

HI-FI

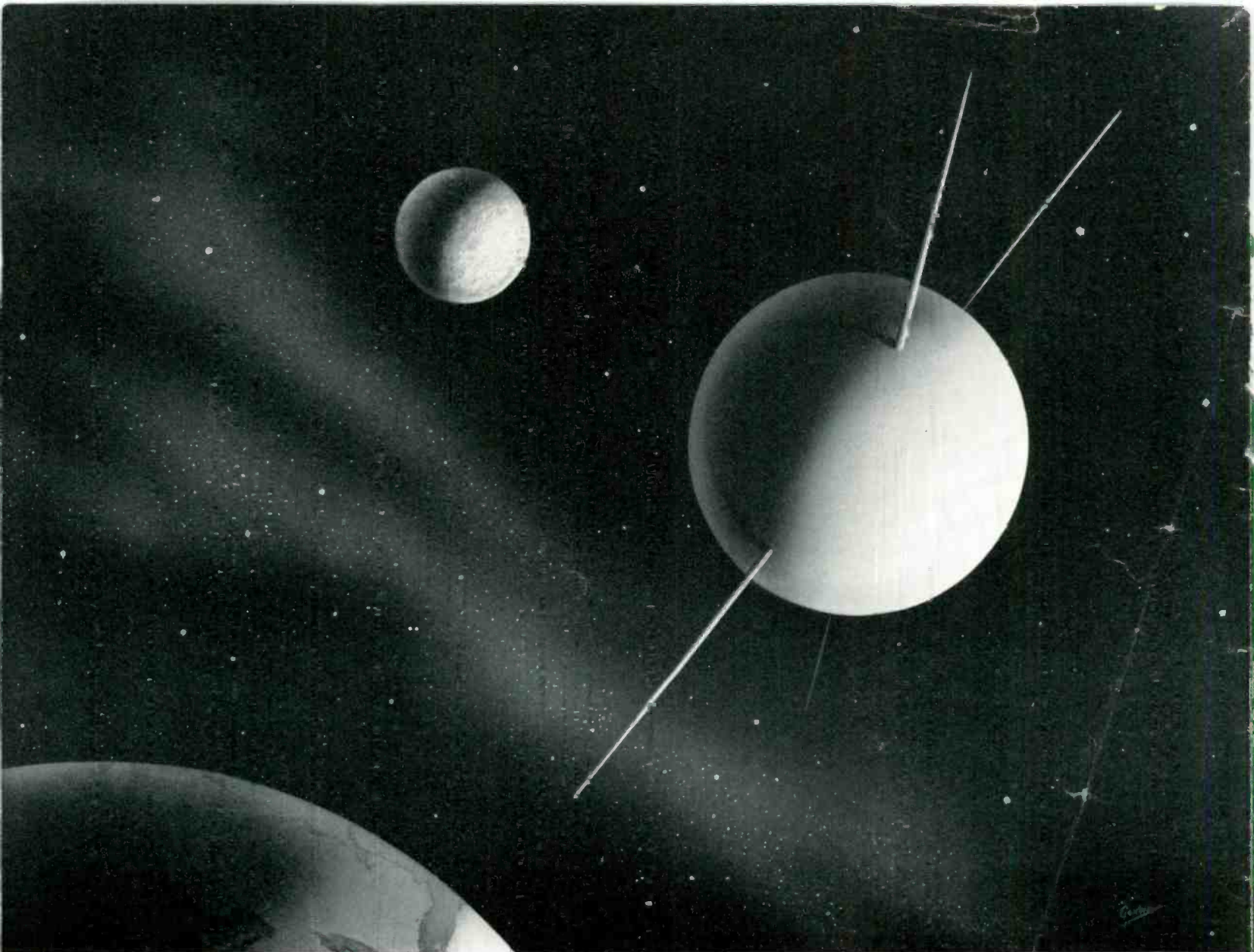
TAPE RECORDING



231 Wildland Ave.
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April 1957

35c



recording the "man-made moon" on extra-precision audiotape

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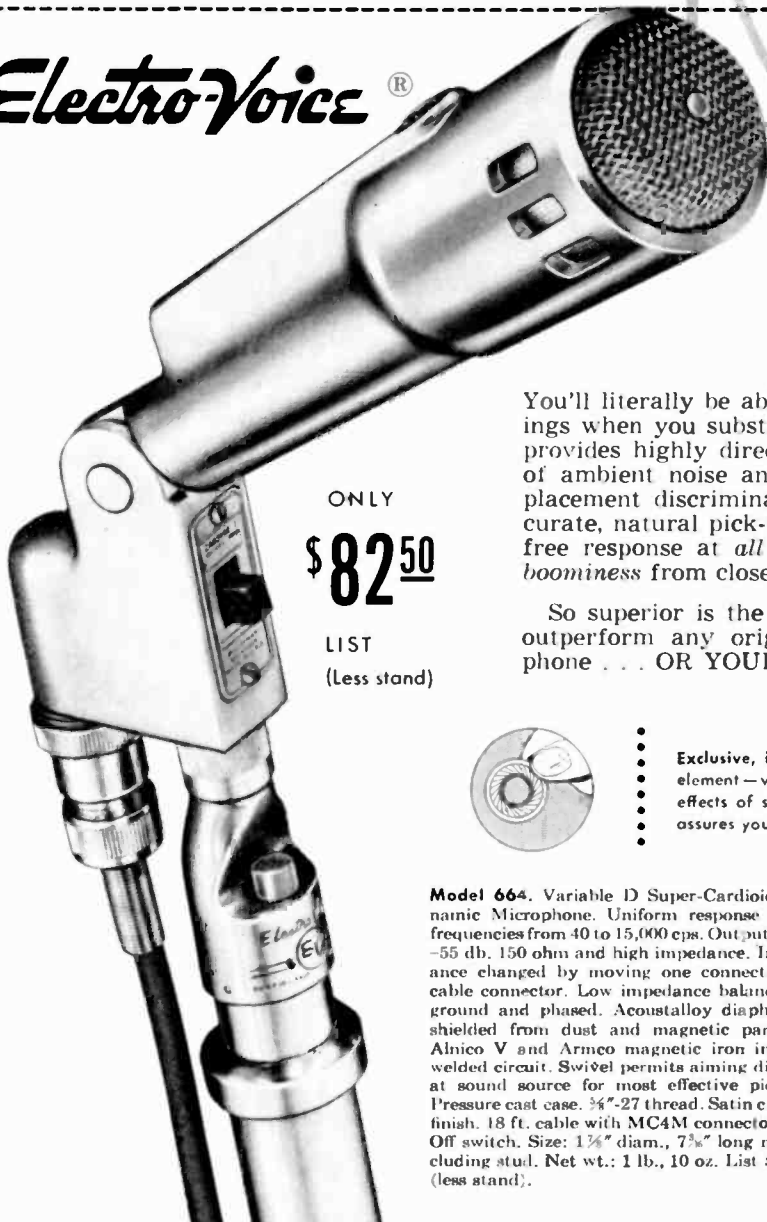
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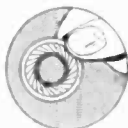


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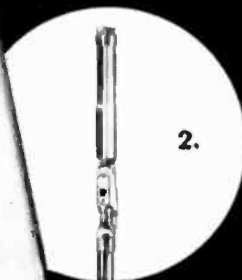
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HI-FI

TAPE RECORDING

VOL. 4 No. 5 APRIL, 1957

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IN THIS ISSUE

SOUNDS OF MEXICO Robert Van Der Velde 22
 EXTRA INCOME FROM A RECORDER Geoffrey Grant 26
 ADD SOUND TO YOUR MOVIES Alec Taylor 29
 QUESTIONS ON STEREO Robert Oakes Jordan and James Cunningham 32
 NEW TAPES Georgia Sigsbee 6
 TEEN TAPERS Jerry Heisler 12
 TAKE I 13
 TAPES TO THE EDITOR 14
 QUESTIONS AND ANSWERS 15
 TAPE IN EDUCATION John J. Grady, Jr. 16
 TAPE TEACHES LANGUAGES 18
 CLUB NEWS 19
 NEW PRODUCTS 20
 COMPACT HI-FI SETUP Morgan Brody 35
 NEW PRODUCT REPORT, FILM INDUSTRIES RIBBON MIKE 37

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AMPRO® TAPE RECORDER

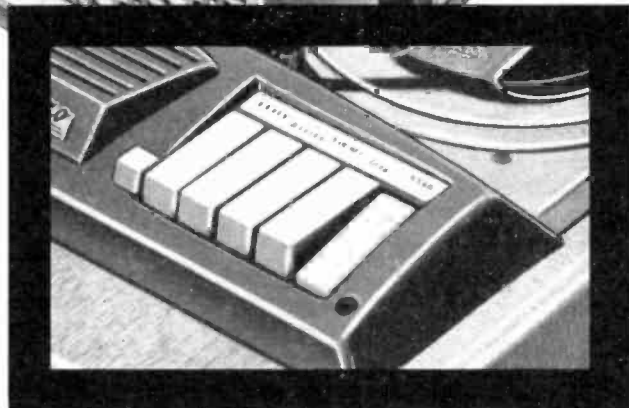
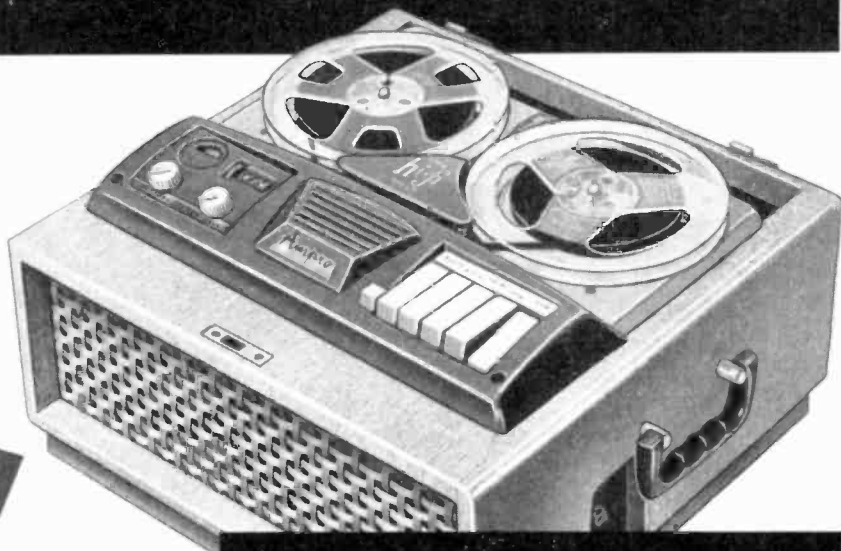
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Thanks to 100% solenoid control, only Ampro gives you instant Start, Stop and Reverse in either direct or remote operation. The Ampro's immediate response to Push-Button Control offers unmatched accuracy and recording performance impossible in mechanically driven tape recorders. Solenoid controls make many operations easier and more perfect. You can dub in corrections or erase unwanted material easily and accurately. Because of its split-second operation, you can easily record sound effects or portions of music or speech from records for special effects. The Ampro Hi-Fi solenoid operation permits exclusive use of a forward-reverse foot control and a stop-start microphone for operating and controlling the unit from a distance . . . highly beneficial in recording, dictating and transcribing. There is no danger of spilling the tape! Mechanism shuts off automatically at the end of the reel.

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Ampro Hi-Fi features one of the finest amplifying systems ever incorporated in a tape recorder, providing true high fidelity reproduction from 40 to 15,000 cycles per second. The lowest notes of the string bass to the highest notes of the violin are well within its duplicating range.

Contributing to Ampro's "live performance" sound is a crossover network system which combines two electronically balanced speakers, achieving matchless realism through perfect tonal separation. The lower frequencies are reproduced by a 6 x 9 inch elliptical Alnico-5 "woofer" and the higher frequencies by a 3 1/2" round Alnico-5 "tweeter."

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NEW TAPES

By Georgia Sigsbee

Those who have a wealth of information and understanding of music, either classical and/or popular, may wonder why background and facts of which they are cognizant are often given in reviews. This is done for those who are just entering through the door of music or who have yet to build up listening experience and data to the point where they are "old timers" in the field. For you who have had music as an integral part of your lives for many years we try to give enough evaluation of interpretation and fidelity so that you may be guided according to your

own personal taste. Do not feel we are talking down or being repetitious when we give information on the composer, his composition, or the artists; we are trying to inform all who desire such knowledge. We try to be as succinct as possible and yet whet the appetite for further communication with music and its makers.

We compare tape against tape and with the familiarity bred by years of music via disc we will often evaluate interpretation available on tape against that which you may have, or have heard, on disc. There are, as yet, many conductors and artists

not available on tape and we hope as this field grows and grows that the representation will become complete.

As Lincoln said, "You can please some of the people all of the time, and all of the people some of the time, but you cant' please all of the people all of the time" . . . however, we'll try to do our best by all of you!

CLASSICAL

BACH

Brandenburg Concerto #5
Brandenburg Concerto #6

Cento Soli Orchestra, Hermann Scherchen, Conductor

OMEGATAPE OT 3010

Scherchen is highly esteemed both as a conductor of traditional and modern music, as well as a writer on musical subjects. He rates the highest praise in relation to the former for his readings of these concerti for various instruments which Bach composed in 1721 for Christian Ludwig, Margrave of Brandenburg. The six Brandenburg Concerti are available via OMEGATAPE OT-9001, as well as Concerti 1-4, OT-8006, or the above 5 and 6. In this way you can fill in the gaps in your library or have the entire compositions all at once.

The 5th is lively and happy and I found the performance and reproduction of the solo work by Ruggero Gerlin at the harpsichord delightful and excellent. The 6th is more solemn and filled with the dignity of Bach's time. Scherchen and the orchestra work together beautifully and come up with a profound rendition of the two compositions containing the essence of delicacy, charm and finely balanced sound.

Rated as tops.

PIPE ORGAN

MIGHTY WURLITZER PIPE ORGAN,

Volume 2

Oklahoma:

Oklahoma
Oh What A Beautiful Morning
Surrey With the Fringe on Top
All 'er Nothin'
Kansas City
People Will Say We're in Love
I Can't Say No
Out of My Dreams

South Pacific:

Overture
Dites Moi
Cockeyed Optimist
Twin Soliloquies
Unspoken Thoughts
This Nearly Was Mine
Happy Talk
Younger Than Springtime
Bali Hai

Gordon Kibbee

OMEGATAPE ST 7001

7 1/2, Stereo—\$12.95, Stacked or Staggered

On this tape Kibbee presents more show tunes (Omegatape 7009, October 1955 featuring "Pal Joey" and "Jumbo") exe-

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CLASSICAL

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The Music of the Bach Family—Volume I, Boston BO 7-6 BN. Monaural version: BO 7-8 D (includes contents of BO 7-7 BN).

The Music of the Bach Family — Volume II, Boston BO 7-7 BN. Monaural version: BO 7-8 D (includes contents of BO 7-6 BN).

HANDEL: Excerpts from "The Messiah," Boston BO 7-9 BN. Monaural version: BO 5-9 D.

Johana Harris Plays the Works of Claude Debussy, Connoisseur 116 BN. Monaural version: D 5-116 D.

Music Written for the Harp—Nicanor Zabaleta, Esoteric ES 7-10 BN. Monaural version: ES 5-10 D.

POPULAR AND JAZZ

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Lenny Herman — Hit Tunes Through the Years, Livingston 1094 BN. Monaural version: T 7-1095 D (includes contents of 1093 BN).

The Gin Bottle Seven Play Again, Empirical EM 7-6 BN. Monaural version: EM 5-6 D.

Bob Mielke and His Bear Cats, Empirical EM 7-7 BN. Monaural version: EM 5-7 D.

Send for our complete catalogue describing these and all other releases in detail. Request also, if necessary, the name of your nearest Livingston dealer.

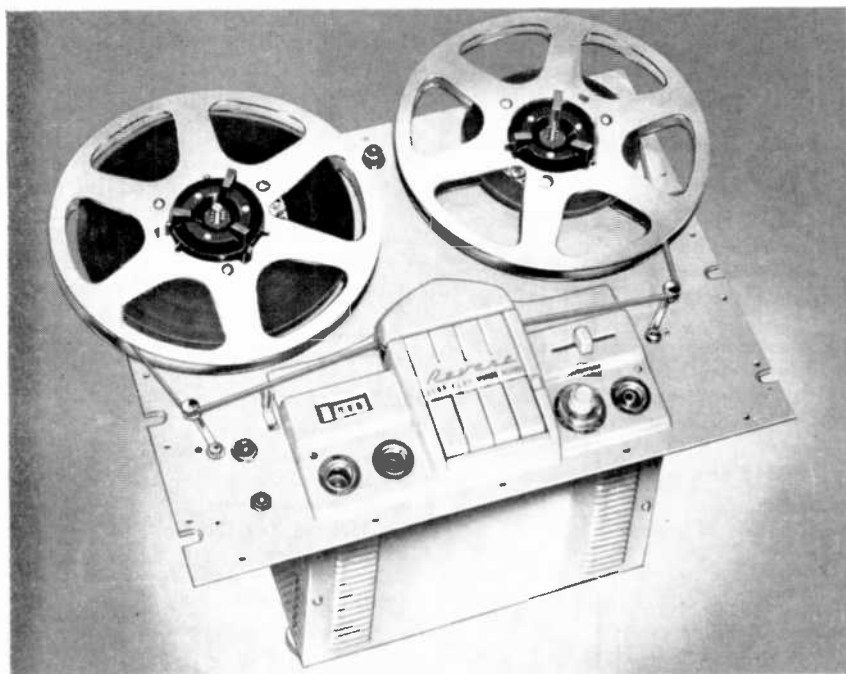
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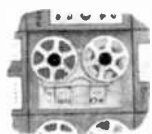


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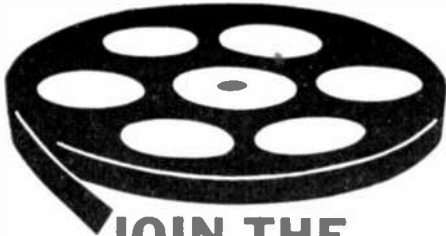
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My Check, for \$6.00
 Money Order for \$9.00 is enclosed herewith (payable to the Stereophonic Music Soc., Inc.)

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cuted on this terrific five manual pipe organ. This particular instrument boasts such added attractions as a real brass trumpet, brass saxophone and a real piano which Mr. Kibbee uses to advantage throughout.

His extremely talented playing of this fine organ combined with Rodgers' and Hammerstein's music should more than please all those who enjoy light music on the pipe organ.

Full range fidelity.

POPS FOR PIPES

Careless
The Boy Next Door
I've Grown Accustomed to Her Face
I Could Have Danced All Night
When Your Lover Has Gone
Gordon Kibbee

ALPHATAPE ST 25

7 1/2. Stereo—\$8.95, Stacked or Staggered

As an instructor of the organ at both the California Academy of Music and The American Operatic Laboratory, Kibbee breaks the bonds of the more serious aspect of such a profession to bring you music in a light vein skillfully arranged and played.

He "dances" about on the instrument with his usual agility, achieving tonal effects which should delight the audiophile; try "I Could Have Danced All Night" for size.

For those more interested in musical content than different audio colorings, these standard tunes are played well and should give you an agreeable musical interlude.

HIGH FIDELITY SHOWPIECES

C'est Si Bon
Vienna My City of Dreams
Granada
Baia
Begin the Beguine
Somebody Loves Me
My Heart Belongs to Daddy
Tea for Two
Gordon Kibbee

OMEGATAPE ST 7007

7 1/2. Stereo—\$12.95, Stacked or Staggered

On this tape you will hear Mr. Kibbee ably demonstrate his versatility while performing these sundry musical selections

There are so many recordings out these days which, according to their labels, try to promote or create various moods, that, with tongue in cheek, we'll say this is for your "mixed-up mood." Who knows, if you play this tape with such diversified pieces while in such a mood, you might have to see your psychiatrist! You can guess then what new label could follow.

This tape is entertaining and well-recorded. I've never heard the pipe organ get so jazzy.

POPULAR

MUSIC FOR HEARTH AND HEART
Frank Hunter—Orchestra and Chorus
BEL CANTO #106

This is a tape that the teen-agers would use to keep the party going. There is some vocal work thrown in by Joe Foley and Dotti Malone, some chilly sound effects on

"Snowbound" which in this hot, humid clime had some cooling effects, and a good Miller-type arrangement of "I'll Never Smile Again." The young in heart will like this one.

MEMORIES OF FRANCE

Under Paris Skies—Can-Can
Frere Jacques
Vien Vien
La Mer
Humoresque
Vilia
Paris Theatre Orchestra

BEL CANTO . . . #4

7 1/2. Stereo—\$9.95, Stacked or Staggered

These typical French selections are done with a refined and elegantly polished touch so do not expect the brash, earthy versions as might be heard at the clubs in the Montmartre but more the sleek, grand feeling one might derive from walking along the Champs-Elysees . . . or going to the Paris Theatre!

The pizzicato of strings in "Can-Can" and "Frere Jacques" is good and I have never heard the latter played so "toned up" and I must admit it was a relief from the usual. Children would find it difficult to sing to as there is change of key and pace! "La Mer," "Vien Vien," and "Vilia" are given soft, piquant arrangements while "Humoresque" is gay and lilting.

Fidelity at its finest.

WALTZTIME IN STEREO

Candlelight Waltz
Autumn Waltz
As Shadows Kiss
Merry Widow Waltz
I'm Holding You Close
Strauss Medley
Tales From the Vienna Woods
Arranged by Joseph Kuhn

BEL CANTO . . . #6

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

Have you ever wished you could waltz in a huge ballroom, just you and your "one and only," to music performed with a delicate, romantic air? Well, pull back the rugs and pretend you have the ballroom, for here are the waltzes produced with poignancy and emotional appeal.

The nameless orchestra does an accomplished job and the fidelity is excellent.

MARCHES

MILITARY MARCHES

Deutshmeister March
Hurra Heidecksburg
Radetzky March
Schoenfeld March
Seidferditz March
Adreas Hofer March
Kaiserjaeger March
Orchestra of the Army Battalion, Vienna
Gustav Gaigg, Conductor
Josef Duron, Musical Director

OMEGATAPE ST 2006, Volume I

7 1/2. Stereo—\$10.95, Stacked or Staggered

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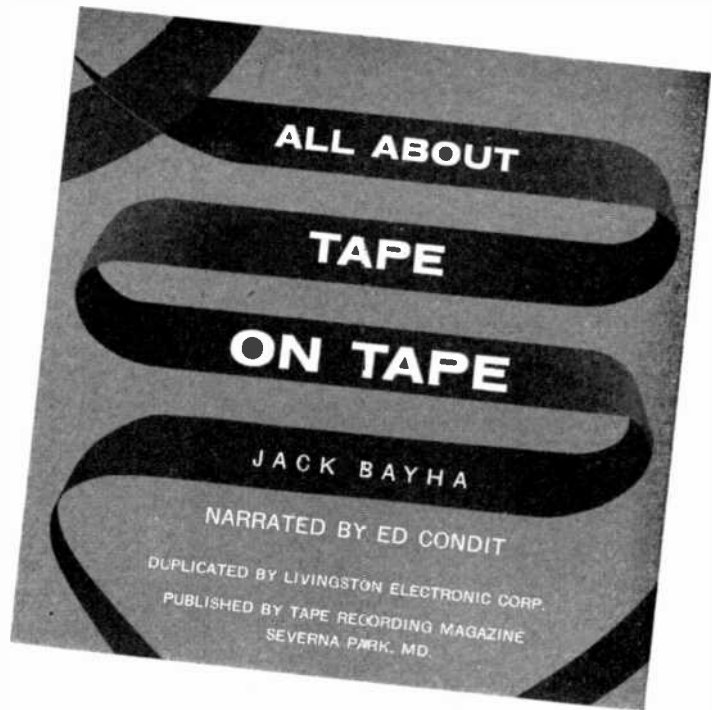
MEET THE AUTHOR



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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... authored by Jack Bayha ... a book to which you listen ... the first book specifically designed and produced on tape instead of the printed page ... Now you can actually HEAR what good recording, over-recording, wow, flutter, distortion, wrong mike placement, etc., sound like. A test section allows you to adjust the head of your recorder for best results. Chapters include: How a Tape Recorder Works, A Demonstrated Glossary, Recorder Operation, Home Recording, Field Recording, Low Impedance, Microphones, Recorder Maintenance and Testing. ... Playing time of the Tapebook is one hour. Accompanying each reel is a 28 page booklet containing 80 illustrations to supplement the spoken word. It is unique, enjoyable and instructive.

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BO RHAMBO COMBO #505 30 min.

This album has no peer today with the excellent presentation of sax, trumpet and organ. Bo Rhambo is truly amazing with his mastery of the sax and trumpet... reminding us of the Hawk of yesteryear.

Stardust, Jump Time, Bo's Blues, Loafing, Lost in a Day Dream, Blues For The Doll, Indian Love Call, Move it on Out.



BO RHAMBO COMBO

PARDON MY BLOOPER! #901 (vol. 1); #902 (vol. 2)
45 min. each

An album of radio and t.v.'s most hilarious boners collected by Kermit Schafer, radio and T.V. producer. Material for this album was gathered from transcriptions, kinescope sound tracks, off the air recordings, tapes and other sources; covers an approximate 25 year span. The material herein is authentic, and contains types of BONERS known in radio and T.V. as FLUFFS, SPOONERISMS, SLIPS, FLUBS, BLOOPERS, etc.

HIGHWAY JAZZ 20 #504 30 min.

Modern Jazz is generally conceded to be either of West Coast or East Coast origin. There's a lot of terrain between: in no coast land one prominent jazz figure known as "Mr. Music" grew in Cleveland, our Joe Howard. In this album you'll find some refreshing "clearwater sounds" from Cleveland, Ohio, on Jazz, Highway 20. Drive carefully. All The Things You Are, Tenderly, If I Had You, I'll Remember April, Dorisio, Taking A Chance On Love, Memories Of You, You Took Advantage Of Me.

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street. Don't expect the orchestra to march in one speaker, across and out the other for they have halted right in front of you. For some, as it did for me, it may recall the band concerts given in the local park. Some of you are still fortunate enough to be able to enjoy this form of entertainment but for those of us who cannot, this tape provides a well-chosen seat by the bandstand.

The marches are played and conducted with refined polish; the brasses and percussion brilliant and lifelike.

I feel this tape could be used to great advantage in the schools by music teachers who are instructing students in band music. For schools which might have tape machines, but no band, here is the music to march into, and out of, assembly!

DRAMA

"NO EXIT" by Jean-Paul Sartre

Featuring:
Patricia Luce
Terry Gallegos
Andre de Mandach
Directed by Marion Vandal

NATIONAL TAPE LIBRARY
7 1/2, Stereo, Stacked or Staggered

Recorded at the U. S. Recording Studios in Washington, D. C. this tape proved to be most interesting.

Monsieur Sartre, philosopher, writer and originator of the French atheistic existentialist philosophy presents in this modern morality play his idea of what hell might be like. Even if you don't agree with him, the play in itself is thought provoking.

In capsule version the plot revolves around three chief characters; Garcin (a pacifist journalist), Estelle (Parisian beauty), and Inez (post office clerk). They find themselves in a place designed for those who have not done too well on this earthly plane; they become acquainted, ultimately confess their sins and succeed in making time (to be indefinite) spent together unbearable for one another.

The play started out slowly but, as oftines when reading a book, after getting into it, it picked up and held interest.

As I did not receive information as to which individuals took each part, I will give my opinion as to the readings without really knowing who did them. "Inez" gives an outstanding performance portraying to perfection the frustrated, cruel personality of this woman. "Garcin" does a commendable job but at times does not seem to deliver his lines with the proper depth. "Estelle" is good; the valet a bit too devilish in tone.

This tape does not follow the English translation which I have on hand (published by Knopf, Inc.) word for word. The tape contains more profanity and even more modern wordings. Two additional characters have been inserted into the play. They give background on the three people and discuss events as the play progresses.

Stereo does much to enliven drama via tape. You hear the performers walking and speaking from all parts of the room, doors closing on the left, etc. Stereo builds up the feel of the stage.

Unfortunately, this particular set of tapes was poorly edited. Reel 1 is clear, but as

Reel 2 begins there is a repeat of the end of Reel 1 (about 5/8 inch). Also the audio level drops. Used setting #3 on Ampex but had to ride the gain up to #4 to compensate for the loss. 5/8 inch from the end of Reel 2 the play stops, then goes back and repeats the last section and continues on to cover further dialogue in the play. Reel #3 takes up after skipping a short section where Garcin tries to convince Inez to cooperate in stopping the torture each is inflicting on the other. Am sure the NTL people will rectify any such errors should they exist in other sets and thus preserve the proper continuity necessary.

Dramatic tapes are not only entertaining but of great educational value in our various schools and colleges, and via stereophonic sound take on a "live" quality.

"THE TEMPEST" by William Shakespeare
Cast:

- Narrator Richard Barr
- Master of ship Dayton Lummis
- Boatswain Robert Busch
- Alonso, King of Naples... Dayton Lummis
- Sebastian, his brother Oliver Cliff
- Antonio, usurping Duke of Milan and brother of Prospero.. Bruce Gordon
- Gonzalo, honest old counsellor Robert Harrison
- Miranda, daughter of Prospero Margaret Phillips
- Prospero, rightful Duke of Milan Raymond Massey
- Ariel, an airy spirit Lee Grant
- Caliban, savage and deformed slave Lionel Stander
- Ferdinand, son to Alonso.. Hurd Hatfield
- Trinculo, a jester David Orrick
- Stephano, a drunken butler Martin Kingsley

CONNOISSEUR TAPE LIBRARY, D-113/4
LIVINGSTON ELECTRONIC CORP.
7 1/2, Dual track (2 reels)—\$19.50

A magnificent tape beautifully dramatized by an excellent cast with top reproduction.

For those who may not be familiar with the play, Shakespeare relates a story of one Prospero who was ousted from his Dukedom by his brother, Antonio (aided by the King of Naples, Alonso) and put adrift in a small boat in the open sea with his young daughter. Reaching a desert island on which there is but one lone inhabitant, the misshapen monster, Caliban, Prospero releases the good spirits imprisoned by Sycorax, Caliban's now deceased mother, and proceeds to devote himself to the study of magic and the education of his daughter.

Prospero's time for revenge comes when a ship carrying the wicked conspirators is off the coast of the island. He arranges a sudden tempest, aided by Ariel who sets the ship ablaze. This is where the play actually opens. They see that the ship is hidden safe in a harbor and all passengers dispersed about the island.

Ferdinand (Hurd Hatfield gives a fine performance in this role) finds his way to Prospero's cell and falls quickly in love with Miranda and she, with him. Meanwhile, the King and his cohorts are trying

to find Ferdinand and are beset upon by spirits which frighten them. Elsewhere, the butler and jester discover Caliban, who hates Prospero because he is master of the Island (this is a delightful scene), and, after overindulging in wine they plot Prospero's death. Here again the spirits are brought into play and their foul plan runs amuck. Prospero recalls to his enemies their guilty deeds, forgives them and all return to Naples where Prospero is restored to his Dukedom and forsakes, forever, his magic art.

The fidelity is superb from the opening claps of thunder and lightning, the clarity of voices throughout, to the background music. The only thing lacking would be stereophonic sound.

The incidental music, calling for four players, is scored for keyboard instruments, harp and percussion. The keyboard instruments, played by Abba Bogin and the composer, includes two pianos, harpsichord and celeste. The harpist is the well-known Edward Vito. The percussion is played by Carroll Bratman and are from his personal collection which include: Chinese gongs of various sizes. Turkish and Chinese cymbals, tuned antique cymbals; two groups of timpani; timbales; bass drum; snare drum; bongoes; tuned temple blocks; crotales; triangle; a Chinese bell-tree; glockenspiel; vibraphone; and brass marimba. Quite an impressive group of instruments.

All the actors impart intrinsic feelings into their roles and the performances throughout are highly polished. Lee Grant,

as Ariel, does a splendid piece of acting; Trinculo (David Orric) is particularly effective. Raymond Massey and Margaret Phillips turn in top dramatizations.

I was surprised to hear the familiar, rusty voice of Lionel Stander reading Shakespeare, as the characterizations he has depicted in the movies conjures up a mental picture far removed from the Bard of Avon. His voice sounds "uncultivated" enough (I keep trying to clear my throat for him!) in his part of a savage but he does not project the sensation of being either fierce or ferocious; a savage more to be pitied than frightened by. Perhaps that is the way it should be.

The enunciation, phrasing and vocal expressions are well executed by the entire staff. Special mention for the rich, full-timbered voice of Bruce Gordon.

The two lords, Adrian and Francisco, have been cut from the cast, as they were but minor parts. Some lines have been deleted (of more or less extraneous nature) but the continuity is maintained. The only errors I found, and they are small, are where the narrator introduces Scene II in Act II as Scene IV and Act III as Act II. The play goes from Act IV into Act V without break or introduction.

This, in my opinion, is a great addition to one's library. The price is going to scare some but I have known evenings when dinner, concert and babysitter has come to about that price. This is a lasting treasure for you as well as a wonderful tape for your children. It should help them to understand and accept Shakespeare more readily and it seems to me could be employed favorably in the schools, in both literature and dramatic courses.

I cannot pass by this play without quoting one of my favorite Shakespearean lines which appears therein: "We are such stuff as dreams are made on; and our little life is rounded with a sleep."

STEREO SHOWCASE

LIVINGSTON

LS 5-3 BN, Stacked or Staggered

Received a special advance copy of the above tape which selects a cross-section of Livingston's stereo releases for the edification of the consumer. Hugh James keeps the talking to a minimum. Several musical categories are presented: Lennie Herman and his orchestra, Bill Thompson at the organ in a light vein and later Kurt Rapf at the pipe organ playing the classics. You get a brief hearing of the Mozart Horn Concerto (reviewed October 1956) and the brilliant percussive effects and bright brass are brought home by the Florence May Festival performing Dukas' "Sorcerer's Apprentice." Some New Orleans Jazz, a tuba solo with Wilbur de Paris, the Vienna Choir as brought to you in Livingston's "Music, Wine and Candlelight" series and a tremendous finale of Wagner's "Overture to Tannhauser" complete the tape.

I hereby immediately place my order for the Dukas and the Wagner as do not have and, from what I have heard, I want to hear more! This tape gives you a good idea of what Livingston has done and is doing in stereo and what you can expect in the future.

quality tapes for your listening pleasure . . .

SYMPHONY FOR GLENN ST-8, \$11.95,

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Joseph Kuhn
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Circa 1890—is considered, of late, a dead and buried memory of early Americana. However, the showmanship and spontaneity of this early form of stage production contributed tremendously to our present day entertainment.

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We've saved a seat for you — front row center where your grandad sat and got such a kick out of Mr. Interlocutor and his end men, the banjo and bones, the chorus and band.

Take care now, the Grand March is just about to start! We won't look for you until intermission or after the Grand Finale.

Stereophonic production under the direction of Russ Molloy for Bel Canto.

ST-DX
\$3.95

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- ST-2, \$9.95, Rachmaninoff in Stereo, 23 min. A thrilling high fidelity adventure in stereo through the brilliant artistry of Monsieur D'Coto and the String Ensemble de Paris.
- ST-3, \$9.95, Memories of Spain and Italy, 23 min. Featuring the Symphonette de Madrid and the Rossini Orchestra of Italy. The stirring La Virgen de la Marearena is an absolute must for the stereo enthusiast.
- ST-4, \$9.95, Memories of France, 23 min. Under Paris Skies, Can-Can and Frere Jacques done by the Paris Theatre Orchestra; arranged and recorded specifically for the Bel Canto stereo library.
- ST-5, \$9.95, Tribute to Victor Herbert, 23 min. The Stockholm String Orchestra under the direction of Hans Holbert; nine immortal tunes of Herbert, such as Indian Summer, Toyland, and Moonbeams.
- ST-6, \$11.95, Waltztime in Stereo, 30 min. Here is an album devoted to the waltz; featuring the Kingsway String and Joseph Kuhn's arrangements of the Merry Widow and Candlelight Waltzes.
- ST-7, \$7.95, Polka Party in Stereo, 15 min. For the first time in stereo, Razzberry Reynolds and the Allstar Polka Band perform; Too Fat Polka, At the Mill, and Helena Polka, recorded at Capitol Tower in Hollywood.

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TEEN TAPERS

BY JERRY HEISLER, National President



Stereo is going to be of tremendous interest to us teens. For the first time real, full, lifelike music is available. As good as hi-fi music is, it can't approach stereo for realism.

For teen dances it's a natural. Few groups can afford to hire a live orchestra except on very special occasions but with stereo its just like having a live band in the hall. For a large group you'll need additional amplification and larger speakers. A Teen Tapers Club might buy and put together two of the amplifier and speaker kits and present them to the school. This would make an excellent club project, you would learn about the hook-ups of amplifiers and the speaker cabinets could be made in the school shop.

If the gang was once treated to a stereo dance they'd never want anything else.

Getting a stereo outfit of your own should not be too difficult either. There are more machines coming on the market all the time and in all price brackets. There are also adapters which enable you to convert your present recorder to stereo. If your folks like good music, they'll gladly chip in.

If your school has not yet organized a Teen Tapers Club—use the coupon below. We'll rush you the materials.

An activity of interest to many is being offered by Tape Respondents International, according to Secretary Jim Greene. Rather than maintaining permanent correspondences via tape, TRI is embarking upon a program for those people interested in contacting as many people as possible on a one shot basis. When an exchange is made the members will send each other a card with their "call letters", name and address similar to the type used by the radio operators. Sounds like fun for a private individual as well as a club. Lots of luck Jim and TRI.

We hope you enjoyed the "Students Tape It Easy" story appearing in the last issue, as much as we did. It is interesting to note some of the uses made of recorders by teen age groups. We are extremely interested in learning about what you do with your recorder. One of the purposes of Teen-Tapers is to spread information so that teens can enjoy their recorders more fully. To promote your sending in ideas we have arranged a little contest.

We would like every person who reads this column to send in a description of a novel use of a recorder that he has personally tried. Everyone records the family, radio broadcasts, records and the like, so these are not novel. We want something different. Send us a complete description of your uses of a recorder along with a picture if you have it (certainly not required) and to the five teens whom we judge as having the most interesting and novel uses of a recorder we will award a free 1 year subscription to the magazine, or if you are a subscriber, we will extend your subscription for an extra year. How about it? It's not a tremendous prize, but it's not a tremendous thing we want you to do. Just pass along some of your fun with a recorder to some other teens who might enjoy doing the same thing. By the way, while you're writing in, clip the Teen-Tapers application below so that we can put you on the list.

We've done a lot of talking about how great it is to play stereo tapes and the like, but we've never mentioned a lot about making a stereo tape. To this end we are arranging with a manufacturer of a line of equipment that enables you to make your own recordings in stereo as well as monaural. These units come in the form of a tape deck with various types of heads and various amplifiers to suit the purposes you have in mind. The cost is very reasonable and the combinations that you can set up are limited only by the imagination. I can see that it would be possible for you to assemble a recorder to your own desires as far as mixing channels, etc. go. I won't say anymore about this now other than the fact that I hope to be able to experiment with this equipment and tell you what a teen might do with a machine enabling him to MAKE stereo tapes plus combine tape components into a custom system. Watch for this in an issue not too far off.

We would again like to urge all of you to let us hear from you. We want to know your ideas, opinions, and suggestions, and we'd like to have you and your school join Teen-Tapers. Be sure and enter your story of the interesting uses you make of a recorder, so that you will be eligible to receive the free subscription to the magazine.

Jerry L. Heisler—Teen-Tapers
Hi-Fi Tape Recording Magazine
Severna Park, Maryland

Dear Jerry:

Yes, we want to join Teen-Tapers. Please send us full particulars.

Name

Address

My high school

School Address

Principal

Check one: Send materials to
School Me Both

TAKE 1

by the Editors

ONCE upon a time there was a General who vaulted to his horse and rode off in all directions at once.

That would be pretty hard for any general to do, or any horse either, but we know of no description that better fits the magnetic recording industry.

Tape is just about into everything. We are all familiar with our regular and much loved tape recorders that serve us in home, business and school in a thousand ways. But there are many, many more applications for tape than to record and playback intelligible signals.

For instance, the earth satellite will be tracked by tape, its signals will be recorded on tape.

Tape has become the heart of giant computer machines, storing millions of bits of information subject to almost instant recall by the mechanism.

Tape has shortened the interval between the drawing board and the finished product. One machine tool is guided in all its operations from a tape. The tape is used instead of expensive cams that formerly had to be cut by equally expensive tool makers. A high-school graduate with a bit of training can put the necessary information for the machine on tape in a few hours.

You of course know of video recording which is now being used by the major networks. This specialized tape recorder (\$45,000 each) records both the picture and sound. Ready for instant playback, the machine will supplant the kinescope in TV stations.

But it doesn't stop there. RCA has a working model of a video tape player for the home and rumor has it that Ampex is thinking along similar lines. The RCA unit uses a standard TV receiver as the screen. A recorded tape plays the picture and sound on the screen. The next step will be a complete unit which will also permit the signal to be recorded in the home.

Douglas Ewing, Vice President for Engineering and Research for the firm, says such a device is no more complicated than a TV receiver and would cost somewhere in the neighborhood of \$200 to \$300.

But tape doesn't stop there. This unit would also make home electronic photography possible. Already RCA has a four pound transistorized TV camera—it's only a short step to hooking the camera up to the home video recorder to make pictures and then play them back right away on the TV receiver screen.

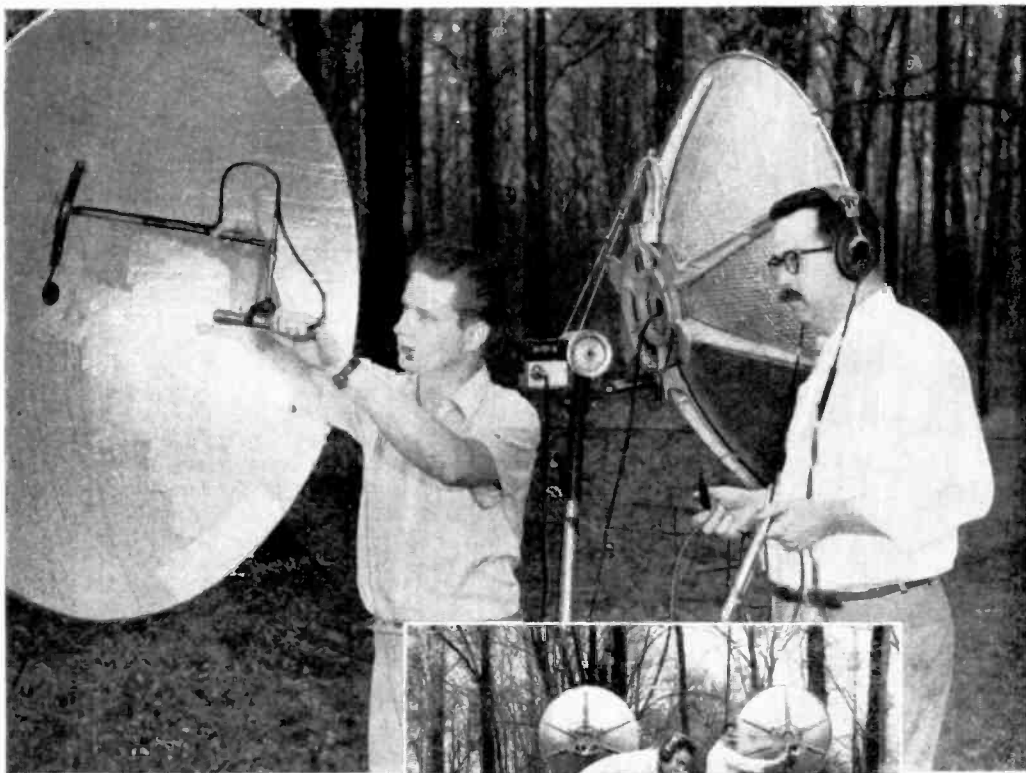
This is in the future, it's not on the market now but at the pace with which this industry moves—anything can happen almost overnight.

Some years ago, Magnecord, in one of their exhibits, had a cake mixing machine that compounded the recipe on directions from the tape. Who knows, someday Mama may simply slip a tape cartridge containing a recipe into a slot, put a bowl under the spout of the machine and the mixed ingredients will come tumbling out.

Impossible? Don't bet on it. You might even invent it yourself.

The Experts' Choice for Outdoor Recording

THE SHURE SLENDYNE "535" DYNAMIC PROBE MICROPHONE...



Robert Oakes Jordan and James C. Cunningham using two parabolic sound reflectors and two Shure Slendynes during an outdoor stereophonic recording session.

For a special series of outdoor stereophonic recordings, "Sounds of Nature," one of the world's foremost stereophonic recording research organizations, Robert Oakes Jordan & Associates of Highland Park, Illinois, chose the Shure Slendyne "535" . . . because of its rugged, weather-proof construction.

The microphones used in this project were exposed to rain, strong winds and rough handling, with no change in their excellent recording characteristics.

Said Mr. Jordan, "In field tests during all types of weather the 535's withstood the abuses of nature and two busy scientists more intent upon their work than upon the "proper" treatment of high quality microphones."

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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, FILM and TAPE RECORDING, Severna Park, Md.

To the Editor:

We are determined to see Old Spooky identified, once and for all. Your readers will recall that Old Spooky is the ubiquitous gentleman who haunted the illustrations in the excellent article, "Sound in the Round" by Robert Oakes Jordan in your December issue. A Mr. Paul Harris (and, as I understand, many others) wrote you about this and his letter was printed in your February issue. In the March issue Spooky replied, and I thought most graciously. But this mystery has gone far enough. We ask your readers to help us in exposing this man. We have obtained sufficient clues to make this possible. They are set forth in our advertisement on Page 17.

Five hundred 7" reels of Audiotape (or over 113 miles) is a lot of good recording tape to give away. But 1957 is our twentieth anniversary and we feel like throwing a party—so what the heck!—Bryce Haynes, Vice President, Audio Devices, Inc.

To the Editor:

From time to time I have entertained the idea of subscribing to TAPE RECORDING Magazine. Enclosed is Money Order for same.

My first knowledge that many people use and like the medium of magnetic tape recording was gained through *Low Cost Hi-Fi*, a book by Hofner. Last summer, while attending a convention in Detroit, I dropped by Grinnell Brothers music store, and went to their recording department. I was quite surprised to discover that even with the high price of recorded tapes, Grinnell's has quite an extensive library. They also offer many fine leaflets containing interesting hints on how to make a recorder give better and longer service. Realizing that when a company of their size goes in for tapes and machines on such a large scale, tape recording for home use and taping must be more than just a passing fad, I was inspired to join the ranks and to subscribe to your magazine so that I may enjoy the medium more myself. Some tapes I made of my friends seven years ago are now just as clear in reproduction as they were then. No other form of home recording can make this claim. I am looking forward to my first copy of the magazine. —Charles C. Byers, Bluffton, Ind.

To the Editor:

I had been following the radio program, The Greatest Story Ever Told, which was presented over the American Broadcasting System, until cancelled. I missed the four Christmas and Easter programs, and am wondering if you can give me any

information on where I could obtain a tape of these. I hope you can help me, for without these programs my collection is not complete.—Norman Torgersen, 960 Montague Ave., Salt Lake City 4, Utah.

Are there any readers who can help Mr. Torgersen out?

To the Editor:

Would you do an article on the various tracks? Even the dealers are thoroughly confused with dual track, full track, inline and staggered terms. This may all seem "green" to you old-timers in tape recording, but I am very "green" at it.—William Eakins, Garrison, Kentucky.

While we are aware that there is still much confusion on these terms, we feel that a simple definition of each will suffice. Full (or single) track is when the sound-track occupies the full width of the tape. After playing through the machine it must be rewound before being played back again. Dual track tapes have two tracks on the same tape with an unrecorded center space. After playing through the machine, the reel is turned over and played back onto the original reel. Rewinding is consequently unnecessary and twice as much material can be put on the same size reel of tape. Inline (or stacked) heads are those which have two channels, one mounted directly above the other to pick up both tracks on the tape at once. In the staggered head system, the two heads are spaced 1 1/4 inches apart. The two recordings on the tape also have the same spacing so that it is necessary to have the proper tape to play on the machine.

To the Editor:

I follow record and tape reviews in several publications. All tape fans will agree that half the enjoyment is taping the music yourself. The advent of tape made possible programming by the listener. With the three base tapes, various selections may be recorded on a 7 inch reel of tape. To know which tape to use, one must know the approximate time of the selections. I would welcome a new innovation; at the end of reviews, print the elapsed time of the selections. —Harold Britz, Paterson, N. J.

A good suggestion, we will keep this in mind and pass it along to our tape reviewer.

TAPE RECORDERS

TAPES (in Boxes or Cans) & HI-FI
EXCEPTIONAL VALUES

NATIONALLY ADVERTISED BRANDS
WRITE FOR FREE CATALOG

CARSTON 215-C E. 88 St.
New York 28, N. Y.

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," Film and 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—We recently bought a tape recorder. The music shop where we went to buy some tape only carried tape for in-line heads and they told us that staggered heads were on their way out and that we would be able to buy very few stereophonic tapes, if any, for our particular machine, which has staggered heads.

This seems hard to believe since ours is a brand new machine and I don't see how a company could sell a machine for which a customer would not be able to buy recorded tape. Could you enlighten us on this question?—Mrs. E. J. Prouty, Denver, Colo.

Q—I am the unfortunate owner of a staggered head player. I have about a dozen stereo tapes in my library which was expanding—until recently.

What I am concerned about is this: more and more dealers are going to the stacked or in-line stereophonic tapes. In a tape catalog, Alphatape, Bel Canto, EMC, Hi-Fi Tapes, Jazztape, Omegatape, Replica, Sonotape, Sony Stereocord, and WFB are listed as having stacked tapes only while only seven companies cater to staggered heads. If I could have the heads on my machine moved or new in-line heads installed, that would salvage the machine but what about the staggered tapes I already have? Can you give any information about what the prospects are for continued availability of staggered head tapes? I am afraid to buy more until I have an understanding on the matter.—R. M., Detroit, Mich.

A—At this writing there are 21 companies who are issuing stereo tapes. Of these, 13 have tapes available either for stacked or staggered. There is a total of 250 tapes available. Of this number, 168 are available either in-line or staggered and 82 are available for in-line heads only. Of the latter, 26 are foreign tapes (Sony and EMI).

The tape catalog to which you refer is in error. Alphatape, Bel Canto, Jazztape, Omegatape, Replica, and Sonotape are available in staggered form. Tell your local dealer to get staggered head tapes for you—he can. We cannot understand why a dealer would give you the impression that there were only a few tapes available, unless he has not had access to correct information. We know of no tape library which is planning to discontinue staggered tapes for there are more staggered machines in the hands of owners than stacked. RCA is the only company not currently making staggered tapes among the majors.

Any staggered machine may be converted to stacked, or have stacked heads added so that it will play both kinds of tapes. Adapters are available for this purpose or a stacked head may be purchased and installed by your serviceman.

For accurate listings of all available stereo tapes we would suggest that you subscribe to the Hi-Fi Tape Recording Catalog of Stereo Tapes (see page 19).

Q—Being a novice in the field I would like some information. I buy my tapes in two different stores. When I ask them for information, one tells me one thing and the other dealer tells me the opposite. I would greatly appreciate it if you could help me out.

My prime interest is in recording music. I would like to know why I shouldn't use the 3¾ ips speed. Also is it true that there is no advantage in buying Mylar tape unless you are going to the tropics? Is it true that a Mylar tape will stretch while a plastic tape will not?

One of my dealers wants to sell me a Mylar tape which has been spliced. He claims this does not affect the tape, but he sells it for a reduced price. Is this true? I buy your magazine every month and I would like to tell you that it is a very good publication. I am glad that you now come out every month. I always look forward to your next edition.—M. L. M., New York, N. Y.

A—You may use the 3¾ ips speed for music if you are satisfied with the results you get. The 7½ ips speed is better as the frequency response recorded on the tape and played back is greater. However, if music at 3¾ ips sounds good to you and is satisfactory for your purpose then use it.

Mylar tape is the best tape made. It is not affected by heat or humidity, as other plastic base tapes are. We would not go as far as to say there is no advantage to Mylar unless one plans to go to the tropics. For any tapes which are likely to be kept for a long period of time, such as recordings of the children, we would definitely suggest that Mylar be used, since it requires no special storage conditions at all, will not dry out or become brittle.

Mylar will stretch before it will break and acetate tape breaks without stretching. However, in ordinary use, it is doubtful that a machine would pull on the tape hard enough to stretch it unless something were radically wrong. Regarding spliced tape, the splice, if well made, will not be noticed in recording or playback. Over a period of time the splice may pull apart slightly but it can be respliced should this occur.

Q—In your Questions and Answers Department of Hi-Fi Tape Recording, you mention "Doctors listen to Audio Digest, which is a taped medical article service as they make their house calls." I would appreciate information as to the address and location of this service—in fact, any and all information you can give me on this type of service to doctors.—Dr. L. P., New York, N. Y.

A—Audio Digest is issued by the Audio Digest Foundation, 800 N. Glendale Avenue, Glendale 6, Cal. The service is by subscription and has tapes on general practice and specialized medicine.

NEW! PENTRON *Emperor* 3 Speaker Hi-Fi Tape Recorder

Now with
STEREOPHONIC SOUND



STEREO

PENTRON STEREO-MAGIC

Only the new Pentron Emperor recorder offers this newest concept in audio pleasure. The Emperor's "roving" tweeter in a separate baffle, perfectly balanced with 2 heavy duty woofers in the recorder, reweaves the whole complex beauty of the music ever at low volume. Don't miss the experience. Hear and feel this difference in audio dimension—see the Emperor's bold incomparable styling at your Pentron dealer.

Push pull 10-watt amplifier. VU meter. Automatic index counter. Instantaneous braking. Frequency response 40-12,000 cps.

LARGEST EXCLUSIVE MAKER
PENTRON
OF TAPE RECORDERS

PENTRON CORPORATION
787 South Tripp Ave., Chicago 24, Ill.

TAPE IN EDUCATION

BY JOHN J. GRADY, JR.



THE versatility of tape recording is truly amazing. Tape in Education is indebted to Mr. Harlan E. Pitcher, an alumnus of Michigan State College, for a much appreciated commentary regarding the participation of tape recording, as a means of scientific communication, in the recent bomb tests in the South Pacific area. For security reasons the

commentary does not refer to any specific operation, but is general in character. It is a very welcome addition to other important testimonials as to the variety of usages of tape recording.

Mr. Pitcher, as an observer for Douglas Aircraft Co., referring to the Field Use of Miniature Battery Operated Tape Recorders,

comments as follows:

"This equipment has been used at remote test sites to record the pre-flight preparations of ground and air crews. The post-test de-briefing of air crews has also been recorded with spectacular success.

The complexity of modern tests of military equipment make it mandatory to maintain a complete tabulation of all test preparations and test results. Written notes and the memory of on-the-spot observers do not provide adequate or reliable data on which to base subsequent conclusions and procedures.

The use of miniature battery-operated tape recorders has made it possible to record the actual events and conversations as they take place. These recordings may also be sent from the test area to the 'home office,' where support personnel may have *actual* first-hand information in lieu of incomplete or slanted conclusions.

The proper use of modern tape recording equipment has made this an indispensable tool to the research scientist and engineer."

The above commentary of an expert in scientific achievement should carry weight with students and educators. Especially, should it be inspirational to such student experimenters as Jerry Heisler and his Teen Tapers—the young and aggressive seekers after better methods of communication, who are working with school instructors throughout the nation to perfect advanced methods of imparting knowledge to the efficient citizens of tomorrow.

Tape in Education says confidentially to all ambitious students; Study carefully the comment above of Mr. Pitcher. The last paragraph is a prophecy of great importance to you. For that last paragraph sustains the fact that tape recording is certain to be recognized in many lines of industry and commerce as an indispensable tool. Tape in Education now hints that a new Tapebook will be published—taped instruction in The Convincing Objective Speech of Modern Commerce. It will be fundamental instruction, with actual examples of the various components of *convincing* objective speech—on tape. There's to be a text manual also. The purpose is to provide a formula for becoming articulate to meet the requirements of modern efficient communication. For no matter how wise you may become—how much knowledge you may absorb—unless you can express yourself with vocal conviction, this highly competitive era we live in can be difficult for those unable to vocally display their wisdom and knowledge. Watch for an announcement in a future issue.

Students are urged to read aloud the concentrated comment of Mr. Pitcher. It's a rare example of convincing objective discussion. Note the omission of weak "I think," or "I believe," or "Let me say." Note rather that a load of logic is delivered, and the conclusion is inescapable. You're convinced that *TAPE RECORDING IS AN INDISPENSABLE TOOL TO THE RESEARCH SCIENTIST AND ENGINEER*. Thanks, Harlan Pitcher, for unconsciously supplying such a fine illustration of the type of *convincing objective speech of modern commerce*. of

(Continued on page 18)

EXPERTS PICKED ASTATIC VOGUE 988

FOR "ALL ABOUT TAPE ON TAPE"*

"The author selected the Astatic 988 for the job due to its extreme frequency response and particularly fine sound of the human voice. On a dollar-per-cycle basis it represented a best buy for high fidelity tape recording work.

"Livingston Audio Products Corp. recognized the 988's fine performance, as well, and by joint agreement we selected the 988."

(signed) JACK BAYHA, Author
CHED SMILEY, President
Livingston Audio Products Corp.

*Narrated by Ed Condit
Duplicated by Livingston Audio Products Corp.
Published by Tape Recording Magazine, Severna Park, Md



ASTATIC Futura Vogue "988"

Brilliant new Astatic Futura dynamic microphones add still another to their many startling industry "firsts!"

The producers chose Vogue 988 of Astatic's Futura line as THE microphone in recording "ALL ABOUT TAPE ON TAPE," the first definitive TAPEBOOK® reference. Astatic's incomparable "FUTURA" series combines striking beauty, rugged construction, all-around versatility, and electronic engineering of the highest quality.

FOR COMPLETE INFORMATION on all Futura series microphones, write for Catalog No. S-438.



THE **Astatic** CORPORATION, CONNEAUT, OHIO

KNOWN THE WORLD OVER

IN CANADA: CANADIAN ASTATIC LIMITED, TORONTO, ONTARIO

Export Sales Representative: 401 Broadway, N. Y. 13, N. Y. - Cable—ASTATIC, N. Y.

who is "old spooky"?



*A reel of Audiotape to each of the first
500 people with the correct answer*



A MYSTERIOUS umbrella-toting figure appeared, apparently without reason, in all the photographs in Robert Oakes Jordan's article, "Sound in the Round," in the December issue of HI-FI TAPE RECORDING.

Alert readers by the score immediately questioned the strange presence. A thought-provoking letter in the February issue, from Paul E. Harris, christened the stranger "Old Spooky" and suggested that perhaps he was the spirit of stereo. Others, noting the peculiar surroundings in which the debonair gentleman appeared, suggested that he was a bird watcher, an aviation buff, or a ferroquinologist.

"Old Spooky," himself, responded with a letter in the March issue. But the mystery prevailed: WHO IS OLD SPOOKY?

Fortunately, an answer is in sight at last. For we had a direct communication from Old Spooky. He offers the verse below as the key to his identity:

*I manage an office of a company you know,
In a city where zephyrs are noted to blow.
My first name's a flower ere it reaches the bloom,
The last has two syllables, both short as is "zoom."
The first is pronounced as fishes are cooked,
The second, "a ballground" — but the pronoun's been hooked.*

OUR OFFER: Audio Devices will give a 7" reel of Audiotape to the first 500 people who hack their way through the verbal jungle of Spooky's verse and emerge with his real name.

Don't worry if your entry is a little late. Even if you're not among the first 500, you may qualify for a nice consolation prize.

AUDIO DEVICES, Inc.

444 Madison Avenue, New York 22, N.Y.

THE RULES

Your entry must be on the contest coupon below. Time of entry will be determined by the postmark. Postmarks will be checked by Mr. S. L. Hammer, a vice-president of The Manufacturers Trust Company, 681 8th Avenue, New York, N.Y. And why not? They have been our good bankers since Audio Devices, Inc. became Inc.*

The following are not eligible to enter this contest:

Employees of Audio Devices, Inc., or any of its subsidiaries, its advertising agency (Marsteller, Rickard, Gebhardt and Reed, Inc.), its corporate lawyers, patent lawyers or tax lawyers, its accounting firms, factory representatives, or any of its suppliers who offer less than 2% cash discount. And if any of these people tell anybody else, then they ought to be ashamed of themselves!

**And this year is our 20th anniversary.*

Audio Devices, Inc., 444 Madison Ave., New York 22, N.Y.

OLD SPOOKY'S name is _____

Just for fun, I'm guessing:

His position _____

His company _____

His city _____

My name _____

Address _____

**ALLIED has the BEST BUY
IN A QUALITY TAPE RECORDER!**



only
\$89.95

**THE KNIGHT
PUSH-BUTTON
AUTOMATIC TAPE RECORDER**

Judged "Best Buy" among recording experts. Features Push-Button keyboard for instant recording with remarkably faithful reproduction. Has 2-speed dual-track recording mechanism and efficient erase system. Records up to 2 hours on standard tape (3 hours on long play). For instant playback, just push a button; also push-button control of forward, reverse and stop functions. Records from mike, radio or phono. Built-in quality amplifier and speaker. Simple to operate. Compact—only 23 lbs. With microphone, 600-ft. reel of tape and take-up reel. 96 RZ 675. Only **\$89.95**

FREE

356-PAGE 1957

ALLIED CATALOG



Buying guide to everything in electronics, including all equipment for the tape recorder: complete recorders, basic mechanisms, amplifiers, mixers, microphones, head demagnetizers, telephone pickups, recording tape, splicers, leader and timing tape, identification labels and accessories. Write for your Free copy.

ALLIED RADIO

100 N. Western Ave., Dept 83-D-7, Chicago 80, Ill.

**Now! New RCA Victor
superstrength, extra-long
play Hi-Fi "Mylar"* tape!**



Plays 50% longer! Not 1200 feet, but 1800 feet on a 7" reel! Extra-thin—superstrong! Costs \$7.50 per 7-inch reel. Also available: new RCA Victor acetate tape with full frequency performance—at a special low price! And RCA Victor acetate tape with full High Fidelity response. The same tape used for professional recordings—**\$3.50** for 7-inch reel.

*"Mylar" is a registered Dupont trademark for its polyester film. Nationally advertised list prices shown, subject to change.

RCA VICTOR
RADIO CORPORATION OF AMERICA
CAMDEN 8, NEW JERSEY

(Continued from page 16)

which the Tapebook will soon be available through the initiative of TAPE RECORDING Magazine.

After furnishing such a fine constructive illustration of the usage of tape recording, as above, it is with a feeling of regret, and with deep sympathy for the dead and injured students of Pacoima Junior High School in Southern California, that *Tape in Education* tells of the sad functioning of a tape recorder, which continued to operate while a huge stricken plane—after collision with a jet—dropped from the skies into a

peaceful school yard, in the San Fernando Valley, near Los Angeles. The valedictorian for the Spring graduating class, was being auditioned by her principal, surrounded by teachers and classmates. The school tape recorder was in operation. Then came chaos in the school yard. Only the tape recorder retained poise and composure. And only the tape recorder can be the true auditor of the catastrophe. On playback, the voice of the valedictorian is clear and vibrant. Then the interruption. Indescribable noise. Cries. A terrific crash. Shouting. A clamorous background of sound. Then the voice of a valorous principal—taking command. Only the tape recorder knows—and can tell.

TAPE TEACHES LANGUAGES



Language students have the advantage of reading and hearing the language at the same time.

The Foreign Language Laboratory of Wheaton College, Wheaton, Illinois has been using a system of tape recorders and recorded tapes for individual student instruction in foreign languages for the past 3 years. At this point in their expanding audio-visual program, Wheaton has 16 recording and listening booths in operation. Each booth is equipped with a Pentron TM-56 tape transport mechanism, and the matching Pentron P-4 tape preamplifier. The equipment was purchased from Allied Radio Corp., Chicago, who were consulted regarding the performance characteristics of recording equipment.

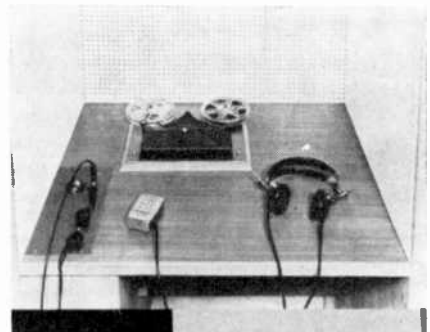
A microphone for recording is available in each booth, as is a set of earphones for listening. The Audio Visual Center under the direction of Grosevnor C. Rust supervises the overall system. The method offers the following advantages: The student has the advantage of reading and hearing the language at the same time. He works at his own pace, and can stop or rewind to review material at will. Approximately one-third less time is required for a student to complete a language course. The instructor is in effect giving 960 private tutoring periods each week.

Cost is extremely low because preamplifiers are used rather than amplifiers plus amplifiers, and because the initial cost of the equipment is below \$70 per unit.

In 1953, when Wheaton College was considering installation of the recorders, they thoroughly analyzed available recording equipment in light of their requirements.

They were vitally concerned about obtaining recorders that were easy to operate, performed well, were trouble-free, compact and economical in cost. The Pentron units are in almost constant use, 8 or 9 hours each school day, and service repair has been at a minimum. Each booth is designed to fit space requirements, and is lined with special acoustic sound-proofing material.

Dr. Robert O. deVette, Director of the Foreign Language Laboratory, is Assistant Professor of Spanish at Wheaton. Under his adjusted load schedule, he is able to direct the activities of the laboratory, insuring smooth operation, and helping students when necessary. Dr. deVette points out that the lesson tapes are recorded by the instructor, and made available in required quantities by duplication.



Top view of recording equipment setup. Each booth has a mike and set of earphones available.

IT'S NEW - - IT'S TERRIFIC - - IT'S PRICED RIGHT!



WESTWOOD BRAND BEL-CLEER SOUND RECORDING TAPE

Made by The Saint Cecilia Company, Ltd., Westwood, New Jersey, whose coaters have over 20 years experience in the coating arts. Individually packaged in an attractive, unmistakable, orange-and-black box.

New manufacturing process enables you to buy a branded tape at prices comparable to unbranded tapes. Available in 1200 and 1800 ft. lengths,—plastic backing.

Your dealer has Westwood Brand economy tape or will get it for you—fast. If not, write direct for details,—P. O. Box 55, Westwood, New Jersey.

Export Sales: Terminal Radio International, Ltd., 135 Liberty Street, New York, N. Y.
In Canada: Bel Cleer Products Co., 284 King St. W., Toronto, Canada.

TAPE CLUB NEWS

In connection with President Eisenhower's People-to-People program for creating more international understanding and good will, Harry Matthews, founder-president of World Tape Pals, Inc., was appointed chairman of a subcommittee of the Tape Recording Exchange Field, general classification under which tape recording exchange was placed. Emphasis on individual friendships such as are formed the world over by World Tape Pals is repeated throughout the program. WTP members are urged to assist in this most worthwhile effort. As soon as a workable outline can be arranged, subcommittee members will be informed. Any suggestions as to procedure from WTP's will be welcomed.

Tape-Respondents, International has set up "Operation Handshake," a procedure designed primarily to help new members

JOIN A CLUB

TAPE RESPONDENTS INTERNATIONAL
Jim Greene, Secretary
P. O. Box 125, Dept. T., Little Rock, Ark.

THE VOICESPONDENCE CLUB
Charles Owen, Secretary
Noel, Virginia

WORLD TAPE PALS, Inc.
Marjorie Matthews, Secretary
P. O. Box 9211, Dallas 15, Texas

INTERNATIONAL TAPE WORMS
Art Rubin, National Chairman
P. O. Box 215, Cedarhurst, L. I., N. Y.

AUSTRALIAN TAPE RECORDISTS ASSOC.
Jack A. Ferry, Federal President
Springbank Rd., Clapham, S. Australia

UNITED RECORDING CLUB
Richard L. Marshall, President
2516 S. Austin Boulevard
Chicago 50, Ill.

THE NATIONAL TAPESPINNERS
Carl Lotz, Secretary
Box 148, Paoli, Pa.

meet each other at the earliest possible date. Any member who would like to make two new contacts simply purchases a reply type (double) post card for 4c. His "invitation" to tape respond is written on the message side of the reply card and the address side of the reply card is left blank. He then addresses the regular card to: Operation Handshake, P.O. Box 125, Little Rock, Ark. On the message side of the regular card, he states to the secretary his preferences in regard to making the new contact. This permits the secretary to pair up members with similar preferences. Finally, the secretary mails the reply card (containing the invitation) to that other member. Each member participating should

thus obtain two new tape respondents.

The Voicespondence Club now has another service for its blind members. A 60-minute master tape containing excerpts from the October '56, December '56, January '57, and February '57 issues of Hi-Fi Tape Recording. Any blind member can obtain a copy by sending a tape with return postage to VS-er Lloyd Sparkman of Dallas, Texas. Lloyd and Harry Selman, also of Dallas, are both blind and have united their recording facilities in order to make copies of the master tape for the blind members who wish them. Sightless recordists who have heard of the magazine now have portions of it available to them for the first time.

FOR STEREO OWNERS

We can now offer the Hi-Fi Tape Recording Catalog of Stereo Tapes. This is available on Subscription—four issues for one dollar. It will be revised and issued quarterly. First issue is now ready.

- Lists all available stereo tapes.
- Complete description of each tape—no more guessing when you order.
- Lists 250 tapes from 21 companies.

USE BLANK BELOW TODAY

STEREO TAPE CATALOG
Serverna Park, Md.

Please enter my subscription to the Stereo Tape Catalog. I enclose \$1.00.

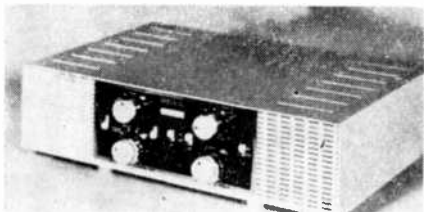
Name

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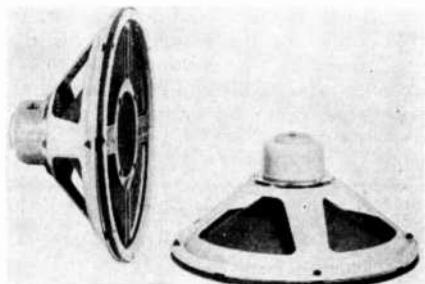
NEW PRODUCTS

BELL AMPLIFIER



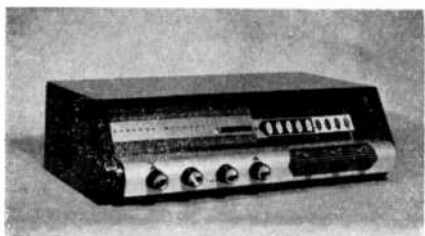
Bell Sound Systems, Inc., 555 Marion Road, Columbus, Ohio, has introduced the new "2300" hi-fi amplifier which incorporates new design features to create an entirely "new look" in hi-fi sound. Only four inches high, it has a tan-flecked cabinet. The perforated front panel, in addition to the slots on top of the cabinet are designed to facilitate air passage over the tubes for cooling. There is central placement of all controls. It has a built-in preamplifier which provides inputs and equalization for playback directly from a tape head or a ceramic cartridge. Power output is 20 watts at less than .3% harmonic distortion, peak; 40 watts; seven inputs provide for 2 low magnetic or tape head; ceramic or crystal; high magnetic; radio; TV; auxiliary. The established audiophile price of the Bell "2300" is \$109.95. Write for additional details to Bell Sound Systems, Inc.

DYAD TWIN REPRODUCER



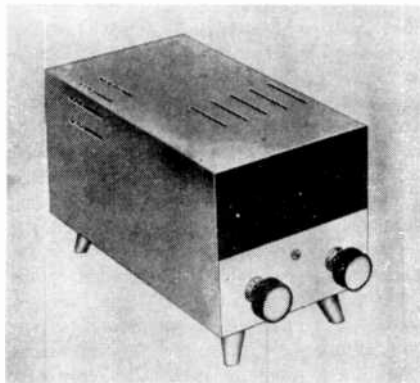
A new type 1251 DYAD twin reproducer, manufactured by Reproducers and Amplifiers, Ltd. of Wolverhampton, England, and which is distributed in this country by Ercona Corp., is now available. It is composed of a 12" woofer and a 5" tweeter mounted coaxially on a sturdy frame. The DYAD has an impedance of 8 ohms @ 400 cps; response of 30-15,000 cps; power rating of 12 watts program; bass resonance of 20 cps; and crossover of 1000 cps. Price and details are available from The Ercona Corporation, 551 Fifth Avenue, New York 17, N.Y.

THE CLAREMONT



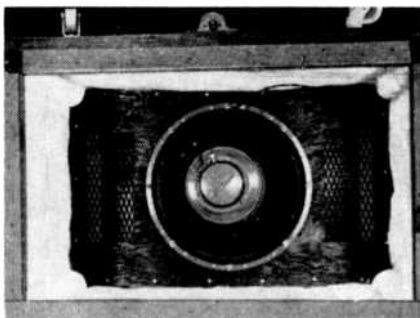
A new DeLuxe Control Amplifier, model SR-200, "The Claremont," has been announced by the Sargent-Raymont Co., 4956 E. 12th Street, Oakland 1, Calif. It features variable rumble control, which enables you to "pick out" interferences within an extremely narrow range; variable scratch filter, which permits you to eliminate scratch, hiss, or whistles at the exact point source of interference without cancelling any more of the frequency range than is necessary to maintain program brilliance; and it has a 9 position amplifier control dial. Bass and treble boost and attenuation 15 db, 40 to 15KC with only 1 db variation at mid-frequencies; output impedances 4, 8 and 16 ohms; 20 watt output with 1.5% 1M and 0.3% harmonic distortion. For more information and price, contact the manufacturer.

BOGEN ST10



David Bogen Co., Inc., Route 4, Paramus, N.J., is marketing its Model ST10 stereophonic tape playback for use in hi-fi systems. It incorporates dual preamplifiers and a 10 watt amplifier in a single compact unit. When used with a tape playback deck the output of a stereophonic tape head is fed into both preamplifiers of the ST10. One of these drives the built-in amplifier (channel 1), and the other drives an external amplifier (channel 2) from a cathode follower. Audiophile net price in east is \$59.50, and it is also available in chassis form at \$52.50. For additional information, contact the manufacturer.

FIBERGLAS LINING KIT



Fibre Glass-Evercoat Company of Cincinnati, Ohio has announced the development of a kit for lining interiors of radio-

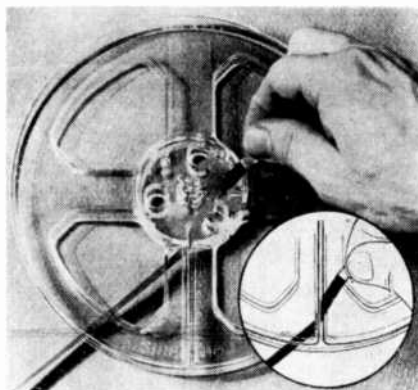
phonograph consoles, TV sets and speaker cabinets. Especially designed to eliminate medium and high frequency reverberations in speaker enclosures, the material is made of Owens-Corning Fiberglas. The company is offering two kits for retail. The \$1.00 kit contains 9 square feet of 1/2" thick fibreglass insulation, glue and applicator. The \$2.00 kit contains 9 square feet of 1" thick insulation, glue and applicator. Complete details are available by writing to the company at 7220 Vine St., Cincinnati 16, Ohio.

WOLLENSAK RECORDER



The new Wollensak "1500" tape recorder has recently been introduced. This dual-speed recorder measures 6 1/2" x 10 1/4" x 11 3/4" and weighs only 18 lbs. It accepts 7" reels, and its 10 watts audio output is four times greater than larger, less portable recorders, with enough power to accommodate large auditorium speaker systems. Other features of this machine include "Balanced-Tone" high-fidelity, simplified keyboard control, tape speeds of 3 3/4" and 7 1/2" ips, high speed rewind lever, two-level recording indicator, and precision index counter. The "1500" comes complete with a ceramic-type wide range microphone, 2 reels (one with tape) and cords. It is priced at \$189.50. For complete information, write to the Wollensak Optical Company, 320 East 21st St., Chicago, Ill.

EASY-TO-THREAD REEL



Reeves Soundcraft Corp., 10 East 52nd Street, New York City 22, N.Y., now supplies its 5" and 7" reels of tape with an easy-to-thread reel. The reel features a loading slot accessible at the outer edge of the reel. Tape is inserted in this slot and automatically guided to the hub for instant, secure attachment. The tape can actually be fastened without the fingers ever touching the reel. Further information is obtainable from the manufacturer.

CORRECTION

An error was made in the last issue in combining the photo and description of a new product. While there was a description of a new Sherwood tuner (page 15), the photo above it was of a new Knight FM tuner kit. To clarify the situation, both of these new products, together with their proper photos are shown below.

SHERWOOD TUNER



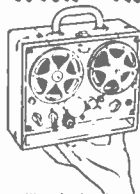
Sherwood Electronic Laboratories, Inc., Chicago, Illinois, in marketing the new Sherwood S-3000 FM only tuner, which has under one microvolt sensitivity. Edward S. Miller, Vice-President and General Manager of the laboratories said, "In achieving 0.95 microvolt for 20 db quieting we have, in effect, extended FM station broadcast range to over 100 miles." The S-3000 also features the new "Feather-Ray" tuning eye for positive sharp focus tuning, a local-distance switch to suppress cross-modulation and fly-wheel tuning, as well as automatic frequency control, precision calibrated dial, cathode-follower output, output level control and FM multiplex output. This tuner is priced at \$99.50. For additional details, contact the manufacturer.

FM TUNER KIT



Allied Radio Corp., exclusive distributor of Knight kits has announced the release of a new FM tuner kit. This kit features printed circuitry, flywheel tuning, and automatic frequency control. The tuner can be used with any amplifier that has volume and tone controls. Automatic frequency control makes tuning extremely simple and eliminates drift by "locking in" the station tuned. Printed circuit wiring greatly speeds and simplifies assembly of the kit. All leads of critical length or position are pre-wired on the printed-circuit board. Two output jacks are provided. The cabinet of the tuner is attractively styled in soft gray, ebony black and polished aluminum. There are two control knobs. This kit, stock number 83 Y 751, is priced at \$37.75, and is available from Allied Radio Corp., 100 N. Western Ave., Chicago 80, Ill.

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courtesy R. Wurlitzer
Collection
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*DuPont trademark

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10 East 52nd Street, New York 22, N. Y.

West Coast: 338 N. LaBrea Ave., Los Angeles 36, Calif.



Dance of the Old Men was the first recording made by Robert and Mary Van Der Velde on their 13,000-mile trip through Mexico. In this dance, which dates back to ancient time, young men humorously portray the spry, yet decrepit, hobbling of their elders. Sound was recorded after the dance had been filmed and was then later dubbed onto the film's soundtrack.

SOUNDS of MEXICO

by
Robert Van Der Velde

... a never-to-be-forgotten trip is lived again and again through the magic of tape.



Mariaches, or wandering musicians, as pictured above are everywhere in Mexico. They stroll through sidewalk cafes, exclusive night clubs and dingy beer joints alike, entertaining the customers. They are thrilled when they hear a recording of their musical efforts played.

OUR tape recorder went with us when my wife and I drove to Mexico. The primary reason for taking it was to record a musical background and sound effects for a film which we planned to use for lecture purposes. But our *grabador de cinta*, as it is known south of the border, ended up performing a lot of other duties as well.

Today, for example, Mary and I find that pleasant memories are revived simply by listening to the tapes in our living room. Half of our six-month, 13,000-mile sojourn seemed to revolve around those recordings, and the entire trip unfolds again each time we hear them.

The clattering, stomping, handclapping Flamenco tunes transport us back to Mexico City with its Spanish night clubs and elaborate floor shows. Sky rockets swish through the air, then burst with a muffled boom, brass bands parade around the plaza, firecrackers pop in the streets and it is Christmas Eve in Oaxaca once again.

The scream of a macaw reverberates through the jungle. In the distance a sing-song chant begins, while in the foreground two Lacandon Indians, descendants of the ancient Mayas, discuss the magical machine that permits them to "hear own voice." They speak in an age-old tongue—the language of a dead civilization—and the chant in the background is the same as their forefathers intoned while they marched up the steps of towering pyramids to perform the ghastly rites of human sacrifice.

The equipment on which these recordings were made was far from elaborate. The recorder itself was a portable Revere T-1100, powered by an ordinary six-volt automobile battery plugged into a Trav-Electric Chief current converter. When the battery became weak we had it quick-charged at the nearest gas station. If a charger was not available, we simply interchanged it with the battery in our car and drove around for a while. Although we paid only six dollars for the extra battery, it seemed good for an interminable length of time and only needed recharging about three or four times during six months use.

Electric power in even the largest cities of Mexico is



Deep in the unexplored interior of southern Mexico, the author records the language of the ancient Maya, spoken today by only a handful of Lacandon Indians. Robes worn by these men were not introduced by missionaries, but date from dawn of civilization, when man first learned to wear clothes.

unpredictable, and a voltage regulator is often required to run ordinary appliances. Mexico City is on 50-cycle current, which means that any recordings made there will play back 20 per cent too fast in the United States. This, of course, can be corrected by the installation of a simple shim in the recorder, but since we also wanted to record in the field I decided to rely at all times on storage battery current.

Volumes could be written about Mexican electrical utilities. For example, in San Cristobal, a small city near the Guatemalan border, customers purchase electricity by watts and hours. "I have to go around the house and count how many watts we're burning before I can turn on another light bulb," an American housewife told me. "We subscribe to 200 watts, evening service only. If I accidentally turn on 201 the whole thing blows out and we have to wait several days for the power company to come around and turn on the electricity again."

The long and the short of it is, unless you are an electrical wizard with a truckload of equipment, do not expect reliable service from any electrical appliance more complicated than a razor in foreign countries. (Much of Europe and some of the Caribbean is on 220-volt current, and even the razor will be damaged there.)

One disadvantage of our current-converter, however, was that it created a disturbing hum during full-volume recording. Consequently, I had to work quite close to any subject. We finally beat even this drawback, though, by placing the microphone in a parabolic reflector. This we did at no additional cost, since we already had with us a 20-inch flood reflector. To find the exact focal point of the paraboloid, Mary stood across the room reading a newspaper aloud while I moved the microphone around in the reflector until the record level indicator showed the loudest point. Using the parabolic reflector not only permitted louder recording volume; it also gave a much better tone and cut down background rumble. It was amazing what this simple little trick accomplished.

The first recording we made was of the Dance of the Old Men in Cucuchuchu, a tiny Tarascan Indian village about 400 miles west of Mexico City. A dried up, boulder-strewn river bed, which had a local reputation of being a road, was the only entrance into the town. One look at it and I knew our old Plymouth would split its crankcase on the first good bump. But a Mexican government official came to our rescue by lending us his jeep . . . which came equipped with a seedy looking character who hoped to pick up extra tequila money by acting as guide and "assistant in case of trouble."

The citizens of Cucuchuchu are probably still talking about our visit. To them it must have looked like a De Mille Production—equipment spread all over the plaza, movie cameras grinding away, masked dancers going through their paces and crowds of people watching . . . more people than anyone would have thought could possibly live in such a small town.

Since there was no synchronization problem, we first shot the film footage, then recorded the sound of stomping feet and guitar accompaniment close up at low volume. To conclude, we amused individuals in the crowd by recording their voices and playing them back amid their companions' laughter. Everything went off smoothly. Everyone was impressed. Mary and I felt like jolly good fellows from another planet who had dropped in for a short, amusing visit. Several townspeople asked for a ride back to the city.



Bespangled in her China Poblana costume, an attractive señorita performs the traditional Mexican Hat Dance in a tiny patio in one of Mexico City's suburbs. Everywhere the author and his wife traveled in Mexico, they made new friends, with their recorder acting as the introductory medium.

and we invited anyone who could hang on to join us. The old jeep sagged on its springs as passengers jammed into the back, sat on the hood and dangled their legs over the tailgate.

Goodbys were exchanged and re-exchanged. Hands waved, and "bien viajes" and "go with Gods" filled the air. Then it happened. The jeep wouldn't start.

The whole town shoved us up and down the rocky trail, but it was no use. Finally I discovered the trouble. The wires going into the ignition switch had fallen right out of the dashboard. "No, señor," our guide disagreed. "It is that the battery is dead."

I argued that the battery had nothing to do with it, that you had to have wires going into the ignition to complete a circuit and so on. But he just stood stubbornly shaking his head and insisting it was the battery. Finally I decided to prove my point. I removed the jeep's battery and replaced it with the one that powered our recorder. And the damn thing started! There seemed to be no limit to the services our recording equipment could perform.

The most difficult recording to make was the one we expected to be the easiest: an hour of Mariache music. Mexico City is teeming with Mariaches, wandering musicians who stroll through exclusive night clubs and dingy beer joints alike, entertaining the customers. We picked up eight characters in a bar, whisked them to a friend's living room in two taxis and set up our recorder. The result was awful.

"We've just got to have better Mariaches," Mary said. "Why don't we try the radio stations? I've heard some pretty good ones on the air."

Watching a performance at XEW, I picked up a few tricks and also learned why our recording was so bad. The station used three microphones—one for the principal



Emotion shows in this Lacandon Indian's face as he makes an offering of vegetable figures to the gods. A descendant of the ancient Maya, he intones the same chants in his pagan worship as his forefathers used when performing human sacrifice on the steps of great pyramids.

singer, one for the rest of the band and a third for the blaring trumpet, which in true Mariache music alternates with the singer on every other chorus.

We decided there was only one way to go about it. We would hire a well known group and rent the station's recording facilities, engineers and all. Actually the price was remarkably cheap by American standards—only about \$100.

Everything was set. We were to report the next day to the station at 12 o'clock. When we arrived, however, there was not a sign of the Mariaches. Now, "Twelve o'clock" in Spanish is "las doce" and "Two o'clock" is "las doz." It was just possible that we had misunderstood. So we hung around the waiting room two more hours. Then we sweated it out another hour just in case, since nobody ever shows up on time in Mexico anyway. Still no Mariaches!

It turned out that the leader had completely forgotten about the appointment. And when the rest of the troupe discovered his oversight and the money it had cost them, they practically carved him up with a machete.

But that did not solve our recording problem. We tried another group, this time one of the top Mariache bands in the nation, stars of radio, TV and motion pictures. These people, we thought, will certainly be more reliable.

For the price they asked, I have little doubt that they would have proved the acme of punctuality and promptness. They wanted \$14,000!

Two more weeks of hanging around the XEW studios finally paid off. But the people sitting next to me in the audience must have thought I was a real wet blanket, since my Spanish was not good enough for me to understand the jokes that panicked everyone else. But I did discover an obscure little group of musicians that were exceptionally talented.

We called up the friend with the living room again, passed around enough tequila to get the musicians mellow and went to work. The first test showed wonderful results. These singers knew how to work with a microphone. When the trumpet player started to blast he would first back half

way into the dining room. Each singer stepped up to the microphone before he ever uttered a note and then backed away when he took up his instrument. I had my choice of two prices. As the leader put it: "We can either work our usual rate for \$50 an hour, or we can work like mad dogs until we have completed one hour's recording for a flat \$80." It took very little imagination to figure out what "the usual rate" meant, so Mary and I picked the bargain price.

Although there were few retakes, we had started rather late and it was nearly one a.m. when the instruments were finally packed away in their cases. "It just dawned on me," I said to our host, "how much noise we've been making. What will the neighbors think?"

Carlos shrugged his shoulders. "Oh, don't worry about them," he said. "They'll just think we're having a party."

In Oaxaca our tape recorder had a field day. We arrived as the town was getting ready for Christmas . . . and Christmas in Oaxaca is like Mardi-Gras in New Orleans. Here we made many recordings just to take home as souvenirs.

One day as I walked down one of Oaxaca's cobble-stoned side streets I heard a strangely beautiful sound drifting out from one of the old cathedrals. Accompanying a choir was the usual organ, but tamborines and castinets also clacked through the hollow interior. Below, in the pews, hundreds of children spasmodically tooted on small wooden whistles.

I asked the priest if I could enter the choir loft to record the sounds of his church. He considered my request a compliment and even helped lug the battery up the stairs.

Everywhere we went our recorder made new friends. Mexico seems to be a nation of amateur singers and guitar players, and they considered it a thrilling treat to be able to hear the results of their efforts played back to them.

We could hardly wait to see what reaction our tape recorder would create among really primitive people, such as the Lacandons. To get these seldom-visited Indians we flew into the lush tropical interior of Chiapas from San Cristobal, last sizable town on the Pan American Highway. Then we traveled on mules and finally on foot. The last part was the roughest. A Tzeltal Indian guide went ahead, hacking a dim tunnel through the jungle. Two others followed behind, our cameras and recording equipment slung on their backs with tump lines.

I had made the mistake of not recharging the battery just before we left San Cristobal, so was unable to do as much recording in this area as I wanted. But we did capture on tape some spectacular sounds in the Lacandon encampment. The peculiar grunting tones of the Maya language may never have been recorded before, for the Lacandons had never seen a tape recorder. There are other dialects of Maya still used in Yucatan and Guatemala, but only among a handful of Lacandons is the original language still spoken.

These Indians have perpetuated much of the lore of their ancestors. They still make pilgrimages into the ancient temples (many of them unknown to modern man) to worship the gigantic stone idols erected by their forefathers. Their knowledge of astronomy is astounding, and they use many age-old chants in their pagan ceremonies.

They took our recorder very seriously and with much frowning, debating and expectorating, which both men and women do continually as they puff on huge black cigars. One of the men, whose long black hair dangled in a matted maze to his shoulders, explained to our interpreter that he understood the "voice box."

The black box, he explained, must make the machine work. The machine itself was the lighter colored box, and

the power came into it through those strings. Mary and I stood amazed.

We decided to play some music for him to see his reaction. As a lively Mariache tune, recorded in Mexico City, echoed through the jungle, the Indian's face lighted up. "Musica!" he exclaimed in pidgin Spanish. "I too have musica. You like to hear it?"

Here was obviously the break we had been hoping for—the chance to record some authentic Maya music, rhythms handed down through the centuries and probably never heard by modern man. We followed our primitive friend into his hut, wondering whether he would toot the ancient notes on a reed flute or perhaps beat out a lively staccato on a crude drum.

But our mouths dropped as he showed us his music. It was an old wind-up victrola and a stack of records. Our interpreter translated the Indian's excited garble as "He is upset señor, because the price of records has gone up."

We stayed with the Lacandons three weeks . . . until we ran out of film and the battery went dead. Then we started the long trek back to civilization. When we arrived home we recorded the entire sound track onto a duplicate, magnetic-stripped film, using two recorders and a mixer.

Our film was completed, but in addition to our film we had something else: we had a complete record of our trip in the reels of tape that we had recorded. Somehow, I find that sound seems to bring back more memories than the more vivid impact of sight, such as looking at a photograph or movie. Perhaps this is because the listener can lean back, close his eyes and let his mind wander.

As the clanging of Taxco's cathedral bells resounds through our living room, I see again every minute detail of the Hotel Melendez. The quiet rustle of the Indian market in Las Casas brings to mind a picture so vivid that I can practically count the cobbles in the streets. What better souvenir is there of a foreign country than the sounds peculiar to that land?



Bells of this ornate church in Taxco were recorded by the author from his hotel room balcony, where this picture was taken. The recording was later used in the soundtrack of a travelogue.



Thanks to tape recorders, crack ex-secretaries, unable to leave home because of small children, now solve secretarial problems for many a firm. A recorder enables the business man to dictate at a time most convenient for him. The reels of tape are then delivered to the ex-secretary's home, she transcribes and returns them typed on the businessman's own stationery. Thus, the businessman whose volume of work does not justify a full-time secretary pays only for those letters he dictates.

Extra Income From a Recorder

by GEOFFREY GRANT

"DON'T know where that money goes" is a complaint that has echoed down the corridors of time. Ever since man stopped bartering women for horses and switched to a currency instead, he has found that his money never went quite far enough.

Considering that the new 1957 auto models, if fully equipped, include such niceties as air conditioning, power steering, power brakes, automatic transmission, it isn't too surprising that a little extra dough would be worthwhile. One way to make money go further is to budget it. A still more efficient way is to budget it but earn more.

Additional money is not always easy to acquire . . . without a sizeable capital outlay. For a respectable hamburger stand, the initial capital outlay ranges between ten to twenty thousand dollars. Even to turn a buck in the peanut vending business requires a minimum of three hundred machines on location at an investment of about \$50 each.

But reposing on a closet shelf or in the living room is

the family tape recorder. A proven electronic wonder, the average tape recorder has done everything from recording junior's voice to capturing and reproducing the world's great music. But chances are there is one thing that your tape recorder has never done: make money for you. Oodles and oodles of crisp dollar bills. There are a multitude of ways the tape recorder is being used to earn money. Here are twelve of the best, none of which involves a major cash outlay. Perhaps one of them may appeal to you.

Recording Junior's Voice

Strange as it may seem, the vast majority of proud parents have never considered putting on tape for all time the voices of their offspring. Despite continuing promotion by the recorder manufacturers, millions of parents the nation over are unaware that they can have a sound album as well as a photo album of their children.

Generally, it is a simple matter to convince parents to record the voices of their children. Recording children in

natural, realistic settings does present many a challenging problem. But with practice and good use of the candid microphone technique, highly satisfactory recordings can be secured. Either the tape itself can be sold or, working through a local radio station or recording studio, a disc copy of the tape can be produced. If you are able to build a sufficient volume to justify the expense, a specially designed album cover can be provided with the disc or tape.

Wedding Bells on Tape

As a corollary to capturing Junior's voice for all time, there is a growing trend to record marriages on tape. Generally, satisfactory arrangements can be made with the church to permit the recording of the ceremony. The marriage license column of the local newspaper provides a ready-made listing of prospects each day. Often it is advantageous to work with a local photographer. Again, as in recording the voices of children, either the tape can be sold or a disc copy can be made. A white satin album cover can be provided in which to present the disc . . . or a white satin box for the tape.

In addition, most tape recorder dealers will offer a generous commission for the sale of recorders. Thus, a still additional opportunity to earn money by selling recorders presents itself.

Taking the Headache out of Inventories

"You call, I'll write" has been a tradition among inventory takers for centuries. To take an inventory generally requires two people, one to call and the other to write. Often inventory is taken on an overtime basis during evenings and week-ends. A new wrinkle in inventory taking is the use of a portable tape recorder. The inventory requires only one man, can be done in less than half the time. There are several firms in the country already specializing in tape recorder inventories for smaller stores, wholesalers and factories. The tape recorded inventories are later transcribed on cards and tabulated.

Secretaries Unlimited

The business or professional man whose volume of work does not justify a full time secretary generally has the choice of doing his own work or paying some one to do nothing part of the day. Positions in stenographic pools of large firms located in outlying areas are going begging.

Girls would much prefer to work in downtown areas, close to shopping facilities. But thanks to tape recorders and crack ex-secretaries, who are unable to leave home because of small children, many secretarial problems are being solved. A tape recorder, placed in a business office, can enable the business man to dictate to his heart's content at any hour that is most convenient for him. A messenger picks up the reels of tape. Housewife-secretaries transcribe the letters from the tape. All correspondence is delivered, typed letter perfect on the businessman's own stationery, the following day. The business man pays only for those letters he dictates. Generally, a monthly minimum is required in order to subscribe.

Memory Albums

XYZ Widget Corporation is celebrating its twenty-fifth birthday. What better way of commemorating the occasion than issuing a "sound album" to its employees, large customers, and suppliers? With a tape recorder, the appropriate memories that best typify the company's progress can be recorded and presented dramatically. Disc copies can be made from the edited master tape. Or a church can sell a "sound album" of its activities to parishioners,

spear-heading the yearly fund raising campaign. Or every member of a high school or college graduating class will want a "memory sound album" to accompany the year book. A high degree of imagination and skill must be employed, of course.

Depth Interviews

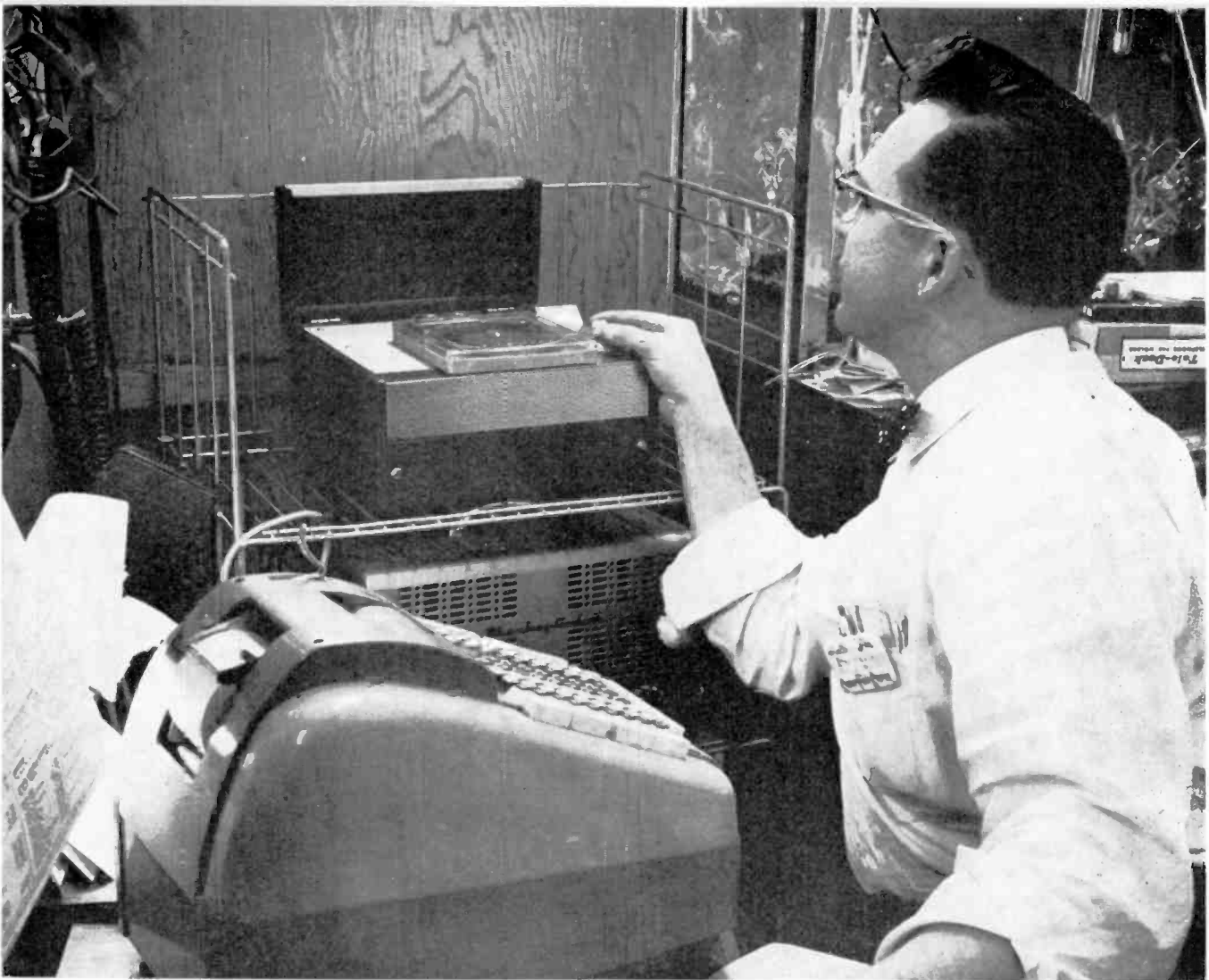
Market research firms, research directors of industrial firms and advertising agencies are focusing extra attention on "in depth" interviews. Since people answering questionnaires do not always mean what they say, interviews are tape recorded, later played back by psychologists. Tone of voice, hesitation in answering convey shades of meaning not revealed by a check in a mimeographed survey questionnaire. If you own a tape recorder, can follow instructions exactly, in most areas you can qualify for part time employment as an "in depth" interviewer. Also, recorded dealer or consumer comments may be essential in market planning and analysis, providing you are adept at candid or hidden microphone techniques.

Rentals

If the thought of renting tape recorders is appealing and you are handy at keeping them in repair, there is a ready

Thanks to newly developed tape message repeating devices, new opportunities have opened up at a point of purchase. A message repeater, placed in a strategic spot in a store, moves mountains of merchandise.





A large market is opening up, even among independent merchants, for personalized store commercials on magnetic tape. Here a grocer is placing a continuous cartridge on a playback machine especially designed for in-store applications for playback through the P.A. system.

market waiting. Organizations holding parties, banquets, sales meetings alone represent a giant-sized potential.

Opportunity at Point of Purchase

Thanks to the newly developed tape recorded message repeater, new business opportunities have opened up at point of purchase. A message repeater placed in a strategic spot in a store will move mountains of merchandise that have been formerly gathering dust. Opportunities exist with both chain stores and independents. Garages, filling stations, hardware stores, drug and grocery outlets all are prime prospects. On contract, a message repeating device is placed in the store. A cartridge holding the recorded message can be replaced with a new 20-second commercial each week. The operator keeps the devices in repair and provides the recordings. In addition, the service can be sold to industrial plant safety departments to warn employees of danger spots, no smoking zones, give a safety reminder to drivers before checking out. With a tape recorder, complete with timing mechanism, there is no reason why your local independent super market, drug, hardware and novelty store can't compete with the elaborate "store casts" used by the chains. By preparing weekly tapes, tailored for the store's special promotion, a valuable business service can be created.

Read Me a Story

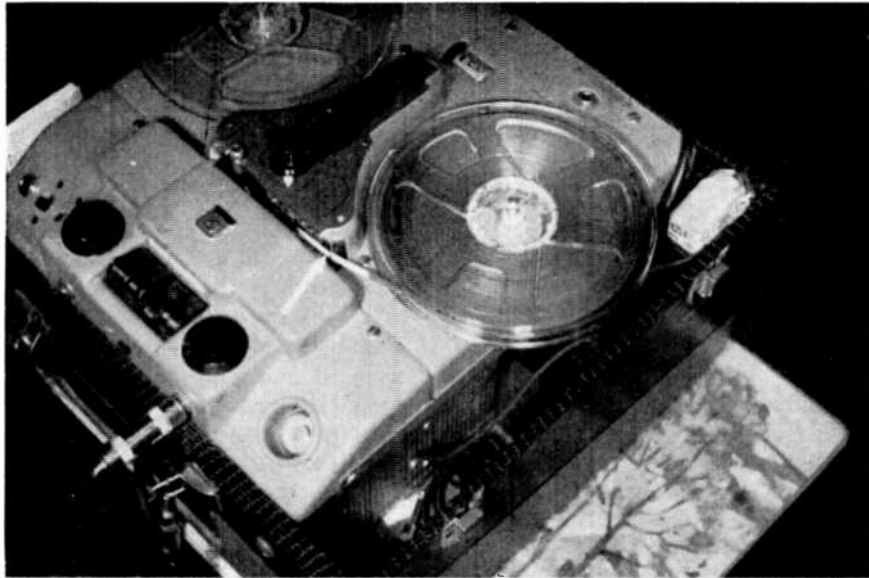
The busy executive rarely has time to read the many articles and news happenings that affect his firm. However, he *does* have time to listen. Larger firms in your area

may prove highly responsive to weekly summaries in capsule form of all the happenings in a particular industry recorded on tape. The executive can listen to the tape at leisure in his home or, if he prefers, by means of a special recorder installed in his car.

Testimonials on Tape

There is no more convincing sales argument than a testimonial from an enthusiastic user, told in his own words. Letters and all types of written testimonials pale into insignificance when compared to a spoken statement, told convincingly in the user's own words. Here, then, is a large local market for taped testimonials. Real estate firms, insurance companies, moving and storage firms and a long list of others can all profitably use taped testimonials in person-to-person selling or even on paid radio time. Someone specializing in obtaining the right type of user testimonial on tape can build a selective but lucrative business.

This article has offered a few suggestions as to how people are making money with tape recorders without large capital investments. There are literally hundreds of other ways of making money with your tape recorder. New applications for tape recording are being found each day. But the concept of tape recording is new to many people. You must go after the business; it will not come to you. Be thankful that this is so. Competition is small. There is plenty of room for people with imagination and creative resourcefulness.



Arrow points to "Marker" on tape, with the center of the "Marker" lined up with the guide post of the tape recorder. This is the "Start" position for the tape. It is a good idea to have at least six feet of leader tape with the "Start" position marked on it.

Add Sound to Your Movies

by Alec Taylor

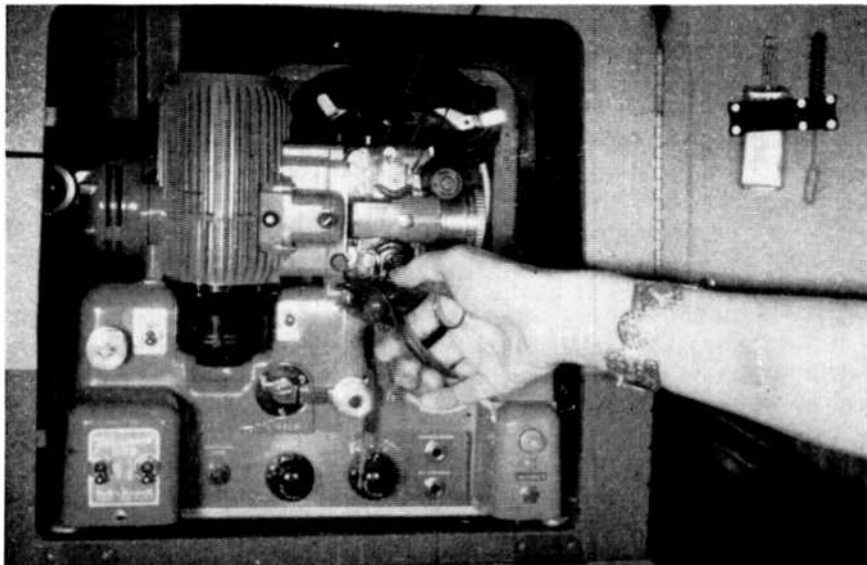
. . . . home movies with added sound will make a big hit with all the folks—and its easy to make your own system.

FOR years we 8mm and 16mm movie enthusiasts have yearned for some relatively simple—and not overly expensive—system whereby narration and music could be added to our motion pictures to enhance the presentation thereof. Not to mention saving the voice of the producer-cameraman-editor-projectionist in the repeated showing of, say, "Our Trip to Europe," or "Yellowstone as Seen by The Joneses." And for years we have put up with

silent movies which needed only the addition of sound to make them into something more than "Just another home movie" with which to bore one's guests—movies which, although excellent even in their silent form, would have immeasurably increased entertainment value if accompanied only by a sound commentary.

Well, 8mm and 16mm fans (and those odd size sub-standard films like 9.5mm and 17.5mm one encounters

Establishing the "Start" position on film. A stationery punch is used in this instance to perforate the film at the bottom of the loop. The perforation could be made at the top of the loop, or any other convenient point, depending on the make of projector.



in Europe) the millenium in motion picture sound for folks like us is here! Sound can be used along with our size film screenings at a comparatively small cost—and with only a moderate outlay in time and patience. All the ingredients for the "dish" are easily available and require only a modicum of effort to put them into action. The rest is up to us.

The simplest form of sound and picture from the projectionists' standpoint is, of course, the optically-recorded type of sound track as used professionally (tho' one shouldn't fail to mention that increasing use of magnetically recorded sound may be noted in professional motion pictures—as witness "The Robe"; "The Gladiators"; and many others) and which are, for the most part, optical reductions from standard 35mm movies. Cost of equipment for the recording of optical sound tracks rules out the use of this type of sound—except by those fortunates, sometimes referred to as "advanced amateurs," who have enough of that necessary commodity, cash, to allow of the purchase of expensive sound cameras and allied recording gear.

But these words are directed at those of us who quite often (in fact, more often than not) have to "make do" with the simplest of cameras and projectors, and who have no access to the means with which to even hire the use of high-priced recording equipment—but who do have (1) a camera; (2) a tape recorder; (3) a projector; and (4) a burning desire to make more presentable movies.

The simplest of tape recorders—even those selling for as little as \$100.00, and lower second-hand—will record music and speech with excellent fidelity and, for the sake of economy in tape, the $3\frac{3}{4}$ inch per second speed will prove to be more than adequate—even for music. But of course, $7\frac{1}{2}$ inches per second makes for better fidelity all around and this speed is to be preferred—and the slight additional cost is well worth it.

And at this point, I know it, someone is going to bring up the question of coupling the projector and tape recorder together to keep them "in step"; and will be visualizing all kinds of interlocking devices, electrical and mechanical, necessary to keep the two machines running at exactly the same speed during recording and playback. But I hasten to point out that such coupling of the two machines—by either synchronous motors or by flexible cables—is completely unnecessary since we are dealing not with "lip synchronized" motion pictures (those in which people talk, and the appropriate words come out at the right time) and where absolute synchrony of sound and picture is a "must," but are concerned only with music and narration being played along with certain scenes of a movie to add to the smoothness of its presentation.

Oh sure, there has to be synchronism from scene to scene (after all, it would be silly to have shots of bathing beauties appearing to the description from the sound of what happened on Aunt Agatha's birthday) but, with proper planning such as has to go into even the simplest of movies, this is no difficult task.

The first step, assuming the film to be titled, edited, and ready for showing, is to establish "start" positions on both the film and the tape. There are several methods employed, but I have for some time used just a regular stationery punch to make a small hole in the center of the film frame (or it could be a scratched "X" or "O"—anything easily recognizable) which is then lined up at a point easily located. This can be at the top of the "loop," or at the bottom, or even as the film is just leaving the

feed spool. Just so long as the mark is in the position decided upon immediately prior to switching on the machinery for either recording or playback.

And be sure you have a generous length of "leader" and "trailer" on your film—in fact, it is a good idea to have at least six feet of leader at the beginning of your film and have your "Start" position marked on this leader. In that way, you have a few seconds leeway after throwing the switches to get all set to do your narration.

To mark the tape use a piece of regular white splicing tape (marketed by the "Scotch" people) and apply about two inches to the shiny side of the tape—the side away from the recording head surface. You'll have to trim the excess away which will leave you with a definite point on the tape which will be easy to locate. Set the exact center of this "mark" opposite the center of the recording head—or, if your machine is of the type where it is not easy to see the record and erase heads, then line it up at the point where it passes the guide post as it enters the slot leading to the record head. In any event, after deciding on your "start" point, be sure that the "marker" lines up with it at the beginning of recording or playback. And again, allow about six feet of tape ahead of the "marker"—or use that much "leader" tape to eliminate any initial slippage or jerking of the tape on starting.

Now comes the question, "How to start both machines at once?" Easy! Just have both machines connected to the same power source and controlled by a common switch. They are both bound to start at the same time then, aren't they? And the fact that enough "leader" has been allowed on the film, both machines will be up to speed by the time the first title fades in, and the opening music swells up.

But, says one Doubting Thomas, how's about the "warm-up" period before which the recorder amplifier won't pass even a "peep" of a signal? Easy again! Do it like this. Keep the projector switch "off" until the very last minute—with the power being fed into the recorder amplifier, of course, thereby keeping it warmed up—Then—(1) switch the "common" switch "off," (2) switch the projector "on," and (3) switch the "common" switch "on" again. Things will then be rolling with a minimum loss of heat to the amplifier tubes and the recording can commence with the first title.

It goes without saying that recording music and narration for a movie, however short, is really not a one-man affair, and at least one assistant is desirable—for preference, two. Especially is it so where the music to be used is on records, as it is an almost impossible feat to change records, fade 'em in and out, watch the screen for cues, and at the same time keep up with a written commentary. It just can't be done and result in a really decent job.

Which now brings us to some of the finer points. The microphone position should be arranged as far away from the projector as is possible—otherwise the noise of the projector (and I haven't encountered a noiseless one yet) will be faithfully recorded along with your narration and music. Some "mikes" are said to be completely uni-directional (in other words, will pick up sounds on one side only) but, even so, I have found that even those types perform better when placed in a separate room—with a couple of closed doors between, if at all possible.

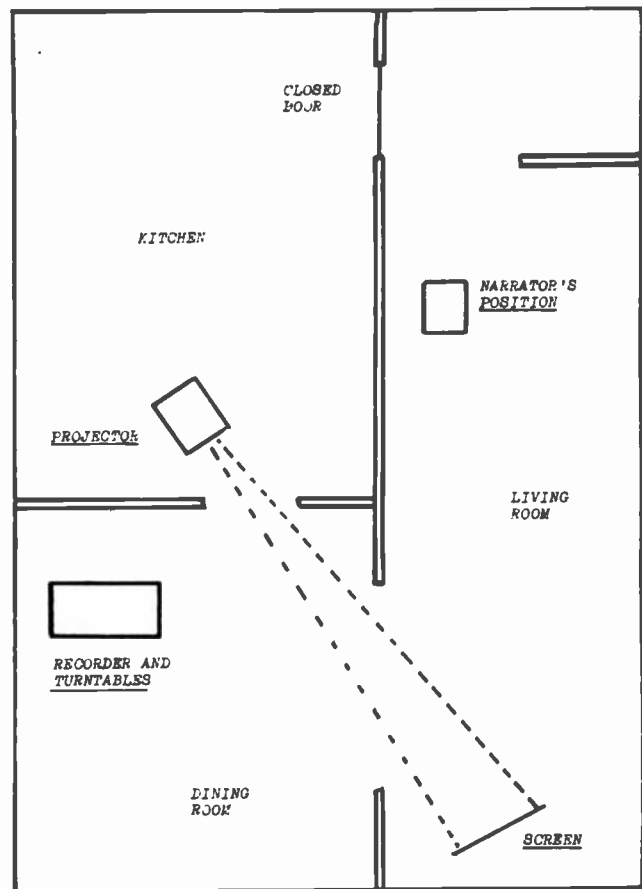
A recording set-up I recently used with success—and all but eliminated projector noise from the sound track—

is illustrated. As will be noted, the "mike" was placed about 18 feet from the tape recorder (which was in one room) and with a wall insulating the "mike" from the noise of the projector (which projected the picture from the kitchen, across the dining-room, and on to a screen at one end of the living-room) and with the recordings (discs) being handled by an assistant with a clear view of the screen. While there was quite a lot of noise when the projector was in operation, most of this was lost by the time it reached the "mike" position in the three or four blankets which were hung, baffle-fashion along the path the sound would have to travel to reach it. And the living-room drapes, carpets, and furnishings all helped to deaden the unwanted noise. And while it might take a little time and trouble to hang blankets or drapes, and to move furniture so that it offers resistance to sound in motion—and over-stuffed chairs are wonderful sound-absorbers—you'll be glad you did when you play back your recording and hear only the music and narration, without any unwanted sounds in the background.

And about mixing voice and music? Of course, a regular electronic-type mixer, with dials and knobs, and all the works, is "just what the doctor ordered." And, frankly, if you can afford one, I'd recommend you to buy one as the control over the mixing of the "mike" and phonograph signals will enable you to produce excellent recordings. But, you don't have to use a super mixer, and for only a few dollars "mike" and "phone" signals can be mixed to produce, with pre-determined settings, recordings which will satisfy all but the super-fastidious movie-maker. This mixing can be accomplished with the use of a dual mixing-plug, called a "Minimix" (available from most audio stores) into which the two sources are fed, via two sockets, through two variable resistances, into a common plug. This common plug then feeds into the "mike" socket of the tape recorder. In making the recording, the levels of the "mike" and "phono" signals are varied by two dials on the "Minimix"—for instance, with the initial "fade in," the "phono" dial will be increased (as the monitoring by head-phones indicates) to the appropriate level of sound, and then decreased, at the same time as the mike dial is increased, as the cue for narration to begin is noted.

Of course, all of the foregoing is based on the assumption that the film to be narrated is complete and "ready to go," and that the narration and music have been pre-planned and rehearsed so that, if possible, the recording session may continue without a break. Should the film be a long one, however, it is usually best to split it up into sequences and deal with them one at a time—ending each sequence, if possible, on a "fade out" and beginning the next on a "fade in," which will eliminate sudden changes in sound level if the sound is faded in and out at the same time.

Now to the synchronism of the narration scene by scene; plan this (the narration) to commence no sooner than four seconds after a given shot appears, and time it to end at least four seconds before the end of the scene. This will allow for any slight variation in speed between tape recorder and projector, and even in a long film the possibility of the machines getting more than a few frames of film out of step—or a few inches of tape—is somewhat unlikely. However, to obviate "creep" on the part of either machine, and assuming that the projector is fitted with a variable speed control, the use of Revere stroboscopic recording tape is suggested. This tape has



A recording setup for eliminating projector noise from the sound-track. The mike was placed about 18 ft. from the tape recorder (which was in one room), with a wall insulating the mike from the noise of the projector, which projected the picture from the kitchen, across the dining-room, and onto a screen at one end of the living-room.

stroboscopic marks on the back (or shiny) side of the tape, so spaced that the intermittent light of a projector beam at sixteen frames per second holds the marks in a seemingly stationary position when both recorder and projector are exactly "in sync." With the recorder placed ahead of and below the projector beam sufficient stray light falls on the back of the tape to adequately illuminate the "strob" marks and an occasional check during the screening is all required to keep things running O.K.

And there you have it! For a comparatively small outlay in cash, coupled with a few hours' work in planning music, narration, and recording set-up, you have a virtual sound-movie of your own making.

Oh yes, I know that this type of film recording isn't the answer to every amateur movie-maker's prayer. I know that a lot of work is involved in even what looks like the simplest of sound commentaries—I know, too, that 16mm magnetic sound-on-film recording projectors are on the market, and that the fact of the magnetic sound track being right there on the film makes that system more desirable. And having used one of these machines I know the excellence of the recordings that can be obtained on them.

But, after all, this article wasn't written for the owners of Auricon and Morton Soundmaster cameras—it is directed at those of us who like to take movies, and who want to add just a little more to them to get them out of the "rank amateur" class. And so that one's friends, on leaving one's home, are not heard to mutter, "Oh Heaven, that man's awful home movies!"

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Questions on Stereo

? ?

by Robert Oakes Jordan and
James Cunningham

? ?

... some of the most frequently asked questions are answered by the authors.

? ?

THESE have been some questions from readers of TAPE RECORDING MAGAZINE about stereophonic sound and recording. The interest in this series and in stereophonic sound, as shown by the mail response provides us with an opportunity to answer questions. As close as we are to the subject, it is unfortunate that we have left insufficiently explained, some rather important areas of reader interest. We have gone through the letters and generalized most of the questions into categories; however, those of a specific but interesting nature are just as the reader has asked them . . . these we will place in quotation marks.

The most frequent questions concern allied equipment, materials and their cost. Let's start with those about tape.

QUESTION: "Is there a large enough pre-recorded tape library available to make stereo worth my while?"

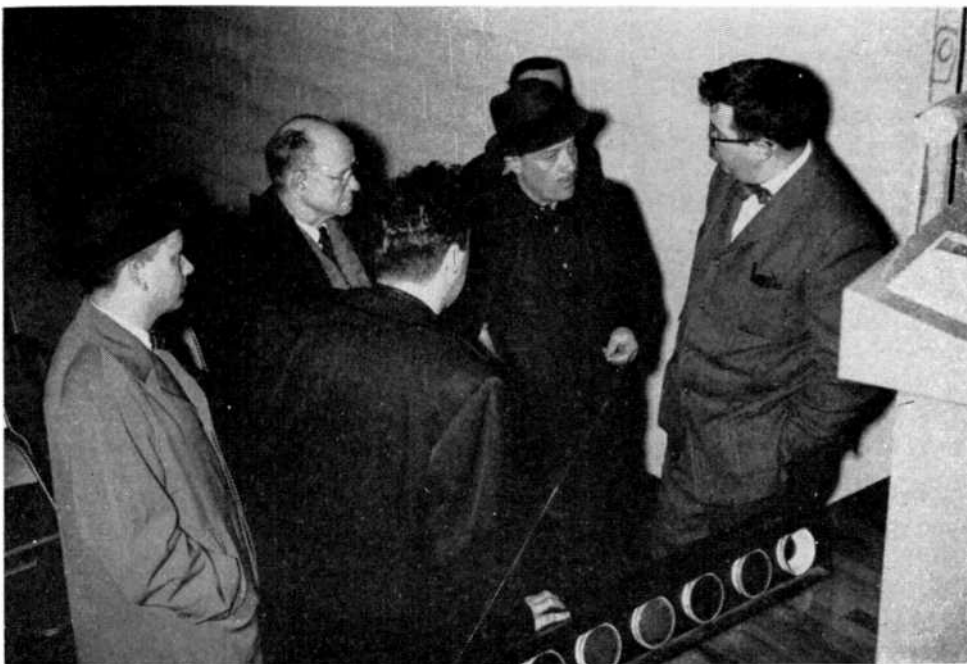
ANSWER: There are close to 250 tapes available in stereophonic recording. While this might seem like a small number of selections at first glance, looking further into the group will show that most of the major classical works are included along with a wide choice of jazz, folk, and pop music. Opera,

plays, poetry, Biblical and other material in the spoken word are appearing regularly. The average cost of these tapes runs about ten dollars for thirty minutes of performance.

QUESTION: "Is magnetic tape as permanent as the advertisements say?"

ANSWER: Perhaps the advertisements are somewhat misleading in that they refer to the actual usability of the tape over a period of time. The magnetic qualities of tape are as far as anyone knows, long lasting. A roll of good quality tape does not lose its working qualities in storage. Some of the plastic film used in the bases of tapes is subject to moisture damage. For the most part any tape if not stretched or distorted physically by incorrect handling or transporting (i.e. from the supply reel to the take-up reel on the recorder), will last as a quality recording medium for years in normal use.

Tape that has been recorded is subject to the same physical conditioning as a blank tape but the magnetic character is subject to external electro-magnetic



The type of questions asked after a demonstration of stereophonic sound reflects the tremendous growing interest on the part of the public. Here Robert Oakes Jordan answers some of those tossed at him by inquiring visitors.



Cold weather can be a drawback to field recording. Author James Cunningham is shown talking with driver of old-fashioned milk truck during the recording of sounds for the new VM stereophonic demonstration tape.

influences. Other influences come into play between layers of recorded tape as it is stored on the reel, due to magnetic influence of adjacent heavy magnetic signals recorded on the tape. Heat and other conditions of storage control this effect called *print through*. However, the manufacturing processes now used to grind the oxides are being changed with hopes that a finer particle deposition on the tape will aid in eliminating this problem.

QUESTION: "Do tapes recorded in binaural sound differ from those recorded in stereophonic sound?"

ANSWER: If the question is asked in a scientific vein we must first define the terms *binaural* and *stereophonic*. As applied to tape recording *binaural* has reference to a two channel tape recorded with microphones placed with reference to the two ears in distance. The head in the human hearing system happens to be a delay path for the sounds and hence a disc or some similar phasing obstruction is employed between the two microphones. When the tape is to be played back for the listener a pair of individual earphones is used. In this way the two channels are never mixed in air, or that is, the listening room acoustics do not play a part in the three dimensional reproduction. Throughout each channel remains independent into the dual hearing channels of the human hearing system. As applied to tape recording stereophonic has reference to a multiple channel tape recorded with the microphones spaced wider apart depending upon the aggregation to be recorded. In this type of microphone set-up the attention paid to the ratio of direct to reverberent is more critical. While the channels are separate on the master tape the playback is accomplished by employing two power amplifier and speaker systems which causes the sound to be mixed acoustically in the listening room. Except for some of the older recordings made here in America and some of those coming from European sources there are no true

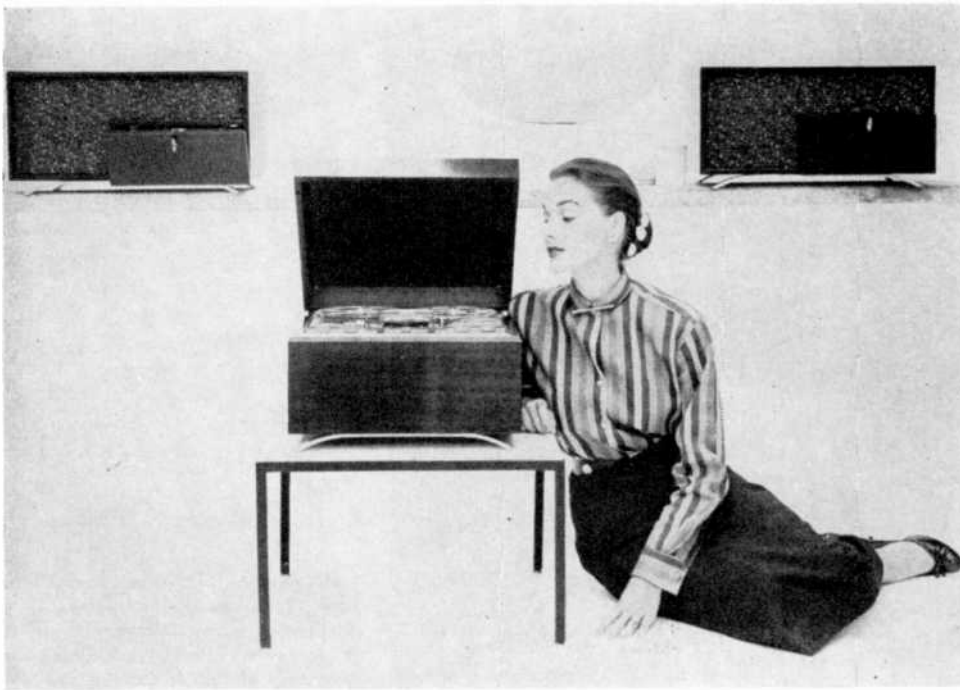
binaural tapes available. However, the terms *binaural* and *stereophonic* are currently being used by the advertisers as meaning the same thing. It is our belief that they are different methods of recording but this as an answer is open to scientific conjecture.

QUESTION: "I have noticed that there are several do-it-yourself adapter kits available for converting a standard tape recorder for playing stereophonic tapes. I have no technical experience, can I do the job myself?"

ANSWER: We are familiar with only two of the available conversion kits, the Bell and the VM. Both of these kits are easily installed. It is wise to follow exactly the directions furnished by the manufacturer. Some additional points of caution are these: Try to keep magnetized steel tools away from the faces of the



Ken Nordine, renowned radio and television artist demonstrates how microphones are placed for a stereophonic voice recording. Here he is reading the Bible.



The placement of the speakers for stereophonic sound is mainly a matter of personal experimentation. Pictured is one way suggested by the Ampex Corp.

playback heads. If it is possible to avoid adjusting the head alignment do so, i.e. the head gap should be exactly vertical to play commercial tapes with all their stereophonic fidelity. Do not use a soldering iron on the electrical terminals of the playback head, heat can change the performance quality of this type of structure.

QUESTION: "I have a good quality monaural high fidelity system and I have been planning to buy a stereophonic tape player. If I do, must I buy duplicate amplifier, speaker and enclosure to match my existing system? Could I possibly use less expensive equipment?"

ANSWER: This is a problem that faces everyone interested in stereo who has existing equipment. Our answer to this is based upon several factors. How you expand your system for stereo will be governed by how much money you can spend. If your budget is limited then your second amplifier, speaker, and enclosure will be lower in quality. If not, then duplication is easy and room space will be your only problem. Whatever your financial position get stereo . . . it's worth it. If you want the facts about what should be done regardless of price then this is what stands: To have the maximum stereophonic effect the loudspeakers and enclosures must be identical. Since loudspeakers vary as widely in quality as they do in price it is here that a serious loss to the stereo effect could occur. It is better to use two identical inexpensive speaker systems than two having a serious quality difference. An essentially equal quality amplifier can be purchased to match your more expensive unit at a lower price. While quality differences do occur in amplifiers these differences are not so important as those occurring in the actual speaker system.

QUESTION: "Can I make my existing hi-fi stereophonic by adding another loudspeaker?"

ANSWER: No. Stereophonic sound is produced by a unique and different system of recording and played

back through a special multi-channel reproducing system. Adding an extra speaker to your existing amplifier will only provide additional coverage by your monaural sound sources (radio, discs, etc.) Despite what some experts say there is little advantage to extra speakers, and certainly it will not provide any stereophonic effect.

QUESTION: "I have purchased a used stereophonic tape recorder, and I am interested in knowing what effect weather has on the equipment you use in your field recording work?"

ANSWER: Our equipment is used for recording in all sorts of weather conditions. We have technical problems in hot weather. In winter time cold and dampness produce our major source of troubles. When we move the equipment from the warm laboratory we try to have the station wagon at 70 degrees. In very cold weather the equipment has sufficient heat of its own to keep it running smoothly. If for some reason the tape recorder is allowed to cool down below freezing it takes only a short period of running time to warm it back into a correct operating condition. Cold has little or no effect on the electronic system but has some effect on the mechanical lubrication used in the transport unit. Microphones are another problem. In damp weather the condenser microphone will develop humidity faults. When the microphone is removed from a warm condition to one very cold, condensation may form on the interior of the mike changing its response drastically. We have found by field experience that a good sturdy magnetic probe microphone like the Shure 535 will provide dependable service at all temperatures and degree of dampness likely to be encountered in field recording.

QUESTION: "Do you find much public interest in stereophonic sound at your lectures and demonstrations?"

ANSWER: When we first began giving lectures and demonstrations to various groups several years ago, stereophonic sound was without meaning to most

people. If we hadn't put the words Hi-Fi in the publicity concerning each demonstration I am afraid the drawing power would have been zero. Perhaps we were not being fair in our desire to give these programs since we asked each group to fill out our scientific information form. As time went on we found that stereophonic sound was all you needed to advertise to get a good sized crowd. We served well both purposes . . . entertainment of the group and the collection of our scientific data sheets. Having collected many thousands of these informational forms we completed our research program. The requests for these lectures and demonstrations still continues and we now find we can even make a slight charge. In some cases the group will sell tickets for donation to some worthy charity and people will still come to hear stereophonic sound. We find now however that those who ask questions after the program are now asking knowledgeable questions.

QUESTION: "In some of your demonstration tapes that I have heard there seem to be special effects that could not be obtained from the standard professional recording machine. Do you have to construct special

mechanical or electronic equipment for these recordings?"

ANSWER: While doing either research or special recordings we often are called upon to either alter an existing piece of equipment or to construct a special device. Time and speed effects in tape work require laboratory and machine shop work. We do all of this special design and construction work here in our own laboratory.

QUESTION: "Should I wait to buy stereophonic equipment until they have decided which type of head placement they will standardize . . . stacked (in-line) or staggered (off-set)?"

ANSWER: A person could wait forever for the final development in any new art. The equipment used in stereo playback will get better and better. We do not believe it is important in the long run to wait for one or the other type of head displacement. Eventually, we presume in-line heads will become standard when all the problems of cross talk and manufacturing expense are worked out. Until then buy stereo equipment with the same idea in mind that you had when you bought your first television set nine years ago. No regrets about that is there?

DO IT YOURSELF

Six months of spare cash and two months of the same type of time has presented me with this compact conglomeration of new and used hi-fi equipment.

Just my luck that the photog friend of mine had to show up two days before I painted the "Rack," as I call it. But, that's the way it goes.

Since I happen to live in a cramped apartment and cannot build things in, I have this all in an area of 60" by 29", not counting a couple of base reflex speakers in their own carrying cases. The 13" top shelf holds three playbacks in battered suitcases with the lids decorated a bit to keep the place from becoming too one way, (I had thought this to be the perfect spot for some really nice pictures of girls I've been saving for years, I can't afford to save the girls) anyway, to get back to the main subject at hand, the two cases on the ends house radios too. I don't own a changer so I won't go into the type of case that would be necessary for one.

The boxy protrusion at top center is my 10 watt amplifier and tuner, and incidentally the shade on the lamp is a home made flock job, and the clock in the cigar box did not have seconds marked on it at the factory, so I had to do that too till I can afford something better. Directly under the amp. is the work light to illuminate the switch panel where all and sundry are operated.

In the center position on the main deck the first of my collection Miesner Radio-Photo-Recorder-P.A.-Amp does most of the work, the cost of tape what it is, with a Webcor taper on each side.

Starting at the left on the bottom, and front, I'd better add, everything is removable; the wire rack was made of two trays from an old refrigerator, one laboriously curved, the other cut in half. Up out of sight are a few 45's still within reach though. Next is the master tape box: add a strap

from top to bottom and it becomes a carrying case for 7" reels, it's 8 by 8 by 15" high. To the right of that, a 5" reel case sits snugly because it's reversible. Has two shelves facing the back of the rack. With a strap around it, it's also a carrying case. On each end of the rack behind the tape recorders is a drawer that holds 22 more reels not meant to be removable, but could be.

I neglected to give due credit to the lovely Prune box that fits as tho I'd meant it to. Of course this whole thing was ad lib from the first "Let me see." The Prune box holds all the hand mikes, spare parts, wires and other goodies that I seldom have use for. The lids fit behind the records in the back, where I happen to have my bed at this moment, and the main deck extends to the back where I park an ash tray and assorted cigarettes and pocket books to lull me off after a long session at the switchboard.

Sorry you can't get a better view of the mike stand behind me, I made it from an old bird cage stand and half a door pull from a Lincoln I once owned.

I might add at this point that little or no space would be wasted if this were jammed against the wall again where I had it in the first place. I just wanted it further in the room where it stands behind my home-made 78" bar. No, I eat off it, and lean on it when I'm not messing around like in the accomp. picture. Now, have I forgotten anything? Oh, yes, the little cubby holes for frequently used gadgets like marking and splicing tape, and at far right I stow the three inchers. As you see I have room for a sight more tape than I have, but I hope in time to remedy that now that the big money has been blown.

Morgan Brody
Burbank, Calif.



The do-it-yourself aptitude of Morgan Brody of Burbank, Calif. resulted in this compact setup of new and used hi-fi equipment.

FOR YOUR AUDIO BOOKSHELF



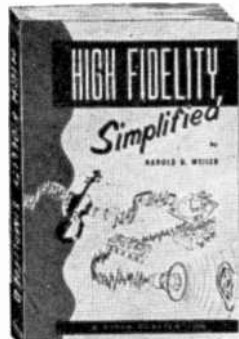
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This is the first book for nonprofessional users and includes the photographs and specifications of 55 recorders as a guide to selecting the proper machine for various uses. The book does not deal with technicalities. It was written after some 2500 experiments had been conducted, using recorders in the fields of education, camps, meetings, business and the home. Part of the book is devoted to an explanation of hi-fi principles and terminology.

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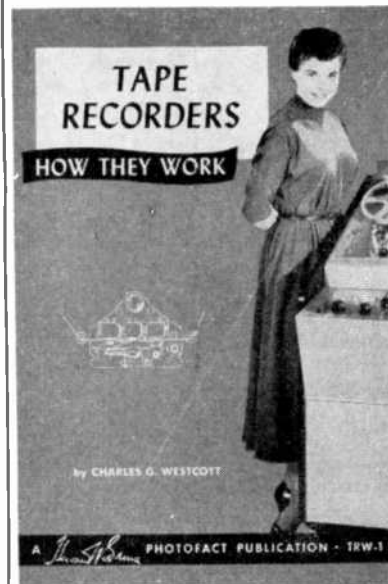
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by
Charles G. Westcott

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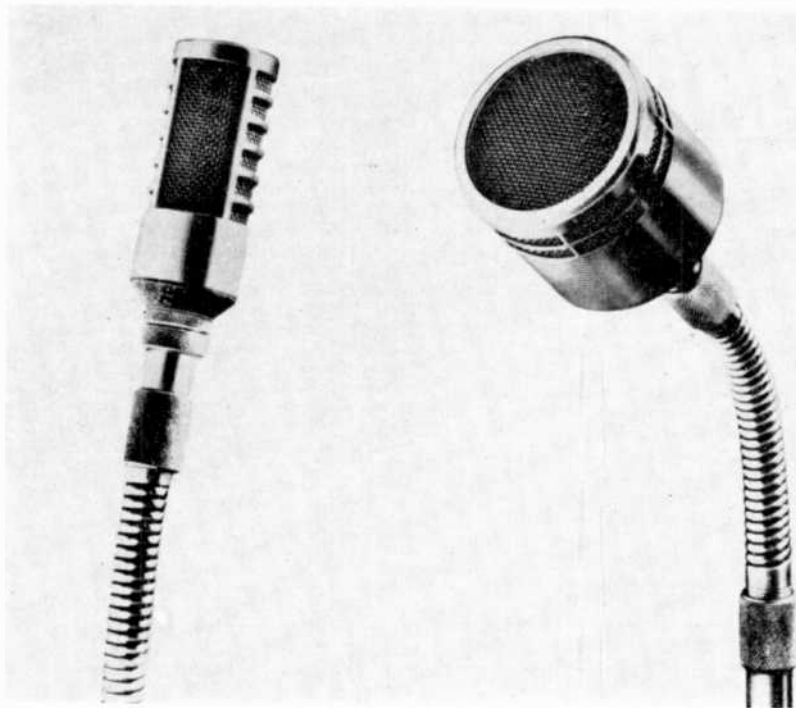
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NEW PRODUCT REPORT

STAFOKSTED



FILM INDUSTRIES RIBBON MICROPHONE

... low cost, low impedance microphone

has good response and true Ribbon characteristics

THE Model M-8 Film Industries Microphone is an attractive unit of small dimensions and light weight. It is finished in satin chrome and comes equipped with a 4 inch gooseneck. The lower fitting on this is tapped with the standard $\frac{5}{8}$ -27 thread to fit regular microphone stands.

In diameter it measures $1\frac{3}{8}$ inches and is $3\frac{3}{8}$ inches in length. The weight is 8 ounces. The two views above show the arrangement of the sound entrances in the case.

This microphone is a true ribbon microphone and has the directional characteristics of the ribbon. The front and back sides are sensitive while sound coming from the sides is reduced in volume. Our tests revealed no differences between the front and back response. The side response was down 25-30 db from the front or back response.

The manufacturers specifications call

for a response of below 40 to 14,000 cycles per second ± 3 db.

Our tests, against a standard calibrated microphone revealed the BFI to have a response of 70 to 10,000 cycles per second ± 2 db. The response within these limits when compared to the calibrated mike was very good.

The output impedance of the mike is 30 ohms. To use it with an ordinary tape recorder having a high impedance input, as most recorders do, a microphone transformer is necessary. Two types are available, one is a straight type, mounted on a jack for use with the Ferrograph, with which this microphone is supplied as standard equipment; the other is similar in appearance except that the plug is connected to it with a flexible lead so that it may be used with any recorder.

The transformer is of good quality and stays within the limits from 70 to 10,000 cycles per second.

Product: Film Industries

Ribbon Microphone Model M-8

Price: \$19.50 with 12 feet of shielded cable.

Distributor: Ercona Corp.

551 Fifth Ave., New York, N. Y.

The output level of the microphone is good, measuring by our tests from 54 to 57 db down. We also found the noise level to be excellent for this type of microphone which is very sensitive to electro-magnetic fields.

The construction of the unit is sturdy but, as with all ribbon microphones, it should be treated with respect and care. Most ribbon mikes are designed primarily for indoor or studio use.

A three magnet Alcomax assembly is used to supply the magnetic lines of force which the ribbon cuts when struck by the sound waves in the air. We understand from the distributor that this microphone is standard equipment in the film studios in England.

We feel that this microphone compares very favorably with others of its type both in response, and output characteristics. Its comparatively low price will make it attractive to those who would like to use a ribbon mike with their equipment.

The operational principle of the ribbon or velocity mikes is different than other microphones. In its case, a delicate ribbon of aluminum is suspended in a magnetic field. The motion of this ribbon in cutting the lines of force generated by the magnets, sets up the current.

The "velocity" of the air particles striking this ribbon causes it to move back and forth.

Obviously, sound coming from the sides of the mike, where most of their force hits the thin edge of the ribbon, will not affect it much.

Ribbon mikes, on the whole are very sensitive and, as mentioned earlier, must be treated with care and respect.

Inasmuch as both sides of the mike can be used equally well, it is good for recording dramatic groups or soloist and instrument, in addition to the regular uses to which microphones of other types are put.

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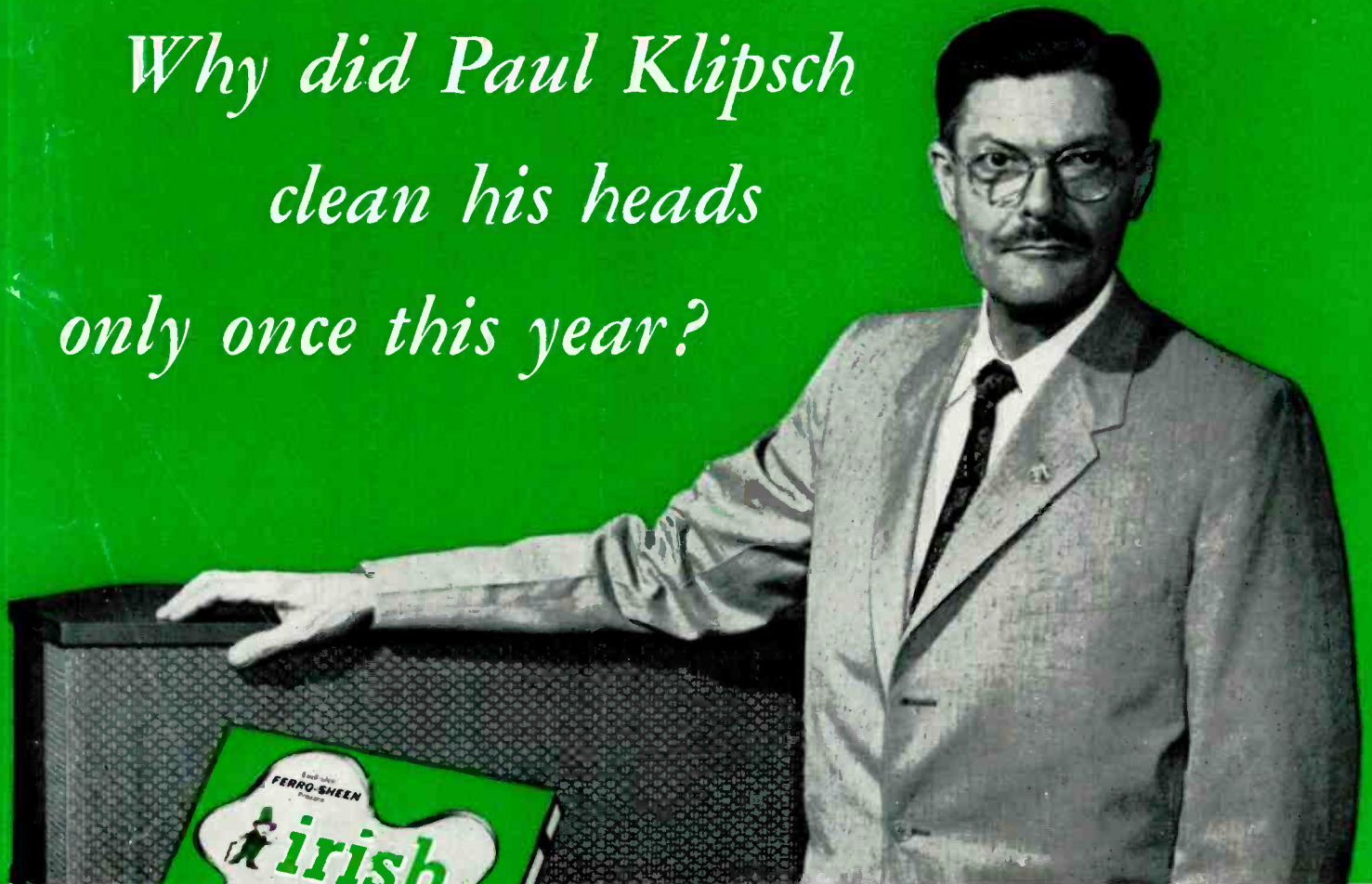
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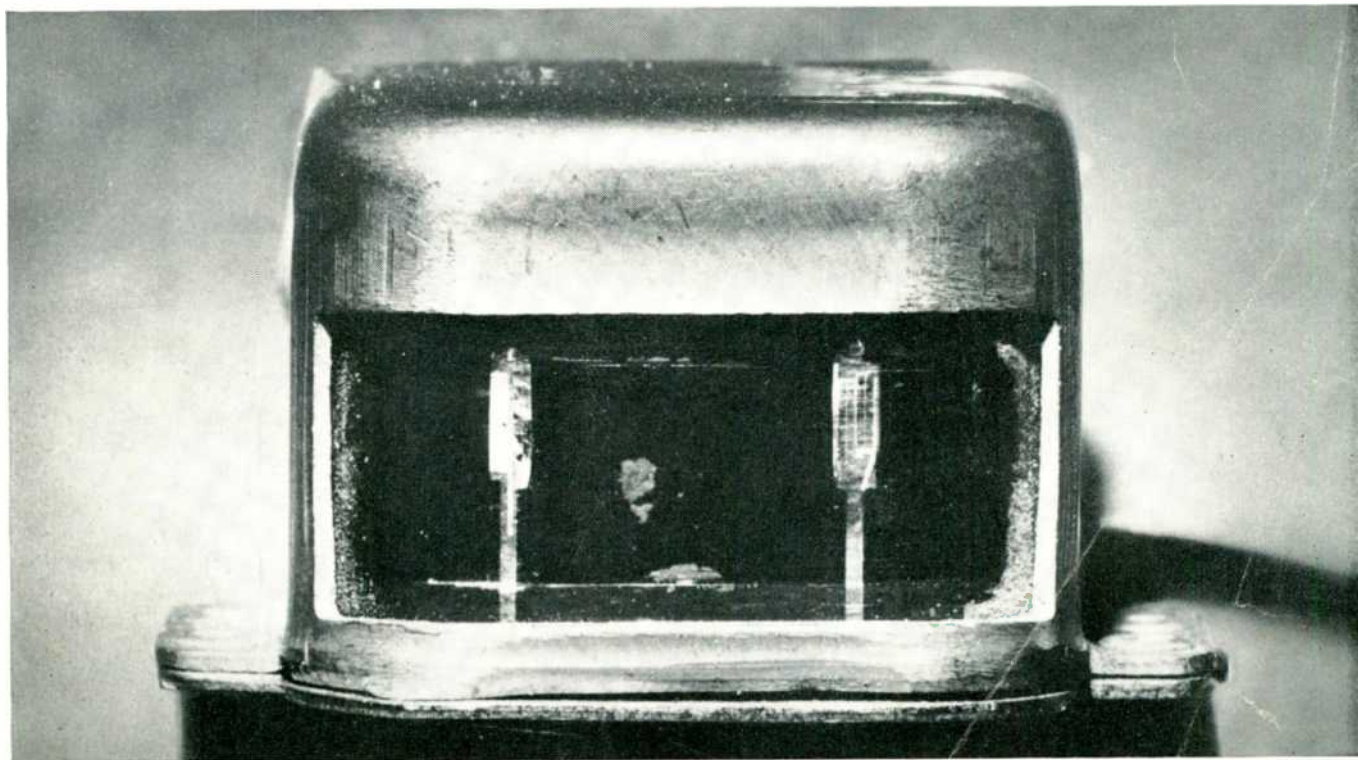
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