruments Corp	. 18
Berkeley Custom Electronics	111
Bogen, David, Co	, 126
Book Department 104	1, 105
Bozak, R. T., Co	. 107 . 2, 3
British Radio Electronics, Ltd.	120
Brockner Electronic Lab	109
Brook Electronics, Inc.	103
Brooklyn High-Fidelity Sound Center	
Browning Laboratories, Inc	93
Califone Corp	96
Capitol Records, Inc	Cover
Capitol Records, Inc	116
Columbia Records	89
Concertone Recorders, Berlant Associate	s. 108
Cook Labs, Inc	0, 107
Craig Audio Lab	111
Crestwood Recorder Division	121
Custom Electronics, Inc	125
Danby Radio Corp	119
Dubbings Co	
Doublings Co	1, 119
Duotone, Inc	119
Duotone, Inc	119
Duotone, Inc	119
Duotone, Inc	119
Electro-Voice, Inc. Electro-Voice Sound Systems	119
Electro-Voice, Inc Electro-Voice Sound Systems Espey Mfg. Co., Inc	119
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc.	119
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc.	119
Electro-Voice, Inc Electro-Voice Sound Systems Espey Mfg. Co., Inc Fairchild Recording & Eqpt. Co Federated Purchaser, Inc Fisher Radio Corp	119 7 111 125 108 124
Electro-Voice, Inc Electro-Voice Sound Systems Espey Mfg. Co., Inc Fairchild Recording & Eqpt. Co Federated Purchaser, Inc Fisher Radio Corp	119 7 111 125 108 124
Electro-Voice, Inc Electro-Voice Sound Systems Espey Mfg. Co., Inc Fairchild Recording & Eqpt. Co Federated Purchaser, Inc Fisher Radio Corp	119 7 111 125 108 124
Electro-Voice, Inc Electro-Voice Sound Systems Espey Mfg. Co., Inc Fairchild Recording & Eqpt. Co Federated Purchaser, Inc Fisher Radio Corp	119 7 111 125 108 124
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gareway to Music. General Apparatus. General Rodio Company.	119
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co.	1197111125108124212, 31261181314
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gareway to Music. General Apparatus. General Rodio Company.	1197111125108124212, 31261181314
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus. General Rodio Company. Gray Research and Development Co Grommes	119
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus. General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co.	119
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company Gray Research and Development Co. Grammes Hallicrafters Co. H. A. Hartley Co., Inc.	119
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus. General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co.	
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus. General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. The Heath Co.	
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gareway to Music. General Apparatus. General Apparatus. General Rodio Company. Gray Research and Development Co Grommes Hallicrafters Co H. A. Hartley Co., Inc. Harvey Radio Co The Heath Co	
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co. Grammes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp.	
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp.	
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus. General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp.	
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp.	
Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music General Apparatus General Rodio Company Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp. James B. Lansing Sound, Inc. Jensen Industries, Inc.	
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp. James & Lansing Sound, Inc. Jensen Industries, Inc. Jensen Mfg. Co. Kelton Co.	
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Hudson Radio & TV Corp. James & Lansing Sound, Inc. Jensen Mfg. Co. Kelton Co.	
Electro-Voice, Inc. Electro-Voice, Inc. Electro-Voice Sound Systems Espey Mfg. Co., Inc. Fairchild Recording & Eqpt. Co. Federated Purchaser, Inc. Fisher Radio Corp. Garrard Sales Corp. Gateway to Music. General Apparatus General Rodio Company. Gray Research and Development Co. Grommes Hallicrafters Co. H. A. Hartley Co., Inc. Harvey Radio Co. The Heath Co. Holt, Henry, & Co. Hudson Radio & TV Corp. James & Lansing Sound, Inc. Jensen Industries, Inc. Jensen Mfg. Co. Kelton Co.	

ectronics	111
ectronicseonard_Radio, Inc	101
ivingston Electronic Corp.	106
ondon Records	75
owe Associates	111
	123
owell manufactoring Co	
Aagnecord, Inc	17
Acintosh Laboratory, Inc	98
	78
Ainnesota Mining & Mfg. Co he Music Box	92
he Music Box	68
lewark Electric Co	
lewcomb Audio Pdts. Co	9
	96
	115
Pickering & Co., Inc	26
Pilot Radio Corp	97
Precision Electronics, Inc.	122
	. 24
	.111
lam Co	.111
RCA Victor	73
	122
	103
	. 124
Ravland-Borg Corp	. 94
Reeves Soundcraft Corp.	. 22
	. 12
Revere Camera Co	
Rhapsody Record Shop111	
J. F. Rider, Publisher, Inc.	
	. 8
Sams, Howard W., Co., Inc	
Schwann, W	
Schwann, W	. 25
	. 80
Sound Workshop	. 115
· · ·	. 111
	. 102 . 113
Sun Radio & Electronics Co., Inc.	. 113
Terminal Radio Corp	110
Thorens Co	112
Transcriber Co	. 123
iranscriber Co	. 123
University Loudspeakers, Inc.	11
Urania Records, Inc	
United TransformerInside Back (
Similed TransformerInside Sack (
Vanguard Recording Society, Inc	. 79
	.111
	128
Voice & Vision, Inc	. 120
Weathers Industries	. 19
	. 91
	.111
	. 77
	. 110
Wholesale Radio Parts Co.	. 109
York Furniture Corp	.111

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H-2	Mike to grid	TF1A11YY	82	135,000	50	250-8,000	+21	16.00
H-3	Single plate to single grid	TF1A15YY	15,000	60,000	0	50-10,000	+ 6	13.50
H-4	Single plate to single grid, DC in Pri.	TF1A15YY	15,000	60,000	4	200-10,000	+14	13.50
H-5	Single plate to P.P. grids	TF1A15YY	15,000	95,000 CT	0	50-10,000	+ 5	15.50
H-6	Single plate to P.P. grids, DC in Pri.	TF1A15YY	15,000	95.000 split	4	200-10,000	+11	16.00
H-7	Single or P.P. plates to line	TF1A13YY	20,000 CT	150/600	4	200-10,000	+21	16.50
H-8	Mixing and matching	TF1A16YY	150/600	600 CT	0	50-10,000	+ 8	15.50
H-9	82/41:1 input to grid	TF1A10YY	150/600	1 meg.	0	200-3,000 (4db.)	-10	16.50
H-10	10:1 single plate to single grid	TF1A15YY	10,000	1 meg.	0	200-3,000 (4db.)	+10	15.00
H-11	Reactor	TF1A20YY	300 Henries-O D	C, 50 Henries-3	Ma. DC	, 6,000 Ohms.		12.00



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Length	1 25/64
Width	61/64
Height	1 13/32
Mounting	1 1/8
Screws	4-40 FIL.
Cutout	7/8 Dia.
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	SM	CASE
Length		11/16
Width		1/2
Height		29/32
Screw		4-40 FIL.
Unit Wei	tht	8 07

SUBMINIATURE AUDIO UNITS...SM CASE

Type No.	Application	M1L Type	Pri. 1mp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm	List Price
H-30	Input to grid	TF1A10YY	50**	62.500	0	150-10,000	+13	\$13.00
H-31	Single plate to single grid, 3:1	TF1A15YY	10,000	90,000	0	300-10,000	+13	13.00
H-32	Single plate to line	TF1A13YY	10,000***	200	3	300-10,000	+13	13.00
H-33	Single plate to low impedance	TF1A13YY	30,000	50	1	300-10,000	+15	13.00
H-34	Single plate to low impedance	TF1A13YY	100,000	60	.5	300-10,000	+ 6	13.00
H-35	Reactor	TF1A20YY	100 Henries	DC, 50 Henries-1	Ma. DC,	4,400 ohms.		11.00

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Type M-14880 30,000 ohms (.1 Ma. DC) to 3,000 ohms ... 6 MW ... 300 to 5,000 cycles.

Type M-14881 25,000 ohms (.5 Ma. DC) to 1,000 ohms ... 6 MW ... 300 to 5,000 cycles.



- * 200 ohm term nation can be used for 150 ohms or 250 ohms, 500 ohm termination can be used for 600 ohms.
- ** can be used with higher source impedances, with corresponding reduction in frequency range. With 200 ohm source, secondary impedance becomes 250,000 ohms . . . loaded response is -4 db. at 300 cycles.

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