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# TAPE RECORDING

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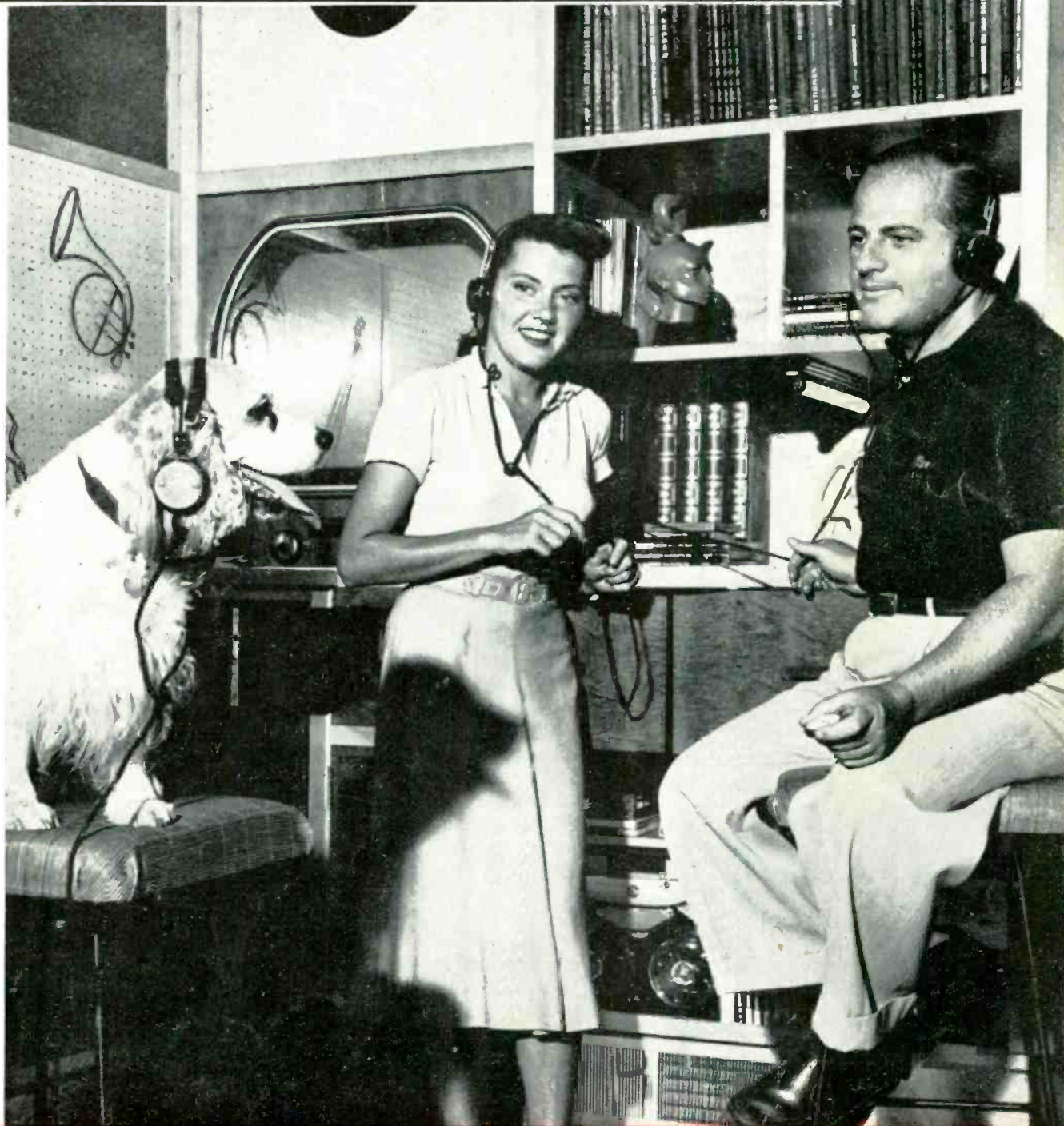
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DIMINUETTE  
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Radio-TV Producer Kerm + Schafer's Bloopers Listening Post

**OCTOBER, 1955**

**35c**

# African Torture Test

proves **LR** audiotape  
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 immune to extreme heat and humidity

"The Ituri Forest provides the worst possible conditions for recording work. Our camera lenses grew mushrooms, even on the inner surfaces. All leather molded in four days. Our acetate-base tapes became unuseable. But the LR Audiotape always unwound without sticking and showed no tendency to stretch or curl."



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	Yield Strength	Breaking Strength
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0.9 mil "Mylar"	4.2 lb.	7.6 lb.
1.45 mil Acetate	5.0 lb.	5.5 lb.

Table II TESTS AT 75°F, 90% RELATIVE HUMIDITY

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0.9 mil "Mylar"	4.1 lb.	7.6 lb.
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**MAGNETIC FILM &**

**TAPE RECORDING**

VOL. 2 No. 6

SEPTEMBER-OCTOBER, 1955

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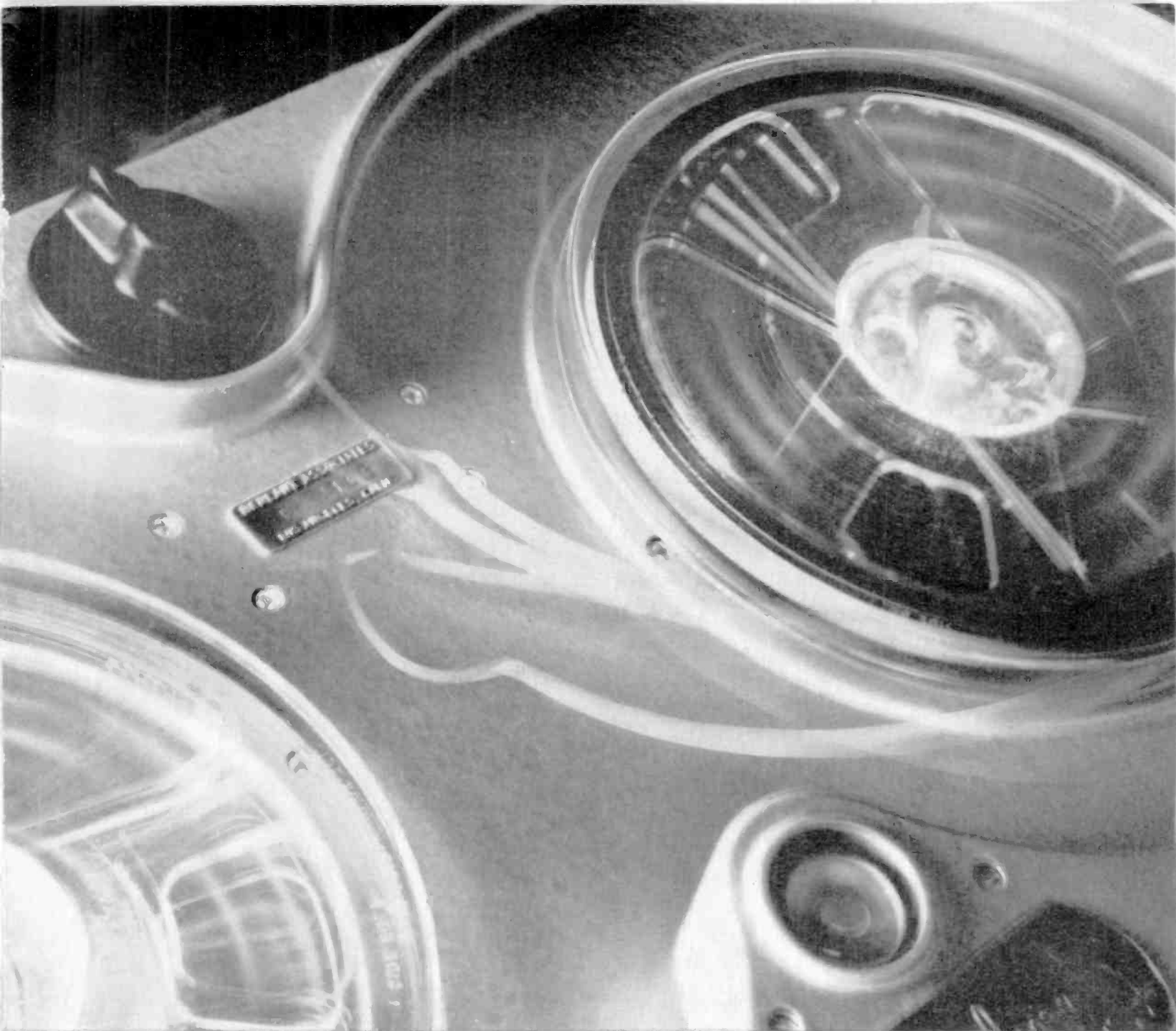
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## NEW TAPES

By Charles D. Sigsbee

As this column was being written, the weather was hot and humid, hurricanes Connie and Diane were creating havoc on the east coast and American League fans were losing weight by the scoreboard.

While Connie and Diane were doing their worst, two hurricanes blew up in the tape field. These, however, are good winds which should blow lots of good to recorded tapes fans.

You'll be interested to know, as we were, that Berkshire Recordings has entered the tape field. Their new library contains in part, recordings of the Haydn Society, released on tape exclusively by Berkshire. The tapes will be issued in three series: the Hi-Fi Supreme series, recorded at 7½ ips. (one hour of music), the Royal De Luxe, recorded at 3¾ ips. (two hours playing time), and the Extended De Luxe series on long play Mylar recorded at 3¾ ips. giving a playing time of three hours. Prices start at \$6.95 in the Hi-Fi Supreme series. We'll be reviewing some of these tapes in following issues.

The second tape hurricane was centered around Livingston, N. J., where Livingston Electronics announced the formation of the Livingston Tape Club. Oddly enough, just a few days before their announcement, Columbia Records announced a somewhat similar plan for disc records. We know that Livingston has had this latest idea in the works for some time. Apparently there was some parallel thinking going on in both organizations.

Details of the Livingston plan are described in their advertisement so we won't take up column space going over them.

Another straw in the wind blew in from Chicago with the announcement by Pentron Prexy Irving Rossman that Pentron will enter the recorded tape field with their "Moods in Music" series.

The first release was made by Larry Paige and his Orchestra and consists of popular standards, including Stardust, Jet Flight, Blue Moon, Empty Arms, Begin the Beguine, Brazil and Once in a Blue Mood. The recordings were made at Universal Studios in Chicago on a Pentron Dynachord and have a frequency range of from 40 to 16,000 cycles.

The tapes have been made specifically and only for playing on a tape recorder and the arrangers were given wide latitude in their arrangements. The tape has extreme lows and high violin figure work. We'll be reviewing it in a subsequent issue.

We decided to counter all this uproar by keeping everything in a light mood. And that is just what you'll find in this column, light, gay, popular music. The only thing heavy you'll find in this issue is an occasional 30 cycle note from the Wurlitzer Organ and Guy Kibbee's left foot.

Academy Award Song Hits (1940-1953) ✓  
Irving Fields and his Trio

OCEANIC TAPE LIBRARY  
OC 5-3

The most provocative piano arrangements to come along in some time, enthusiastically played by Irving Fields and his trio.

The whole tape is filled with one delight after another from the first selection, "The Last Time I Saw Paris," to the last, "White Christmas." In fact, the recording presents such an omnibus of good and familiar tunes that the melodies linger on long after the tape itself has been placed back on the shelf.

Much of the credit for the immediate acceptance of this recording goes to the brilliant arrangements and infectious style of Mr. Fields. The trio plays as an integrated group that has been together for some time; nothing intrudes, nothing detracts.

Livingston Electronic Corporation made the reproduction with great success. It is an excellent high fidelity job recorded at a high level which eliminates any trace of hiss in the high frequency end.

Charlie Davies—Piano  
MUSIKON TAPE #531

A Hack Swain-Livingston release that pales beside the Irving Fields' recording reviewed in this column. Somehow Charlie Davies' piano styling sounds mechanical and uninspired but, as I say, this feeling is prompted, in part, by comparison with the Fields' Trio.

It is interesting to note that Livingston does a good job of transferring Hack Swain's master tapes to dual track. The recording can be put to excellent use in background music service, in spite of the fact that it falls somewhat short as a listening experience.

Larry Carr Sings Verse and Chorus with  
Bethe Douglas  
ESOTERIC  
ES 5-5

Larry Carr sings a pleasantly, lusty collection of familiar, but not too familiar, show tunes. The tape gets off to a good start with the highly suggestive Cole Porter lyrics to "Let's Misbehave" from a 1928 musical called "Paris." The fine pace set continues unflaggingly through all eight tunes, one of which even boasts lyrics by the late P. G. Wodehouse, of all people.

Carr has been around the networks and night spots for quite some time both as a pianist and a singer but developed his lusty, infectious singing style during the war in barracks shower-rooms. Coupled with Carr on the recording is a fellow Texan, Bethe Douglas, who can be seen on NBC-TV as a nightclub singer in the soap opera, Three Steps To Heaven.

The outstanding selections, in addition to "Let's Misbehave" are "True Blue Lou," "I See Your Face Before Me" and "Ten Cents A Dance"; the latter two sung by Miss Douglas.

Deserving of special mention on the recording is the musical background, and sometimes foreground, provided by Dick Hyman, the pianist and arranger, Mundell Lowe on guitar, Eddie Safranski on bass, the drums of Don Lamond and the outstanding trumpet style of Rusty Dedrick. All are familiar names to pop musicians and fans everywhere.

The recording is a good one and includes program notes by George Simon.

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Bob Keene and his Orchestra ✓  
(Arrangements of Billy May, Shorty Rogers, Bill Holman, Johnny Thompson, Paul Villepigue)  
JAZZTAPE 4007

Nothing has impressed me quite so much in the big dance band field since the first time I heard Artie Shaw; unless it was Stan Kenton's original orchestra.

To make sure this just wasn't an old man's prejudiced opinion, I invited in some teenagers to get their reaction. Their facial contortions concurred. A Kansas City disc jockey who happened to be passing by gave his approval with, "Who is THAT!"

Bob Keene plays a clarinet which is very reminiscent of the aforementioned Mr. Shaw, and fronts a band that could re-popularize ballroom dancing singlehandedly. The jacket liner calls the band "enthusiastic" and I can't think of a better description. Keene hand-picked the group around Los Angeles and they sound like they have played together for years.

The opening selection of the tape is George and Ira Gershwin's "It Ain't Necessarily So" which opens with a series of big percussion blasts that lead into an arrangement of sounds that breathe new life into this old standard that has been exciting audiences for years.

This type of music continues throughout the entire tape with but one possible exception; the last number, "Flying Home," which didn't do a thing for me although I liked the original Goodman-Hampton version years ago.

My hope is that this new outfit survives the initial business problems that have destroyed good, young musical groups in the past; and if they do survive, I hope that OMEGA continues to send out more tapes by this orchestra.

Laurindo Almeida Quartet  
Featuring Bud Shank  
JAZZTAPE 4006

A musical oddity that comes off very well in this unorthodox coupling of an alto sax, bass, drums and Spanish concert guitar. Almeida is a Brazilian guitar virtuoso who has somehow found himself on this recording playing wonderful Spanish guitar around which comes jazz. Not real jazz, nor real Spanish music either; hard to say what it is, but it sounds good and should appeal to both those who love Latin American music and those who prefer quiet jazz.

One must get used to this odd coupling of instruments before being exposed to an old favorite like "Speak Low." I feel it would have been more appropriate to lead off with the second number "Amor Flamengo" which shows off Almeida to the best advantage and sort of sneaks in Bud Shank on alto sax.

As the guitar is unamplified one is subjected to a great deal of fingering noise which tends to lend a great deal of presence to the whole thing and I will quite imagine it will find its way into more than a few hi-fi demonstrations.

One thought occurs to me after hearing the tape: I would like to hear another tape featuring Laurindo Almeida doing what he can do at his solo best.



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TAPE No. 1: Alice Blue Gown\*, All of You\*, Darling Je Vous Aime Beaucoup\*, Deed I Do\*, Wagon Wheels\*, Melody of Love\*, When Your Hair Has Turned to Silver\*, Stomping at the Savoy\*, September Song\*, Deep Purple\*, Josephine\*, Anniversary Song\*, I Guess I'll Have to Change\*, The Breeze and I\*, You Do Something to Me\*, Cruising Down the River, A Foggy Day\*, Charmaine, Dancing on the Ceiling\*, Stardust, Tweedle Dee\*. (Total of 21 different numbers of which 19 are multiple track.)

TAPE No. 2: You Go to My Head\*, Where Can I Go Without You\*, Easy to Love\*, Don't Take Your Love from Me\*, Falling in Love with Love\*, Anniversary Waltz, Let Me Call You Sweetheart, Deep in My Heart, When I'm Not Near the Girl I Love, Two Hearts, Oklahoma, Surrey with the Fringe on Top\*, All the Things You Are, There's No Business Like Show Business, I Love You\*, They Say Falling in Love is Wonderful, June is Bustin' Out All Over\*, Desert Song, Serenade, Whiffenpoof Song, One Alone, Moonlight and Roses. (Total of 22 numbers of which 9 are multiple track.)

SPECIAL CHRISTMAS TAPE: Oh Come All Ye Faithful, Silent Night, Hark, the Herald Angels Sing, Noel, Oh Little Town of Bethlehem, God Rest Ye Merry Gentlemen, Joy to the World, Jingle Bells, White Christmas, Winter Wonderland\*, Blue Christmas, Let It Snow\*, Santa Claus is Coming to Town. (13 selections of which 2 are multiple track.)

\*Numbers marked with asterisk (\*) are multiple track.

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Enclosed please find 50 cents. Send me the next pre-view. If I am satisfied I will join the club for an additional \$4.50 for the next 11 months, with no obligation to buy full monthly tapes.

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Jazz Showcase  
Sir Charles Thompson Sextet  
A-V Tape Libraries, Inc.  
AV-702 B

Sir Charles is not a member of the nobility as one might expect, but rather a pretty talented pianist from Independence, Kansas. "Chase" was dubbed "Sir Charles" at Cafe Society in New York in 1941. The name stuck as did the titles of Basie, Oliver and Ellington. Now that we have this cleared up let's talk about the tape.

This A-V Vanguard recording is pure creative jazz. The members of the Sextet played together for the first time at the recording session which adds an element of surprise and feeling of spontaneity that cannot be achieved with organized groups.

This music itself is in the completely modern jazz idiom and features in addition to Thompson, Joe Newman on trumpet, Benny Powell on trombone, both of whom are side-men with the Count Basie orchestra. Also Pete Brown, alto sax, Osie Johnson, drums and Gene Ramey, bass.

The recording was produced in cooperation with *Doun Beat Magazine* and was supervised by the noted jazz critic and commentator, John Hammond. The recording hall was chosen for its fine acoustic properties and the equipment used was that normally used to record the finest symphony orchestras. (Ampex, Altec and Telefunken)

If you are scared by the word "Bop" don't be, this is wonderful music and for jazz enthusiasts a thrilling listening experience quite reminiscent of the Jazz At The Philharmonic recordings without the exuberant audience noises. "For The Ears" is a masterpiece of musical improvisation lasting twelve minutes.

The fidelity is as high as one could possibly get and as the recording level on the tape is high it is unlikely that one will hear excess noise even on a poor machine. A successful recording in every way.

Listen to the Hi-Lo's  
Frank Comstock and his Orchestra  
**JAZZTAPE 4002**

The Hi-Lo's, in case you haven't been informed, and I hadn't been, is a vocal quartet and, in my opinion, ten successive selections by a vocal quartet is pretty much to take at one sitting. However, this is just my opinion, and I must admit if you have to take it, this is a pretty good one to take.

Ablly backed by Frank Comstock and his orchestra they romp through ten old standards including that ubiquitous "Speak Low" again. The Gene Puerling arrangements help considerably to provide a warm approach for these four young men. They sing with a rare verve and excellent phrasing.

Jazz fans should not be misled by the Jazztape label; it is good popular music, but not jazz.

Folk Songs and Ballads  
Susan Reed Sings "Old Airs"  
A-V Tape Libraries, Inc.  
AV-801 B

I don't know that placing Susan Reed among the popular music tapes is a good

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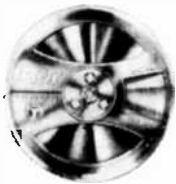
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You pay only 59c for this Exclusive Encore Treasure Tape, "Excerpts from Dubbing's Test Tape No. D-110" . . . THE MEASURE OF YOUR TAPE RECORDER'S PERFORMANCE. Tests for maximum and normal recording level, rough and fine head alignment, timing and tape speed, wow and flutter, signal-to-noise ratio. NOT for sale anywhere. Obtainable only by mail



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Versatility underscores the modern functionalism of this new design. It weighs only 2 ounces, only 3 1/2 x 2 1/2 x 1/4 inches in size . . . can be easily handled and used by standing persons, or it can be rested on a flat surface for conference type pick-up such as conference recording.

Quality in construction means quality in tonal reproduction. The microphone element is shielded, with very low hum pick-up. Model B-203, ceramic type, and Model X-203, crystal type are both available with RCA type or miniature phone plugs.

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categorization except that the songs were popular for a long, long time, are popular now and will be popular forevermore.

Miss Reed sings these old airs from Ireland, Scotland and England as if she loved and cherished each one of them. Her voice is a very clear and pleasant one indeed, and she accompanies herself expertly on a variety of stringed instruments, including a harp. Truly a delightful selection of folk songs that should appeal to everyone

Miss Reed writes as well as she sings; for example, in the program notes she has this to say:

"Folk songs are gems of a spontaneous potential. Each is a kind of pure essence and while each stands perfectly on its own, they can be the source from which symphonic and operatic compositions as well as plays and ballets can be developed. I look forward to the day when more good composers draw on folk material as Brahms and Schubert used their native music and Ralph Vaughn Williams and Aaron Copland have drawn from their inheritance. The folk song is the spine . . . the root system of the tree; leaves and blossoms may grow but the core is still the roots from which the tree began. I trust that none of us will grow so far out on the limb that we forget the basic core which is in the earth where these songs have sprung."

Mighty Wurlitzer Pipe Organ  
Gordon Kibbee, Organist ✓  
OMEGATAPE 7009  
Delux Series

Not the first organ to go whumping through my study, the mighty Wurlitzer is certainly one of the most impressive. This is a five-manual organ, one of three built by Wurlitzer. Each manual has 61 keys making a total of 305 keys on the instrument. It has 256 stops and thousands of pipes and percussions. What a pity that Mr Kibbee only has two hands and feet!

He makes good use of his limited extremities, however, as he expertly interprets selections by Rodgers and Hart. For the music is only incidental here, the organ is the real attention getter. The frequency range is from 30 cycles to 16,000 cycles per second and several of the low pedal notes on this recording are actually 30 cycle notes. Well, go ahead and measure them then!

I can't help but wonder when listening to this, how far Wurlitzer would have gone with these organs had not sound movies come along?

Paris Midnight  
Liane Sinns with the Boheme Bar Trio  
A-V Tape Libraries, Inc.  
AV-405 B

A forty minute trip to Paris. Well, at least a side street bistro in Paris. Here is the music of Paris as I remember it. The sultry-voiced singer, an accordion and the pianist that makes you feel that he is quite a bit better than the place in which he is playing. Liane should find more favor with American audiences than even Edith Piaf did; her voice is less "street song" and more drawing room in quality. Something like Rosemary Clooney imitating Marlene Dietrich.

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The selections are paired off into one instrumental for every vocal and I have my favorite of each; the instrumental "La Ronde" and the vocal, "La Seine."

There is one prime difference between hearing this tape and hearing Liane in person; in person you could never get this close!

Organ Specialties  
Ralph Bonds

CONSOLE RECORDING STUDIO (Wayne, Pa.) REEL NO. 1

An uncommonly good electric Organ recording by this small, independent recording studio. So good, in fact, that it is impossible, on my equipment, to distinguish it from the original.

Although recorded in the currently popular multiple track manner, it does not sound tricked-up, nor flashy. Good, full arrangements of standard pop tunes.

Designed specifically to be played through the Hammond Organ circuit, it sounds equally good on any equipment with properly shaded tone controls. Would make wonderful background music, and is a reel to which you will enjoy listening many times.

The Roger Wagner Chorale  
Sings Folk Tunes

OMEGATAPE 6003

If you should see this album in your favorite store, you will notice that the Chorale as pictured in Hollywood Bowl appears to be quite large, something you will not find inside the box. The group recorded sounds quite small, quite good but quite small.

This Choir has won many awards and international acclaim. In 1952 it was adjudged the best acappella group to make a recording. The group appears in numerous films including the current "The Egyptian," "Desiree" and "Day of Triumph."

Singing a collection of folk tunes from around the world they present a high degree of virtuosity. However, after hearing them sing the Welsh folk tune "All Through The Night" I was tempted to listen to the John Halloran Choir of Chicago sing the same thing, and did. Virtuosity or not, I like the Halloran Choir better. Their approach seemed better disciplined and more highly stylized. Listen yourself next time you go to the store.

WEBCOR SPONSORS TONY MARTIN SHOW

Beginning September 5, Webcor will sponsor the popular Tony Martin show on alternate weeks with a "cross-plug" that will give them commercials each week for the following 26 weeks. Martin, who is one of the country's most popular recording artists and whose motion picture, night club appearances and TV performances have won a large following, will personally demonstrate Webcor tape recorders, phonographs and diskchangers on the program. The show will be carried by a 77 station NBC network. Consult your local paper for time and station. This is the first time that recorders will have been demonstrated on a national network on a consistent basis and should add to the growing army of tape recorder owners.

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**Audiophile Net Prices**

Model 404 with standard case . . . \$229.50  
Model 404 less case . . . . . \$214.50  
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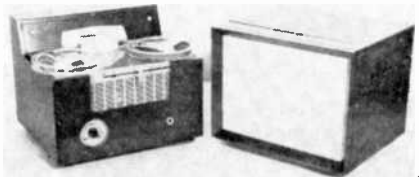
## NEW PRODUCTS

### WEBCOR ROYAL



Webster-Chicago Corporation, 5610 W. Bloomingdale Ave., Chicago 39, Ill., has announced the 1956 Webcor Royal tape recorder. This machine has two motors and two recording heads, a new Veeder Root counter to simplify editing and locating contents of the reel, 7½ and 3¾ ips speeds, and it is equipped with a wide-range crystal-type microphone. It also has an input jack, plays back through its own hi-fi amplifier or may be used with separate external speaker, and a monitor position permits listening to what is being recorded or use of the recorder as a public address system. The Royal is in a luggage type case covered in ebony pyroxylin with gold metal speaker grill and trim and is priced at \$219.95. For complete details, write to Webcor, above address.

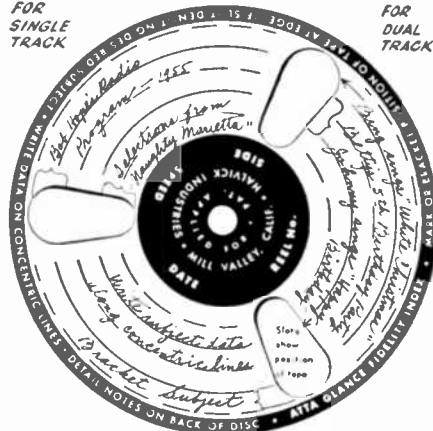
### EMC PLAYBACK



A new completely self-contained tape playback machine has been introduced by EMC Recordings Corporation, 806 East 7th Street, St. Paul 6, Minn. This instrument is available in three models, all of which employ identical mechanisms with two simple controls for operation. Model 375 has a speed of 3¾ ips, frequency response of 100-5000 cps, 35 db signal to noise ratio, less than 5% distortion at peak output, and less than .50% wow and flutter. Models 750 and 1000 both have a speed of 7½ ips, frequency response of 80-8000 cps, 38 db signal to noise ratio, less than 5% distortion at peak output, and less than .30% wow and flutter. All three machines contain a 5" PM round speaker, have a dual track head, take 7" maximum reel size, are supplied with an output jack, and are attractively styled. These playbacks are priced at \$79.95 and additional information is available from EMC Recordings.

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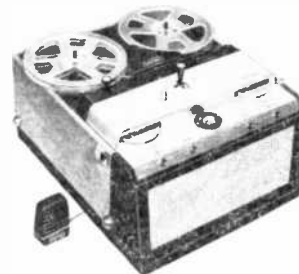


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## TAPE RECORDERS



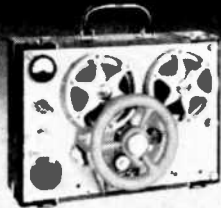
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### ROBINS SPLICER



Robins Industries Corp., 41-08 Bell Blvd., Bayside 61, N.Y., is producing a cutter-splicer designed for repairing and editing computer, TV, industrial and special purpose tapes. Models of this splicer are available for ¼", ½", ¾", ¾" and 1" wide tapes. The unit contains a knob controlled cutter carriage. With the knob moved to the back, the tape in the guide is cut diagonally; and with it moved forward, the splice is trimmed parallel to the tape (two concave cuts are made in the tape edges at the splice). Toggle acting pressure fingers hold the tape ends to be spliced in the tape guide, and the whole unit is mounted on a heavy cast base for bench use, but may be removed for mounting directly on a recording machine. Write to Robins Industries for complete information and price.

### EDUCORDER DUAL



The Educorder Dual Model M-7 is being marketed by Educational Laboratories, Inc., 1823 Jefferson Place, N.W., Washington 6, D.C. This recorder has been designed especially to meet the various needs of the teaching profession. It has speeds of 3¾ and 7½ ips, frequency response to 7,500 cycles at 7½ ips, two separate channels, two independently operated amplifiers and record-play-erase heads, 0.5% wow and flutter at 7½ ips, fast forward and fast rewind, 40 db signal to noise ratio, separate neon recording level indicators for each channel, standard telephone jack input for each channel, three output connections, and is offered in the same compact case typical of a standard half-track machine. The machine is priced at \$295, f.o.b. Washington, D.C. For additional information, contact Educational Laboratories.



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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:

I am not too sure of just how many books there are in Braille print or what blind people must do to get them. I am not sure also as to the talking books I have heard about and how extensive the variety or accessibility. It has occurred to me that perhaps there is a vast field here that could be improved with a tape fan's charity. If the blind people would like the idea, why not let them contact the tape clubs or this magazine and let those tape owners know that they have a set available. Tape members with eyes read books and magazines anyway. Why not record the things they read for blind friends and (matching tastes of reading matter perhaps with the reader and listener) keep a weekly reading session for them. I personally would like to share my enjoyment of Dickens and the rest of the classics with those who would like to read them and can't.—Peter Alburas, Portland, Oregon.

*Mr. Alburas has a fine idea and we feel that it should be done on a local rather than a national basis. The talking book library and the books in Braille are supported by the Federal Government, even to free postage, and we understand the library is quite extensive. However, current material would be of great interest to the blind and we would suggest that those interested in putting their recorders to such a worthy use contact their local associations for the blind who, we are sure, would be more than willing to assist in the project.*

To the Editor:

Your readers in the Midwest might be interested in knowing that the Henry Ford Museum, Dearborn, Michigan, has a Mills Virtuoso similar to the one mentioned in your June issue.

The machine is in excellent working condition and it has proved to be a very popular attraction with Museum visitors. The interesting story by Mr. Walter also mentioned a calliope. Our Museum has an excellent calliope that was once used by the John Robinson & King Bros. Circuses. During this period it was usually played by the famous E. H. "Deacon" Albright, an old-time master of the steam whistle.

For any of your readers who might be interested in seeing the above mentioned pieces, the Museum is open every day of the year from 9:00 a.m. until 4:30 p.m. We are located only 12 miles from Detroit.—David W. Krupp, Publicity Manager, Henry Ford Museum and Greenfield Village, Dearborn, Michigan.

To the Editor:

I would like to suggest that the work of the various committees of the Magnetic Recording Industry Association be published

in TAPE RECORDING when the work has been completed. I feel that it would be of great value to the readers. I have found that if a recorder has both bass and playback controls it is relatively easy to obtain the proper balance when a tape has been recorded on one machine and played back on another. I have also found that if the bass is cut on recording, and if necessary, the treble cut on playback, will give excellent results.—Ray Wensman KRLP, Clarkston, Washington.

To the Editor:

We would like to correct a mis-statement which appeared in your August issue (under "New Product Report," page 42.)

The article stated that the DeJur-Amsco Stenorette dictating machine was the first to use regular 1/4-inch magnetic tape. The Permoflux "Scribe" dictating machine uses 1/4-inch magnetic tape and has been on the market for a number of years.

The article also implied that the Stenorette is the only machine that can be used for dictation and transcription. Our units always have had this dual-function feature. The tape is housed in a magazine, which can be removed as a unit for use on a transcribing machine, or may be left on the machine if the same unit is used for both dictation and transcription.—Laurence M. Eugene, Advertising and Sales Promotion Manager.

To the Editor:

For a long time the idea of recording books on tape has intrigued me. Imagine stretching out on the sofa or in bed after a hard day's work and enjoying a good book with your eyes closed and resting. This would be especially appreciated by those of us who work with our eyes, as most of us do today.

Some 25 years ago, I began building a small personal library of books which interest me. They now total about 500 volumes, mostly travel and biographical subjects. There are books which I can read again and again but I find that time has caught up with me and my eyes suffer when I read for a short length of time.

It should be practical to pay some high school boy or girl to read these books onto tape. Then I could listen to literature with an earphone without disturbing anyone. Years ago literature was put on discs for the blind but why should we wait to become almost blind before availing ourselves of the advantages of listening to good books instead of staring at page after page of eye-straining print. Since the tape manufacturers are in the business of selling tape, they should welcome a new avenue of sales possibilities.—John H. Reuther, Waco, Texas.

*Sounds like a fine idea to us. Anyone else care to comment? Ed.*



## 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**—I have heard that there is a recording device which automatically answers the phone and records the messages for you. Could you please give me the name and address of the maker of such a machine and where I could purchase it?—H.F.M., Harundale, Md.

**A**—The machine is known as the I-B Answering Recorder and is rented, not sold, by the telephone company. This recorder meets all the FCC requirements relative to recording from the phone wires. Your local telephone business office can give you the details.

**Q**—I have my recorder and hi-fi unit arranged so I can record without the use of a mike from the radio or phonograph. Playback from the tape also can be made through the system or the tape recorder's speakers. Recently I was recording the Band of America with the above-mentioned arrangement. That's where the trouble started. First I had to turn the volume on my recorder nearly completely on. Next, when I began to play back the recordings (this is the best of all) I found that every word spoken and every little noise that was made while I was recording was picked up on the tape. You figure it out. I can't.—L.A.B., Reading, Pennsylvania.

**A**—Without knowing just what connection you have rigged between your recorder and the radio we would think it was to the speaker. In such case, the speaker was also acting as a microphone. A dynamic speaker has that characteristic and is built in the same way as a dynamic mike. So any noises you made in the room were added to the tape by the speaker in addition to the music the speaker was reproducing, the noise being superimposed by the speaker. We would suggest you make your recording takeoff at the volume control as shown in the last issue of TAPE RECORDING. We believe you'll find this superior to making a pickup from the speaker terminals.

**Q**—I have always noticed that whenever I make a tape recording outdoors, which is quite often, a very undesirable hum is produced in the recording. I usually use about 30 feet of mike cable and a crystal or dynamic microphone. I would appreciate it very much if you could give me some hints concerning outdoor recordings. I would imagine my trouble has something to do with being grounded to the earth that makes the hum. Could it be affected by the type of cable used?—J.R.S., Kansas City, Kansas.

**A**—Using high impedance mikes, there is a possibility that you are using single-conductor co-axial microphone cable. If such is the case it is absolutely necessary

that you have the case of the microphone, as well as one side of the mike output connected to the shield of the cable. The hot side of the microphone output should go through the center of the cable. If the connection points are not marked, try switching leads until you get rid of the hum. If you are using dual conductor cable and a grounded type mike, you should connect both sides to the mike output and the shield to the microphone framework. Always make sure that the microphone framework is connected through the shield to the chassis ground of the recorder.

**Q**—I have had my tape recorder for only a month and after reading my first copy of your magazine I came across two words I do not understand. Could you please tell me what is meant by the following: Monaural, Binaural. I checked Webster but I could not find any mention of either of these two words.—F. J. W., Collingdale, Pa.

**A**—Monaural refers to sound heard from a single source, such as the groove on a phonograph record or one track of a tape. Even though the recording might have been made with more than one mike and played back through more than one speaker, it is still monaural or "one-eared" sound. Binaural, as the word implies is "two-eared" sound and is reproduced from two or more channels on a record or tape. From the recording to the playback, there are at least two separate mikes, recording heads, and playback systems. This recreates the original sound. We would suggest you read the article beginning on page 29 of this issue.

**Q**—I am interested in buying for myself a tape recorder. I am going to use it for normal home use; recording from the radio, listening to my piano playing, etc. But I am confused on which to buy—there seems to be so many on the market.—A. K., Collinsville, Conn.

**A**—We would suggest that you write to the firms whose advertising appears in Tape Recording and request data on the machines. From this you can decide which best fits your particular needs and pocket-book. The firms which advertise in Tape Recording are reliable and are industry leaders.

**Q**—Where does one get parabolic reflectors for microphone work? I have not seen any advertisements in catalogs or electronic or mechanical magazines.—D. G. P., Portland, Oregon.

**A**—The C. W. Torngren, Co., 35 Skilton Ave., Somerville 45, Mass., makes a complete line of reflectors for microphones. We would suggest you write to them for details and a price list. Mention this magazine.

## EXTRAORDINARY TONE QUALITY

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We'll admit — you don't expect to find a sensitive instrument with its clear, realistic tone at the FME's surprisingly low price. The FME is indisputably the value leader in its price class.

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#### PLUS FEATURES

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Less than 0.5% flutter or wow.  
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The master control unit is in the living room. Here the Schafers have three recorders running and they are set-up so they can take AM, FM or TV programs off the air. Earphones are used for monitoring each system. The "control board" is on the first shelf next to the TV set.

# MEET MR. BLOOPER

. . . The inside story of Radio-TV producer Kermit Schafer's fabulous Blooper collection . . . his tape recorders . . . and his listening Post.

BY FRANKLIN D. DAVIES

*Photos by Philip Cammarata*

**H**IGH on a hill overlooking the Ramapo Mountains in Central Valley, New York, sits a modern redwood house which is the home of Radio-TV producer, Kermit Schafer. The attractive and interesting home has become a veritable listening post for radio and TV bloopers.

On a visit inside you will see a battery of built-in tape recorders which are constantly in operation in the process of monitoring several programs simultaneously. This equipment doesn't interfere with the convenience of modern

living as it is all functionally built in to go with the rest of the modern furnishings. With all of this equipment Kermit Schafer, or "Mr. Blooper," as he is sometimes referred to, capitalizes on the mistakes of others.

In his living room, which he calls the master control room, he has a custom-built Craftsman TV, a Pilot AM-FM Tuner, a Webcor tape-recorder located in a drawer, and two RCA tape-recorders below. Separate antennas are employed for AM-FM and TV, as programs from each of



Shown high on a hill top in Central Valley, New York is Kermit Schafer's beautiful, modern redwood home. This house is a veritable listening post and monitoring station for radio and television Bloopers. The high location is an aid to good radio and TV reception.

these systems can be recorded simultaneously. Toggle switches are mounted on a master switchboard located in two large dummy record albums, to facilitate quick changes from one system to another.

Also provided is a master monitor system for the purpose of listening in on programs in the process of being recorded. A number of earphone jacks located in various positions inside and outside the house provide a means of monitoring when not actually at the control board. While this system is used primarily for off-the-air recording, it also affords excellent high fidelity listening with its Altec Lansing Duplex speaker, Pilon amplifier, and Garrard record-changer.

The audio circuits to the various rooms are carried by shielded microphone cable to avoid hum. As most of the programs where fluffs are likely to occur are more speech than music, the  $3\frac{3}{4}$  inch speed on the recorders is adequate. After the recordings have been made and auditioned, the desired parts are clipped out and saved. When album-making time rolls around an intense editing job must be done from the rough cuts. As all the recording is dual track, it is sometimes necessary to dub one track to another tape to save the material.

After the fine editing is done, the tape goes to the recording company where they make a final dub, bringing up levels and smoothing over transitions, from which the disc master is cut.

Some of the recorders are clock-radio controlled to catch programs while the occupants of the house may be out, and outlets in the garden and patio permit monitoring programs or reviewing material while enjoying the outdoors. A Rotomatic control in the bedroom enables Schafer to control the TV set from bed.

Until recent years radio and TV performers who made a verbal fluff on the air were only concerned with the people who might be listening at the moment. Almost everyone can remember hearing some such error and en-



In good weather outdoor listening is the rule. Both the terrace, above, and the garden, below, are wired for sound. Tapes are reviewed the day after they have been recorded. Clock radios turn on the recorders when the Schafers are not at home to tape a program.



joying it heartily at the time. Radio and TV performers are so nearly letter-perfect that their boners strike us as very amusing; but now, when someone commits a Blooper on the air he is less concerned with all the people who heard it than with the man who might have been listening—that man being Kermit Schafer.

However, his records are designed to be funny and to give the nation a much needed laugh from time to time and to date they have proved to be fun, even to the victims. Schafer dedicates his Blooper albums to the victims of these classic boners with the hope that they find consolation and proof that they are not alone.

Kermit Schafer began his career as a radio and TV pro-

ducer, having produced several top radio and TV network programs. Over the years Mr. Schafer has had experience in all phases of the industry. As a hobby, he began to collect "fluffs" which had been made by radio and TV performers. He continued his collection during his four years in the Air Force, and after his return to civilian life. With the rise of the tape recorder to technical perfection, Schafer was launched on a new career.

He visualized the attractiveness of his already started Blooper collection and the role that tape could play in it. Instead of the cumbersome 16-inch transcription recordings which contained most of these precious Bloopers he could now have all of this material dubbed on to a small compact roll of tape. He no longer feared playing these transcriptions for tape will not wear out as the discs did with excessive use. With the stroke of a razor blade on an editing block he was now able to splice out the desired portions

and splice them together. With the advent of tape, considerable expense was eliminated through the constant re-use of the erased tape.

It occurred to him that the public in general would have as much fun and entertainment from this unique type of material as his private circle of friends had had. His collection started with the classic Harry Von Zell fluff introduction in the early days of radio, when he blurted out, "Ladies and gentlemen, the President of the United States, Hoobert Heever." The collection continued to include modern-day television.

Schafer has his monitoring system tuned in to particular types of programs which are most apt to result in Bloopers. Shows such as audience participation programs (which are spontaneous) and especially children's shows. We say "especially," since Schafer believes in the adage: "Out of the mouths of babes oft times come gems." The former type of program (Arthur Godfrey, Steve Allen and several of the top quiz programs) are excellent sources for this type of material. Art Linkletter, Howdy Doody, Juvenile Jury are sources of some classics of the latter type of program.

Schafer was the first to dub these twists of the tongue "Blooper," a word which has already been added to the American language; and he is rapidly becoming more and more associated with this term as was the Reverend Spooner—who was responsible for the word "Spoonerism," i. e.,

Spoonerism: The unintentional transposition of sounds and letters or of the parts of words in forming a sentence; as "half-warmed fish" for "half-formed wish" attributed to nervous tension. So called from William A. Spooner (1844-1930), warden of New College, Oxford, England, to whom the practice is commonly attributed.

—Funk & Wagnall's *New Standard Dictionary of the English Language*

Bloopers come in all sorts and sizes. Here are a few from his vast collection of funnybone ticklers.

Left: rough editing of the tapes is done in the playroom. Lower left: all of the material earmarked for possible use is transcribed to paper to get the necessary clearances and permissions to use it. "Fluffin" lies on the floor. Below: Schafer takes his recorder along on a lecture tour and entertains audiences with Bloopers.





Another view of the terrace showing the view and the Schafers monitoring a recording. The entire house is wired with audio circuits to allow recording or listening to be done anywhere.

**GANGSTER:** "Okay you rat, I've got you covered and now I'm going to drill ya."

**COMPLETE SILENCE**

**GANGSTER:** (Realizing that the sound effects man has run into trouble) "On second thought I'm going to slit your throat!"

**TWO SHOTS**—The sound man had located his trouble.

**NEWSCASTER:** "This report is credited to the president of the British Board of Trade, Sir Stifford Crapps."

**DAVID ROSS:** "And now we present that great Mexican singing star, Tito Guitar and his guizar."

**MILTON CROSS:** "The A&P Program, starring Harry Horlich and his A&G Pippies."

On "EXPLORING THE UNKNOWN," a science program, Andre Baruch reading a commercial for a large corporation, called it "the largest producers in the United States of Magnoosium, Aleeminum, and Stool."

**ANNOUNCER:** "We now bring you Mister Keene, loser of traced persons."

**COMMENTATOR:** "All the world was thrilled with the

marriage of the Duck and Doochess of Windsor."

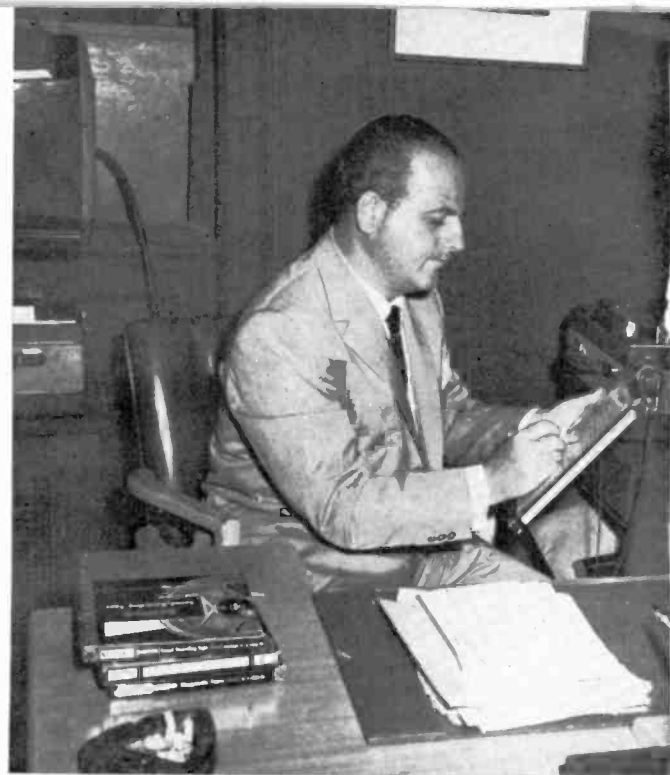
"And Dad will love Wonder Bread's delicious flavor too. Remember it's Wonder Bread for the breast in bed."

**JIMMY POWERS:** "It's a hot night at the Garden folks, and at ringside I see several ladies in gownless evening straps."

As he set about building his collection he culled the record archives of stations coast to coast and taped some of the most hilarious Bloopers ever heard in the past 25 years.

Within a short time Schafer had gleaned enough material to fill a book called, appropriately enough, "Your Slip is Showing," published by Grayson. Encouraged by its success Schafer turned his tape recorders on the next year's outpouring of radio and TV sounds and came up with a record album called, "Pardon My Blooper," put out by Jubilee Records. Disk jockeys coast to coast had a field day with the special edition "air play" copy of the album.

The public reaction to this first album was phenomenal. Somehow or other, Schafer had managed to tickle the national funny-bone by ribbing some of the most sacrosanct



Left: on vacation, the tape recorder goes along too. The car is equipped with an inverter to provide current so no shows will be missed while on the road. Right: at the office there are two recorders which are used for editing tapes and taking shows off the air.

voices heard on radio and television. People enjoyed hearing their favorite announcers and stars take a little slip on the verbal banana peel. They enjoyed it the more, knowing the material was completely authentic and was presented with all the facts. In the past a Blooper was so distorted when it was passed on from one individual to another that as time wore on any similarity of the garbled Blooper to the original was purely coincidental.

Some of the nation's top magazines such as *Coronet* and *Reader's Digest* carried excerpts from his collection. Schafer is now writing a regular monthly exclusive feature on Bloopers in *McCall's Magazine*. He is also being booked on a coast-to-coast lecture tour.

Another Blooper venture is a nationwide television program now in preparation titled, "Spot the Boner," the format of which is patterned along the "Stop the Music" line, except that the boner is featured.

Besides listening to Schafer's records and reading his books, fans send him Blooper items. Very often they will mail him small pieces of tape with fluffs they have caught.

As Schafer produced more record albums, "Pardon My Blooper," Vol. 1, 2, and 3, he became nationally known as the definitive authority on Bloopers, and he is now the central clearing house for this type of material. People from all over the world send him verbal boners as well as recorded ones. In addition to these contributions Schafer has used his many contacts in the radio and television fields to secure permission to use original recordings which ordinarily would not be made available to anyone. Celebrities call him as soon as they have committed any Bloopers which will add to his collection. Even Walter Winchell, spotting a Blooper, relayed in his column: "That hilarious fluff on Martin Block's ABC program should be included in the next Blooper album." P. S. It's scheduled for inclusion.

But the greatest part of collecting Bloopers is done by Schafer himself with the help of his wife, Mickey, a former Conover photographic model, and a battery of tape recorders. It is quite likely that Schafer uses more tape recorders and tape more often in his work than any other

single individual. To make sure that he doesn't miss any boners committed on the air, Schafer has tape recorders set up at home in different rooms tuned to all programs that are likely to result in useful material. He has a tape recorder set up in his car so that he won't miss any possibilities for his collection when he is traveling. Schafer estimates that he spends 8 to 10 hours a day listening for boners.

Schafer's "Pardon My Blooper" albums are among the most successful special material albums ever issued according to recording industry trade papers and some of the nation's top publications and critics have called it the funniest. The "Pardon My Blooper" series, as with all of the other Kermit Schafer humor record albums, is high on the list of records purchased and distributed to members of the Armed Forces. The Army feels that this type of humor is an asset in its morale programs.

An announcement is expected shortly which will be of interest to all tape recorder owners. The "Pardon My Blooper" series will soon be offered for sale in tape form.

Schafer's success with "Pardon My Blooper" has encouraged him to bring out other albums of material gathered on a tape recorder, for example, "The Best of Candid Mike" produced in collaboration with Allen Funt on the Jubilee label. "The Best of Candid Mike" features human interest items taped from life, and which were featured on the Radio program. Incidentally, Funt and Schafer grew up together in Brooklyn, New York, and went to school together. Little did they realize that they were destined to grow up to be tape-worms together.

Other Schafer albums released by Jubilee include "Burlesque Show," an album of authentic Burlesque nostalgia and "Dear Sir," featuring Juliet Lowell's famous collection of dumb-bell letters to draft boards, and the government.

All tape recording fans are invited to participate in the quest for new Blooper material. If you catch any, Kermit Schafer will be happy to hear from you, and if they are used in any form a credit will be given stating the source. Send them to Schafer at 45 East 51st Street, N. Y. C.

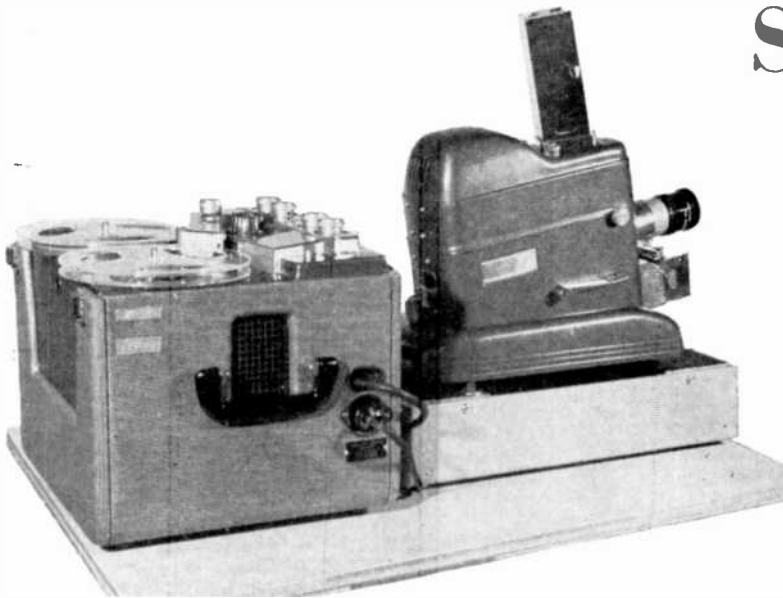
"To err is human, to forgive divine."—Alexander Pope.

# Show Your Slides Automatically

by

Col. Charles E. Emery

... this tape recorder and projector combination not only gives the lecture but shows the slides in perfect synchronization as well.



I've just completed a tape-and-slide presentation which is far better than any of the other dozen or so which I have made within the last two years and which I feel, embodies the fundamental upon which the popularity of such programs will grow tremendously within the next four or five years. It's fully automatic! I can walk into an auditorium, hook up my automatically controlled equipment, start my tape with its preliminary music and introduction to the subject of the presentation—and then take a seat in the audience for the next half-hour and enjoy my own pictures and narrative if I want to without touching either recorder or projector.

Each slide appears on the screen in perfect synchronization with the voice. No discordant ringing of a bell or clacking of a "cricket" to annoy the audience before each slide change; no pictures shown on the screen just before or, more often, just behind when they should appear in timing with the voice; no disturbing rattling of script paper in a dark room by the projector operator in his frantic efforts to show the slides at the proper time; none of that general "jerkiness" of story from slide to slide or other of those annoying characteristics which immediately brand a presentation as "rank amateur."

That removal of the "rank amateur" stigma is quite important to me because "amateur" is just what I am but don't want to be called in its derogatory sense. I'm probably the world's worst mechanic—and electronically, I wouldn't be able to recognize an impedance from a UHF if they were to jump up into my lap. I'm interested in end results and I trust the equipment manufacturers implicitly (with my ignorance, I have to) in providing the machinery to produce it. You can imagine how fool-proof and easy-to-operate equipment has to be for me to operate it and turn out anything "professional" in character. Yet, with this automatic combination, I have turned out a production which is really quite smooth, pleasant-to-take and enjoyable even to the critical history professors who have seen and heard it.

You folks who are experienced with tape-and-slide programs—you fellows who have jerked at magazine slide changers all evening by guess rather than by script because you couldn't follow script in a dark room—you boys and

girls whose faces have turned crimson in the welcome dark because you have shown a slide upside-down or perhaps knocked over your carefully stacked pile of slides and gotten them all out of order—I'd like to tell you enough about this LaBelle automatic combination to make your mouths water, but I won't. The purpose of this article is to tell you enough about tape-and-slide presentation making to inspire you to get out your equipment, whatever it is, and get to work to make one. If you're not a photographer yourself, get a photographer friend of yours to work with you in providing the slides. He'll do it—and he'll be just as interested as you are to see how it all comes out.

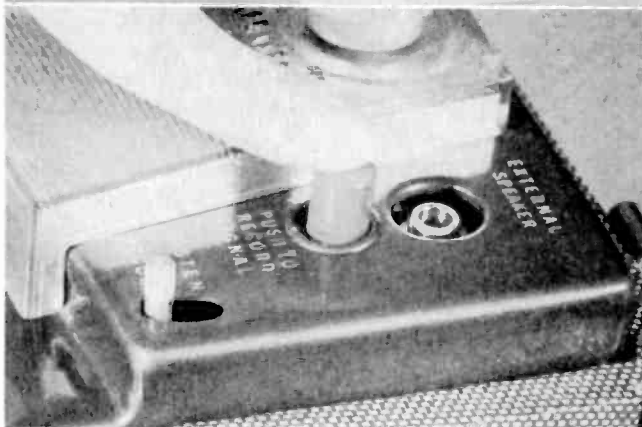
There's no end of possibilities for tape-and-slide showings. My very decided feeling is that such presentations will be quite commonplace within a few years. Manufacturers will be using them to tell groups all over the country how they make their products or how to use them; they'll be used for sales presentations before Boards of Directors; school children will be learning their history and geography lessons better because of them; travel agencies will be selling tours by means of tape-and-slide programs; libraries will be filing them for reference; they'll be a boon to program chairmen of various clubs and organizations. Pages might be filled with a mere listing of occasions where they will doubtless be used in the quite near future; they have a logical place in modern communication and they're fast working themselves into that niche.

Think of the opportunity they offer a manufacturer to tell a captured audience about his product in a dramatized, interesting way. For him to present his story by means of a color movie, it would cost him from \$1,000.00 to \$1,500.00 per *minute*. A fifteen minute movie would cost from \$15,000.00 to \$20,000.00 and such production costs are prohibitive to many manufacturers. A tape-and-slide production which would do him just as much good, including professionally-taken color pictures, models, dramatized action, script writing—the whole thing professionally done, couldn't cost more than one-tenth that amount.

I made my very first tape-and-slide presentation for the Community Chest of Annapolis, Maryland. I bought a regular recorder and a new transparency projector for the purpose then loaned both to them to present the Red Feather story



Recording the script on tape should be done in a quiet room where there will be no interruptions. The mike that comes with the recorder can be placed on a desk stand such as this Atlas unit. Shown in the picture are a record player and mixer which can be used to put background music on the tape behind the voice. The music may be brought up to cover intervals when there is no speech and reduced in volume when the commentator talks. The recorder should be placed alongside where the controls are easily reached and the recording level indicator can be seen. The recorder has a stop knob which permits stopping and starting the tape without making clicks in the recording. The script should be double-spaced for easy reading.



Slides may be sorted easily by viewing them against a well lighted piece of white paper. After they are in order, the script is prepared. Below: the control button which puts the slide changing signal on the tape. The signal may be recorded at the same time as the script or later, as desired. The tape may be played and the signals recorded as the voice is heard.

of the community to clubs and civic organizations. After the first showing, word got around by word of mouth about it—within one month the presentation was shown to 54 different groups and that year the Chest goal was over-subscribed.

But my "pride and joy" is the one I have just completed with my new automatic recorder and projector combination. This one has been made in collaboration with a few members of the Annapolis Camera Club at the request of American history classes of the public schools of Anne Arundel County. Its purpose is to give the young history students a much more intimate glimpse of the many historic buildings and locations within the old city of Annapolis which in colonial times, was referred to as "the Athens of America." The children see in full color what the statesmen of the period looked like—actually hear them utter the sentences which have come down in history—can almost feel (by means of close-ups) the mellow wood of the chairs on which they sat. This show is a "smoothie"—and it's fully automatic—start it running and forget it for half-an-hour. I'm confident that this is the way the best of the tape-and-slide presentations will be made in the future.

Let me suggest a few basic things which tears, sweat and cuss words have taught me in my very limited and amateur experience with these tape-and-slide presentations. Before you do anything at all about one, you should think up a general plan of what your presentation is supposed to accomplish. Is it going to sell someone on taking a trip to Monument Park or Atlantic Beach? Is it going to educate someone? Is it to be a travelogue? Keep your purpose in mind throughout your writing of the script and don't wander too far from your main theme.



Then think of the people who will see and hear it. How old are they? How well educated? Are they all men or are women going to see it, too? How can you present your pictures and narrative so that they will be most appealing to your audience? Remember at all times during your script writing and picture taking who your audience will be.

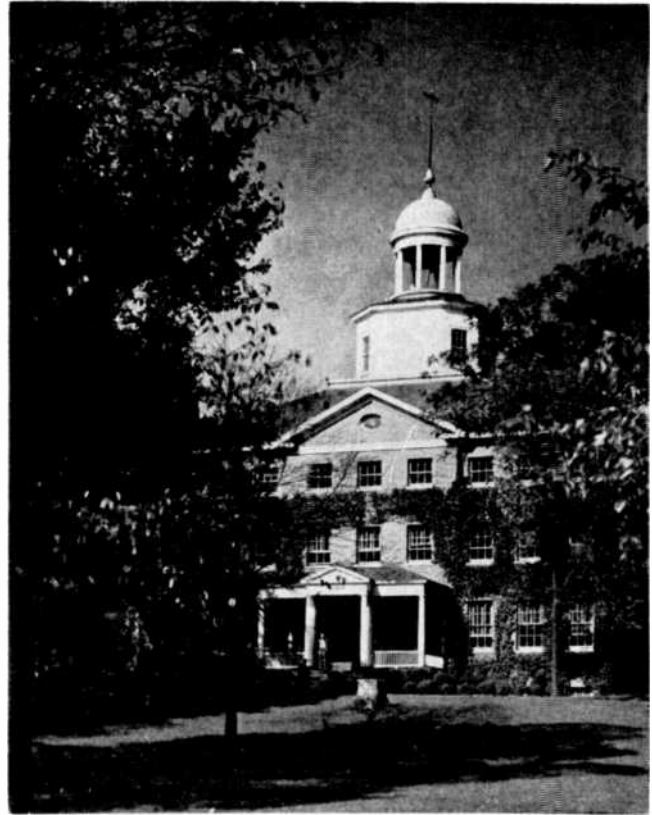
Next, plan the general structure of your program. What points do you want to get across first? How do you want to wind it all up? How many different pictures will you need to illustrate the various points that you make in your narrative? It's a good rule, never to keep one picture on the screen more than a minute or a minute and a half at most—and that means no narrative should be longer than 100 to 150 words without a change of picture.

And while we're on the subject of pictures a word about editing your slides might not be amiss. At the start, you'll probably have many more slides than you can use. These must be ruthlessly pared down until you have only the very best of the lot. It is much better to have a short show of top-notch material than a too-long one that is spoiled by too many pictures that are not good, or which add nothing to the story you are trying to tell. Sort your slides, line them up in order and run them through the projector. Try to view them as a stranger would, even though you are ever-so-proud of each one. Is the quality good? Does the slide show what you want it to? Is it necessary to the story you want to tell? If the answer is "no" to any of these points, then remove the slide.

When the slide editing is complete, make a list of the pictures in the order in which they should appear. With the list at hand, you're ready for the next step.

Don't think you can get by with running, extemporaneous comment put on tape as you push your selection of slides through the projector. Your narrative will be a garble of poor enunciation, "Er's and Ah's" and incorrect English. I know this because I tried to tape the instructions one of our best extemporaneous speakers gave during a photographic demonstration and the result was terrible. You *must* write your script—and do it just as well as you possibly can—then, when you have it just the way you want it, you should read it to your tape.

In preparing your script, write it as you'd talk it. Don't for pity's sake, let it sound for one line as though it had been written. You know how disappointed you are when the speaker of the evening gets up on the dais and pulls from his inside coat pocket a sheaf of papers and starts that dull ordeal of reading his speech. Write your narrative with spontaneity and emphasis and intense dramatic interest. Then when it comes time to put your script on tape, read it over aloud several times before you throw that "Record" switch. Rehearse it so well that you are actually talking it—not reading it. Put emphasis where it belongs in your narrative by emphasizing your spoken words; use gestures if it helps you to put the right tone into your voice. Talk your script on to the tape as though you were so interested in your subject that you just had to get it "off your chest" to your listeners. Don't talk in a monotone; make your words rise and fall in pitch as they would if you were talking to someone. Pronounce the words clearly but not so clearly that they sound artificial and forced; don't sacrifice the impression of talk for precise pronunciation. Make your voice sparkle with live, vibrant interest and an evident earnest desire to make your audience see your points as clearly as you do when you say them.



One of the slides from the Annapolis series. This is McDowell Hall, which is now the library of St. John's College. Once it was known as "Bladen's Folly" and for more than forty years stood without the upper floors and a roof. Bladen was an early Colonial governor who wanted to build himself a palace. He spent so much money on the project that the colonists finally called a halt and cut off the funds. Even such a static slide as this may be dramatized and given audience holding power through the use of actors and sound effects instead of straight narration, as explained in the text.

Finally, any audience listening to one voice for half-an-hour—regardless of how well that voice talks a script—gets slightly bored. If you possibly can, arrange to have other voices on your tape—or if it can be done without sounding "hammed up" or obviously contrived, work in some sound effects to break the monotony of one voice. With your tape recorder, you can go out on location and get actual sounds that are associated with a scene—kids playing on a school yard, traffic on a downtown corner, a fire engine siren, the chimes in your neighborhood church, a train leaving the railroad station. An inverter mounted in your car will supply the current. If you can't get actual sound effects to illustrate your pictures and to liven your narrative by change of sound, you can buy sound effect records just as the radio stations do—and the sound effects you can buy from published catalogs include every conceivable noise from the trumpeting of an African elephant to the sound of a heart-beat.

There is more than one way to write your script. You can make it straight narrative, or you can work drama into it. As an example let's take the story of one slide which appears in the Annapolis show. This is a picture of "Bladen's Folly" now known as McDowell Hall, a magnificent example of colonial architecture.

Here is how a narrative speech about it might go. "This shows the beautiful building which is now named McDowell Hall and serves as a library for St. John's college. It was built by one of the colony's first governors, Thomas

Bladen by name, who ran up the expenses so fast that the colonists finally refused to grant any additional funds when the building had reached the second story. For more than forty years it stood without the upper floors and a roof while the wind and rain did their worst. It's fame spread and it became known as "Bladen's Folly." Finally funds were granted to complete the structure and today it is regarded as a fine example of colonial architecture.

If you wished to add drama, the script for that slide might be produced this way.

**NARRATOR:** "This beautiful building, which now serves as a library for St. John's college was once known as 'Bladen's Folly'. Started by one of the early colonial governors, its construction rose to the second floor when—let's listen to what might have been said in the town council of those days.

**SOUND EFFECT:** Background noise of meeting. Hub-bub of voices. Gavel pounds.

**CHAIRMAN:** Gentlemen, gentlemen. The meeting will come to order.

**SOUND EFFECT:** Hubbub subsides, gavel sounds.

**CHAIRMAN:** The chair recognizes Mr. Carpenter.

**CARPENTER:** Gentlemen, I rise to protest the extravagance of our present governor. He is bleeding us white with his taxes to construct the Governor's Palace. I say we should allow him no further funds for this—this—Bladen's Folly.

**SOUND EFFECT:** Hubbub rises—shouts of "Hear-hear". Fade hubbub.

**CARPENTER:** And I further call upon the chair to have this voted upon here and now. I say let the building rot and let us stop throwing good money after bad.

**SOUND EFFECT:** Voices up. Chair pounds for order—**FADE** to Narrator.

**NARRATOR:** And so it was done. The work was stopped and for more than forty years the building remained uncompleted with the wind and rain wreaking their havoc. Finally funds were found to add the remaining stories and the roof. Today this building is a fine example of colonial architecture."

Highlighting important parts of your slide show this way gives it additional punch that cannot be had with straight narration. It is not at all difficult to do, any amateur drama group, or a group of friends can add the voices and the sound effects can be home made or be run from a record.

Background music can add much to a presentation even if dramatic incidents are not used. This may be put on the tape in two ways; one, by having the music played from another recorder or record player in the background as the script is read into the microphone or two, by feeding the music and voice into a mixer and then into the recorder. The latter method is preferable as it allows the recordist complete control of both music and voice.

Recording the script, once you have it written is an easy job. Let's take the straight narrative script first. To maintain a constant voice level, try to stay the same distance from the mike while you are recording. The kind of mike furnished with the recorder may be placed on a desk or table. Seat yourself comfortably, be at ease and read the script onto the tape. Do not let the papers rattle as you shift from one page to another. A trick used in radio is to remove the top sheet gently and let it float to the floor.

If you find it easier to record while standing, then put your mike on a stand. These may be obtained inexpensively.

Recording the dramatic type of script takes a bit more

"doing". You will have to assemble your cast and sound effects and have a copy of the script for each performer. If you have a mixer, use one mike for sound effects and the other for the actors. If one mike is used, you'll still be able to make your recording—and very well—but it will take a little more ingenuity. The dramatic parts can then be spliced into the tape at the proper spots.

Because the slide changing signals may be put on the tape at any time you have complete freedom in recording. For instance, you may record the whole script and then with the machine on "play" and the signal button on "record" you need only press the button each time you want a slide changed. Or, if you prefer, you can press the slide change button as you read the script.

It is not advisable to hook up the projector while recording the script as each time the button is pressed the projector will operate and the sound of its operation will be picked up by the mike and recorded on the tape.

The signal that is recorded on the tape when the button is pressed is a 1000 cycle tone. The machine has two separate heads, one for each track and this tone is not heard through the speaker on playback. The tone, as picked up from the tape, is amplified and this current in turn works a relay which energizes a small motor in the projector to operate the slide changing mechanism.

Because the signal may be recorded separately, the tape may be edited to your heart's content. Excerpts that you have recorded on location, such as the sound of church bells or the puffing of a locomotive may be spliced in their proper place. Any parts which are unsatisfactory may be erased, re-recorded, or cut out, as you choose.

If you are using the tapes for sales demonstrations, etc. where a number of different people may be making the showings, or if you have a number of field men, each with his own machine, then you should aim to make a master tape and have this duplicated, or duplicate it yourself by playing it from one recorder to another (don't forget to record both tracks). The master tape is then kept on file in case of loss or damage to the dupes.

One thing which will mark an amateur as "rank" is the smoothness of the show. This machine gets rid of most of the hazards as once you throw the switch the rest is automatic.

But the machine should be set up before the audience comes in. The power cable should be run under chairs or in other out of the way places where no one can trip over it. The screen should be in place and the projector focused and you should also post someone to darken the room at the proper moment. If the recorder is placed near the screen, to give the audience the impression that the voice emanates from the picture, then an extension cord can be added to carry the control signal from the recorder to the projector. Slides should be loaded in the magazine and everything ready to roll beforehand. If this is done then you are assured of a professional performance. Because the slides are stacked in order in the receiving magazine as they are shown, all you need do for a repeat performance is to put the receiving magazine in the feeder position.

There are other things about smoothing out tape-and-slide presentations which you will learn "the hard way" but if you will stick pretty close to the few basic suggestions I've given you, the first presentation you prepare will be a surprise and a great satisfaction to you, I guarantee. It will be much better than the first one I "sweated out" all by myself for the Community Chest.



C. W. Smiley, president and Dr. Hans Wolf, musical director of Livingston Electronics listen to a binaural master tape. Dr. Wolf follows the score for correctness of musical interpretation while Mr. Smiley holds the stop watch on the tape.

## STEREOPHONIC SOUND

*... a new dimension in high fidelity music reproduction in the home.*

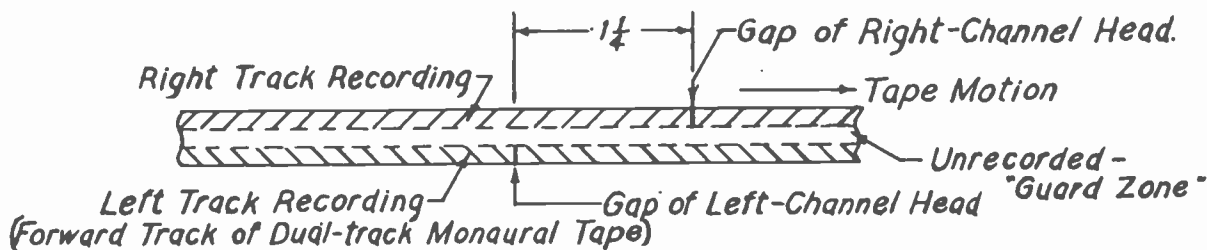
**by C. W. Smiley**

**M**AGNETIC tape recording has seen an almost incredible diversity of new uses in the past few years. It records heart sounds for the medical profession, controls complicated machining operations in industry, serves as an invaluable tool in research, and has military application which, when made public, will read like pages from a science-fiction story. One new application of tape recording is making possible a quiet, but dramatic revolution in the method of reproducing music in the home.

In this age of high-pressure ballyhoo and pile-driver promotion, a strange incongruous situation exists. With almost no publicity, promotion, or advertising, a strong fraternity of enthusiastic music-lovers have turned their

interests to a technique of reproducing recorded music so excitingly new and alive that it seems incredible its arrival could have been so long delayed. Binaural or two-channel stereophonic home music systems are now a practical reality for anyone's livingroom. So dramatically superior are they to the most expensive single-channel conventional systems that it pays to understand this technique before planning a home installation since it is not only superior, but ironically, less expensive.

Well then, what is this technique and how does it work? In order to understand the differences, let us first consider the conventional single-channel or monaural system. In this case, one or more microphones are used to pick up the



**FIG.1 STAGGERED-BN TAPE LAYOUT**  
Facing Oxide Surface

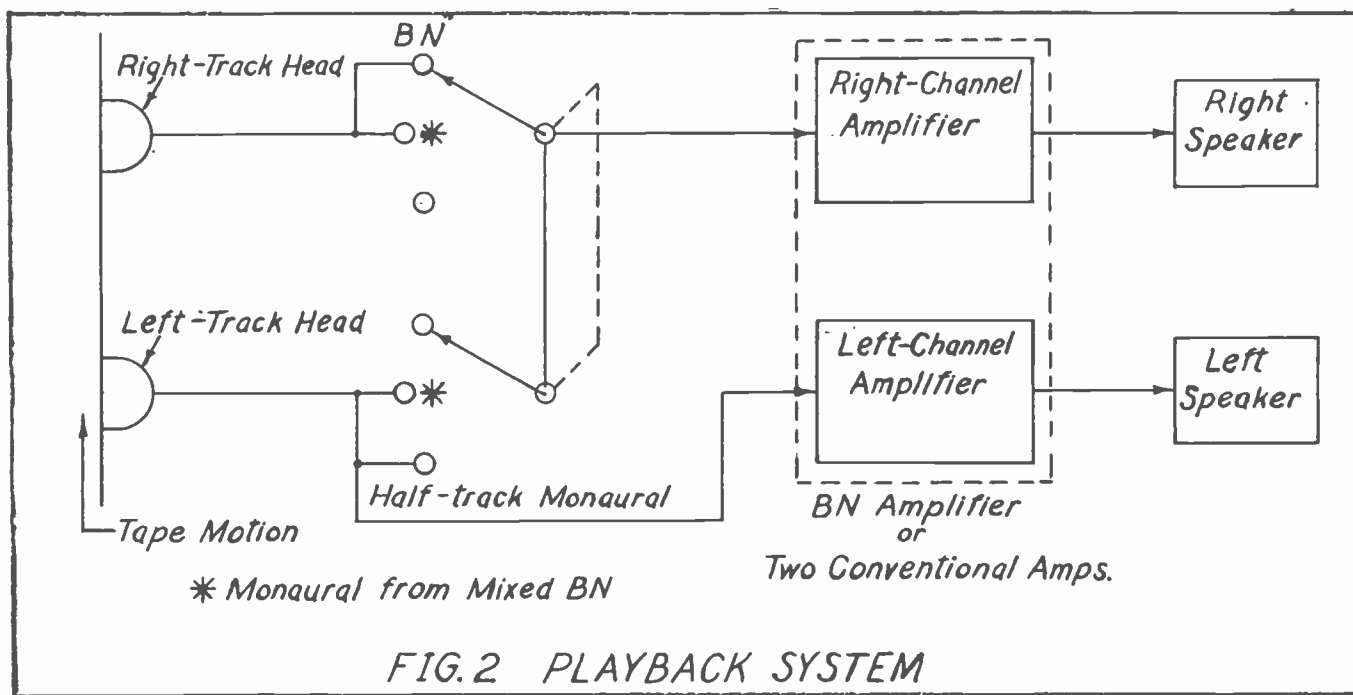
Binaural tapes employ both tracks of the tape with a "guard zone" between them to prevent crosstalk between the two channels. The right channel is recorded on the top track, the left channel on the bottom. The distance between the gaps has been standardized at one and one quarter inches. As the tape passes through the machine once, the playing time for a seven inch reel is about 30 minutes. With "in-line" binaural tapes there is no space between gaps, one is placed directly above the other.

original sounds which are then recorded on some storage medium such as tape or disc. Subsequently, these sounds are partially re-created by playing them back through a system which will drive one or more loudspeaker units. However, to permit storage and reproduction, *all* of the original sounds must be mixed (regardless of the number of separate microphones used) and combined in *one channel*. Hence the designation, "monaural" since at this point it becomes sound as it would be heard with *only one ear*.

At this point, of course, all sense of separation by direction, or perspective, has been irretrievably lost. Two loudspeakers or two hundred cannot re-separate these sounds. They can merely multiply the number of "flat" sound sources. Never again can these sounds appear completely natural to anyone but a one-eared listener. High fidelity techniques have gone far in their attempts to synthesize the "presence"

of the original performance, but always the law of diminishing returns seemed to operate in opposition to even the most extravagant investments in monaural systems.

Two-channel systems take an entirely different approach to the problem. Literally, they take *both* of the listener's ears to the original sounds. Two separate recordings or broadcast pick-ups, as the case may be, are employed. These are *never* combined, but reproduced individually through two comparatively simple systems and two loudspeakers spaced six to twelve feet apart in the room. An amazing effect results. Sound appears to come from the entire wall and the listener has the eerie sensation of being at the actual performance. Each instrument acquires a strange new definition and the excitement of "motion" of the live performance is felt again in the room. No longer is there an impulse to "turn it up louder" to destroy the unpleasant sensation of listening to a large symphony orchestra sounding from



**FIG.2 PLAYBACK SYSTEM**

The hookup of a binaural playback system. The switch is shown in "BN" position with each track feeding through to its proper amplifier and speaker. If the switch is moved to the next position (marked with an asterisk) the output from each track is mixed, producing a monaural playback. This position is used to balance the output from the two speakers. In the lower position, half-track monaural sound is fed to both amplifiers and speakers.

a single point. The orchestra is there!

Few people seem to be aware of the remarkable directivity of their hearing equipment, and yet the following simple experiment will demonstrate this. Blindfold a friend and ask him to stand in the center of the room. Toss a penny in any direction, and if it rolls a bit—all the better, then ask him to point to it. It's surprising how accurately it will be located. Then, ask him to repeat the experiment with one ear stopped. These two simple tests will do much to increase your respect for our two ears as direction-finders.

This ability serves an interesting purpose in a two-channel stereophonic system, since the sensations received by each ear from such a system create the illusion that sound is originating even *between* the two speakers. Thus it is that the feeling of "being there" is produced. Other benefits turn up in the form of reductions in power requirements and even the loudspeaker requirements seem more moderate. Tragically, this reaction cannot be properly described with words. It must be heard. Even in its simplest form, the superiority of a two-channel stereo system to a monaural one is almost unbelievable.

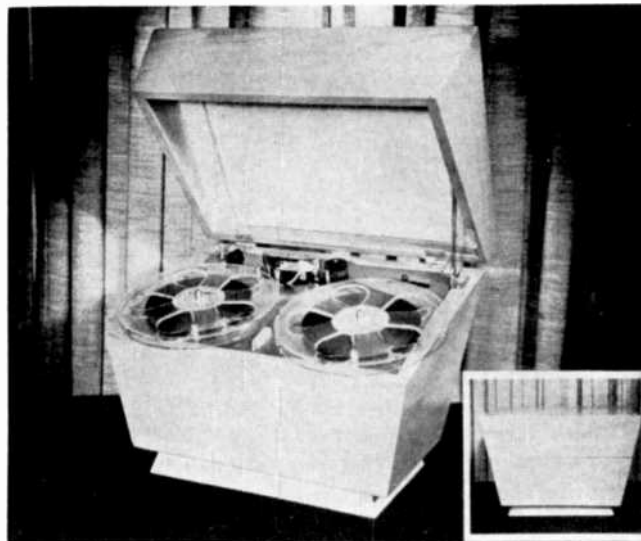
Which brings us to the question of program material and equipment already available for the home. Much recorded material is available on both disc and tape from several manufacturers and in addition, the number of radio stations broadcasting stereophonic material by using separately the AM and FM transmitters is steadily on the increase. A large percentage of today's recording sessions are being done stereophonically, both in this country and abroad, and it is highly probable that this Fall will see many new entrants in the field.

The bulk of stereophonic recordings are available on tape, at 7.5 I.P.S. and generally on 7" reels which play approximately one-half hour. Typical suppliers in this category are RCA, Livingston, Audiosphere, Atlantic, Boston, Empirical, Esotric, Riverside, Concertapes, A-V and others.

Since recording and duplicating techniques have progressed so dramatically, most of these tapes have remarkable fidelity. The usual first reaction on the part of a new listener is to bemoan his delayed discovery and start plans for his own system immediately.

The material available, although somewhat limited, is diversified ranging from classical to Dixieland, and is being augmented continuously.

As to equipment, the trend also seems to be to tape.



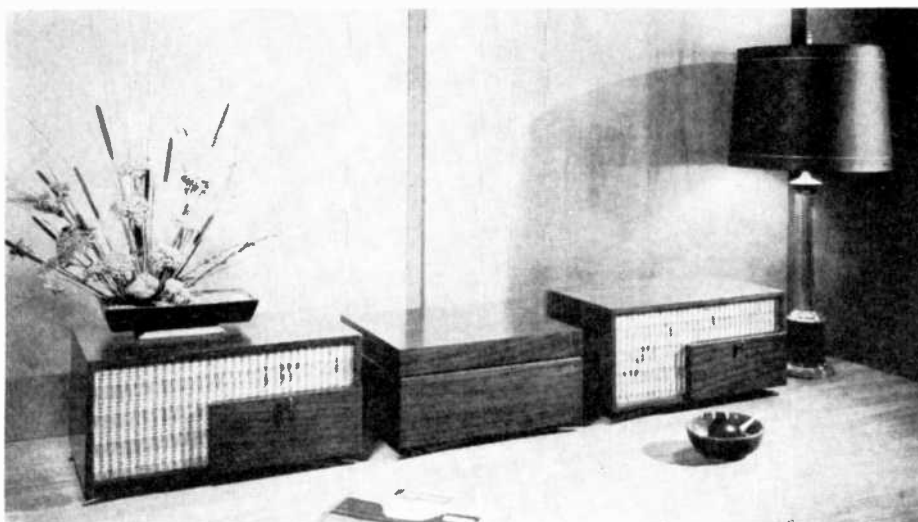
The Livingston binaural playback machine which will play either single track, dual track or binaural (stereo) tapes. It is a mechanism only and must be connected to amplifiers and speakers. It plays "staggered head" stereo tapes.

At least three tape playback units are now available which handle these stereophonic pre-recorded tapes with more in the offing. Such units are designed to drive two inexpensive amplifiers which in turn drive separate speakers. One exceptionally fine binaural tuner is available for the reception of stereophonic broadcasts. Special binaural amplifiers are available from at least three reputable manufacturers and again, more are in the offing. One manufacturer supplies a conversion unit to make an ordinary tape recorder into a binaural unit.

Probably the best way to start such a system is to pick up a tape playback unit which handles stereo tapes, two inexpensive amplifiers and two speakers. Then the results will demonstrate that probably for less than one-half the cost of an equivalent high fidelity system, the basic elements of a good two-channel stereophonic or binaural system have more than justified the investment.

Thus, it is apparent that this technique has quietly arrived. Thanks to tape, and the ease of putting two separate recordings side-by-side on this remarkable and almost indestructible medium, theatre quality stereophonic sound is now inexpensively available to anyone who wants his easy chair to be the "best seat in the house."

The Ampex 612 Stereo Music System which includes the 612 tape phonograph and two model 620 amplifier-speakers. Both models are available in matching wood cabinetry or in luggage type cases. In addition to playing commercially available binaural tapes it will also reproduce standard tape recordings, whether full or half-track. Speed is 7½ inches per second, which has become the standard for binaural playback. This unit is designed for "in line" stereo tapes.



# Tape Record Your Sound Effects

by  
Jeanne Hickam

*Photos by the author*

*... for amateur dramatic productions, anything from an overture to pistol shot is better on tape. Here's how to do it.*

**A**CT I of "Ten Little Indians" is drawing to a close. The actors have built an audience feeling of tension, stretched to a breaking point. The young man in evening clothes approaches the piano, plays a few bars. Gradually the notes become discordant. Suddenly the actor falls over the keyboard, with a resulting crash. In the brief silence which follows, a man crosses the stage, examines the youth at the piano, and, in a strained voice, announces to the others, "He's dead." The curtains close quickly, and the entr'acte music starts.

Dramatic efforts of many types are a popular source of both enjoyment and income for little theatres, clubs, schools, church organizations, and numerous other groups where neither actors nor stage facilities are made to order. Most actors cast as the doomed young man above cannot play the piano, and an even larger proportion of the auditoriums available for the production have no room for one backstage, especially if the play also calls for such effects as fog horns, thunder storms, and so forth. Use a phonograph record for the scene above? This would omit the discordant playing preceding the crash of the body falling across the keys. And how fast can one switch from the second band of the piano disc to the third band of the next record, which is labeled for use between acts? Use two men? Two machines? Where will they have space to work, sources of current? Yet the answer to the above and dozens of similar problems is simple: One man, one machine, and magnetic recording tape!

The advantage of this method is easily apparent. With tape as the only source of all such effects, one individual can handle the sound plot for an entire production single-handed, thus assuring the producing organization that there

will be no confusion caused by the necessity for having two, three, or more people working on one project in a confined backstage area. With the entire sound scheme handled consistently by one person, there will be less danger of error; and also the positive effect of a uniformity in this division of the production. The stage manager is thus free to think about other aspects of his job, released from worry about the bedlam caused by three people with rain machines, wind machines, and pieces of sheet metal doing their best to create a realistic thunderstorm in an area four feet square while numerous actors struggle past them trying to reach places at the stage entrance without damage to costumes—to say nothing of tempers!

When a play is presented "in-the-round," as is the case in the accompanying action shot of a scene from Shakespeare's *Twelfth Night*, the audience, seated on either three or all four sides of the playing area, can see every move that is made "backstage." Obviously, the smart little theatre group which chooses this type of staging will also prefer handling all backstage work in the simplest, most efficient manner possible with a minimum number of equipment pieces. With the stage manager and his crew in full view of the spectators, things **HAVE** to run smoothly!

From the viewpoint of the sound-effects man himself, it is certainly easier to keep track of one tape recorder and two or three reels of tape than one or more phonograph turntables, records, bells, whistles, guns, blocks of wood to simulate slamming doors, etc., not to mention several assistants. One reel of tape replaces innumerable records, eliminates the need for a backstage piano, does away with the big sound effect machines: The space gained is invaluable.



Sound effects for the "in-the-round" production of Shakespeare's "Twelfth Night" pictured at left were 100% on magnetic tape. With the audience seated on three sides of the playing area, things had to run smoothly in the tiny "backstage." With the sound man relieved of handling separate units to create the various effects needed, the possibility of a miscued sound is eliminated.

The script calls for the sound of a radio playing offstage. Here the sound crew uses a record player and script to make the recording which will be played on cue in the production. By using the tape recorder, it is possible to have "tailor-made" radio programs exactly as called for in the play.



Also eliminated are the problems which constantly arise in conjunction with the use of numerous small objects to create effects . . . the "tremendous trifles" that leave most amateur or semi-pro sound technicians tearing their hair. No longer can the only bell whose tone can be easily recognized as the "dinner bell" disappear ten minutes before curtain. No longer can some harassed member of the stage crew bump into the sound man's table and send bells, records, and broken dishes crashing in four directions during the tragedian's big death scene. And no longer will a member of the cast or production crew have to go hurrying around the block to reclaim the gun that junior lent—with the stipulation that he have it back during the daytime for his cowboy activities! In this connection, it might be well to note that many cities have ruled that cap guns are "fire-works," and their use illegal.

Another frequently-occurring problem is that created by the actor who spends some of his on-stage time playing a violin (or other instrument with a distinctive sound) which instrument is subsequently heard from off-stage, and then reappears in the hand of the corpse on-stage in Act III, Scene 2, at which point neither the actor nor the sound man can find it. With the off-stage sound on tape, the fiddle becomes a stage property, and as such is unquestionably under the jurisdiction of the "prop" man. The actor knows it will be on the prop table when he again needs it—no more wondering if the sound man got it, or if he put it back. Knowing that the technical end of a show will run smoothly eliminates a lot of jitters on the part of amateur actors, too. Result: Fewer lines "blown," a more confident performance, and a better show all-round.

The saying that "It is not *LITTLE THEATRE* when you're in it" has been proven time and time again. Most little theatre enthusiasts will agree that they want a smoothly-run production, as near to professional standards as possible, hence they will appreciate the professional illusion which the use of the tape recorder can create. With a choice of two speakers through which to project the sound, the man in charge can literally be in two places at once. Using the speaker built into the recorder, he is the telephone bell at stage left; with the simple motion of plugging in an external speaker plug, he becomes the radio or doorbell at stage right . . .

Approaching the simplicity advantage from another angle, it is obviously easier to put away one tape recorder and a few reels of tape than it is to safely stow away the big machines for wind and rain, lock the piano, and pack up a bunch of records, doorbells, and numerous small objects. The tapes can be re-wound in much less time than it takes the stage crew to clean up, and the sound man may depart long before the actors can dispose of friends and remove grease paint. (If the sound man has to punch a time clock early the next a.m., he can even plan to reach the theatre early the following night and re-wind the tapes then.)

It is usually possible to also include the introductory music for the program on the same tape with the first act sound effects, and subsequent entr'acte music also can be spliced to the tapes at the proper place. Thus, the lag between the opening or closing of the curtain and the beginning of the music is eliminated—or timed precisely. With the entr'acte music thus included on the recording tape as an integral part of the production itself, a very high standard may be obtained. And backstage sound, whether music before curtain time, birds in the trees for the ingenue to admire, a party "down the hall" to waken the baby, or a disc jockey program over the on-stage radio, is completely custom-tailored to fit the production. Uniformity of sound plot throughout the run is assured.

Ideally, professional-type tape recorders would be desirable for this type of assignment, particularly because of the great variety in type of the sounds reproduced and the necessity for play-back at nearly full volume of the sound of everything from a door-slam to, possibly, a fine full-range symphonic recording, coupled with the provision which the manufacturers of this type of equipment have made for the use of multiple speakers which can be positioned wherever the technical director desires. However, little theatre or club groups which must be budget conscious will find that any tape recorder of reputable make can be put to use in this manner. The group pictured in *Twelfth Night* used an Eko-tape without even an auxiliary larger speaker on one occasion, and were complimented on the smoothness of their sound plot, which included overture and entr'acte music, 16th century clock chimes, the popping of corks, a drunken brawl, etc., as well as a complete musical accompaniment (recorded on the Hammond Organ) for "O Mistress Mine"



Top: the sound effects man in action. Instead of a collection of door bells, pistols, chimes, wind machines and phonograph records and a player, he has only the tape recorder and a cue sheet. As the effects have been recorded in sequence he needs only to stop the recorder between effects and he is already set-up for the next one. Lower: leader and timing tape is spliced between recordings. As a double check, the title of the effect about to pass the head is lettered on the tape. The use of the leader and timing tape also provides a check that the reel has been rewound before the next performance.

and the rest of the play's several songs.

Except in emergencies, larger speakers than those built into the usual portable home tape recorder should be employed, both for better positioning of sound source and superior reproduction. Most tape recorders in the moderate-price field have provision for an external speaker. Those groups who wish to use recorders originally purchased for other purposes for sound plots may find it a good plan to rent such auxiliary speakers at a nominal cost for several rehearsals and the run of the show. In some cases, even the recorder itself could perhaps be rented by an organization which wanted to experiment with sound plots on tape.

The actual steps necessary to obtain these desirable results with recorded sound plots will really be found quite simple and easily handled by a committee of two or three people. Individuals given charge of this division should first be provided with complete copies of the play script, with any additions or "cuts" clearly indicated, from which they can accurately outline the sound plot for the production. Progressing, then, from the first thing to be heard, i.e., the pre-curtain music, the resulting outline should list every sound which must originate from backstage, in order of occurrence, with appropriate notes when applicable. The finished list might look something like this:

"Overture"—15 min.

*Act I, Scene 1*

1. Sound of door key in lock (check—director may want this made by actor who is to enter)
2. Auto horn (off left)
3. Doorbell (off right)
4. Buzzer (off right)
5. Doorbell (off right)—neighbors' entrance
6. Buzzer (off right)
7. Doorbell (off right)—Jane & Edward entrance
8. Footsteps, knock, another knock (check—director may want knocks made by actors about to enter)
9. Sirens (police car) (off left)
10. Traffic, auto horns, sirens (off left)

After checking with the director and technical director, who may want to modify the sound script to have the actors do their own knocking on the door, etc., the committee is ready to record the needed sounds. The next step, logically, is to analyze the outline for repetitions, as well as sounds required.

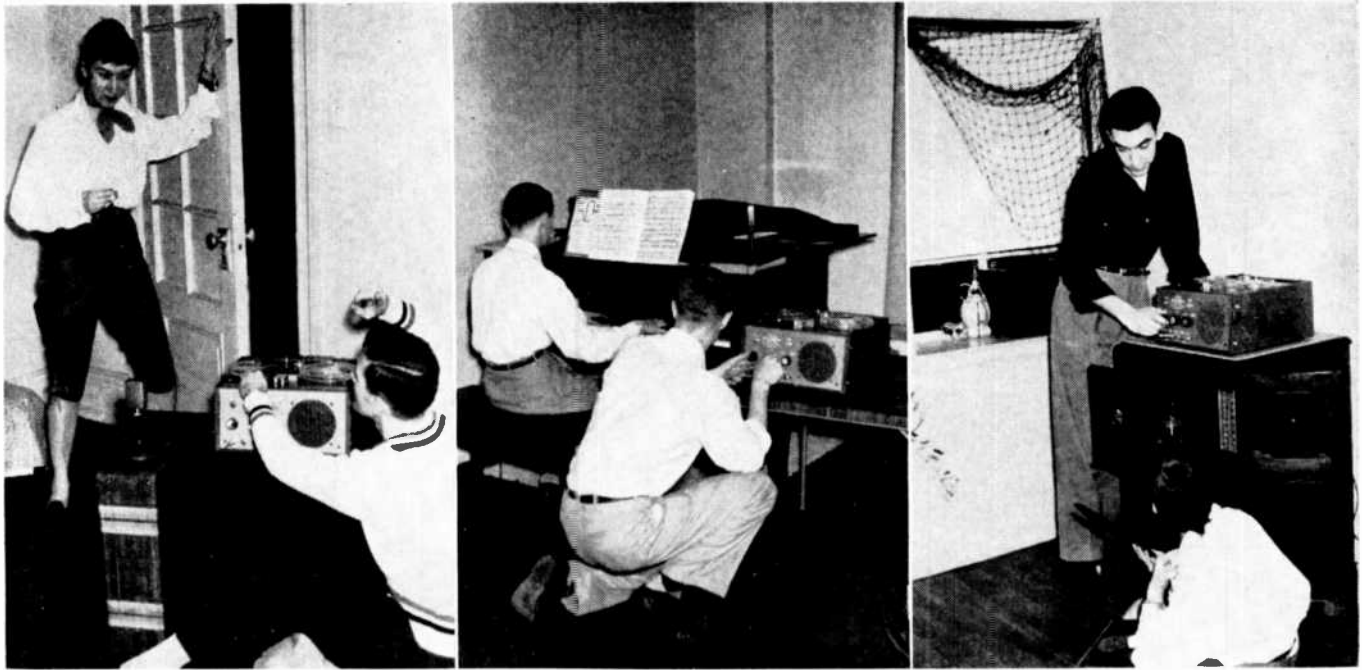
How many times does the same doorbell ring? The same buzzer? How often does the audience hear the same siren on the same police car? It will be necessary to provide a length of tape for a given sound each time it recurs, hence the requisite number of doorbells should be recorded all in one "sitting" as the easiest way to obtain uniform results.

At this point it is also suggested that the committee members also consider the fact that they will later have to edit the tape-lengths and it may be well to provide some convenient way of identifying the various recordings as they are made. An excellent idea, especially when the outline indicates many repetitions of one particular sound, would be to use one of the colored Audiotapes for recording this. Because these colored Audiotapes are available in two colors (blue and green, in addition to the usual brown), the group may find it a good idea to use one color for the sound which recurs most frequently, the second color for the next most-repeated effect, and regular brown tape for any others, with entr'acte music perhaps, on Scotch "High Output" tape, which is a different color (dark green) still. In addition to making their own editing job easier, the committee is thus providing the person who will operate the recorder during production with a visible means of checking the tape against his marked sound script.

When it is time for actual recording, the group may find that there is more than one source available for the first sound effect required, while there is none apparent for the second, and that the source most easily available may not always be the one which will give the most desirable reproduction for the purpose at hand.

It often works out, of course, that the easiest way to record the sound of a door slam is just to slam a door, but it will be somewhat more difficult (although not impossible if a portable recorder is available) to capture the sound of the 4:45 commuters' special coming around the bend. In some cases, it may be necessary to resort to copying commercial sound effect records. Other sounds are easily taped from radio programs, e.g. applause, the NBC chimes; and still others are obtainable right at home—door chimes, the telephone bell, the "party down the hall," etc. Local merchants who are loath to lend such items as gongs, cymbals, etc., for a two or three week rehearsal and production period will usually become co-operative when it is explained that the loan will be of only a 48-hour duration involving no





Left: it often works out that the best way to record the sound of a door slam is just to slam a door. Center: the fact that the tape may be erased and used over permits inexpensive experimentation to get just the effect desired—even to putting the mike on the piano which ordinarily is taboo. Right: copying commercial recordings is the easiest way to obtain music for "Overture" or "Entr'acte" use. Such copies should be made through the radio-phonograph input of the recorder rather than by using a microphone. Semi-professional groups should check the copyright regulations on material of this type before using it in a performance of the play.

risk of loss or damage backstage. Because any "fluffs" are easily erased from the tape, it is possible to experiment in recording with a variety of microphone placements (even to the extent of positioning the mike right on the piano for weird effects) to obtain the most applicable results. Because the finished tapes are to be edited, sounds should naturally be recorded on one track only.

When all of the outlined sounds have been taped, the recording is ready to be edited for backstage use. The first step will be to mark the leader at the beginning of the reel . . . the leader on the first reel of tape might carry the notation, "Reel I, Overture, prior Act I" . . . The use of leader tape with direction arrows (Scotch #43) is recommended as a double check measure. Failure to re-wind the tape after a late dress rehearsal is easily detected when these arrows indicate that it is Side II of the reel which must be played.

In operation, a length of timing tape (equal to one or more seconds of playing time) spliced between the sections of magnetic tape carrying the sound effects will serve a double purpose, i.e., provide an identification label for the sound to be heard, and allow a pre-timed uniform interval of silent tape to take up the lag between the time the recorder is switched to the "forward" position on cue and the time at which the sound must be heard by the audience.

It may also be found desirable, when a production has many sound effects, to use the colored reels (red, green, yellow, etc.) produced by Audio Devices in editing, assigning a different-colored reel to each act for purposes of easy identification at a glance . . . or in those cases where it is not deemed desirable to include the entr'acte music on the same reel with the actual integral sound plot, colored reels may provide a means of quickly separating one from the other. Those groups which can command the use of two recorders may find this an excellent idea because it could then prove possible to include all of the sounds other than

music for the entire show on one reel, with the "overture" and between-acts music on other reels to be reproduced on the better of the two recorders. In this case, the order in which the music reels were to be used could be tied in additionally with the use of vari-colored reels for identification.

In certain productions (or revues), sound effects or music are almost continuous, and when the actors are sufficiently experienced, it may be possible to properly "place" the sound effects through the use of timing tape so that the recorder may run continuously through certain entire sections of the performance. This idea is certainly applicable when there is only one spoken line between two sounds, or between two verses of a song which is sung to a taped accompaniment. Some very enterprising groups may find it possible to provide entire acts or scenes with musical and/or sound backgrounds in this manner. The success of this plan, however, is entirely dependent upon the ability of the actors to consistently time both the delivery of their lines and their stage action to correspond with the predetermined tape intervals, and it is suggested only for groups with extra ambition and ample rehearsal time. Whether the sound effects are many or few, timing tape is invaluable in editing, and it goes without saying that the effects should be assembled to fit on as few reels as possible for ease in use.

In conclusion, it might be mentioned that at least one little theatre group has tried this sound-on-tape idea, and found that it works—so well, in fact, that they were "lost" when a tape recorder was no longer available for their use. School and church groups will find in it another use to add to those to which their recorders are already being put, and those who like to work backstage will surely find the suggestion worth serious consideration as an efficient, economical, and enjoyable way of solving one of their big headaches . . . the sound plot.



Proper labeling of your tape recording collection will save time and trouble and will make your hobby more enjoyable—especially as your tapes grow in number.

## FOOLPROOF LABELING SYSTEM FOR TAPES

by  
Ronald Anderson

*... The tape, the reel and the box should all be identified. Here are a number of practical ways to do it.*

**H**OW many times have you had to go through nearly every tape in your collection just to find one particular recording? As your tape library grows, you'll find this to be a chore of no mean proportions. Like many a tape fan before you, you'll probably decide that proper labeling of your tapes is essential.

The box the tape comes in probably has labeling space on the back, but this alone is inadequate. Too often reels become separated from their boxes and what is recorded on the tape becomes an unknown quantity.

Labeling the reels themselves is a method many recording fans use, in addition to labeling the boxes. But what happens when you leave the tape on the take-up reel instead of rewinding it?

Still other hobbyists label the tape itself by attaching a piece of leader tape and writing the identifying material on it. But again, if the reel is not correspondingly identified, the tape and reel may become separated.

The only foolproof method is to adequately label all three—the tape, the box and the reel. And the time to do

it is now—before your tape collection gets any larger and the task gets completely out of hand.

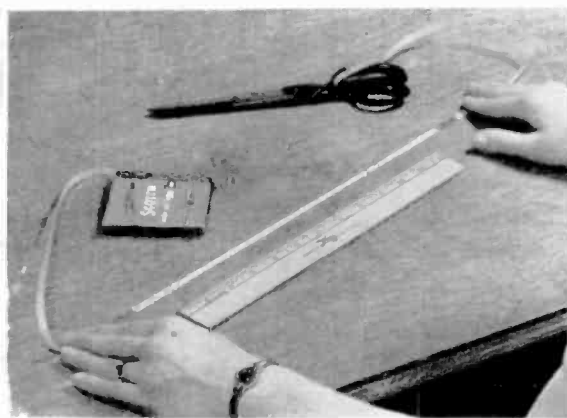
Labeling the tape itself is best done by attaching and labeling a leader. Paper tape can be written on directly, although use of leader tape is still recommended since it also protects the end of the recording and allows you to record to the very end of the magnetic tape.

Various methods of labeling reels have been devised ranging from printed tape labels or reel tabs to writing on the reel itself with a grease pencil.

In addition to writing in the space provided on the back of the box, and on the edge of the box (for easy selection from a bookshelf) some hobbyists insert cards inside each box with a detailed listing of the selections on that particular tape. If your tape recorder has an index counter, you can log the exact position of each selection on the card as well, or use an Atta-Glance disc which both indexes and identifies selections.

The accompanying pictures illustrate step by step just how you can identify your tape recordings quickly.

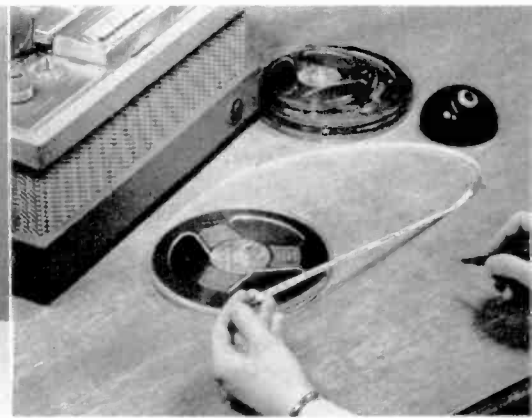
## ON THE TAPE—



Leader and timing tape (such as "Scotch" No. 43) provides plenty of labeling space as well as protecting the end of the magnetic tape. Fourteen inches of white space is provided—plenty for complete identification.

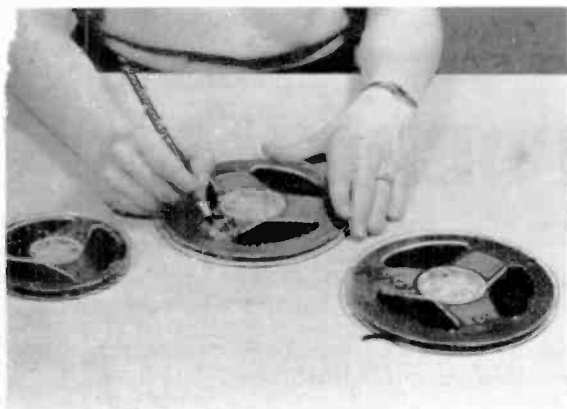


Here the leader and timing tape is being spliced to the end of a tape recording with special splicing tape (such as "Scotch" No. 41). Do not use ordinary cellophane tape since it will gum up your recording head.



You can write on the leader and timing tape with either a pen or pencil. State the reel number, track number, date and name of the selection or selections. Leader and timing tape can also be inserted between selections.

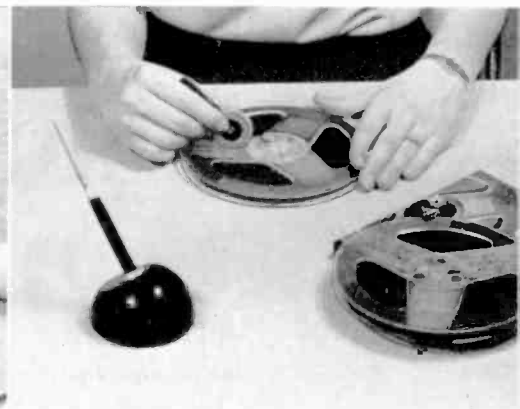
## ON THE REEL—



Individual magnetic tape reels can be labeled easily with a grease pencil or "China marking" pencil, although marking may eventually wear off. Though convenient, this method is not as neat as other methods.



Special pressure-sensitive labeling tape (such as "Scotch" write-on tape No. 48), is designed just for labeling tape recordings. Printed tape indicates reel number, date and subject. Matte surface takes pen or pencil.



You can write on the plastic reels directly if you first rough up the surface of the reel with a typewriter eraser or a piece of fine sandpaper. This gives the plastic "tooth" so it will take the ink or pencil readily.

## ON THE BOX—



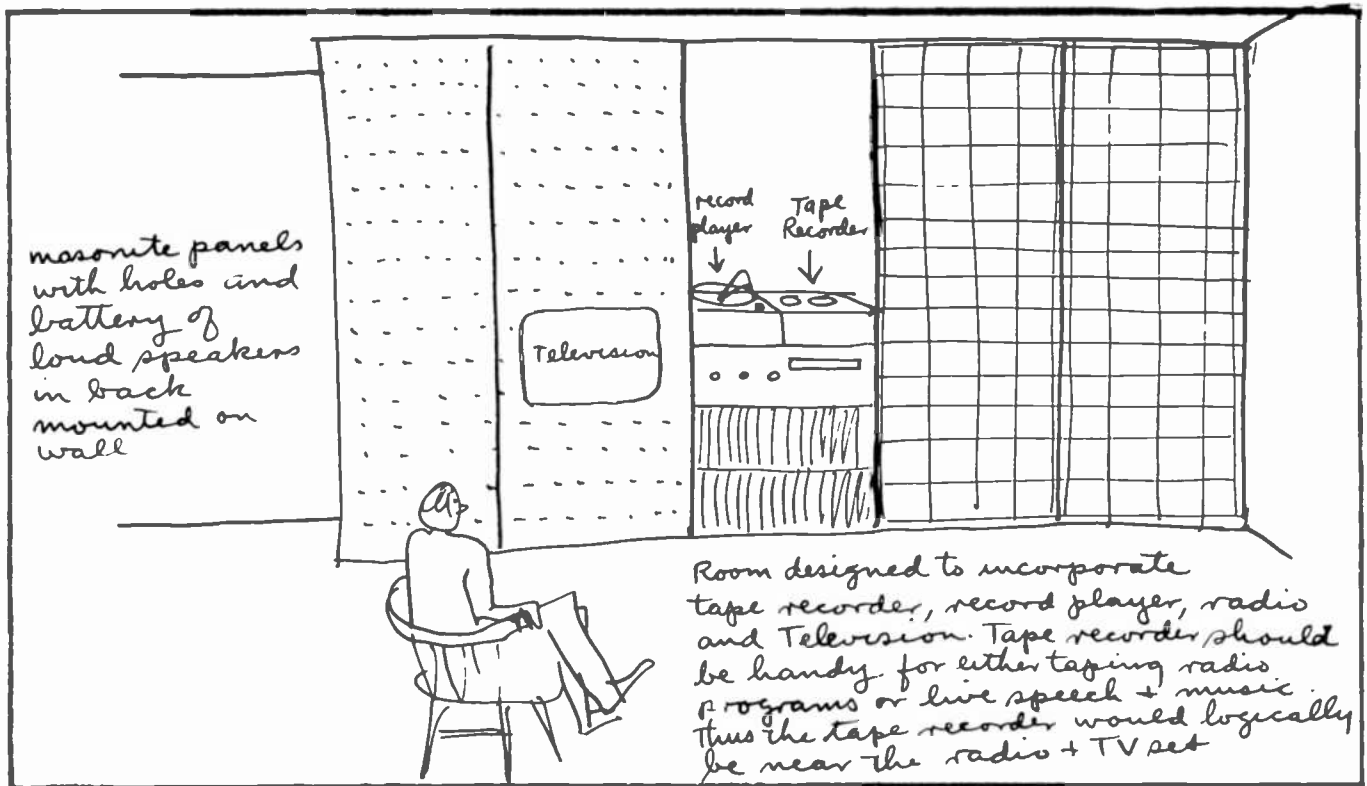
Space for labeling recordings is provided on the box itself of some brands of magnetic tape. This provides a ready reference without opening up the box. End of box can also be labeled for selection from bookshelf.



If there are several selections on a reel, type out the names on paper and glue or tape to the inside of the box. If your recorder has an index counter, you can log the exact location of each selection on the sheet as well.



Some tape hobbyists also label the boxes by cutting out recording advertisements and gluing or taping them to the foot of the box. You can also use pictures to illustrate the selections you've taped.



# BEAUTIFY YOUR RECORDER

by Mildred Stagg

Idea sketches by Walter Miles

*... the lady of the house will approve of these ideas—which will enable you to keep your recorder in the living room instead of in the closet.*

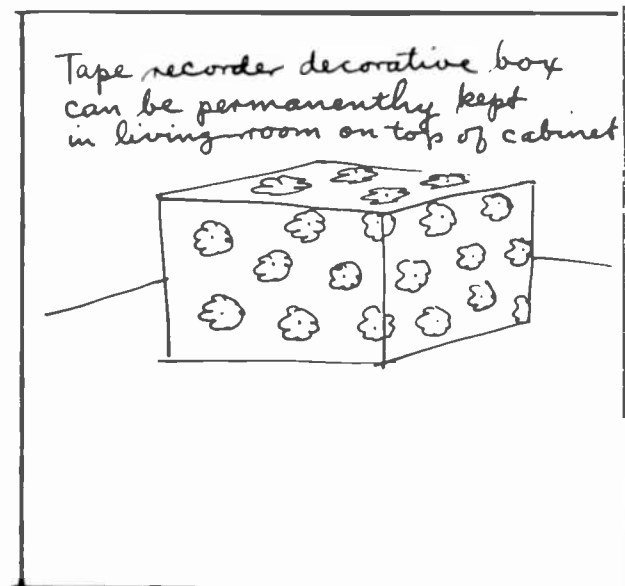
THERE'S just one way to make your tape recorder an integral part of your daily life—transform it into a presentable element of your living room decor. If you keep your tape recorder in a closet it's not surprising that you haven't had all the pleasure that it promised when you bought it. Because not only is "out of sight out of mind"—but it's inconvenient. No one wants to climb a ladder and carry a recorder from its hiding place into the living room. When you add to that nuisance the additional chore of plugging it in, it becomes too much trouble. What's even worse is the possibility that a program or a conversation you wanted to record may be finished before you're set up to tape it.

Don't think the situation is hopeless. No matter how jealously you guard the beauty of your home, you can now have your living room decor and your tape recorder too. Here's how!

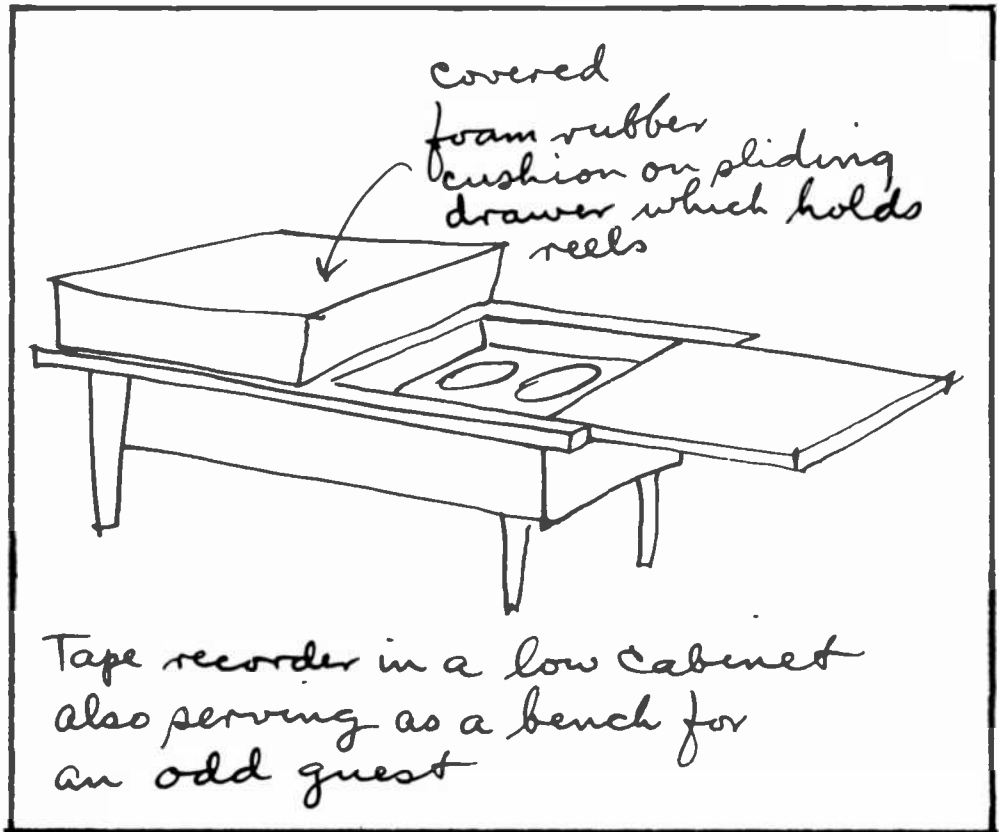
Walter Miles, the designer who was responsible for some of the striking displays at "Look Magazine" and who plans ads to display the fine modern and traditional furniture made by John Stuart, has solved your problem. He's devised a simple cover for your recorder that's inexpensive enough to be feasible at income tax time, as well as more elaborate coverups that can use a share of that Christmas bonus that's

coming up. You can do-it-yourself whether you're a whiz with a power tool or your mechanical equipment comprises a few razor blades and a pair of scissors.

If you're ever apologized for the "mess" in your living room when your recorder and tapes were set up for an evening's pleasure, you can remedy this condition in one



Left: a suggested layout for an entire wall created by Walter Miles, famous designer. These are basic idea sketches and can be altered to suit individual requirements. Right: a suggested installation of a recorder in a bench of the "cobbler" type. Furniture can be made entirely by those with shop equipment and the recorder fitted in, or pieces may be purchased and altered to take the recorder. Below: a clever cover for a recorder which adds to the living room and will please the distaff side of the family. If desired, a light may be installed in the box with a switch that will automatically turn it on when the box is raised. This will illuminate the recorder area. A cord and pulleys are installed as shown.



happy evening. Instead of apologizing you can try to be modest as you accept compliments on your handsome new living room cabinet. You may take your choice from among these designs according to your taste—and manual dexterity. Of course you may prefer to look on your own handiwork as a temporary device until you indulge in one of the new living room models that are either on the market now or will appear shortly.

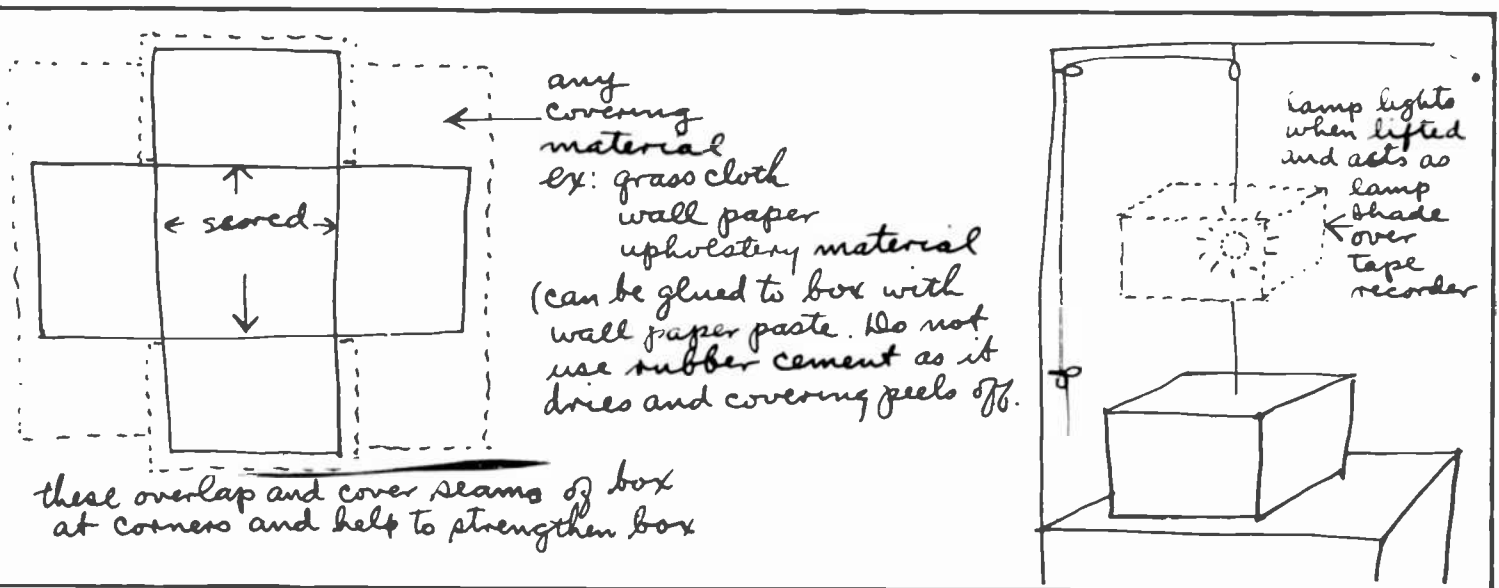
The first Walter Miles' design can be constructed with just razor blades and glue as your tools. Even a ten-thumb operator like this reporter was able to follow his instructions and produce a nice living room piece. The one that Miles made was composed of cardboard and pandanus cloth.

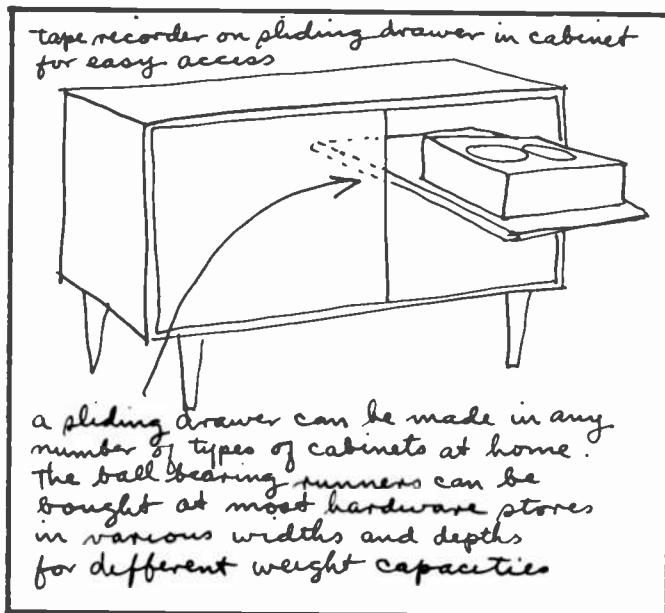
You'll have to buy a piece of cardboard or mounting board, (available in most art supply shops) that's large enough to form a box with sides and a top to cover your tape recorder or use a good, sturdy cardboard carton. You

cut the board into a symmetrical cross as shown in the solid lines in illustration (1) without cutting out the center square. This square is scored with a razor blade so it will bend neatly. Then you paste whatever covering appeals to you over the entire cutout without cutting off the corners. By leaving these on you will be able to overlap them later and they help to strengthen the box.

Wall paper paste is excellent to glue the covering onto the cardboard. Once you've finished your cutting and pasting you'll have a handsome cabinet that would grace any piece of living room furniture. The fact that your tape recorder is resting cozily beneath it with its cable attached ready for instant use, makes it convenient to use whenever the mood strikes you. Yet your living room decor has been preserved because you've selected a fabric and color that harmonizes with the rest of the furnishings and the walls.

When you've accomplished this feat, you might be will-





ing to go a bit farther and really astonish those friends who say "I'd like to have a tape recorder but my wife won't let one into the living room." Just buy a lamp cord, socket, bulb and small pulley. These are available in many five and dime and hardware stores. They sell for less than \$2.00. Place your tape recorder in its cabinet on a piece of furniture close to a wall. Rig up the pulley so it will work on that wall. Then drill a hole in the exact center of the top and substitute the cabinet you've made for a shade retaining the electric bulb fixture. When you want to use the recorder you pull the pulley and up goes the box! It serves as a shade for the bulb and your handmade recorder cabinet performs still another function—it illuminates the recording area for you. This box can be made of plywood instead of cardboard for greater durability.

Walter Miles recognizes of course that not everyone is helpless when confronted with a more elaborate do-it-yourself pattern to fit a tape recorder into the living room decor. For you accomplished tool-wielders he's designed other types of concealment for a tape recorder that keeps it close at hand when you're relaxing or entertaining in your living room. One of the most ingenious and handsome arrangements is the "coffee table type." This model can be constructed or converted so it will house your tape recorder and seat an extra guest.

This design involves a low table of the kind shown on page 39. In Miles' illustration the top of the table has been cut in half. One side covers the tape recorder, the other hides the tapes. The solid top of the table has been divided in half to provide two sliding panels while a shelf, hidden by the apron of the bench, has been attached to it. On this plywood shelf the recorder rests on one side leaving room for plenty of tapes on the other.

When both sliding panels are in place a square, foam-covered cushion serves as an extra seat and also makes the table more attractive. If you want to take out some tapes you simply remove the cushion, pull back the sliding panel and there they are. There you are with a new, handsome piece of furniture that is really a conversation piece as well. Your neighbors and fellow tape fans probably won't rest until you've helped them build their own.

Tables of this variety can be bought new or used, fin-

Recorders may be installed in many types of cabinets. The sliding drawer arrangement shown is convenient but be sure to install stops so that it will not come all the way out. Any wiring to radios, etc. should be flexible enough to permit the recorder to be moved on the slide.

ished or unfinished, modern or traditional—or you can build one from the lumber up. It all depends on how much time you want to devote to the project and how much skill you bring to it.

A third solution to the problem of having your recorder always at hand is also rather simple. This involves practically no expense yet it turns a cabinet you may already possess into a good looking custodian for your tape recorder. If you have a buffet table, serving table, bachelor's chest or other article of furniture that looks something like the adjacent sketch, you can use it to house your tape recorder without buying anything more expensive than a plywood shelf and some ball bearing runners.

The idea is to build a sliding drawer in the cabinet in a convenient size. You can buy the correct ball bearing runners by telling your hardware salesman the purpose and the approximate weight of your tape recording machine. Then when you open the door of the cabinet you can roll out the tape recorder on its ball bearing shelf while under it there will probably be room to store your tapes.

It's a bit difficult to prevent a designer who likes functional modern decor and who particularly admires the simplicity of Japanese design from dreaming a little. And few tape fans will argue with his thesis that to get maximum use from a tape recorder it should be in close proximity to other forms of acoustical entertainment. To realize this dream Walter Miles devised a wall for a room where entertainment is a major project. For Hi-Fi fans in particular, this is the answer. Miles would mount a battery of speakers on the wall in binaural position. In one panel he would mount the TV set permanently so that nothing showed but the screen and controls flush with the wall. Hidden behind a Shoji screen of translucent paper with wood panels would be the radio, FM, player and tape recorder side by side. All three instruments would be connected with switches to the same battery of speakers. The extra panel would hide the tapes with enough shelf space provided to house an extensive tape library.

For those who share Walter Miles' dream without his ability to execute it there are some excellent instruments on the market already that will house all, or nearly all of your musical equipment in handsome fashion. These come in designs to fit almost any type of decor and would grace most living rooms.

An increasing number of manufacturers have brought out units entirely suitable for the living room and which are fine pieces of furniture. But if your pride and joy isn't one of these and you're not yet ready to trade it in on one of the newer models, these ideas are just for you. . . . and we're sure you'll find friend wife in agreement.

Whatever solution you choose you'll be happier because the main object is to have your recorder always set up. Then you can tape a desirable program on the spot—or play your already recorded tapes without fuss or bother. If you can tape what you want when it's available and enjoy your tapes whenever you choose, you will double the pleasure provided by your tape recorder. And probably double the use of your recorder as well.

# TAPE CLUB NEWS



The first Ohio "Tapevention" was attended by more than 30 members of Voicespondence.

The first Ohio "Tapevention" was held in Kenton, Ohio, on Saturday, July 23, and was attended by more than 30 members of The Voicespondence Club and their friends from Ohio and nearby states. Dan Moran of Marion, Ohio, who is the District Deputy for the club, directed the day's activities which featured a recorded message from Charles Owen, Club Secretary at Noel, Virginia, taped messages from other members, tape recorded games, and a program of magic presented by Voicespondent Neiland Herbersman of New Waterford, Ohio. An enjoyable time was had by all, and the day's proceedings were tape recorded.

A newly appointed committee has been organized by the Voicepondence Club to coordinate and plan a number of special programs and activities which the Club maintains for its blind members. It is composed of members Charlie Roberts Swink of Cleveland, Ohio; Victor Goss of Venice, Calif.; Victor Wagner of New Castle, Pa., and Leonard Hoskins of Milwaukee, Wis. Of these members, Vic Wagner and Len Hoskins (who is Director of the Wisconsin State Agency for the Blind) are blind themselves.

Blind voicespondents derive much pleasure out of tape corresponding. The Voicepondence Club has a number of blind

members on its roster at the present time, and it welcomes inquiries from others who wish to make greater use of their recorders.

Through the efforts of World Tape Pal, Vernon Smith of Oneonta, N.Y., tape recordings of the Hartwick College radio programs, featuring such subjects as discussions by foreign students, Christmas music, and a student talk on "Evaluation of Brotherhood Week," are now obtainable free of charge to all WTP members. During the past year, Vernon has directed the radio programs and was responsible for making the recordings. Wishing to stimulate better understanding through tape exchange with other countries and other parts of the U.S., he has requested the College to support this free exchange service. A catalog of programs is available to all members from: Vernon Smith, Apt. No. 1, Hartwick College, Oneonta, N.Y.

World Tape Pal Bill Patterson of Richmond, Indiana has designed a wooden mailing box especially suited to aid the handicapped blind. Upon receiving a tape in such a carton, the recipient need only turn over the address card in an outside holder, replace the tape and drop it back in the mail. Bill constructs the boxes himself and sells them at cost. They are available in sizes to fit, 3, 4, 5 or 7 inch tapes, and provide fine protection for mailing.

World Tape Pal, Allan Wilson, who is a representative of Lever Bros. Co. in Malaya, but who lives in England, has recorded a vivid tape description with a tropical rainstorm for a background. A dubbing of this tape was made and is being circulated round-robin style to some fifty WTP's chosen at random from the United States roster. A list of these members is enclosed with the tape. Any member who has not received it and would like to hear it, may receive a copy from the Tape Bank by enclosing postage from Dallas, Texas, for a 5" reel.

Hugh Thrasher, Jr., 1021 Clearfield Road S.W., Roanoke, Virginia, would like to form a new tape recording club in Roanoke, Virginia. Anyone interested in joining with Hugh may contact him at the above address.

## JOIN A CLUB

### TAPE RESPONDENTS INTERNATIONAL

Fred Goetz, Secretary

P. O. Box 1404T, San Francisco, Cal.

### THE VOICESPONDENCE CLUB

Charles Owen, Secretary

Noel, Virginia

### WORLD TAPE PALS

Harry Matthews, Secretary

P. O. Box 9211, Dallas, Texas

### INTERNATIONAL TAPE WORMS

Art Rubin, National Chairman

P. O. Box 215, Cedarhurst, L. I., N. Y.

### GLOBAL RECORDING FRIENDS

Alfred L. Sferra, D.D.S., Secretary

125 Hamilton Street, Bound Brook, N. J.

## RECORDING TAPES

any brand or length—you name it. Complete stock of accessories.

(See our big 'ad' page 8 Dec., 1954 "Tape Recording.")

- Agents for Tape Recording Magazine. Back issues available.
- Used Tape, plastic and mylar bought & sold.
- Send for our price sheet.



New empty plastic reels in boxes for easy labeling. 3" 10c; 4" 22c; 5" 24c; 7" Professional reel (2 1/4" hub) 29c ea. EMPTY BOXES: 3" 3c; 4", 5", 7" 5c ea. 10 1/2" Aluminum Reel \$2.24.

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for HIGH-FIDELITY RESULTS

There's more to this fascinating subject than you may suspect!

## MAGNETIC RECORDING

By S. J. Begun

242 pages, 130 illustrations. Price \$5.00

for Home Entertainment Movies Broadcasting Amateur Radio Secret Communications Speech Scrambling Professional Recording Transcriptions Telegraphy and Telephony Automatic Announcing Magnetic "Memories" Recording Transients Chronoscopes

... and many other uses that make this one of the fastest-growing phases of the electronic industry.

Here's your "Open Sesame!" to a fast-growing branch of electronics in which far too few have specialized to date! Whether recording is your hobby or your business, this book will pave your way to better results, new techniques and effects.

From simple wire or tape recorders for home entertainment to complicated equipment and processes used in secret services, movies, industry and elsewhere, MAGNETIC RECORDING brings you complete, how-to-do-it data. From basic circuits to components, from commercial and home built equipment to its operating and service problems, you get the latest information and expert guidance. And, chances are, you'll be amazed at the opportunities for recording specialists in this steadily expanding field.

Starting with the fundamentals of magnetism and acoustics you progress rapidly to the advanced phases of the art. Biasing methods, distortion, re-producing heads, crasing, artificial reverberation (echoes), amplification, instrumentation and measurements and helpful analyses of modern commercial recording equipment are but a few of the subjects covered. Dozens of schematics, block diagrams, cross-sections and under-chassis photos make things easy to understand and are invaluable guides in selecting new equipment or building your own.

## READ IT 10 DAYS . . . at our risk!

Dept. MF-95, RINEHART & CO., Inc.

232 Madison Ave., New York 16, N. Y.

Send MAGNETIC RECORDING for 10-day FREE EXAMINATION. If book is O.K., I will then promptly remit \$5.00 in full payment. If not, I will return it postpaid and owe you nothing.

Name .....

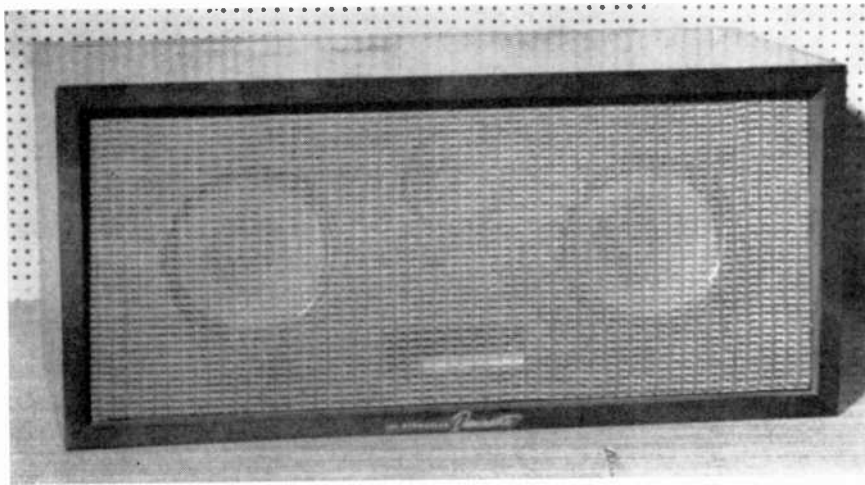
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Price outside U.S.A. \$5.50—cash only. Money back in 10 days if you return book.

Rinehart Books are sold by leading book stores.

# NEW PRODUCT REPORT



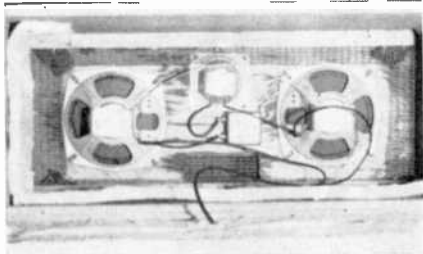
## PERMOFLUX DIMINUETTE SPEAKER

... a small, wide-range speaker system that can add to the enjoyment of a portable tape recorder radio or TV set, when used as an external speaker.

**T**HIS is an economically-priced multi-speaker unit which will provide an excellent supplementary or replacement speaker for a radio, TV set or tape recorder which is not equipped with an adequate unit. It will easily carry two or three times the output power load of the normal four or six inch speakers commonly found in home sets.

In making a portable recorder the manufacturer does the best he can in getting a speaker with a good response but he seldom can employ the bass reflex principle because the recorder machinery, electronic parts, etc., must all fit within the case.

The same is true of table model TV sets. Even though they have good au-



An inside view of the Diminnette showing the two six-inch drivers, the three-inch tweeter, band pass filter and sound absorbing material placed to absorb unwanted reflections.

dio circuitry, the speakers leave much to be desired. A 21-inch set will usually have a three or four inch speaker.

Small home radios, with parts packed into every cubic inch of the cabinets also must, of necessity, use small speakers.

This unit was tried on all three. Plugged into the "external speaker" jack of a low priced recorder it brought up not only the tone quality but the volume as well. As the unit can handle more output power than the small speaker found in the recorder, it was also possible to run it at a higher level without distortion.

On the TV set the same difference was noted. The sound was greatly superior to that produced by the small speaker mounted as standard equipment in the TV set.

A radio connected to the unit also sounded much better.

So the addition of an external speaker to your audio equipment can serve you in more than one way and lessen the investment as compared to the price of your radio, TV or recorder.

The Diminnette contains dual six inch drivers with treated, slotted cones, and a cone-type tweeter to handle the highs. A band-pass filter is used to pre-

STA **OK** STED

Product: Permoflux Diminnette

Price: \$49.50

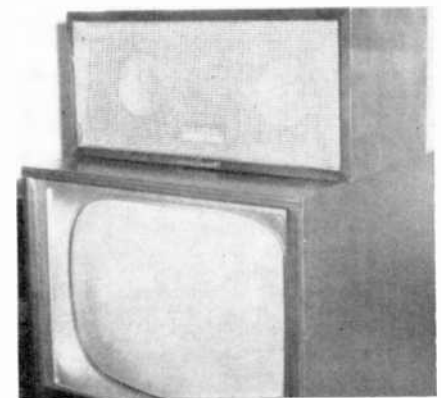
Manufacturer: Permoflux Corporation, 4900 W. Grand Avenue, Chicago 39, Ill.

vent overloading the tweeter. Batts of sound absorbing material are placed at the obvious reflecting points within the cabinet to reduce resonances. The face board on which the speakers are mounted has a port opening.

The face board is not parallel with the face of the cabinet. This permits the speaker to be placed either high or low and the sound will be directed to ear level. If placed high, such as on the top of a bookcase, the unit should be turned over so the board will face downward. If placed on the floor, it should be positioned to project the sound upward.

The unit is available in either blonde or mahogany. In our tests we found the response to be pleasing and the deviation of the speakers at any frequency from 50 to 12,000 cycles was not easily perceptible.

We feel that it is worth your consideration and can be of great service as an external speaker to the recorder, radio or TV set.



The speaker mounted atop a 21-inch TV set where it considerably improved the sound quality of the output as compared to the small speaker with which the set was factory equipped.



# BOOK REVIEWS

*Basic Electricity, Volumes 1 to 5, by Van Valkenburg, Nooger and Neville, Inc., 6" x 9", paper bound, 124 pages, profusely illustrated. Published by John Rider, New York. \$2.00 per volume, \$9.00 complete set of five.*

This series of books is actually a course as given in the Navy Specialty Schools and which has just been released for public use. The job of getting the manuals together was turned over to Van Valkenburg, Nooger and Neville, Inc., who specialize in the production of complete "packaged programs" and who have had broad experience serving industrial organizations requiring mass-training techniques.

The purpose of the course was to enable the Navy to turn out technicians at a faster rate without sacrifice of subject matter. The subject had to be made understandable to every Navy student regardless of previous education.

In collaboration with educators, and electronics experts, the firm developed this dynamic new training course which lays heavy emphasis on the visual approach. It is now the backbone of the Navy's current electricity and electronics program.

The course presents one topic at a time and each page has at least one illustration on it. Cartoon type drawings are used and get the point across very effectively. Every page covers one complete idea.

While the course was specifically designed for the Navy, there is no reference to Navy equipment as general principles are covered.

In your reviewer's opinion, this series of volumes is truly excellent. For the novice who would like to learn more of the subject it can't be beat. Throughout the books, a review technique is used that serves to fix the various points firmly in mind.

Volume 1 covers: Where Electricity Comes From, Electricity in Action, Current Flow, Voltage, Resistance, Magnetism, DC Meters. Volume 2: Direct Current Circuits, Ohm's and Kirchoff's Laws, Electric Power. Volume 3: Alternating Current, Resistance, Inductance, Capacitance in AC, Reactance, AC Meters. Volume 4: Impedance, Alternating Current Circuits, Series and Parallel Resonance, Transformers. Volume 5: DC Generators and Motors, Alternators and AC Mo-

tors, Power Control Devices.

If you are starting from scratch in things electrical, you'll find no better nor more easily understood texts than these.

*Basic Electronics, Volumes 1 to 5, by Van Valkenburg, Nooger and Neville, Inc., 6" x 9", 118 pages, profusely illustrated. Published by John Rider, New York. \$2.00 per volume, \$9.00, complete set of five.*

The five volumes in this set are a continuation of the set reviewed above. As in the previous series, the same techniques are effectively employed. Volume 1 covers: Introduction to Electronics, Diode Vacuum Tubes, Dry Metal Rectifiers, What a Power Supply Is, Filters, Voltage Regulators. Volume 2: Introduction to Amplifiers, The Triode Tube, Tetrodes and Pentodes, Audio Voltage and Power Amplifiers. Volume 3: Video Amplifiers, RF Amplifiers, Oscillators, Volume 4: Transmitters, Transmission Lines & Antennas, CW Transmission and Amplitude Modulation. Volume 5: Receiver Antennas, Detectors & Mixers, TRF Receivers, Superheterodyne Receivers.

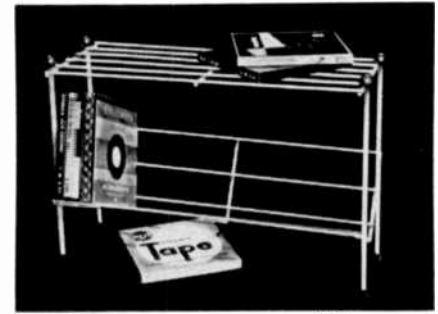
As with the preceding series, we again feel that these books are excellent.

*The New High Fidelity Handbook by Irving Greene and James Radcliffe. Introduction by Deems Taylor. 8" x 11", 193 pages, 250 illustrations. Published by Crown Publishers, New York. \$4.95.*

This book was written primarily for the layman but it has not been "written down" hence those who already know something about the subject of Hi-Fi techniques can gain information also.

The volume covers the entire gamut of Hi-Fi reproduction from what it is to how to achieve it. Components are discussed very frankly and a buyer's Guide is included in the Appendix.

The book is written in a pleasing style and the authors have packed a surprising amount of meat into it. We believe that anyone interested in the subject will find this book of value, especially the layman who might be confused by too much engineering terminology.



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## NEW AMERICAN MIKES



American Microphone Company, 370 South Fair Oaks Avenue, Pasadena, California, is marketing a new series of small microphones suitable for tape recording, paging systems and general purpose work. These mikes are 3 1/4" x 2 1/8" x 15/16", weigh just 2 oz., have a tenet case, and are available with either shielded crystal or ceramic elements. The crystal type has a response of 100 to 7,000 cps and an output of -55 db, while the ceramic type has a response of 100 to 6,000 cps and an output of -62 db. The mikes in this series are omnidirectional and are available in either gray or beige color. For complete information and price, write to American Microphone Company, above address.

## AUTOMATIC THREADER ✓



An automatic threading and sound tape reel has been developed by the Apt Corporation, 4332 Stockton Blvd., Sacramento, Calif. This reel also gives you at a glance the time or spot indication of your tape. The reel is available either in the Deluxe 7" reel which will be put out in a package including reel and dust-proof container, extra labels, leader, and a small bottle of splicing cement which will sell for \$1.40; or the 5" reel without the container which will sell for 75¢. By splicing the leader to the tape, it makes it thread automatically and acts as a guide, holding the tape from rubbing against the edges of the reel. The reel has a place for a label, titling, and timing. Additional information is available from the manufacturer.

## NEW RCA RECORDER ✓



RCA has introduced a new high fidelity tape recorder attachment which can be plugged in and operated through "Vicrola" phonographs. It has a record level tuning eye which permits setting or adjusting of record level when the tape is not in motion, a two-speed equalization control, an erase indicator, and it has speeds of 3 3/4 and 7 1/2 ips. Other features include a sensitive microphone and microphone input jack, it accommodates 7 inch reels, and it has a mahogany finish panel. Complete information and price is obtainable by writing to the Radio Corporation of America, Camden 2, New Jersey.

## CORRECTION

An error was made in the last issue in regard to the specifications for the Daystrom Model 404 recorder. Instead of reading "less than 2% wow and flutter," it should have read "less than 2% distortion and less than 0.3% wow and flutter."

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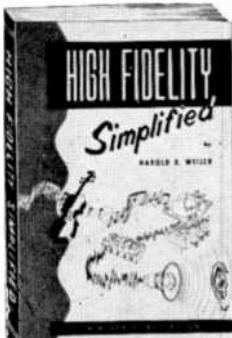
by William R. Wellman

The book describes the functions of each unit of a home music system, giving advice on the good and bad features of various kinds of units. Chapters include: An Introduction to High Fidelity, Loudspeakers, Loudspeaker Enclosures, Record Players, Radio Tuners, Tape Recorders, Amplifiers, etc. Also included are plans for installing a home music system.



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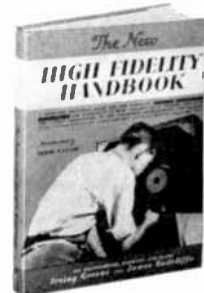
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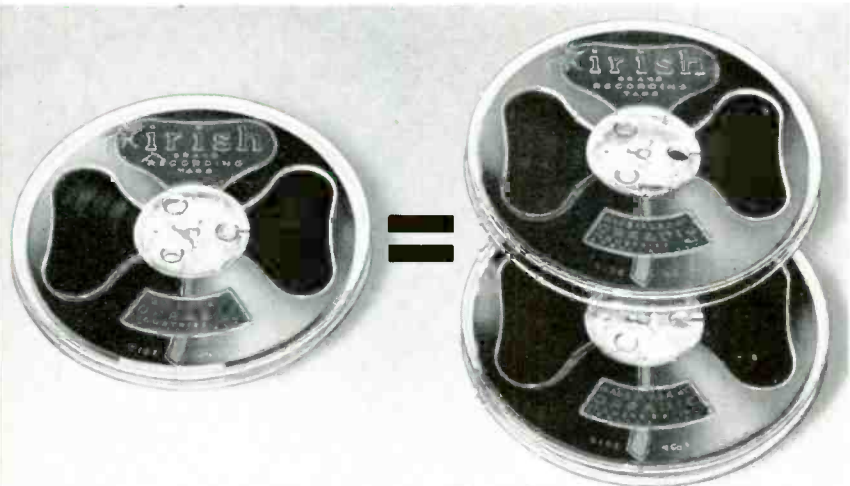
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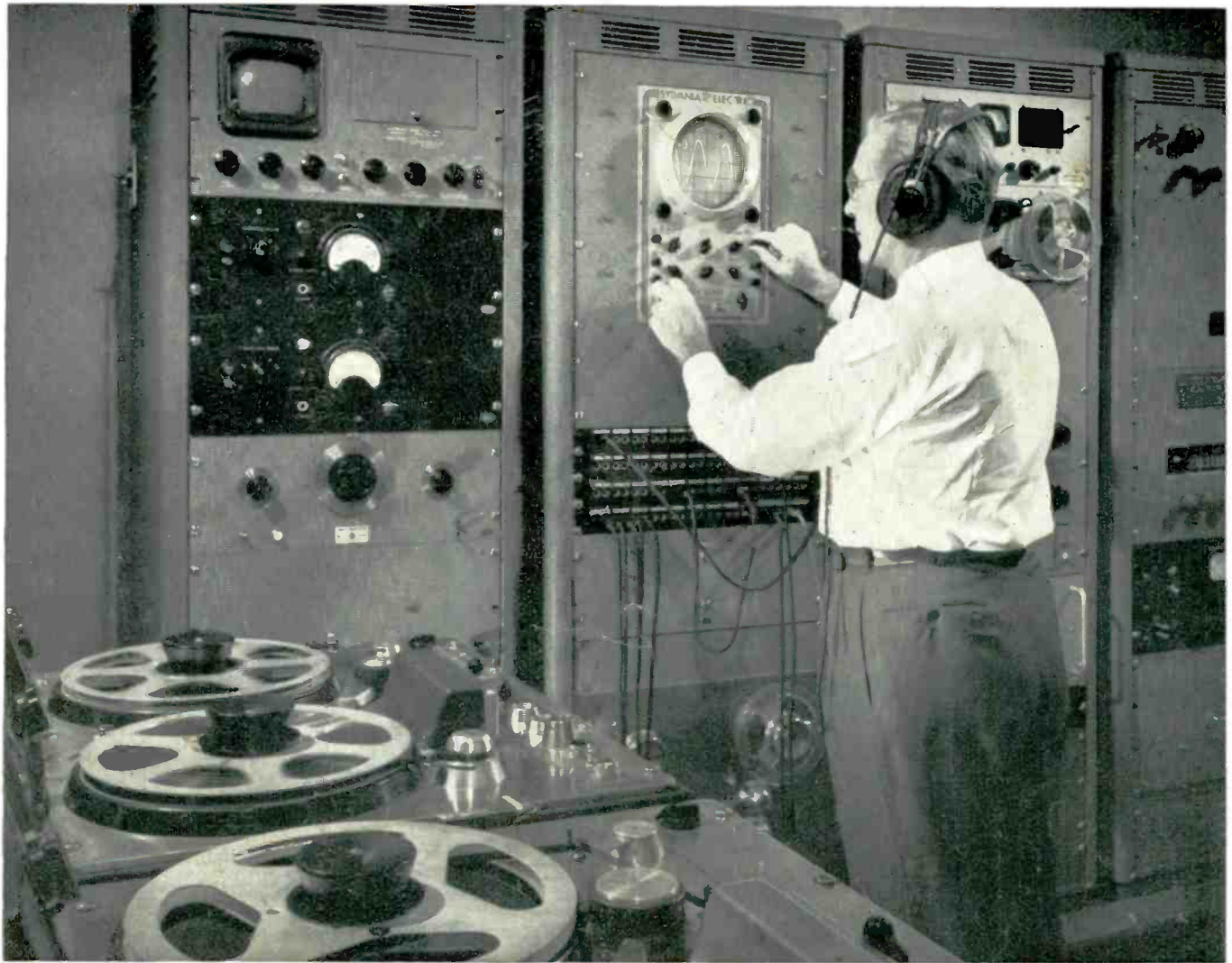
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7 1/2 ips	1 hour	30 minutes

\*Multiply by 2 for dual track



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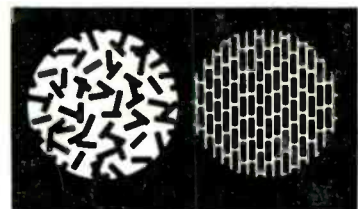
Years ago "SCOTCH" Brand pioneered modern magnetic tape—and solved a knotty technical problem at the same time. The problem? How to produce recording tape with a uniform, magnetically-responsive oxide surface for finest recording results.

"SCOTCH" Brand does it by making its own oxide coatings. It's a difficult job and *only* "SCOTCH" Brand does it — splitting atoms to transform non-magnetic oxide into a *super*-magnetic coating sensitive enough to record even a whisper! But this extra work is worth the effort, as you'll hear yourself. *Today*—listen to a reel of new "SCOTCH" Brand

Extra Play Magnetic Tape 190. It offers you 50% more recording time on a standard-size reel, *plus* complete fidelity and purity of sound.

Electron photo microscope shows the difference!

At left, artist's conception of magnified view of old-fashioned oxide coating. At right, "SCOTCH" Brand lays on its own regular-shape, *super*-magnetic particles to give you a super-sensitive recording surface.



**SCOTCH** THE 3M COMPANY *Extra Play* Magnetic Tape 190  
BRAND with 50% more recording time



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