

HI-FI

TAPE RECORDING



OUTDOOR ISSUE

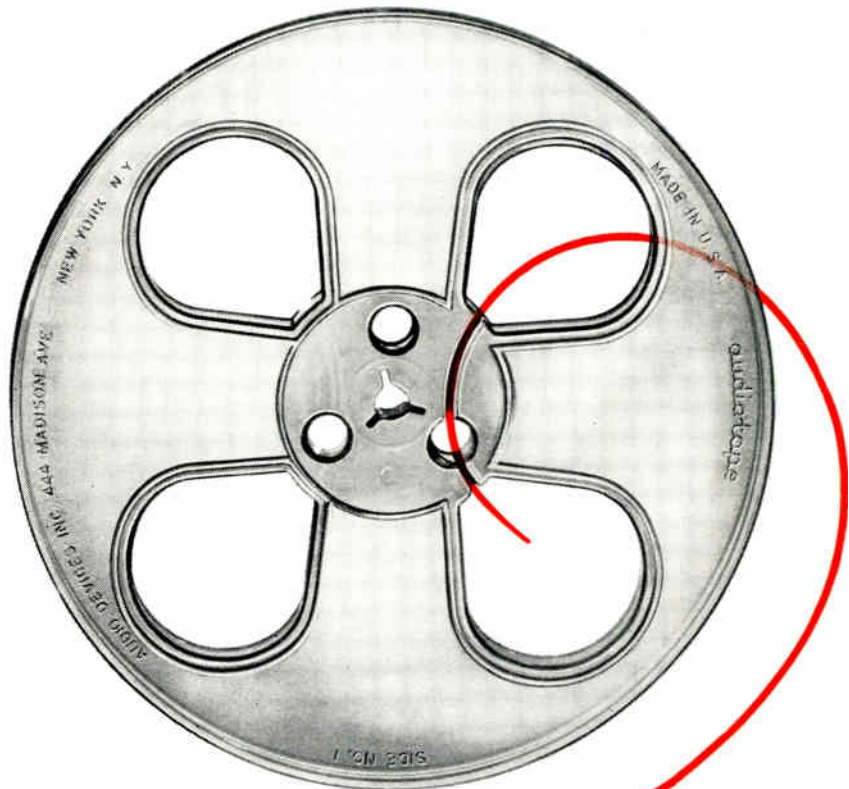
- Move Your Music Outdoors
- Using Parabolic Reflectors
- Recording Stereo Outdoors
- New Product Report: Viking Cartridge Machine—Fidelipos Tape Cartridge

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July, 1957

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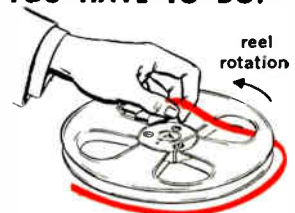
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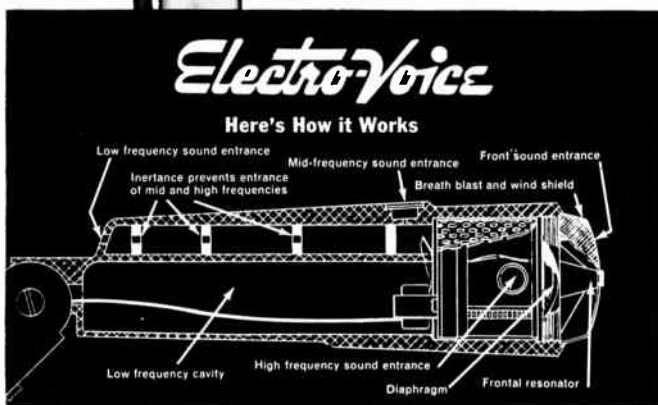
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HI-FI

TAPE RECORDING

VOL. 4 No. 8

JULY 1957

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IN THIS ISSUE

MOVE YOUR MUSIC OUTDOORS	Sam Chambliss	18
USING PARABOLIC REFLECTORS	Mark Mooney, Jr.	22
WONDERFUL COPENHAGEN	Erik Lindgren	24
OUTDOOR STEREO RECORDING	Robert Oakes Jordan and James Cunningham	27
NEW TAPES	Georgie Sigsbee	6
NEW PRODUCTS		12
TAPE CLUB NEWS		13
TAPE IN EDUCATION	John J. Grady, Jr.	14
TEEN TAPERS	Jerry Heisler	15
TAPES TO THE EDITOR		16
QUESTIONS AND ANSWERS		17
NEW PRODUCT REPORT, VIKING TAPE HANDLER & FIDELIPAC CARTRIDGE		30



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NEW TAPES

By Georgie Sigsbee

CLASSICAL

BALLET

OPERA BALLETS

La Gioconda

Aida

Djamileh

Faust

Samson and Delilah

Wuerttemberg State Orchestra, Stuttgart

Pro Musica Symphony, Vienna

Jonel Perlea, Conductor

PHONOTAPES SONORE PM 156

7 1/2, Dual...\$8.95

The main object of ballet in opera was to supply varied and delightful entertainment for the audience and by the late 17th century, due much to the French public's insistence that ballet be integrated into opera, the dance had become an important ingredient within operatic scores. Many composers had to inject terpsichore into their works, such as Gounod who adapted "Faust" to meet this requirement. However, there were some brave souls such as Wagner who refused to rewrite operatic scores so as to include ballet within the main structure and so suffered at the hands of the demanding French audiences; "Tannhauser" was hissed down when it reached the Paris stage.

Featured in the Third Act of Ponchielli's "La Gioconda" is the ever-charming "Dance of the Hours" which proves to be a light, attractive introduction to this tape.

The ballet of Eastern nature from the grand finale of the Second Act of Verdi's "Aida" is a whirling, stimulating dance of victory and a piece of vivid sonic brilliance as presented by the Wuerttemberg Orchestra.

The rather sombre, repetitious theme of Djamileh's dance from Bizet's one-act opera closes Track I. This and the following numbers are performed by the Pro Musica Orchestra.

Today Americans seldom see the ballet from Gounod's "Faust" but the exciting, lively music is often a part of concert programs. This superb ballet consisting of seven numbers is filled with effective orchestration and sparkling melodies in many diversified and contrasting moods. Interpolated to afford further spectacle, the ballet appears at the beginning of the final act where Mephistopheles has taken Faust to the Walpurgis Night revels and a banquet attended by ancient queens of beauty; the ballet ensues.

The "Bacchanale" from "Samson and Delilah" by Saint-Saëns is distinctly oriental. Depicting a sacred orgy, its dynamic, violent rhythms; brief and more gentle-natured middle section; and wild, swift climax; all go to make this a dramatic piece of music.

An excellent tape in all respects. Both orchestras under Perlea's direction perform in a highly satisfactory manner.

ORATORIO

G. F. HANDEL

Excerpts from the Messiah

And the Glory of the Lord

He shall Feed His Flock

For Unto Us a Child is Born

Thou Shalt Break Them with a Rod of Iron

Halleluja

I Know That My Redeemer Liveth

Adele Addison, soprano

Lorna Sydney, contralto

David Lloyd, tenor

Donald Gramm, bass

Chorus of the Handel and Haydn Society of Boston and the Zimble Sinfonietta

Thompson Stone, Conductor

THE BOSTON TAPE LIBRARY (Livingston)

BO 7-9

7 1/2, Stereo, Staggered or Inline...\$11.95

Sitting here listening to these excerpts from one of the greatest and most imperishable of oratorios, "The Messiah," I recall having read that after the first London performance Handel said he should be sorry if he only succeeded in entertaining people, for he wished to make them better. I believe he succeeded in his desire; for hearing parts, or the whole, can infuse one with the wish to do better. Created in 1741, in the incredibly short time of 24 days, Handel's splendid legacy bequeaths to the listener an inspiring, soul-enriching experience. The well-known Boston chorus and orchestra bring to this work sincerity and great depth of feeling. I could only wish to hear the entire performance.

As a substitute I proceeded to play the monaural tapes made during a local television "spectacular" directed by my husband several years ago and presented by over 250 musicians and singers of the University of Missouri. They do a pretty good job, too, but it proves that the scope of stereo sound is truly a wonderful thing.

This BOSTON recording was made at a performance in Boston's Symphony Hall in the late fall of 1955. The chorus, orchestra, and soloists give an excellent performance of these selections. Miss Sydney sings with sensitivity "He Shall Feed His Flock" with Miss Addison coming through in the second portion ("Come Unto Him") with a perfectly beautiful bit of singing. She also affectively executes the song of faith "I Know That My Redeemer Liveth." Mr. Gramm handles his solo in a strong, dramatic manner. His enunciation is precise. As for Mr. Lloyd... there is no tenor solo in this recording. Hearing the "Halleluja" chorus caused tingling on the back of my neck... it is no wonder crowds rise to their feet when this is sung.

This is a most worthy addition to the music library and with full-range stereo sound it is particularly brilliant and powerful. Flawless reproduction.

CHORAL

A CONCERT BY THE OBERLIN COLLEGE CHOIR

Exultate Deo (Scarlatti)

Surely He Hath Borne Our Grievs

(Graun)

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NORENE TATE—TENDERLY

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(includes contents of EL 7-2 BN)

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Another Livingston release of the unique interpretations of a master of folk song, this time on the Elektra label.

Elektra EL-7-2 BN
Monaural version: EL 7-6D
(including contents of EL 7-1 BN)

SABICAS

A stirring experience with the acknowledged master of flamenco guitar playing.

Elektra EL 7-4 BN
Monaural version: EL 5-4

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Be Not Afraid; I Am With Thee (Bach)
 David Mourneth For Absalom (Lockwood)
 Beautiful Savior (Christiansen)

Robert Fountain, Conductor
 LIVINGSTON TAPE LIBRARY 714-BN

7 1/2, Stereo, Staggered or Inline...\$11.95

This mixed choir of some 50 talented young voices, singing a cappella, present these sacred works with dignity and distinction. Their able "taskmaster" Mr. Robert Fountain, who is an Associate Professor of voice at the pioneer Oberlin College Conservatory of Music, has achieved a well-disciplined vocal organization. Their modulation, control and intonation are a compliment to his ability as a choral conductor.

Hearing this young choir singing with profundity "David Mourneth for Absalom" and delivering with inspiration the motet by Bach gives one the sensation that "God's in His Heaven, all's right with the world."

Not as overwhelming as the John Halloran Choir, nor as professionally polished as the Roger Wagner Chorale, this choir is nonetheless a small gem which, with wide-range sound, should cast some radiant musical lights from your high fidelity set. Put it on and watch a lovely sunset.

CHORAL MOZART

Missa Brevis in F (K 102)

Kyrie
 Gloria
 Credo
 Santus
 Benedictus
 Agnus Dei

The Oberlin College Choir, Soloists and Instrumental Ensemble

Robert Fountain, Conductor
 LIVINGSTON TAPE LIBRARY 713 BN

7 1/2, Stereo, Staggered or Inline...\$11.95

A beautifully accomplished recording of Mozart's short Mass in F. The assemblage imparts warmth and vibrant spirit to the music and the grandeur they bestow to this work makes this reading a significant one. During the slower, more subdued "Agnus Dei" the beauty they weave is not even broken by the sound of someone coughing twice. The soloists do an admirable job and blend as an integral part of the whole. The choir (which is the familiar Oberlin touring choir) and the instrumental ensemble are well-balanced and ably handle their work.

Impressive from start to finish . . . excellently engineered.

ORCHESTRAL

FOREVER THE WALTZ

On the Beautiful Blue Danube
 Voices of Spring
 Vienna Blood
 Treasure Waltz

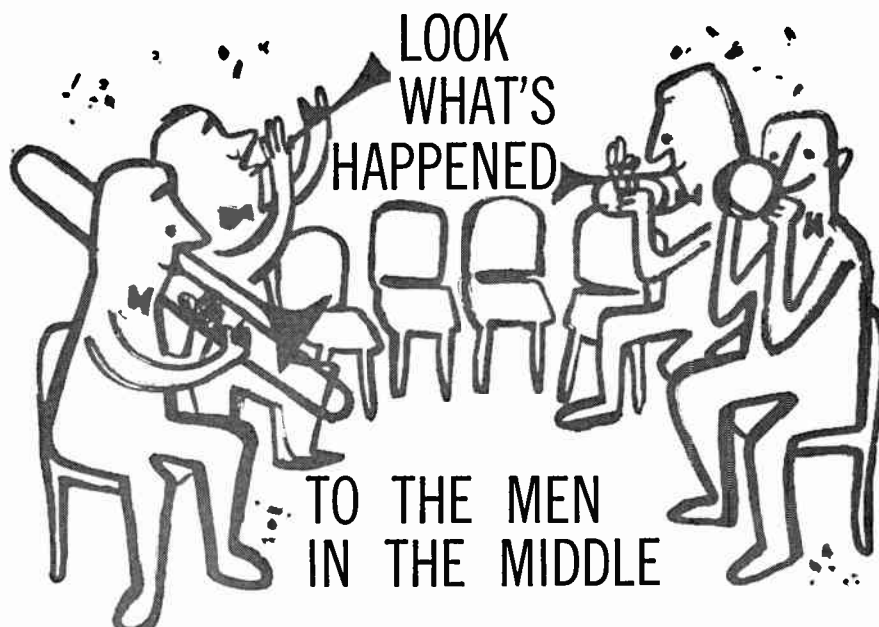
Vienna Bohemian Orchestra

Fried Walter, Conductor

RCA AC-29

7 1/2, Dual...\$6.95

Recorded in Europe by an orchestra which captures and transmits these graceful waltzes in a most agreeable manner, these ingratiating melodies should provide pleasant listening to those who possess a romantic, sentimental inclination toward the Wiener Walzer.



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A VOCESTRA is an orchestra of human voices, producing hummed or tonal sounds, used to accompany a solo musical instrument. It's novel, different, and unbelievably effective in full stereo sound.

Catalogue C151, 31 minutes, 7 in. reel, \$8.95.

NEW-DOC EVAN'S DIXIELAND ENCORE

The response to the first Doc Evans album has made this second release imperative. This is definitive Dixie from one of America's foremost interpreters.

Catalogue A123, 16 minutes, 5 in. reel \$6.95.

NEW-SHOWCASE FOR SYMPHONIC BAND

Here is symphonic band music at its very best, played by the Chicago Symphonic Band—48 woodwind, brass and percussion instruments. Ten exciting selections, from a Latin Beguine to a military march.

Catalogue C141, 30 minutes, 7 in. reel, \$8.95.

NEW-CHAMPAGNE FOR TWO

This is music in a romantic mood—the silken strings of the Candlelight Trio weaving an atmospheric spell with a selection of familiar ballads for intimate listening.

Catalogue B150, 23 minutes, 7 in. reel, \$7.95.

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For those who may have tired of hearing too many renditions of the "Blue Danube" I heartily endorse the Vienna Bohemian Orchestra's version which proves to be delightful. The lilting strings and old-world sound of the czimbalon transport one back to the gay life of Vienna.

Fine fidelity.

POPULAR

DANCING AND DREAMING

Somebody Loves Me
Don't Blame Me
The Breeze and I
The Way You Look Tonight
Solamente
Easy to Love
Time on My Hands
Green Eyes
Out of Nowhere
It Had to Be You
How Deep Is the Ocean
Amor

The Jay Norman Quintet

CONCERTAPES 24-2

7½. Stereo, Staggered or Inline...\$11.95

Concertapes has a hit in this tape. Anyone throwing a party or having a yen to hear some pleasant background music will want this album of standard tunes which are played with a fresh slant and impeccable style. Featuring Norman, an above-average keyboard artist, ably assisted by Chuck Calzaretta at vibes, Claude Scheiner playing guitar, Max Mariash on drums and Lew Skalinder at bass, you will find this a neat, artistic quintet.

A fitting title for this package—the general effect being smooth and dreamy. Arrangements range from the fast "Amor" to the slow "Don't Blame Me." Recorded at a new studio, Universal Recording Co., in Chicago, the reproduction is very realistic.

A MUSICAL TRIP AROUND THE WORLD

Andalucia
Baia
Tzena Tzena
Chique
Cruiskeen Lawn
Misirlou
Autumn Leaves
Frasquita Serenade
Roman Guitars
Estrellita

Lenny Herman and band

LIVINGSTON 1093-BN

7½. Stereo, Staggered or Inline...\$11.95

Another tape (Jan. 1957, * 1088-BN) of dance music, a la standard night club style, presented by Lenny Herman, accordion; Alan Shurr, sax and clarinet; Lee Friswold, bass; Stan Scott, drums; and Charles Shaw, piano and organo. These tunes are designed to take you here and there and are even interspersed with various linguistic vocalizing. Recorded at the Hotel New Yorker, the tape is clear and the stereo effect is good.

GERSHWIN

ANDRE PREVIN PLAYS GERSHWIN

Love Walked In
Maybe
How Long Has This Been Going On
Love Is Here to Stay
They All Laughed
There's a Boat Dat's Leavin' Soon for New York

Lookin' for a Boy
Nice Work If You Can Get It
I've Got a Crush on You
Strike Up the Band

RCA AP 40

7½. Dual...\$6.95

Previn gives these compositions a modern twist with some very good progressive jazz arrangements much as Gershwin might well have done himself. Previn's sure, brisk touch on the piano, his interpretive insight and the catchy, foot-tapping rhythms furnished by A. Hendrickson playing guitar; A. Shapiro on bass; and I. Gottler at the drums, combine to make this a good tape. The smooth "Maybe," the abstract version of "How Long Has This Been Going On," the bongo beat set by Gottler for "There's a Boat Dat's Leaving Soon for New York," and the fast, jazzy "Strike Up the Band" will serve to convince you this group is very adroit.

GERSHWIN, BY GEORGE

Man I Love
S'wonderful
Foggy Day
Love Walked In
Somebody Loves Me
Someone to Watch Over Me
They Can't Take That Away from Me
Summertime
'Tain't Necessarily So
I Got Plenty of Nothin'
Embraceable You
Liza

JEMO JTT-1-S

7½. Stereo, Stacked...\$11.95

JEMO presents another piano artist, George Greeley, accompanied by Lou Singer at the drums and vibes, Manny Stein officiating at bass and our friend (see above review) Al Hendrickson again performing on the guitar. This well-knit group takes a languid, easy approach to Gershwin's melodies. Soft lights, the right person, and maybe even a nice place to dance wouldn't be out of place. What keeps these selections from sounding too standard is the talent applied by Mr. Greeley in arranging them. His facility at the keyboard is not to be overlooked either. Tastefully presented from start to finish. Another Jemo stereo hit. Excellent reproduction of the piano.

Gershwin fans should welcome both of the above tapes; there is only one repeat number. Here you have different styles, both handled well, both tapes with flawless reproduction; of course, one is stereo, by George!

SHE DANCES OVERHEAD

Dancing on the Ceiling
Mimi
Nobody's Heart
Blue Moon
Isn't It Romantic
I Married an Angel
Mountain Greenery
Give Her a Kiss
Wait 'Til You See Her
I Didn't Know What Time It was
This Funny World
Have You Met Miss Jones?

Matt Dennis with Harry Geller and his orchestra

RCA BP 34

7 1/2, Dual... \$8.95

An adept arranger-composer (with Tommy Dorsey for several years) as well as pianist, Dennis is currently singing and playing in clubs in Hollywood. He croons these tunes of Rodgers and Hart in an easy manner; i.e., "Blue Moon." Teenagers who are not up the rock 'n roll or Presley specie of tree should enjoy this album.

Arrangements, orchestral backing and reproduction are good.

The title for the album is lifted from the lyrics of the first selection, in case you were wondering.

JAZZ

APHRO-DISIA

- Jungle Fantasy
- Lonely Flute
- Song of India
- Wedding in Monaco
- Algiers
- Flute Hurricane
- Jungel Fifes
- Sahara
- Merry Flute
- Zen
- Dardanella
- Hindustan

Bob Romeo Sextet with Laurindo Almeida
OMEGATAPE ST-7011

7 1/2, Stereo, Staggered or Inline... \$11.95

This is an unusual tape featuring, as it does, the flute as lead instrument. This unique twist, coupled with top arrangements of these sensuous, exotic jungle-type rhythms, help to create a hypnotic effect on the listener. Or so it did with me as I found myself completely engrossed with Romeo's handiwork and the resultant sounds thereof. Having always enjoyed the flute I find my reaction the same even though it is out of, what I consider to be, its natural habitat. Romeo manages to blend it quite naturally into the field of jazz and treats the instrument with qualification and respect never triple tonguing, etc. to the point of vulgarity.

Carlos Vidal takes second billing, putting in a remarkable performance from the opening bongo beats of "Jungle Fantasy" to the closing notes of "Hindustan." The Brazilian guitar virtuoso, Almeida, spices the tape with two solo spots; one in "Lonely Flute;" the other in "Sahara." His excellent guitar work would be an important addition to any group; I still would like to hear a tape of Almeida . . . solo. Eddie Cano shows a nice touch at the piano especially in "Song of India," "Dardanella," and "Hindustan." Vasquez gives solidity to the group and Stoller timbales the timbales.

At the end of "Flute Hurricane" (catch the drums here) the flute hits a penetratingly high note which serves to point up the lucid reproduction on this tape. A real high fidelity recording.

GIN BOTTLE 7 PLAY AGAIN

- 4 or 5 Times
- Aggravatin' Mama
- Angry
- Apex Blues
- Eccentric
- Pallet on the Floor
- Dallas Blues
- Wolverine Blues



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EMPIRICAL TAPE LIBRARY (Livingston)

7-6 BN

7 1/2, Stereo, Staggered or Inline... \$11.95

This Dixieland aggregation combines the New Orleans and Chicago jazz styles and blends them in an informal, but enthusiastic, manner. Carl Halen blows trumpet; George Stell, trombone, Jack Pollack, tuba; and Jim Campbell, clarinet. Fred Gary beats it out on the piano, Jan Carroll on banjo and Tom Hyer at the drums. They give out with a steady beat and, in my opinion, do their best work on the three blues selections. "Eccentric" makes room for some good solo bits. On this tape Halen, Campbell and Gary stand out with Hyer getting in some good swipes at the drums. The piano is rigged so that it produces a tinny, old-time sound. In the wide field of jazz this group is not a spectacular one but they are good and entertaining.

I am not too satisfied with the engineering job as, but for the last two numbers, the band seems a little removed so that you have the feeling of sitting back in a room, at times straining to hear solo bits. Perhaps this is because the recordings were made "on location" and did not have the advantage of studio acoustics. In the slow, dirge-like "Aggravatin' Mama" you'll hear the noise of a crowd which transports you into a smoke-filled backroom atmosphere.

There is not enough good balance and separation of sound where there could well be to advantage. I found switching to monaural brought the band in closer, but for loss of the piano. This is how high fidelity can become high futility; instead of the thinly spread sound I wanted a ringside seat. Why this desire seems satisfied in the last two numbers I don't know . . . but they seem definitely better. You might find it interesting to go back to the February 1956 issue of TR and read the article by C. E. Smiley which deals with the recording techniques used in reproducing this particular band.

A BUCK CLAYTON SESSION

Flyin' Home
Please Don't Talk About Me
Fast But Soft
I Found a New Baby
Easy to Riff
Buck's Bon Voyage
S'wonderful
That's My Desire
Blue Feeling

OMEGATAPE 1003 (JAZZTAPE)

7 1/2, Dual . . . \$9.95

Although Clayton has top billing on this album, the stellar attractions are the French jazz musicians, notably the tenor sax men, De Villers and LaFitte. This small jazz group produces some loud, big sounds. The arrangements provide plenty of opportunity for solo work, one of the best examples being the slow blues number "Blue Feeling." Particularly good on fast numbers such as "Fast But Soft" (they play like they drive their cars) this French combo demonstrates a good feel for the jazz medium.

Clayton was a bright star in the Basie outfit back in the 30's and 40's, but the talent that made him a leading trumpet stylist is not evident on this recording.

"Peanuts" Holland who played with Hawkins, Henderson and Redman, takes over trumpet lead on the second track. He comes through a bit better than Clayton. He seems to catch fire toward the end of "S'wonderful" and puts in some good notes during "Blue Feeling." Getting a weak start in "Flying Home" he gets charged along the way; however, on this number it is LaFitte, on sax, who shines forth.

It may be a little confusing as to who is performing on what number as there are two solo groups which switch about. The lineup of musicians goes like this: Clayton and Holland on trumpet; Michel de Villers and Guy LaFitte, tenor sax; Andre Persiany and Jean-Claude Pelletier, piano; Mac Kack and Girard Pochonnet, drums; Jean-Pierre Sasson, guitar; George Daly at vibes and Charlie Blareau on bass.

Sasson, Persiany and Pelletier show considerable talent. Daly is a fine artist. His work at the vibes gives strength to the rhythm section. On "That's My Desire" there is a long vibie solo which, according to the front page notes, is by Daly and according to the annotations by Ralph Gleason of "Down Beat" serve as a vehicle for vibist Nobylad, a disciple of Hampton. Nowhere else can I find that name listed.

This is not highly polished jazz; it has its rough edges but the overall effect is good and I recommend that jazz fans give it a listen. The reproduction is clear. In a few places the highs are over-attenuated, and; where the sax in "Flyin' Home" is close in, the trumpet seems too far back; but all in all it is interesting to hear these French jazz men.

THE HAWK IN HI FI

The Day You Came Along
Little Girl Blue
I Never Knew
Dinner for One Please, James
The Bean Stalks Again
His Very Own Blues
Body and Soul
Have You Met Miss Jones?
The Essence of You
There Will Never Be Another You
I'm Shooting High
39" - 25" - 39"

Coleman Hawkins with Billy Byers and orchestra

RCA BP-37

7 1/2, Dual . . . \$8.95

Coleman "Bean" Hawkins, top tenor sax star, puts forth a lustrous performance on this tape. Winner of more awards and polls than there is room to mention, he shows why from the moment he starts blowing in the easy "The Day You Came Along" to the uptempo "39" - 25" - 39". This latter number and "His Very Own Blues" are the best fast rhythm bits. The majority of pieces are delivered in a relaxed style with young Byers and his orchestra lending nice backing, leaving Hawkins the dominant factor.

Represented in the band are such well-known jazz artists as Al Cohn and Zoot Sims in the reed section; Ernie Royal and Nick Travis on trumpet; Urbie Green, trombone; and included in the rhythm section are Hank Jones, Barry Galbraith, Milt Hinton and Osie Johnson. They are par-

ticularly impressive on the hot rhythm numbers.

As should be expected, Hawkins gives an outstanding version of "Body and Soul."

I take exception to the liner notes which state that this is a "big, shouting band . . . which constantly pushes the saxophonist and challenges all his craft and experience as he tries to top it." And later in reference to Hawkins, "driving, charging, chopping out his lines . . ." This is a big band and during their breaks get in some Montavani-type string work, etc., but I don't feel they push the Hawk at all, but rather roll out the red carpet for him to walk upon. He goes on unchallenged and there is no effort on his behalf to top anything . . . for he is already there. There are two "shouting" (if you will) selections, two more or less uptempo, and the rest are slow smoothies. So don't prepare for the Hawk to be driving and chopping, for you will find him quite effectively relaxed.

Top reproduction.

NOVELTY

HONKY-TONK IN HI-FI

Who's Sorry Now
Georgia Cabin Door
All Alone
Lonely Hawaii
Valiant Volunteers
Waiting for the Robert E. Lee
Ma, He's Making Eyes At Me
The Sheik of Araby
Baby Face
Tuck Me to Sleep in My Old 'Tucky Home
Lullaby of Broadway

SONOTAPE SW 1053

7 1/2, Dual . . . \$8.95

If you happen to be in the vicinity of Utica, New York during your vacation, you and the family might enjoy dropping in at the Musical Museum at Deansboro, New York where Mr. and Mrs. Hardie Sanders operate a museum devoted to the perpetuation of such instruments as music boxes, band organs, barrel organs, calliopes and nickelodeons. Visitors can play as well as inspect these musical antiques.

The instruments recorded on this tape are the relatives of the player piano—the nickelodeons. The forerunner of the jukebox can fray your auditory nerves even faster than its present day counterpart. However, from a nostalgic viewpoint, the discordant sounds on this tape . . . the whir of the motors, the gasp of the bellows, and the clamorous razz-a-ma-tazz musical results . . . are worth hearing. It is a collector's item in itself.

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Real low fidelity via high fidelity. From the opening clank of the nickel in the slot to the closing refrains of "Lullaby of Broadway," prepare yourself for a preponderous amount of noise. I found it very interesting to compare these musical monsters the second time around. In "Georgia Cabin Door", the Seeburg Orchestron sounds as though they threw everything, including the kitchen sink, into this piece of equipment. The Link Piano in "All Alone" has a raucous sound and the xylophone effect is what jangled nerves might sound like. I have a preference for the Nelson-Wiggen Orchestron ("What's the Use, etc.") although the bass effect in "Waiting for the Robert E. Lee" is thuddy.

You'll find yourself thankful that music is better than ever and that either an aspirin or bufferin (whichever you feel gets there faster) can reduce the effect of hearing this sorta thing via high fidelity. Don't get me wrong this IS an amusing and interesting tape and well recorded. I am glad there are people like the Sanders keeping such past traditions alive.

MISCELLANEOUS

GUITARRA ESPAÑOL

Nocturne

Recuerdos de la Alhambra

Leyenda

Preludio

Pagina Romantica

Danza 5: Playera

Autumn Day Suite

1. Out Walking
2. Children at Play
3. Indian Creek
4. Homeward Bound

Richard Pick, Guitarist

CONCERTAPES 24-1

7 1/2, Stereo, Staggered or Inline . . . \$11.95
(also available on monaural)

Richard Pick has given solo recitals, played with such major orchestras as the Chicago and St. Louis Symphonies, appeared on Garroway's TV show and generally gone from Coast to Coast displaying his skill on the guitar. He treats the instrument in a highly competent fashion, demonstrating to advantage his nimble fingering and good phrasing. To hear him play is a thoroughly entertaining experience. Pick's own composition "Autumn Day Suite" is amusing and clever.

The clarity of the recording is superb. However, I found myself wishing the close-in mike technique had not been applied so avidly as the fingers sliding up and down on the strings and each squeak and reverberation of the strings is picked up by the sensitive mike and tends at times to intrude into the music: I don't remember being so cognizant of these noises when sitting beside my Dad as he played this instrument; these sounds were tossed into the air and diffused, but here the mike tosses them into your lap.

For those who like guitar work, this is a fine tape with a versatile artist. I agree with Concertapes when they say ". . . heard in full roundness," and ". . . realism of such lifelike quality . . ." I do not believe stereo reproduction is essential when there is one artist performing on an instrument such as this one.

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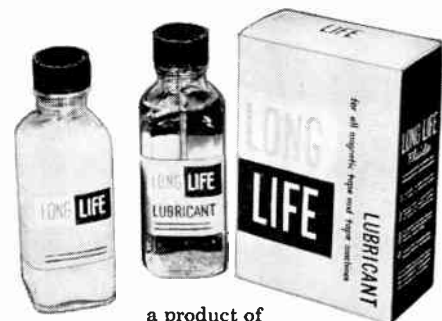
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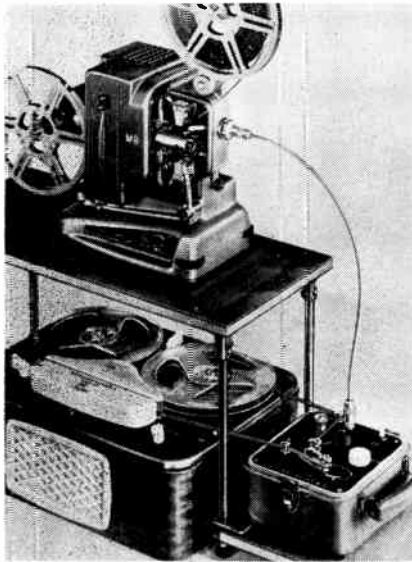
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EMC Recordings Corporation
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NEW PRODUCTS

BOLEX SYNCHROMAT



Bolex Paillard has introduced the Bolex Synchronomat, which accurately synchronizes sound with 8 mm films. A recording is made on regular magnetic tape using any 3¾ or 7½ ips tape recorder with horizontal drive. The pictures are taken at the normal speed of 16 frames per second. The sound is recorded while projecting the completely edited film. Tape recorder and projector are kept in accurate synchronization by means of the Synchronomat. This small, electro-mechanical device continuously regulates the projection rate from beginning to end so that sound and film are permanently synchronized with each other. This is accomplished by letting the tape run over the guide rollers of the Synchronomat before it is wound up on the take-up reel of the recorder. Any Bolex M-8 or M-8R can be converted to be used with the Synchronomat. For complete details and price, contact Paillard Inc., 100 Sixth Ave., New York 13, N. Y.

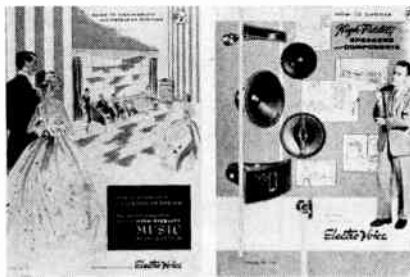
BELL PLAYMATE



Bell Sound Systems, 555 Marion Road, Columbus, Ohio, has introduced the "Play-Mate" recorder. This recorder is the first of its kind to be made available in three models: Monaural Record-Playback; Inline (Stacked) Stereophonic Playback, and Offset (Staggered) Stereophonic Playback. The machine features three heavy-duty, 4

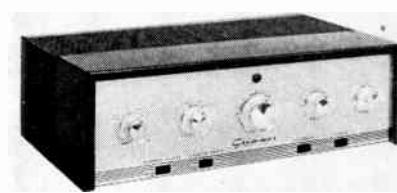
pole motors, electro-dynamic positive braking, piano-key touch controls, wow and flutter of less than ¼ of 1% at 7½ ips, and it is housed in a smart-looking durable carrying case, with removable lid. Built-in storage is provided for extra reels, and each recorder is equipped with a mike, one empty 5" reel and one full reel of tape. Stereophonic demonstration tape and connecting cables are standard with stereo models. Models available are as follows: RT-204 Monaural Record/Erase Playback, \$179.95; BT-2051B Monaural Record/Erase with Stereo Playback—Inline Heads, \$224.95; and BT-2050B Monaural Record/Erase with Stereo Playback—Offset Heads, \$209.95. For additional information, contact the manufacturer.

E-V CATALOG



Electro-Voice, Inc. has added Catalog 118, "How to Choose High-Fidelity Speakers and Components," to its list of available literature on hi-fi equipment. This catalog contains detailed information on building block kits used to improve an existing hi-fi speaker system. 118 supplements Catalog 117, "Guide to High-Fidelity Loudspeaker Systems." Together, these two catalogs form a complete guide to the selection of speaker systems which will give the fullest enjoyment of high-fidelity music reproduction. Thirty-two colorful, informative pages are available upon request for only 25¢ to cover postage and handling. Send your request for Catalog Guides 117-118, together with 25¢ to Electro-Voice, Inc., Buchanan, Mich.

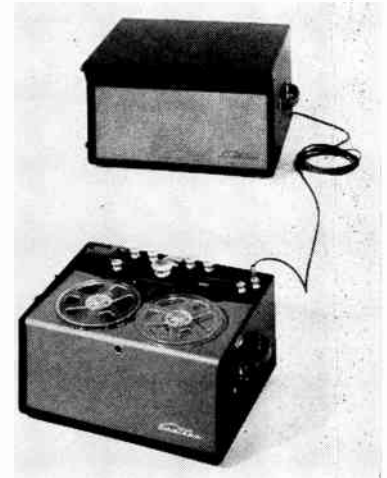
GROMMES AMPLIFIERS



Grommes, 9109 King Street, Franklin Park, Illinois now has available the new Grommes PG series of high fidelity amplifiers. Each unit in this line features advanced feedback circuitry, a full set of controls, unusual flexibility, clean reproduction and rugged durability. The PG line of amplifiers is attractively styled in the new flat compact design and finished in charcoal gray with brushed brass trim. The

Grommes 10PG10 watt amplifier is modestly priced, yet contains features of more costly amplifiers; the 15PG is a 12 watt amplifier which features record compensator, loudness control, wide range bass and treble controls, rumble and scratch filters and six inputs including one for tape head; the 20PG is a new deluxe 20 watt amplifier with all the features of the 15PG plus higher power in the output stage. For complete details and prices, write to Grommes.

EKOTAPE STEREO



Webster Electric Company, 1900 Clark St., Racine, Wisconsin, has introduced its 290 Stereophonic Ekotape tape player. It is also a complete monaural recorder-reproducer. The machine features the stacked head arrangement; has eight watts of power output, matched tweeter and woofer built-in crossover network-plus an additional eight watt amplifier necessary for true stereophonic reproduction; and each amplifier has individual tone and volume controls for maintaining a perfect balance between speakers. The 290 can be used with any available radio or high fidelity speaker, or with a companion speaker that matches the 290 in construction and electronic characteristics. It is housed in a silver-flake black cabinet with brushed aluminum controls and trim. An omni-directional TV-type mike and 600 feet of stereo demonstration tape is included with the machine. For price and additional information, write to Webster Electric.

TAPE VILLAINS

A novel 32-page vest pocket size booklet, "The 7 Old-Fashioned Villains of Tape Recording," is being published by ORRadio Industries, Inc. It tells in humorous vein how the "seven-old-fashioned villains were wreaking endless woe" on tape recorder users and how they were "finally foiled" by Irish Tape's little leprechaun, F. R. O'Sheen. The text is illustrated with caricatures of all the "villains." As an added feature, a playing time chart is supplied on the back cover of the booklet. Copies may be obtained, at no charge, by writing to F. R. O'Sheen, ORRadio Industries, Inc., Shamrock Circle, Opelika, Ala.

TAPE CLUB NEWS

Activities of the Chester branch of the British Amateur Tape Recording Society include making tape recordings for distribution to hospitals in the area. The recordings are voices of the patients' relatives living in other parts of the world. Requests made by hospital patients are passed on to the society, which in turn tries to contact a member in the appropriate country and district. Every effort is made to get the recording, although success cannot always be guaranteed. E. G. Yates, the club secretary, relates that plans for the formation of more local clubs are under way.

American Tape Exchange member, Dick Conklin, has tried an experiment in his tape exchanges with a fellow member. Side two of the tape exchanged is reserved for question and answer time. Dick asks his tape pal a question and then leaves about 15 seconds for an answer. He repeats this procedure for all the questions he has in mind. His correspondent then answers the questions in the 15 second space after each one, which makes a recorded two-way conversation. Also, a portion of side two is reserved for Dick's friend to ask any questions he may have, with space left after each for the answer. Try it—it's fun.

World Tape Pals are distributing a tape recording of President Eisenhower's People-to-People speech. They have sent 5,000 copies of the People-to-People pamphlet to members around the world.

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Charles Owen, Secretary
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WORLD TAPE PALS, Inc.

Marjorie Matthew, Secretary
P. O. Box 9211, Dallas 15, Texas

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210 Stamford Road
Blacon, Chester, U. K.

AMERICAN TAPE EXCHANGE

Stuart Croner, Secretary
181 E. Main St.
Gouverneur, N. Y.

World Tape Pal, K. S. Murte, of 11th Line, Arundalpet P.O., Guntur, India, has requested tapes useful in his work as head of the audio-visual education department of Andhra Christian College in Guntur. About 2000 students, men and women, are anxious to receive tapes on English, education, history, and other college-level subjects. Tapes of high school level could be shared with local schools. Also serving in the capacity of president of the India College of Shorthand, Mr. Murte has correspondence students throughout India. Thus, he would appreciate any tapes used in American secretarial schools which he could adapt to his use. Mr. Murte has promised that any tapes sent him via air mail will be returned the same way.

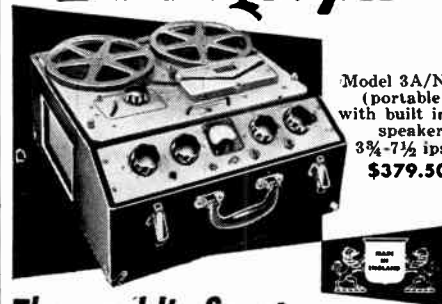
Tape-Respondents, International will offer a free membership to the first recorder owner by the name of Amanda Cummings to submit an application.

Reason? The name Amanda Cummings has become something of a password in T-R-I circles. Not long ago when Bob Coucill, T-R-I Welcoming Committee chairman, and Secretary Jim Greene were preparing a script a name had to be chosen at random for rehearsal purposes. Since names like John Doe and Richard Roe seemed too commonplace, the name Amanda Cummings suddenly seemed to fill the bill. Her name has since become one of the most popular in the club. Amanda has become something of an institution—maybe she's even immortal.

(Editor's Note—Amanda isn't to be confused with our own "Old Spooky," although we would like to see a picture of her when she collects that free membership.)

A pageant commemorating the hundredth anniversary of the birth of the late Lord Baden-Powell, the founder of the Boy Scout Movement, was enacted by 600 Scouts, Guides, Cubs and Brownies at the Sound Shell in Elder Park, Adelaide, South Australia. At this affair the program was linked together by music and commentary from discs, tape, and live performances. The commentary was partly recorded beforehand on tape, and partly spoken "live". The pageant was taped on Australian Tape Recordists Association member Peter D. Thomas' home-brewed "Mark Six" recorder. This equipment has provision to mix and fade mike, disc, etc. and also the ability to cue accurately and quickly. The tape was played back at the Sound Shell on a Ferry Hi-Fi playback deck, using a standard Ferry recorder as an amplifier and monitor. The output of the Ferry deck was fed into the pickup terminals of a Nomis 200 watt amplifier and there mixed with the disc player. On the whole, the equipment worked out very nicely and performed well.

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ISSUE HIGHLIGHTS

Volume 2, No. 1: Radio Tape Network, Choosing a Mike—Part II, How to Erase Tapes.

Volume 2, No. 2: Building an Electronic Mixer, Mike Stands, Orchestra Recording.

Volume 2, No. 3: Music Can Make Your Mood, School Use of Recorder, Orchestra Recording, Tape Recording Glossary.

Volume 2, No. 5A: Sounds to Keep Your Trip Alive, Recording Bands Outdoors, Capturing Insect Songs.

Volume 2, No. 6: Recording Radio and TV Bloopers, Automatic Slide Shows, Beautify Your Recorder, Tape Filing System, Stereophonic Tape.

Volume 3, No. 1: How Tony Martin Uses Recorders, Joining a Tape Club, Tape For Folk Dancing, Recording Xmas Music.

Volume 3, No. 2: Converting to Stereo Sound, Meet "The Monster," Make This Mike Stand, Tape Teaches Speech, Make Money With Your Own Radio Show.

Volume 3, No. 3: Recording Bird Songs, Tape Splicing and Splicers, Stereo Soundorama, Recording String Instruments, Build This Sound Equipment Case.

Volume 3, No. 4: Using A Sound Screen, Recording "Strange to Your Ears," Using Low Impedance Mikes, Can You Sell Off-The-Air Recordings?, Theater Sound on Tape.

Volume 3, No. 5: Take A Slight & Sound Vacation, Recording the Woodwinds, Taping Beethoven's Sixth, Recorder Control Center.

Volume 3, No. 6: Tape Covers the Conventions, Show Off Your Tapes, Recording Brass Instruments, Tape on the North Atlantic.

Volume 4, No. 1: Special Stereo Issue: 10 Ways to Enjoy Stereo Sound, Sound In The Round, Stereo—Why Bother? Directory of Stereo Equipment, Catalog of Recorded Stereophonic Tapes.

Volume 4, No. 2: Beat The Horses, What You Can Do About Magnetic Head Wear, Six Tricks For The Tape Fan, How You Hear Audio Perspective, Viny, Twisty-Twiny . . . Oh Nuts!, Stereo Recording Session, 1956 Roundup.

Volume 4, No. 3: Stereo Unlimited, Print Through, Fact or Fable?, You Can Build It Yourself, Improve Your Audio Album.

Volume 4, No. 4: Stereophonic Recording Tricks, Students Tape It Easy, Build This Portable Mixing Console, New Tape Cartridge Developed.

Volume 4, No. 5: Sounds of Mexico, Extra Income From a Recorder, Add Sound to Your Movies, Questions on Stereo.

Volume 4, No. 6: Big Brain in a Box, Part I, Operation Moonwatch, Placing E-V Speakers for Stereo, Sound in the Round—Part II.

Volume 4, No. 7: Tape Spectacular, Tape Goes To A Folksong Festival, Look Ma—No Wires, Big Brain in a Box, Part II, The Ionovac, PTA To TV Via A Tape Recorder.

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Severna Park, Maryland

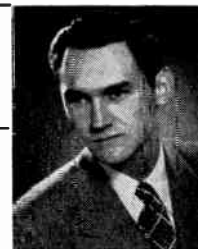
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HI-FI TAPE RECORDING
Severna Park, Md.

TAPE IN EDUCATION

BY JOHN J. GRADY, JR.



HERE'S more evidence that we're living in a small world. At least, today's facilities in communication and transportation make it seem to be small. However, Tape In Education is a bit proud of recent additional proof, which has come to us in the nature of a verbal orchid, that our lines in *Hi-Fi Tape Recording* really are getting around in this compact little old globe we inhabit.

From Chiangmai, once-considered a far-off spot, almost 400 miles north of Bangkok, in Thailand, formerly known as Siam, Dr. Edwin B. McDaniel, stationed at McCormick Hospital, in that torrid country south of Burma, lets us know—"I have enjoyed your column in every issue of *Hi-Fi Tape Recording*." And the good doctor supplies us with very interesting information relative to Tape In Education. The message is in the form of a very efficient air letter—a thin-paper sheet with printed stamp, evidently supplied by Thailand postoffices. When folded, there's a flap for sealing, with the printed threat, "IF ANYTHING IS ENCLOSED, THIS LETTER WILL BE SENT BY ORDINARY MAIL." That sounds very Americana, which is remindful of the mail service of our Navy days in Asian waters.

The information contained in Dr. McDaniel's message should be of interest to all tape recording fans. It's the type of testimony from a user in the field, which proves the utility—and value—of educational tapes. In fact, it helps Tape In Education to completely believe our own controversial prediction, "Every classroom in the U. S. A., eventually, will be equipped with a tape player, and every teacher will own a tape recorder as an instructional tool, just as a physician owns a stethoscope."

Naturally, Dr. McDaniel's air letter from Thailand was brief. But his reference to a unique form of postgraduate medical education was exciting. For the doctor enthused about hour-long tapes he received each week from Audio-Digest Foundation, a non-profit facility of the California Medical Association, of Los Angeles. These are the professionally processed tapes which lead the way in modernizing audio instruction. Tape In Education is grateful to the good doctor, on duty over in south Asia, for being a faithful reader of *Hi Fi Tape Recording*, and for telling us about Audio-Digest, the first regularly-issued "talking" magazine, founded five years ago as an educational unit to inform busy physicians of new developments in the medical profession.

Later, from Claron Oakley, the producer and narrator of Audio-Digest, Tape In Education secured interesting de-

tails of one of the best-planned innovations in tape recording. The short history of Audio-Digest is impressive. And inspiring, too. Certainly, A-D is the trailblazer in an educational adventure that is due to have a vast expansion in numerous avenues. Apparently, the field is limitless—in the professions, in commerce, in banking, in industry. For when an idea in educational communication—involving a roll of magnetic tape in a little five-inch box—beginning with a few subscribers among Los Angeles physicians, balloons to an appreciative circulation that reaches into every state, and into 14 foreign countries, that idea must have merit and real appeal.

Audio-Digest is an infant, yet. And a very healthy one, but a comparatively expensive one to raise. Approximately 4000 subscribers pay \$143.00 a year for 52 tapes. Of course, each tape becomes the possession of the subscriber, and will have value as an addenda item for audio reference in a medical library. And, fortunately, the expenditure can be listed as a deduction on income tax returns. So, alert physicians appraise their weekly talking magazine as a worthy expenditure.

What's the big idea behind Audio-Digest? Well, the big idea is to vocally impart, each week, in digest format, via a one-hour tape recording, to the members of the medical profession, the important developments, as reported in the numerous medical journals. The objective is to free the physician from time-taking study and research, and to deliver instructive information, at the convenience of the listener—in his office, at his home, or in his car, while making calls.

Now, throughout the nation, numerous physicians are supplied with addressed postcards. When they read a meaningful article of current importance, they jot down the title of the article and the name of the author, then mail the card to A-D. This provides a reservoir of material, in addition to the selections of the staff researchers in Los Angeles. All these earnest physicians donate their valuable efforts, happy that profits of the project go to forward the work of the nation's medical schools.

Each weekly Audio-Digest tape consists of two half hour periods at 3¾ IPS. The first period is a narration of condensed articles. The second period is allotted to prominent medical men, who deliver their own material. The processing is completely professional, and each week there are additions to the mailing list of the first great educational tape recorded magazine, which supplies instructive vocal material all over the world, including our friendly informant at Chiangmai, in far-off Thailand. Thank you and good luck, Dr. McDaniel.

TEEN TAPERS

By JERRY HEISLER, National President



A WHILE back we received word from Minneapolis, Minnesota that a firm known as Gaity Recording Studio was doing quite well in the tape and disc business and that this firm was being run by a high school senior named David Hersk. Always vitally interested in teens and recording, we thought that an investigation into the activities of David Hersk would be a worthwhile endeavor.

The one thing we find most interesting is David's rapid rise from a non-recordingist to a professional in less than four years. It seems that in 9th grade David was introduced to the possibilities of recording when a teacher of his let him use a disc recorder. David became interested and decided to purchase a machine of his own, a Wilcox Gay Recordette. After having it only a short time the machine broke down but David was able to obtain a new one.

Soon realizing the limited scope of his disc recorder, David decided that it was about time to switch to tape (probably the best decision he ever made). While David was contemplating purchasing a popular machine, his father confronted him with an offer that would make any teen recordingist purr, the writer included,—How would David like a Magnecorder, professional machine? Mr. Hersk had come across a man who desperately wanted to get rid of his machine and David could purchase it for the ungodly figure of only \$65.

As David puts it, "This was the start of my professional recording career". Replacing his disc recorder, which was a single speed 78 rpm unit, with a 3 speed unit, David "was in business".

During his Junior year in high school

David purchased a used Rek-O-Kut turntable for \$200 only to discover later that it was much older than he had been led to believe and that it was in bad working order for what he needed. Managing to get his money out of the unit, David purchased a new Rek-O-Kut machine. His equipment is pictured below.

Buying and paying for his own equipment necessitated getting a job and David was lucky enough to get a job as an advertising layout man for a Minneapolis hardware concern.

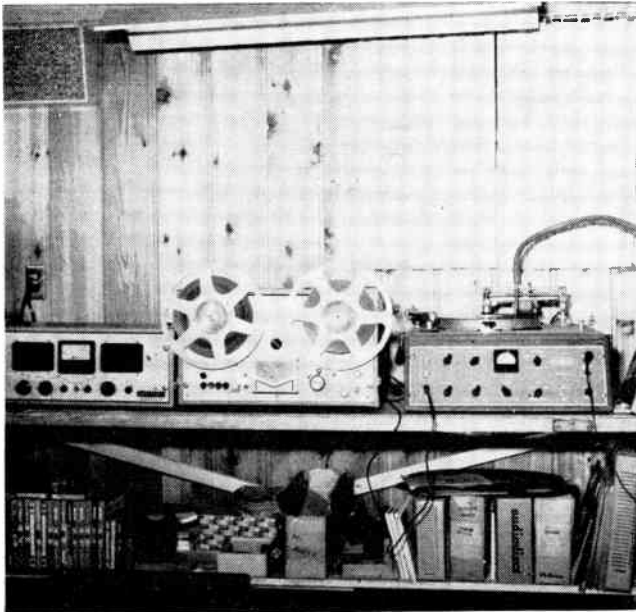
Much of David's work involves school music groups but outside jobs have been on the increase. Eventually David feels that his recording work will become a full time job but his immediate plans call for his attending the University of Minnesota upon his graduation from High school.

David managed to save enough money to replace his Magnecorder with a brand new unit as well as purchasing a new professional type microphone.

Recognizing their son's capabilities and willing to encourage him, David's parents recently built him a completely sound proof studio in the basement of their home. Equipped with a business phone and a listing in the Minneapolis and St. Paul phone directories David Hersk and his Gaity Recording Studio are anxiously awaiting future developments.

It seems that things are on the way for Gaity already, as David reports he is doing some recordings of auditions for well known Minneapolis columnist Cedric Adams and his traveling Aquatennial Road Show.

Where David goes from here is uncer-



High school senior, David Hersk, has accumulated a fine array of equipment for his sound-proof studio.

tain but with his equipment and the rapid progress he has made in the last four years from being a non-recordingist to a professional, we feel he doesn't have too much to worry about.

It shows you what interest and a terrific break can do for you. According to our calculations David got about \$600 dollars worth of equipment for only \$65 on his first lucky purchase and this is enough to get anyone very interested in professional recording.

Teen-Tapers is very happy to present David Hersk with a one year complimentary subscription to Tape Recording Magazine as a token of our good wishes to him and Gaity Recording Studio and we congratulate him on his excellent application of recording equipment.

Another complimentary subscription to Tape Recording goes to James Leston Myers of Grove City, Pennsylvania for his letter on a novel use of a tape recorder. "Leston", as he prefers to be called, is a member of a group called "The Little Theater", which performs plays with marionettes. Recently they decided to record the dialogue and then synchronize the actions of the puppets to the tape. Leston reports that they also occasionally change the speed of the tape for novel effects. Sounds very clever and Leston reports that it is working quite well for them.

We're sure that there are many many more novel uses that you are making with your recorders and we'd love to hear of them and present them so that others might learn from your experience. We have several more complimentary subscriptions waiting, and to become eligible all you have to do is send in a letter. We'd like a picture too if you have one to spare, although this has nothing to do with our decisions.



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TAPES TO THE EDITOR

When sending tapes to the editor please use the 3" reel and indicate the speed at which it was recorded and whether it is dual or single track. We will listen to your tape, make notes from it for use in this column and then reply on your tape. Please keep tapes reasonably brief.

If you do not own a recorder, a letter will be acceptable. Address tapes or letters to: The Editor, HI-FI TAPE RECORDING, Severna Park, Md.

To the Editor:

In the March issue, the Tapes to the Editor column, there was a tape from Lee and Lorraine Ellis making a plea for all tape clubs to unite. Your answer, and Mr. Torrey's in the June issue, more or less stated that each club is distinct in that it fosters various activities and that generally they should not unite. I, too, think they can best serve our hobby by remaining separate and emphasizing their various aspects. A voluminous listing of members hardly seems necessary, anyhow since you can only tape respond with a limited number of people.

Your answer was inaccurate, however, in that you stated that tape clubs are run by individuals. I know of a club run by its members, who vote on a board of directors. The directors run the club through a secretary. It is also incorporated as a non-profit organization, from which each member receives an accounting of every penny spent by the club. Unfortunately, this type of club is in the minority.

I noticed that you added two or three new clubs to your listing in the June issue. I do not wish to imply that these new clubs maintain unethical practices, I wish to point out that the increased listing makes it harder for a reader to pick out a club from which he would get his money's worth in the form of services. When a reader chooses a club, he does so blind. He might choose one that has been formed to satisfy the personal whims, money-making or personal interests of a specific person. From such an organization he would not receive the services for the money he puts in, and hence will not renew his membership when it expires, which is well and good.

It seems to me, however, that the reputable clubs should be concerned for the person who joins such a club. For this person believes he has been taken once and he will not try for a second shaking. He goes out and tells his friends of his experience, and before we know it, a fine hobby is being torn down. I do believe the clubs employing ethical practices should unite against those using unethical methods, as a group. I hope that the International Organization of Tape Clubs becomes a reality, because I feel that all member clubs will subscribe to ethical practices and that membership will be refused those who do not follow these practices.—E. R. Savage, Charlottesville, Va.

Apparently, you misinterpreted our answer to the Ellis's. When we stated that the clubs are run by individuals, we were not referring to particular individuals, but simply to people in general.

Before we list any new club in our column, we contact the club's officials, and request information about the club format, club dues, the club bulletin, number of members, club activities, etc., and they are not listed until we receive an informative reply.

Three of the clubs have already joined together to form the International Association of Recording Clubs, and we will have more information on this in a future issue.

We believe that the clubs you refer to as using ethical practices are not in the minority, but rather that, at least the clubs with which we are acquainted, all maintain a high standard of organizational practices.

To the Editor:

I think I have found the easiest way of all of playing a tape backward when using the second track of a double track machine. Simply thread the tape so that the shiny side is toward the head and the dull side is out. That way the first track will come through loud and clear.

Although I am not a subscriber to your fine magazine, I buy a copy faithfully every month.—David T. MacFarland, Melbourne, Fla.

To the Editor:

Stereo demonstration tapes composed of excerpts of available recordings are the answer to a serious problem. Until very recently, my purchase of tapes was dictated by reviewers comments. Unfortunately, I acquired several tapes which are worthless to me. At the present cost of these tapes you can see what my problem has been.

I especially enjoyed the article in your December issue by Jack Bayha, and in the controversy between stacked and staggered heads, while I am able to play back either type with my Viking universal tape deck, I would like to see one system become the standard.—L. G. Larson, Pittsburgh, Pa.

To the Editor:

I have been reading HI-FI TAPE RECORDING magazine for two years and find it a very good publication. I have especially appreciated articles showing how to construct accessory equipment for the recorder. I recently finished making an attachment for my recorder which makes it possible to duplicate recorded tapes without the use of two recorders.—Buford Frye, High Point, N. C.

To the Editor:

I believe TAPE RECORDING is far ahead of any magazine which carries articles about tape or tape recorders and I especially enjoyed the special stereo issue. I have been a tape recording fan ever since I first heard a tape playback of a musical concert I attended. As the swing is very strongly to stereo, I thought you might be interested in knowing that I added stereo to my present recorder and some of the ideas for doing so were taken from TAPE RECORDING Magazine. It is a most compact stereo unit.—L. Hickman, Clarksburg, W. Virginia.

QUESTIONS & ANSWERS

Questions for this department may be sent on tape or by means of a postcard or letter. Please address your queries to, "Questions and Answers," Hi-Fi TAPE RECORDING, Severna Park, Maryland. The most interesting and widely applicable questions will be used in this department and all inquiries will receive a tape or letter reply.

Q—I purchased my recorder about three months ago. In the beginning my recordings were perfect, with no trouble. Now, every once in a while, on an 1800 foot tape I get a high-pitched squeak which lasts for about 15 to 20 seconds. This happens about two to three times on the tape. When I play the tape over the sound occurs at a different point on the tape. I am puzzled, I don't know what to do. Could you please help me?

In your February issue you mentioned that a stereo kit will be available for my recorder. It said it is for stereo playback—does this mean that you cannot record stereo? If I can do both recording and playback with the kit I have no problems but is it possible to change back to monaural any time I want to?—S. K., Brooklyn, N. Y.

A—We would suggest that you check the pressure pads which hold the tape against the heads. After a time these accumulate dirt and become hard and glazed. The tape in passing over the pads then gives off a screech, much like a piece of hard chalk on a blackboard. We suggest you either replace the pressure pads with new ones or rough the present ones up with a nail file or fine sandpaper to restore their original soft surface. If the pads are glazed, squeals are likely to occur at any point in the tape. You might also use one of the commercially available cleaners and lubricants to clean up the tape guides, heads, etc. on your machine.

All of the kits for conversion to stereo so far are for playback only. In order to record stereo you would need to add another recording amplifier to your recorder so that you could then record the two channels separately. If a kit is installed, or if you buy a recorder with stereo playback built-in, there is no interference whatever with the monaural functioning of the recorder.

Q—Can you please advise me of the best methods of cleaning tape recorder heads and also, on the average, how often they should be cleaned? In addition, I would like to know how often tape heads should be demagnetized?—R. R., Detroit, Mich.

A—The frequency of head cleaning will vary with the frequency of use, and the amount of dust collected from the tapes. It requires but very little dirt to cause a serious loss in the high frequencies and cleaning at least once every ten hours of running time would do no harm. Demagnetization should be done about once every ten hours also. If the heads become magnetized they will not respond as well and, in addition, will add hiss to the tapes. Demagnetizers are inexpensive and there should be one in every recorder kit.

Q—I would like to know if an index counter could be installed on my recorder. I would also like to know if a

binaural playback head could be installed and where one could be obtained.—V. W. R., Louisville, Ky.

A—We would consult the factory about the installation of a counter as sometimes the additional drag of the counter mechanism is enough to cause wow and flutter. A stereo playback head can be mounted on your recorder. We suggest you contact the Dactron Corporation, Box 987, Minneapolis, Minnesota regarding their unit. It is called a Steradapter.

Q—Is there any standard as to which speaker, left or right, the upper and lower tracks of a stereophonic tape are to be played through? If there is no standard how can one tell which way to play the tape? Is there a good preamplifier with two channels and one set of controls for use in stereophonic playback on the market at the present time? If not are there any to be released soon?—R. D. D., Atlanta, Ga.

A—Regarding the dual amplifier for stereo we would advise you to contact Bell Sound Systems, 555 Marion Road, Columbus, Ohio regarding their 3DTG amplifier, Bogen, at Paramus, N. J. on their stereo playback amplifier and Viking, Minneapolis, Minn. regarding their Model PB60, two of which are required for stereo.

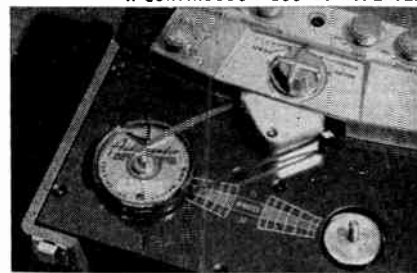
Stereo tapes are recorded with the left-hand channel on the top track and the right-hand one on the bottom track. If there is any doubt, listening to a tape of a symphony orchestra should quickly set it right. The bass should come from the right hand speaker (when you are facing the speaker) and the violins from the left. On some tapes it does not seem to matter much which is right and left as all you are doing is reversing the positions of the players.

Q—I have 100 7" reels of tape stored in the regular boxes. The reels include popular, and classical music. I get the boxes mixed up and have a mess at times. Is there any way to label them?—R. W. M., Atlanta, Ga.

A—One helpful thing to do is to put leader and trailer strips on all your tapes and label each with the contents of the tape. You can identify the reels by writing on them with a grease pencil, attaching a strip of write-on tape to each reel or rough up a spot on the reel with fine sandpaper and write on it with a pencil.

Each box should be identified on the outside with the reel title, contents and with the reels also marked you should be able to keep things sorted out nicely. On reels which have a number of selections, you might type out a list of the reel contents and paste it to the inside of the box lid. If your machine has an index counter, note the indexing numbers also opposite each selection.

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Photos by the author

Mounting popularity of music to exhilarate today's outdoor living activities is a natural outlet for a tape recorder, extra amplifier, and speakers to create the startling realism of outdoor stereo listening pleasure. Here the boys relax and enjoy the music, while watching the gals bat the birdie around.

Move Your Music Outdoors

by Sam Chambliss

. . . let music brighten your outdoor living.

TODAY the emphasis is on outdoor living. Shorts and a Hawaiian shirt, a cool drink and an ever so comfortable lawn chair are now "it" for everyone except apartment dwellers who usually can go visit folks in the suburbs anyhow.

So with all this comfort and coolness, who wants to sit in a hot stuffy room and listen to hi-fi? Or who is willing to lug his hundred-pound pet speaker baffle outdoors for a two-hour session of favorite music and then lug it back inside before the dew begins doing things to the finish or a sudden storm washes the speaker down a gully.

As of today, the music listener no longer has the frustrating choice of sitting in a hot stuffy room or lugging the speaker outdoors. The credit goes to a new type of outdoor speaker labeled a "Compound Diffraction Projector." This

is an all weather unit—including snow and ice. Once installed, the horns may be left out year around.

The CDP starts to drop off at about 175 cycles on the low end and stops dead at 100 cps. To those used to rattling the flooring nails with a 32 cycle note, this may seem intolerable, perhaps. The only answer at this point is to say "try one" for there is less need for the ultra-deep bass outdoors than in and for stereo the maximum directional effect lies in the region above 500 cps. This is a purely subjective opinion but the fact remains that this reasonably priced unit does an excellent job.

One very nice thing about these horns is the fact that they have a broad coverage. The ordinary PA speaker of the re-entrant trumpet or long horn type concentrates the highs in a rather narrow beam. If you, the listener, stray off this

beam, you lose the highs at an alarming rate. And one aspect of lawn listening is moving your chair around to follow the shade patches as the sun goes down. You don't eliminate the chair shifting but the highs are no longer lost. The high frequency pattern spreads the highs 90 degrees and it's only 10 db down at the very edges. Because the horn is a "projector" the music is not blown away by the breeze. It can be heard very well at low level.

We'll get back to the care and mounting of the outdoor speakers a bit later, meanwhile, let's consider the sources for outdoor music.

There is, of course, the possibility of hooking into your amplifier inside the house and tuning to an AM or FM station who is broadcasting material that is suitable.

Or, you can, if you have a record changer, put on a whole stack of your favorite discs and feed the music to the horns from inside the house. Your tape deck or recorder hooked into the amplifier will also provide long stretches of uninterrupted music from recorded tapes or from music you have recorded yourself off the air. In this way the commercials can be extracted beforehand.

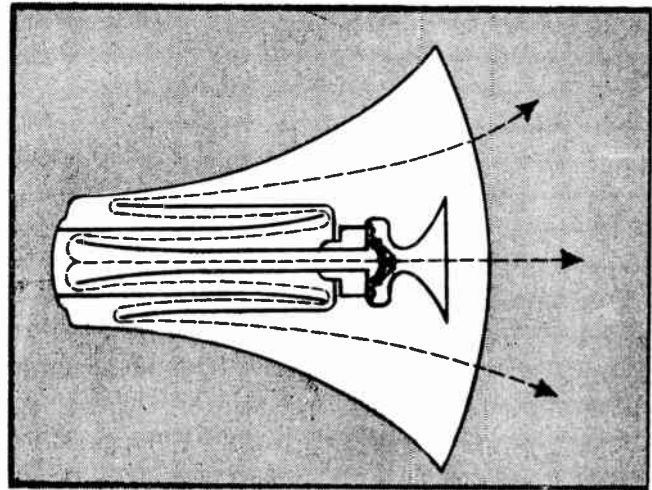
Without the outdoor horns, you might mount your recorder on a tea caddy or cart and wheel it to the patio using a long extension cord of good quality (to avoid voltage drop) to power the unit. If a sudden shower occurs it is a simple matter to wheel the whole thing into shelter.

So far our thoughts have been in the direction of only one speaker—how about stereo outdoors?

For years we have had the desire to sit on our screened porch and listen to music come from the woods, which begins about 100 feet from the porch. This was long before the days of stereo. But since stereo is at least twice as good as monaural we decided to use two CDP horns and give it the works. The results bordered on the fantastic.

The "average living room" is a hypothetical thing and few indoor speaker systems have been balanced to the rooms in which they are mounted. Such takes a high order of professional acoustics. Outdoors, everyone is a professional by comparison because such things as unwanted echoes simply aren't there to any measurable extent. The music sounds much cleaner.

Add this cleanness to stereo and the result is much more impressive than indoor stereo. Granted that certain echoes



Line drawing of CDP schematic. CDP construction uses a "coaxial" system of two horns driven by a single diaphragm. The LF horn, much the larger, is folded and driven by the back side of the diaphragm, while the smaller HF tweeter horn radiates directly. The diaphragm, if overloaded to failure, can be replaced easily.

or reverberations are considered necessary to best listening. Outdoors, of course, with no buildings nearby to provide such reverberations, something might be lost in music playback. But tape recording companies record a certain amount of reverberation to compensate for the lack of reverberations in the average listening room as compared with those in the larger auditoriums where the music is originally recorded. So the taped stereo outdoors contains the necessary reverberations which are pure and not cluttered by relatively unpredictable indoor problems. It's extraordinarily good listening.

Outdoor stereo is brand new, so far as we know, and there were no precedents to guide us. A good deal of juggling went on in trying to spot the best locations for the CDP's. Open lawns, lawns backed by trees, in natural hillside bowls, over the water from a dock—many were tried. And, except where there were unusually large surrounding buildings, which gave the effect of a large room, all worked about equally well.

The two CDP's were taken various distances away from



A CDP has been mounted on a pier piling and is being adjusted to cover the beach area about 130 feet away. In the vertical position of the horn, CDP's horizontal pattern is wider (90 degrees for the highs, 120 degrees for the lows) than it would be if mounted on its side. Adjustment of speaker mounting angle is maintained by two nuts, which an ordinary auto lug wrench fits.



the chosen spot and placed at various angles with the distances between the speakers varying from a few feet to more than 75 feet.

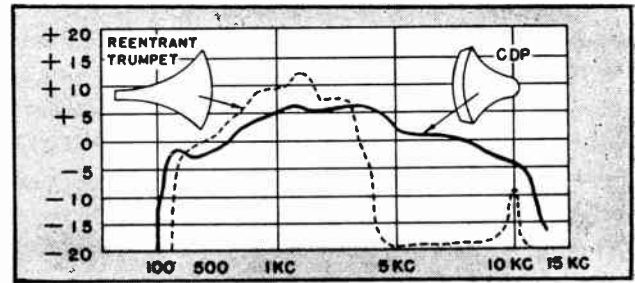
The setup which we liked the best was with the horns at a distance of about 110 feet from the porch and spaced apart about 25-35 feet. They were placed low, not strung up in the trees.

Several driving systems were tried. The simplest was a standard stereo playback recorder with an auxiliary amplifier for the second channel. This amplifier had a power of five watts and proved more than sufficient.

So far the major premise has been that outdoor stereo is an improvement over indoor. There is also something else the CDP's produced, a sort of new impact which this author has never felt before in musical reproduction systems of any sort. The phenomena may have some meaning to those hi-fi tape listeners who occasionally turn their equipment up as high as they can stand it so they can "feel" the music slapping them physically.

However; you define it. If you place the horns 25 feet apart with the volume adjusted for good listening from 100 feet away, the best spot for catching this new dimension is located by walking from between the speakers toward the listening area. After you've walked about 25 feet, the speaker sounds pull together in the stereo effect and the whole body of music seems to lift up off the ground behind you and sweep into the sky. Corny, perhaps, but it's as if there was a celestial orchestra playing magnificent music. (Before you write the author off as possibly over poetic, it may be mentioned that the same effect was observed by a number of people who had never heard of hi-fi). This sort of thing can be taken only in small doses, however. You can't stay back-shivery for longer than a few seconds, after which stereo at the original 100 foot distance seems preferable.

The area in which the stereo retained its character was



Above: A tape recorder's frequency response range is more than adequate for the CDP shown in the above chart. Here the frequency response curve of the Compound Diffraction Projector is contrasted with the curve of a 20" reentrant trumpet indicated by the dotted line. Left: The characteristics of the tape recorder as a playback machine make it ideal for outdoor listening, especially where one's home does not include a porch. A tape recorder can be easily transported to the terrace or a particular chosen spot. It is not subject to rigorous requirements for being large, as are other pick-up devices. Here, John Donald introduces Georgia Mayer to the operation of a smaller and more portable machine.

quite large, much larger, proportionately, than the living-room stereo area. This made sense for two reasons.

First, the pattern of these projectors is wide. To stray beyond the 90 degree high frequency pattern you have to walk 70 feet to either side if the CDP's are 100 feet away to begin with.

Second, 10 feet closer or further away from one speaker than the other at a middle distance of 100 feet makes practically no difference. Sound drops off according to the square of the distance. In the living room, to move from 6 to 8 feet changes the sound in a ratio of 36 to 64, or a drop of almost twice. Outdoors, to move from 100 feet to 102 feet changes the sound by a ratio of 10,000 to 10,404 feet. Almost no change at all. So listening on the terrace requires no "best spot" to hear stereo.

So how can you mount the speakers when you decide on the distance that suits yourself (and your neighbors)? You can put the speakers on the ground if you like. The manufacturer states that the CDP can be dunked while operating in fresh water. When taken out of the water, the speaker clears itself . . . we took the manufacturer's word for this. But the ground isn't the proper place for mounting it anyway. People can stumble over it or, if not firmly anchored, can make off with it. The speaker is provided with a sturdy bracket with a swing of 90 degrees.

Mounting the speaker on the side of the house or garage is simple. Lag bolts, with washers, turned in through the holes provided in the bracket will anchor it firmly in place. If the speaker is being mounted in the woods, a post may be sunk in the ground and the unit mounted on top, or it may be mounted to a tree.

If a tree is used, there are certain precautions which must be taken to avoid harming it. First, always use galvanized iron screws and always drill pilot holes. Screws set without pilot holes will split the grain and allow water to enter the split. This ultimately causes infection or decay.

Second, use spacing washers on the screw between the tree and the mounting bracket so the bracket does not press against the bark. Third, avoid any condition which per-

mits leaves or other moisture trapping junk against the tree and avoid any condition which allows chafing of the bark. The bark covers the living, growing part of the tree which is the outer one inch layer of wood. Cuts and abrasions bare this wood to attacks. Fifth, do not use any bands, clamps or loops around the limb or trunk. They cause chafing or outright strangulation.

If the speaker is moved to a new spot, or taken in for the winter, if you erect it at a summer cabin or camp, remove the galvanized iron screws and plug the holes with caulking compound. The tree will be as good as it ever was.

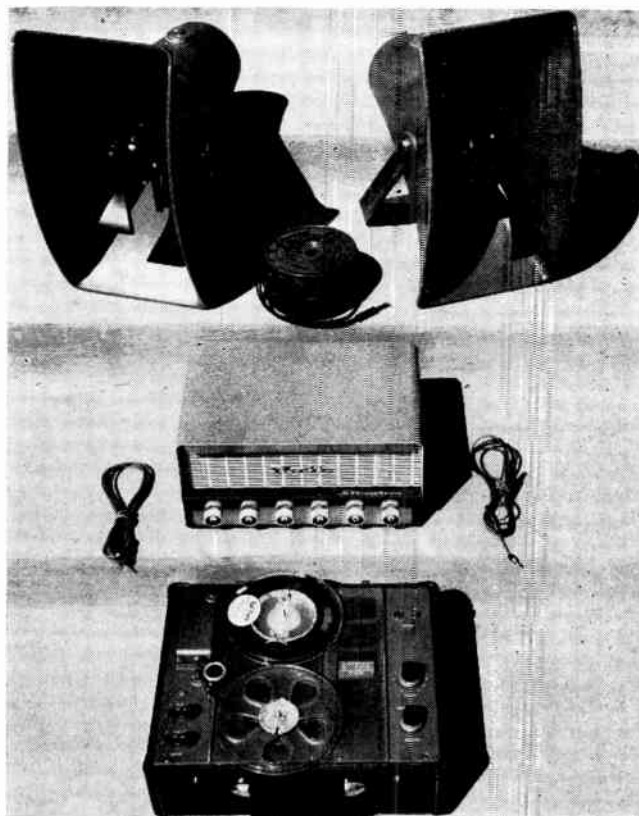
After the speakers are mounted there comes the problem of connecting them to the recorder or amplifier. If you have enough trees between your house and the location of the speakers and don't mind stringing wire in them, use galvanized eye-bolts (no longer than 1/3 the limb diameter) to which small pulleys are attached. Run the wires through the pulleys and terminate it on the porch with a regular insulated terminal post. If the trees sway enough to cause wire breakage, rig a pulley on a short loop of wire and hang enough weight on the pulley to keep the wire from sagging too much. The slack in this short loop will keep the wire from breaking from the tree motion.

If you use above-ground wiring techniques, as described, inexpensive plastic covered two-wire cord is fine for the job.

The rated input power of the CDP is 25 watts and the impedance is 16 ohms. With 16 gauge wire (customary



Cliff Eley spends a goodly part of his spare time working on his well-landscaped terrace and yard. Since Cliff also likes jazz, he has found a way to combine his interests by locating two CDP's in the trees nearby. As the source of his jazz, he has a small standard recorder with an extra head and small amplifier. The recorder drives one speaker while the amplifier drives the other, and the whole effect provides Cliff with jazz, while he works.



An ideal equipment set-up for listening to outdoor stereo is pictured above. At the bottom of the photo is a two-channel stereo tape deck; in the center, a two-channel amplifier; and at the top, two CDP's. The tape deck and amplifier have been specifically tailored for stereo, and CDP's capabilities make it ideal for outdoor stereo listening.

size of regular electrical extension cord wire) you can run as far as 300 feet away from your recorder before you reach a 15 per cent power loss.

Even though the projector is rated at 25 watts, you can drive it louder than you want to hear it, even at 100 feet by the usual tape recorder. One horn is connected to the external speaker outlet on the recorder and, if you are playing stereo, the second is connected to the amplifier.

If you want to run the wires under the lawn you must buy special underground plastic covered wire which will cost about twice as much as the overhead variety. Once installed, it will provide trouble free operation. It is available at most good hardware or electrical supply stores.

Burying the wires can be done the easy way or the hard way, depending upon requirements. If you are a landscaper as well as a tape listener, you'll want to get the wire 10 or 12 inches in the ground so you won't accidentally cut into it while gardening. Running a foot deep trench calls for muscle.

Otherwise you can jab a spade into the lawn, push it to one side and tuck the wire two or three inches down into the slit. Replace the divot and that's it.

In running wires for stereo it is possible to use a three wire system with one wire common to both. This means a saving of one lead and the mixing of the two channels will be negligible over a distance of 100 feet. In fact, some recording companies introduce a little bit of mixing in making their recordings.

Whatever it is, the clean, clear music at twilight, the smell of the grass—or something—putting your music under the sky is a giant step in listening pleasure.

Using Parabolic Reflectors

by

Mark Mooney, Jr.

. . . for outdoor recording, especially of bird calls, a parabolic reflector for the microphone is a necessity.

The reflector mounted on an elevator tripod with a tilt top head. Phones should be used to monitor the recording as it is made to make sure that the reflector is pointed properly for maximum pickup. The recorder is powered by an inverter driven from the car battery.



The Atlas clamp and flexible microphone stand are used to hold the mike as shown. The assembly should be well tightened and suspended from the top of the reflector.

RECORDING outdoors can sometimes be a frustrating experience—especially when the tapes are played back later. In addition to the song of the bird which you do want, the sensitive mike also picks up the bark of a dog on the next farm, the sound of a truck pulling up-grade on the highway a half mile away and perhaps a jet or airliner overhead . . . all of which you don't want.

Grandpa with his ear trumpet had the right idea. Not only did it amplify the sound he wanted to hear, but it tended to shut out the unwanted sounds. The modern parabolic reflector acts in the same way.

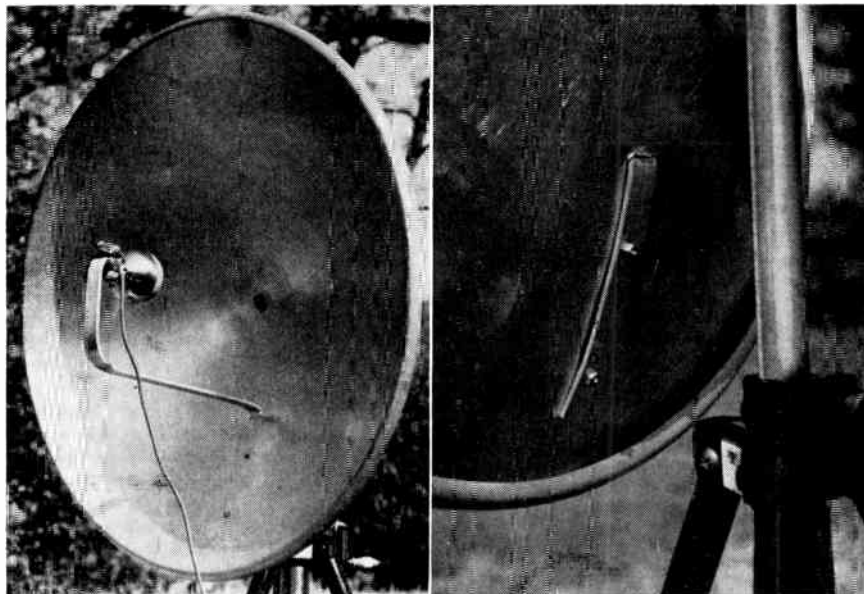
In principle, the reflector for sound works in just the opposite way from a searchlight. In the latter, a small intense source of light is placed at the focus of the reflector. All the individual rays emanating from the source are reflected by the shiny surface so that all are almost parallel and the light carries for a great distance. Because sound waves behave in many respects like light waves, it is possible to reverse this process by gathering the sound in with a reflector and focusing it on a microphone diaphragm.

This results in an intensification of the sound which is in the beam of the reflector. At the same time, as in grandpa's ear trumpet, the sounds to the side and back are cut in intensity.

Mounting a microphone on a reflector is not difficult and can be done with simple tools. We recommend the use of the do-it-yourself aluminum which is obtainable at any good hardware store. This metal, we used $\frac{1}{8}$ " by $\frac{1}{2}$ " strip, is soft enough to work and drill easily but yet is of adequate stiffness to hold a microphone in place.

The reflectors are obtainable from the C. J. Torngren

Left: the microphone is held to the aluminum strip with a pipe clamp. A slot was drilled and filed in the reflector to allow the aluminum strip to pass through. The part inside the reflector was formed by bending the aluminum so that the center of the microphone was opposite the center of the reflector. Right: the aluminum strip was bent down to follow the curve of the reflector on the back and held in place with stove bolts and nuts. The metal is easily worked.



Company, 236 Pearl Street, Somerville 45, Mass. They can be had in various diameters and weights but we do not recommend the smaller reflectors unless you are dealing with high frequencies. The reflector used in our experiments measures two feet across and has a focal length of $7\frac{1}{2}$ inches. Cost will vary according to size and focal length, and will approximate twenty dollars.

To mount the mike we drilled and filed a slot in the reflector to take the aluminum strip. This was bent to follow the reflector curve, as shown and fastened by bolts and nuts. The part extending into the reflector was formed by bending so that the diaphragm of the mike would be exactly $7\frac{1}{2}$ inches from the deepest part of the reflector.

With it, using amplification, it was possible to pick up a conversational voice about 80 to 100 feet away and bird calls came in loud and clear above the background noise.

The reflector may be mounted on an elevator tripod by using a washer and nut ($\frac{1}{4}$ -20) on the tripod screw. The elevator-type tripod is best because it allows more flexibility although the units may be mounted on any tripod having a tilting head.

For holding the mike to the supporting strap we used a pipe clamp, likewise obtainable for about 40 cents at

any hardware or plumbing supply house. This device is neat, positive and easy to tighten or loosen if the mike is removed after use.

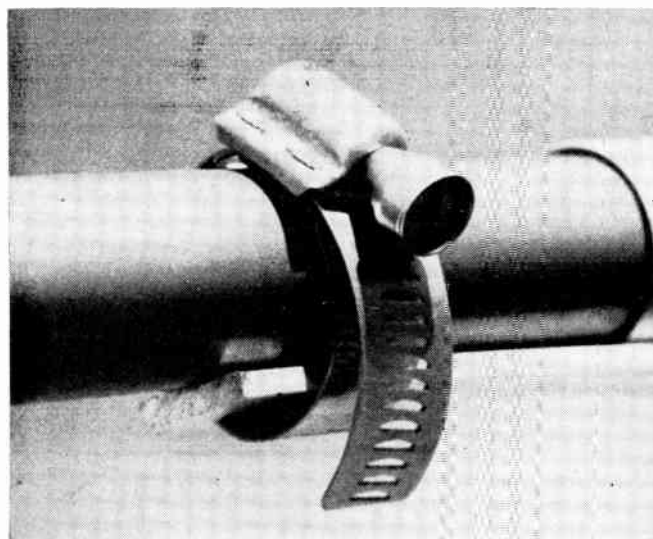
Good results were obtained with an "eight-ball" mike which has a wide pick-up beam and which was faced directly into the reflector as shown in the photos. Any type mike may be used and, one way or another, a pipe clamp can be adapted to hold most of them securely.

When using the mike reflector it is a good idea to monitor the incoming signal if possible. Some recorders have a monitor switch and the phones are plugged in the external speaker jack, others have a monitor jack especially for the purpose. The use of this function permits the best and most accurate aiming of the reflector toward the sound source.

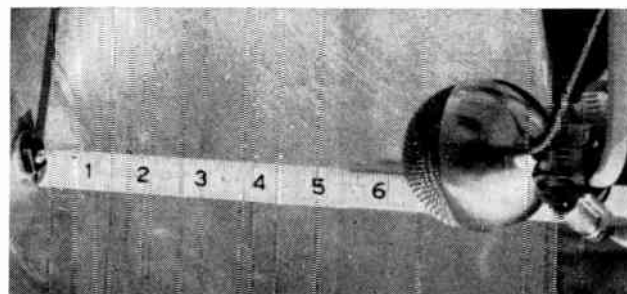
Do not point it at the sun for the reflector will also focus the heat rays and may damage the microphone.

If your recordings sound "tinny" give the reflector a coat of automobile undercoat, both front and back. This will also reduce the noise transmitted to the mike when the reflector is moved.

If you can find any surplus radar reflectors at a reasonable price they are excellent for this type of pick-up also.



Left: a close-up of the pipe clamp obtainable at any good hardware store. This may be used to hold any type of microphone to the supporting strip. Tightening the screw tightens the clamp around mike and support. It may be loosened and the mike removed without difficulty. Right: the diaphragm of the microphone should be placed at the focus of the parabolic reflector to achieve maximum concentration of the sound. Because the reflector will also concentrate heat rays it should not be pointed at the sun or the mike may be damaged.





Wonderful Copenhagen

by Erik Lindgren

*. . . This tourist made sure his visit
will not be forgotten.*

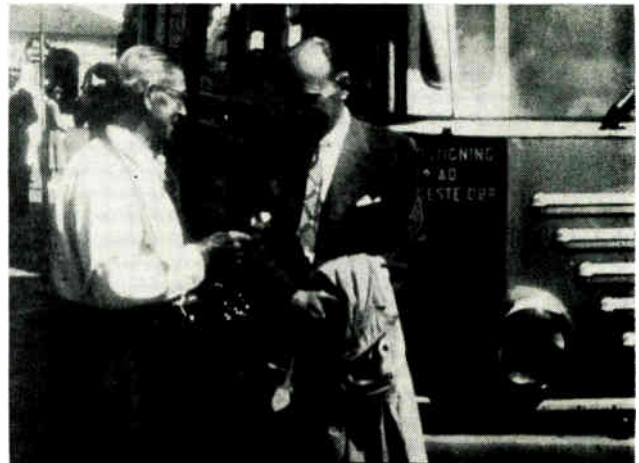
Since the author's visit to Copenhagen was by helicopter, a recording of the machine's engines was made, as well as an interview with the pilot, and the chatter of passengers alighting at their destination.

A FAMOUS American film comedian made very popular a song called "Wonderful Copenhagen" and although his pronunciation of Denmark's capital does not coincide with mine, his sentiment is most correct. I had visited Copenhagen many times by sea and once by airplane, but an unexpected award for an article on my hobby enabled me to afford the realization of a dream of my youngsters, Nils, aged seven and his younger sister Kerstin, to visit Copenhagen by helicopter. The service from Malmö in southern Sweden is the first regular helicopter service in Scandinavia, and since our trip would be quite an event, I decided to record it for my family library.

Loaded with 3000 feet of LP tape and a spring driven recorder I started one of the most interesting weekend trips that I have ever made. After my family had entered the helicopter, I took the pilot aside and made my first interview with him. He seemed to be quite used to talking into a microphone—obviously he had been interviewed for the broadcasting corporation previously (there is only one broadcasting corporation in Sweden and one in Denmark). Actually it was myself who felt a little shy at the beginning, but the smooth response to my questions from the pilot soon made my shyness vanish. His calm way of telling me about the only emergency landing that he had experienced as a helicopter pilot was very good for my nerves and made excellent material for my portable tape recorder.



Upon meeting an English couple viewing the famous statue "The Little Mermaid," Erik Lindgren found they were quite willing to have their comments on Scandinavia recorded.



Copenhagen is always overflowing with tourists. Here a Swedish visitor is interviewed upon his arrival, just as he was about to board a bus for the zoo.



Left: Screams of excited passengers on a scenic railway tour were captured on tape at Tivoli, Copenhagen's fun fair, which is comparable to New York's Coney Island. Right: It was discovered that Copenhagen taxi drivers are just as talkative as their American counterparts. The author found this driver to be most cooperative in an informal interview.

Onboard the helicopter there was such a terrible motor noise that recording was not possible. Just before the landing, however, I shouted a few comments into the microphone. When the wheels of the machine were on the ground, the motor was cut off, and it was possible to record the passengers alighting. A chat with the mechanic, as he tanked the helicopter, was most fascinating as he described thoroughly the very interesting safety regulations

which eliminated any fire danger. He also told me that the helicopter was always tanked with sufficient petrol to enable the machine to cross the sound between Sweden and Denmark and fly back again without refueling.

We were now in Denmark's capital, and a day filled with all sorts of excitement was ahead of us. As it was still early hours I took a bicycle ride through the most trafficated streets in the center with the microphone alive. The recordings made are very vivid sound illustrations for my color slides from Copenhagen. From time to time I stopped to record the chiming of a few of the many church bells; it is just a pity that they were frequently disturbed by the noise of motor cars and rattling trams.

Along "Langelinie", well known harbor of Copenhagen, 24 units of the Swedish Navy were lying on a visit. On board one of the ships I had a member of the crew recording his memories from a visit the night before to New Haven. (This area is a very "colorful one" as it is noted for its bars and cafes). As I returned ashore, I noticed a man selling hot dogs. This occupation is rather odd in the heat of the sunshine, so I interviewed him. He was most excited to talk into the mike and said that business was brisk and that he normally sold more sausages during summer than during winter! People omit having their regular meals during summer, he continued, and as they get hungry, they just take a hot dog. Naval visits, however, were the man's best source of income, and as there had been USN ships visiting recently, I just wonder if any of my readers added to his income.

Upon my return from the ships I found an English couple looking at the famous statue called "The Little Mermaid", and they became my next willing victims. They had shipped their car from Harwick in England to Esbjerg in Denmark and had driven through Denmark from west to east the previous day, arriving in Copenhagen the same morning. They were very kind people and found it interesting to have their comments on Scandinavia recorded. It seemed that I could make conversation with anybody wherever I wanted, thanks to the tape recorder; people were so easy to communicate with.

At the Amalienborg Castle I recorded the sound of the tramp, tramp of the boots of the guards as they changed, and the commands. There were many foreigners watching,



Soon after arrival in Denmark's capital, the author took a bicycle ride through the city's streets, with his recorder and microphone alive, recording sounds which would later enhance the showing of color slides taken during his visit.



Finding a Copenhagen hot dog vendor, the author decided to inquire how business was. He was told that more sausages were sold in summer than any other time, especially when visiting USA naval ships were in port.

but very few Danes—they seemed to have decided to look at the Swedish ships instead.

The "Gefion" fountain is another famous object in Copenhagen and a "must" on the list for visitors. I have a few color slides of it at home. Now I took the opportunity of recording the sound of the water as it spurted from the fountains so that I could have some actual sound effects mixed with the popular melody "Three Coins in the Fountain" for the showing of the color slides in my own home. Many other natural sound effects were recorded the same day and are now valuable additions to my library.

The climax of the day was our visit to Tivoli, Copenhagen's big fun fare, which can be compared with the Battersea Fun Fare in London or Coney Island in New



Another of Copenhagen's famous objects is the "Gefion" fountain, and Erik Lindgren made sure his recorder caught the sound of spurting water to add to his collection of sound reminiscences of his Copenhagen visit.

York. Holding the recorder on my knee I dared to go by the scenic railway, and it worked all right, so that we can relive the audible part of that dizzy tour at any time.

But time never goes so fast as it does when you are enjoying yourself. We suddenly had to leave the fun fare and rush to a tram which took us to Tuborg Haven, where a ferry took us over to Landskrona, in the middle of the west coast of the Scania province of Sweden. It was a nice tour in the calm summer evening, and of course recordings were made on board as well as in the train which brought us back home to the university town of Lund. A wonderful day was over but thanks to the invention of magnetic recording it will be possible to relive so many of the high-lights of Wonderful Copenhagen.



The tramp of boots is recorded as guards march through Copenhagen's streets to Amalienborg Castle. At the castle, the commands were also recorded as the guard was changed.

Outdoor Stereo Recording

by Robert Oakes Jordan
and James Cunningham

. . . proper equipment and correct microphone placement are essential.

ONE of the most fascinating pastimes we have ever discovered is the documenting of sounds of our time in stereo. In fact we do not recommend you begin unless you are very strong willed. Otherwise you will find yourself climbing around the tops of skyscrapers under construction, dodging railroad trains, being deafened by jet airplanes, and involved in other perilous ventures usually faced only by the more foolhardy stunt men. But it's all in fun and you're bound to have many adventures as you go after sounds in motion.

Before you start packing your equipment, however, it would be best to stop and think what you want to accomplish and how you can make stereo work for you. Suppose you want to record a railroad train passing by—

when you play this back in your listening room do you want the train to sound as if it is traveling right through your room or do you want the walls of your room to disappear so that it sounds like you and the train are outdoors? If you choose the first case then you will want to put the microphones close to the tracks—between one and three feet away. Be sure they are solidly placed or you may lose them as the train rushes by. The distance between the microphones will depend on the distance between your loudspeakers and to some extent, the speed of the train. For example, if you put the microphones six inches apart and your loudspeakers six feet apart, a train traveling at normal speed past the microphones will negotiate the distance between the speakers in such a short time that you



While outdoor stereo microphone placement follows certain general rules, they are often departed from to obtain certain effects. In this set-up for recording one of the old-time streetcars, the mikes are farther apart than normal because it was planned to have the streetcar stop between the microphones and record the sound of passengers getting off and on.

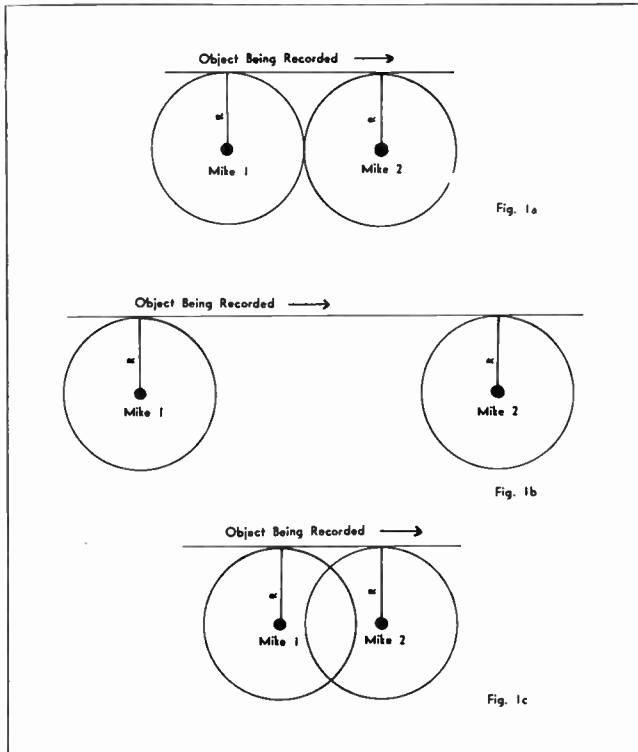


Fig. 1a shows how the spherical patterns of two mikes just touch each other and the plane of the object being recorded. This is correct microphone placement. Fig. 1b shows an incorrect microphone placement, the use of which will make an object seem to drop into a hole when passing midway between the speakers. Fig. 1c also shows an incorrect placement, with the mikes too close together, which produces a poor stereo recording.

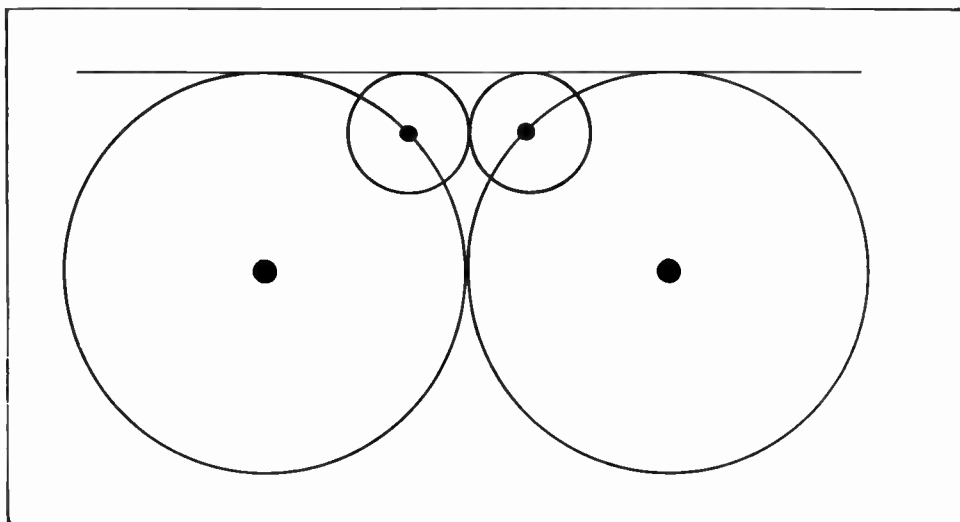
may think you have recorded a jet plane instead of a train. On the other hand, if you put the microphones thirty feet apart and your loudspeakers are still six feet apart, the train will not only seem to be going slower than it actually was but it will sound as if it dropped into a hole while passing midway between the speakers. The reason for this will be explained shortly.

Suppose you prefer the second condition we mentioned—where both you and the train are outdoors. In this case you will want to pick up some of the “acoustics” of the outdoors, that is some of the sound reflected off buildings and nearby objects. To do this you will have to place the microphones some distance from the train tracks—four to

eight feet. Here again the distance between the microphones will depend on the distance between your loudspeakers but now the microphones will have to be placed farther apart than they were in the first case. The reason for this will also be explained shortly. After you make your first recording of this type you may notice that the train seems to jump back and forth between the loudspeakers an instant before it sweeps through the room. This condition has a rather complicated set of causes but it can be avoided by using cardioid pattern microphones and recording some distance from large buildings which tend to reflect the sound into the wrong microphone. Don't worry about losing the outdoor “acoustics” as this is not likely to happen.

At this point we would like to illustrate a few general rules about outdoor stereo microphone placement. Remember they are only general rules and not rigid: they can be departed from to gain certain effects. Figure 1a shows how the spherical patterns of the two microphones just touch each other and the plane of the object being recorded. This means that if the distance from each microphone to the object being recorded is R then the microphones will be a distance twice R apart. Figure 1b shows an incorrect microphone placement—here the object will seem to drop into a hole while passing midway between the speakers because it is “off mike” in this area. Figure 1c shows the microphones too close together—here the sounds reaching the microphones will be too nearly identical to give a good stereo recording. Figure 2 follows the principle of figure 1a and shows why the microphones must be farther apart as they are moved from the object being recorded. One other rule to remember is that both microphones must at all times pick up some of the sound from what is being recorded. For example, suppose you are recording a pneumatic air hammer in the process of ripping up a street. You might want to record the air hammer with one microphone and the air compressor with the other. If you get too close with the microphones you will wind up with two channel monaural sound, whereas if you move them back somewhat to include some sound from each source in both channels you will have true stereo.

One problem in outdoor stereo recording that should not be overlooked is the source of power. There may be times when no commercial source of power is available and some form of converter will be necessary. We use a Carter ER1040C7P which will convert 24 volts DC into



This illustration follows the principle of Fig. 1a shown above. It demonstrates why the microphones must be farther apart as they are moved back from the object being recorded.



Mobile set-up showing battery hook-up for rotary converter. This type converter with some form of frequency control is recommended for out-door stereo recording.

115 volts AC and has a capacity of 400 watts load. Two automobile 12 volt storage batteries are hooked in series to give the 24 volts DC and are good for about two hours of recording time before recharging. We strongly recommend the rotary converter with some form of frequency control. The reason for this is that many tape recorders depend on the frequency rather than the line voltage to control the speed of the recorder. Any recordings made with other than the standard line frequency will sound most unnatural when played back at home on the standard line frequency. In addition, the rotary type converter is

less apt to introduce noise into your tape recorder circuit. If you rent or purchase a converter be sure you get one that delivers very nearly the same wattage rating listed on your tape recorder—not more than 20 watts over or under, otherwise the bias voltage on your tape recorder will not be correct and distortion will result.

Get permission from the proper authorities when you enter any private property to record and keep your microphone cables out of the way. If you record in public you will attract a crowd and you must not become so engrossed in your recording that you endanger anyone's safety.

BOOK REVIEWS

How to Use a Tape Recorder by Dick Hodgson and H. Jay Bullen, *Communication Arts Books, Hastings House, New York, N. Y. 5½" x 8½"*, cloth bound, 216 pages, inc. index, \$4.95.

This book is for the very beginner in tape recording. The greater part of the volume is concerned with ways and means of using a recorder in business, the home, school, church, etc. Sections include such topics as Advertising-Selling, Retail Business, Employee Training, Audio and Visual Presentations, General Business Uses, Non-Business Uses (party games, quizzes, tape clubs, tape albums, etc.) How to Select a Tape Recorder, How to Operate a Recorder and Accessories and How to Use Them. Also included is a Glossary of Technical Terms.

The authors are not professional audio people. Dick Hodgson for two years served as head of the Marine Corps Radio and TV Section and is now connected with the publishing business. H. J. Bullen has had a background in the communications field.

For someone who has run out of ideas as to what might be done with a tape recorder, this book will fill his reservoir again. There are very few technicalities in it and it has been written strictly for the layman. "... it is written strictly for the recorder owner who doesn't know a cathode-

follower output from a phono jack (and cares less)." Its primary purpose is to show how to get maximum use from the versatile recorder.

Hi-Fi Equipment Yearbook, 1957, Sanford M. Herman, Editor. Published by Herman and Stephens, 200 E. 37th Street, New York. 5½" x 8½", 126 pages, paper bound, \$1.95, cloth bound, \$2.75.

Except for a 12 page discussion of the general principles of hi-fi written by Peter Aczel, an avid hi-fi hobbyist, this book is a compilation of existing hi-fi equipment complete with a picture, description and price. Included in the listings are amplifiers, tuners, speakers, tone arms, turntables, cabinets and tape recorders.

The full title of the book is "Hi-Fi Equipment Yearbook, 1957, Including Tape Recorders." Fourteen pages have been allotted to recorders and, we are sorry to report, a number of well known names and pictures of equipment have been omitted. While the greater part of the Hi-Fi fraternity may be spinning discs at the moment, the move to tape is on especially in the field of stereo tape and we trust that in the 1958 edition of the book a much larger and more complete section will be devoted to tape. Perhaps we are a bit prejudiced on this point but from all indications we have seen we have stated the case correctly.

Nevertheless, the volume is a rather complete catalog, something like an audio show in print and without the noise.

Panorama of American Popular Music, by David Ewen, published by Prentice Hall, Englewood Cliffs, N. J. 6" x 9", 365 pages, cloth bound, \$4.95.

David Ewen, the author, has written a number of books on music, of which the present volume is his latest. Included in his previous works are: *The Home Book of Musical Knowledge*, *The Complete Book of Twentieth Century Music*, *Dictators of the Baton*, *Men of Popular Music* and *Music for the Millions*.

This very readable volume covers the growth and development of music that is truly American, from the creation of our national ballads and patriotic songs to the latest musical comedies and reviews.

Even if you have no deep interest in music or the people who make it you will find the book an entertaining one. It is full of stories behind the songs and the tempo of the times in which the songs were written. It traces the influence of the negro slaves, with their background of African rhythms on the songs of the colonies, the growth of the heroic ballads, Tin Pan Alley, jazz and the sophisticated music of today. The volume has a very complete index and we feel will find a place on every music lover's shelf.

NEW PRODUCT REPORT

STAFKSTED



VIKING TAPE CARTRIDGE HANDLER AND FIDELIPAC CARTRIDGE

... 600 ft. cartridge now available, machine will erase, record and playback monaurally in addition to stacked stereo playback.

THE Viking Tape Handler and the Fidelipac cartridge are a team. At the present time the Viking unit is the only one built to take the Fidelipac cartridge, itself a new item.

The tape handler is the first machine to appear on the market that is definitely and conclusively easier to operate than a phonograph or turntable. You can put the cartridge on the player with your eyes closed and not miss. The one operating control, the "release"- "play" lever likewise can be operated sight unseen.

The unit we tested was a deck only, mounted in the case shown. There are no electronics in the case, only the motor and the tape handling mechanism. Record and playback tests were

done using the Viking RP 61 record-playback amplifier. Connections to the heads are made by the use of phono plugs placed on the rear of the bracket holding the heads.

Two speeds are available, $3\frac{3}{4}$ and $7\frac{1}{2}$ inches per second and are selected by means of a knob situated behind the head bracket. This is depressed and released for the $7\frac{1}{2}$ speed or lifted and released for the $3\frac{3}{4}$ speed.

The cabinet is covered with brown leatherette with dull finished metal parts.

The basic mechanism can be obtained with a variety of head arrangements. The Model 35-P is equipped with a single playback head only. Model 35-R has erase and record/-

Product: Viking Model 35 Cartridge Handler

Price: \$85—model S for stereo playback

Manufacturer: Viking of Minneapolis, 9600 Aldrich Ave., S., Minneapolis 20, Minn.

Product: Fidelipac Tape Cartridge

Manufacturer: Sound Electronics Labs, 1702 Wayne St., Toledo, Ohio

Price: loaded with tape \$7.85; empty \$1.95

playback heads. Model 35-S has a stacked stereo playback head and Model 35-SR is equipped with erase and record/playback heads plus a stereo playback head. Prices are different on each model.

Two units were used in testing. The first of these was the model S which has a stacked stereo head. The output of the heads was connected to a two channel amplifier which in turn fed the speakers.

Fidelipac cartridges loaded with recorded tape from Livingston, Omega-tape, EMC, Bel Canto and Concertapes were used for testing. One of these was run ten hours a day and after four days running, no difficulty has been encountered. The manufacturer of the car-



The tape handler with the top open. The cartridge is simply laid on the deck and pushed against the heads. When the lever is in play position the cartridge is locked in place.

tridges states that a run of over 500 hours continuous has been secured without failure. This is more than enough to cover ordinary use.

The Viking tape handler is the most simply constructed unit we have seen. There are only two visible moving parts, the capstan and pressure roller. Beneath the deck is a flywheel and belt drive from the motor.

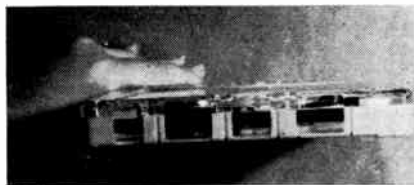
To operate the unit, the cartridge is slid forward until it stops against the pin between the heads. The lever is then moved to play position. This raises the pressure roller into position from beneath the deck and, at the same time unlocks the tape so it can move and it also locks the cartridge in position so that it cannot move.

The pressure of the roller against the capstan may be adjusted by means of a screw. It should be tight enough to pull the tape evenly across the heads but not too tight. It is correctly adjusted when it comes from the factory and any further adjustment may only be necessary to take up wear.

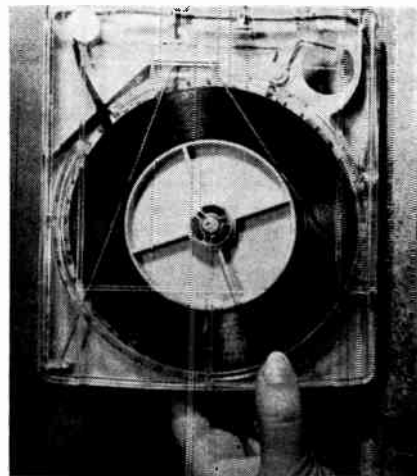
Stereo playback using the stacked head was excellent. Each stereo reel lasted about 15 to 18 minutes of playing time. As the tape is endless, it will repeat until shut off.

We also tried playing monaural tapes using the stacked head but crosstalk between the heads was objectionable. If the unit is to be used monaurally then we believe it is better to purchase one that also has a single track head in addition to the stereo head.

The machine and cartridge should have wide application, not only as a player or recorder for home use but for such uses as point of sale merchandising, background music, etc. As the playing time of a monaural tape, using



Top: front view of the Fidelpac cartridge. The opening at left is for the capstan and roller which moves the tape. Next opening is for stereo playback head, then follows the opening for the record head and last the erase head aperture. Right: top view of cartridge. Hole in base (upper right) is for pressure roller. Note spring clip which locks tape reel when not in use. Pressure roller unlocks this in play position.



a moebius loop is 28 minutes in the 600 foot reel size cartridge, it would prove suitable for background music. The reel will take any length of tape, and hence playing time, up to 600 feet. Cartridges to take the 1200 foot reels are now being developed.

The cartridges may be purchased empty, loaded with blank tape, or already recorded. For home loading a metal spacer (\$2.00) is necessary to get the proper amount of tension in the tape on the reel. This, of course, is used over and over again. Any properly lubricated tape may be used and the manufacturer recommends Reeves Soundcraft or Scotch tape for cartridges. Double coated tape should be used if monaural play with a moebius loop (28 minutes) is to be used.

The cartridge is of plastic and measures 6" wide x 7" long and 7/8 inch thick. The tape is wound on a toothed reel which revolves around a center post. The tape is pulled by the capstan and roller from the center of the tape reel, through the tape guides, across the face of the cartridge and is then wound on itself as the reel is turned by the tape being pulled from the center. When the cartridge is removed

from the player, a spring engages one of the teeth on the wheel and stops further motion of the tape until it is again placed on the player. The tape is protected at all times and cannot spill or tangle.

After a reel is freshly loaded, it should be "run-in" for a few minutes on the tape handler to equalize the tensions before being played or recorded.

In our tests of record and playback using the RP 61 record/playback amplifier we obtained a frequency response about equal to AA program requirements. The signal to noise ratio was excellent. Wow and flutter were within acceptable limits. The gain on the recording channel is 62 db which enables the user to employ a low-level microphone of good quality in making recordings. The playback gain is 55 db.

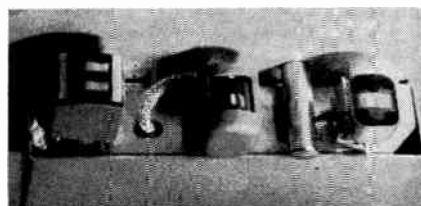
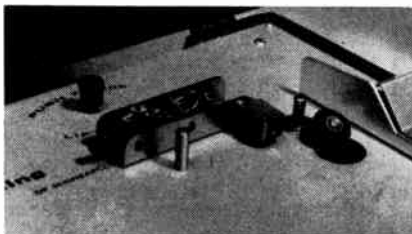
No difficulty was encountered with hum and the use of a metal deck plate effectively eliminates the motor as a source.

The mechanism is one of the simplest we have seen and the amateur mechanic should encounter no difficulty in making any adjustments deemed necessary. Heads may be changed very easily. We found the heads supplied to be of good design and high quality.

Because of the small size of the tape handler it should be easy to mount, together with the record/playback amplifier, in a cabinet, or hi-fi setup.

On the whole, we believe this unit and the cartridge will find wide areas of application.

Left: single lever is only control mechanism and has two positions, release and play. Pressure roller is brought up from beneath deck and clamps tape, pulling it through cartridge. Below: unit with single head for stereo playback. Right: head lineup for erase, record and stereo playback in conjunction with Viking PB 60 record/playback amplifier.





The Fidelipac cartridge may be loaded with any suitably lubricated tape. Steps in loading the cartridge are as follows: 1—remove center screw and take off clear plastic top. 2—Lift the wire guide and lay aside. 3—Remove the toothed wheel by lifting it from the center pin. 4—Place reel on SUPPLY spindle of recorder, tape to be loaded goes on take-up spindle. Tape must be wound on cartridge reel in CLOCKWISE direction, oxide out. 5—Put single twist in tape to get oxide out. 6—Put metal spacer, ears down, clip up, over hub of reel, put end of tape under clip, take a few turns by hand to start tape then put machine in rewind (or fast forward on some machines, in which case the cartridge reel should be on the take-up spindle). Wind tape on reel. 7—When reel is full remove it from the machine. 8—Carefully lift out metal spacer. 9—Hold tape end at center and rest finger on reel to keep from turning. With other hand draw out 18 inches of tape from outside of reel. Tape will slip off, reel should not turn. 10—Hold reel at outside edge and gently pull 8 or 9 inches of tape from center. Reel should be turned as required by tape coming from center. 11—Splice tape with Mylar splicing tape, if available. Acetate splicing tape may break after about 100 hours of operation. 12—Place reel in cartridge, loop will extend as shown. 13—Release spring brake with one finger and pull tape from center until slack is taken up. 14—Place tape around post and in guide slots. 15—Replace wire guide. Place long straight side of guide wire UNDER tape coming from center hub. Place center and ends of guide in proper slots. 16—Replace cover and screw and Fidelipac is ready to play. The reels may be recorded on a regular recorder. The start of the program is at the center of the reel. When loading the reel, use as little back tension as possible, the tape should spool freely. When double coated tape is used with a moebius loop (playing time 28 minutes) the programs on both tracks are in the same direction. Track 1 is on the upper outside and track two on the bottom inside. To record on a regular machine, record track number one in normal manner. Rewind and give tape half twist as it comes off the supply reel before going through recorder head. Then record track two. Rewind after recording and then load tape on Fidelipac. To avoid long pauses, programs should be of about equal length. Double coated tape should be used for a moebius loop. Put a half twist in the end of the tape coming from the center of the Fidelipac reel before splicing. The twist is taken care of between the tape guide at the edge of the reel and the tape post as the tape comes off the center.

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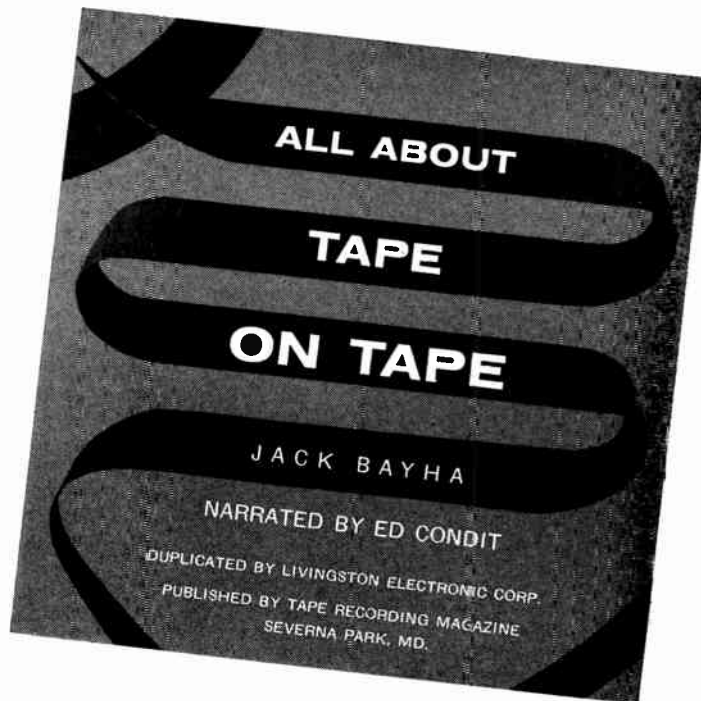
MEET THE AUTHOR



Jack Bayha

JACK BAYHA is a prominent young audio engineer, writer for numerous technical publications and has been an audio hobbyist for over fifteen years. He is the host of the Hi-Fi House program on WHFB. He has been an engineer in the audio and tape recording fields for the last twelve years.

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Flutter: 0.2 percent average.

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output: 1 volt, high impedance.

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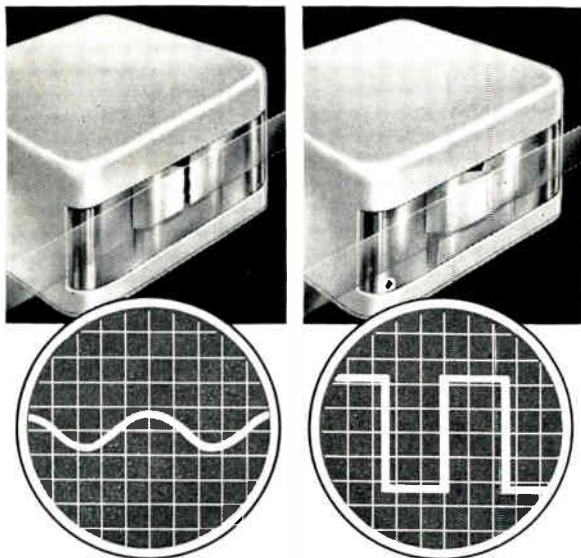


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