

TAPE RECORDING



Christmas Shopper Stopper



**NEW
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PRICES
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Drastic reductions . . . up to 36% . . . in the price of "SCOTCH" BRAND #120 Magnetic Tape! This is the high output tape for the demanding hi-fi fan . . . for all sensitive recording jobs. It has over 100% more output, assuring greater dynamic range, scintillating sound reproduction. It records piano, percussion instruments and violin equally well . . . gives greater protection against overload distortion, particularly at low frequencies and on passages with wide tonal range!

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TAPES!**

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1½ MIL
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synchronize sight and sound the year around!

with **V-M**

A NEW WORLD OF SIGHT AND SOUND WITH A V-M STEREO TAPE RECORDER and SLIDE PROJECTOR SYNCHRONIZER!

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trols. Two High-Fidelity microphones for authentic, professional-quality recordings are included. V-M's unique "Add-A-Track" feature makes home, school or business tape recording *even more practical and useful!*

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*Slightly Higher West

the Voice  of Music®

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PRODUCTS FOR MODERN LIVING



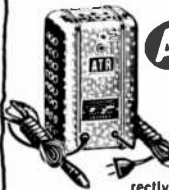
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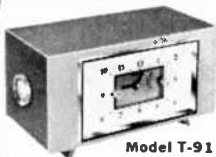
Will Double or triple the life of all types of electronic tubes, including TV picture tube.

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- Self-Starting . . . Never Needs Winding, Oiling, or Regulating.
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- Model T-87 (Tilt-A-Stand), Black NET 17.47
- Model T-87 (Tilt-A-Stand), Red NET 18.10

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AMERICAN TELEVISION & RADIO Co.

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TAPE RECORDING

VOL. 8 NO. 1

DECEMBER 1960

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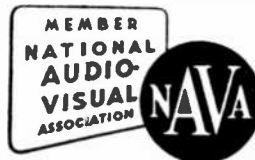
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CROSSTALK

from the Editors

A QUERY AS TO WHETHER "monophonic" or "monaural" was the preferred term for single-track sound sent us to looking over current advertising to see if there was a trend.

* * * * *

WE FOUND that the term "monophonic" was being used rather widely in the description of hi-fi gear and disc records. Of eleven advertisers of tapes and recorders, we found that four used "monophonic," two used "mono" and six used "monaural." So it would appear that the use of the new term in the tape field is gradually catching on.

* * * * *

ACTUALLY THIS IS a logical development. As you may recall, back in the "old days" stereo tapes were called "binaural." The complimentary term was, of course, "monaural." Then "stereophonic" or "stereo" came along and elbowed binaural out of general use. It would seem that the same thing is destined to happen to monaural.

* * * * *

TAPE TALKING BOOKS for the blind may become a reality if research now being undertaken by the Division for the Blind of the Library of Congress pans out. The Cook Research Laboratories of Morton Grove, Ill., has been retained to design a recorder for the blind and the preliminary design was explained at the recent convention of the Audio Engineering Society.

* * * * *

THEY HAVE COME UP with a machine that uses a cassette housing two 7 inch reels of 1 mil Mylar or Tensar type tape. Four tracks will be used with two sets of heads so that the tape can be played in both directions. With a running speed of 1-7/8 IPS it will be possible to put as much as 12 hours of recording on one reel.

* * * * *

ADVANTAGES OF TAPE in this type of use are obvious. For one thing, higher quality will result and it will be possible to put out more titles for less money. At present approximately 55,000 of the nation's 350,000 visually handicapped people use the facilities, available in disc record form. This involves 4000 book titles pressed on 6,500,000 vinyl discs. Each "book" in its container weighs from 7 to 10 pounds which results in a total weight of 4,230,000 pounds of records that must be shipped. The disc books also are subject to high noise level from dust and dirt, scratches and the effects of being played with dull needles.

* * * * *

TAPE WILL OFFER duplication of copies as needed, helping to alleviate present storage problems, providing better fidelity, longer wear, prompt service to the blind and the possibility of correspondence courses, language study at home etc. The savings will permit as much as five times the number of books to be produced on tape as are now produced on records. The present cost of the talking book system on records is in excess of \$600,000 a year. This would be cut to \$200,000 by the switch to tape.

* * * * *

THERE IS AN OLD SAYING about "The blind leading the blind." In this case it may very well be that the blind are leading the sighted. The people at the Division for the Blind, at the Library of Congress are to be congratulated for the forward thinking evident in this research. We hope it works out—and we think that this industry should give of its best efforts to see that it does.

* * * * *

FCC NOW IS CARRYING THE BALL on the decision as to which form and when FM stereo will make its bow to the public. A number of different systems are under consideration and which will come out on top is anyone's guess. Don't look for a decision much before summer of 1961.

NEW TAPES

★—Fair

★★—Good

★★★—Very Good

★★★★—Excellent

CLASSICAL



Music ★★★
Performance ★★★
Fidelity ★★★
Stereo Effect ★★★

GRIEG: Excerpts from Incidental music to Peer Gynt

London Symphony Orchestra conducted by Oivin Fjeldstad

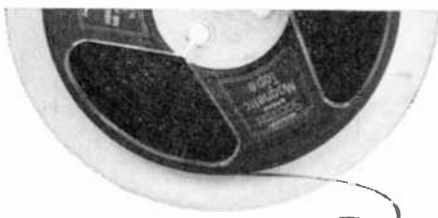
LONDON LCL 80020

4 track 7½ ips

\$7.95. . . . 39, 20 mins.

This tape contains ten of the twenty-three pieces of incidental music Grieg composed for Ibsen's *Peer Gynt*, including the familiar *Anitra's Dance*, *Solvejg's Song* and *In the Hall of the Mountain King*. Performance here is superb with Fjeldstad showing a strong affinity for this music. It is unfortunate that this recording does not use a soprano for *Solvejg's Song*, as it is much more effective when sung.

The over-all sound would have benefited from a more distant pickup. Everything is extraordinarily clear, and there are some spectacular moments, such as the closing of *In the Hall of the Mountain King*. The close-up recording produces searing violin sound not always pleasant to hear. It's in-



NOW—first

FOUR-TRACK STEREO TAPES

from the wonderful library of

CAPITOL RECORDS 

POPULAR STARS

Frank Sinatra: *Only the Lonely* ZW 1053
Nat King Cole: *Love is the Thing* ZW 824
Kingston Trio: *Here We Go Again* ZT 1258
George Shearing: *Satin Brass* ZT 1326
Guy Lombardo: *Berlin by Lombardo* ZT 1019
Fred Waring: *Waring in Hi-Fi* ZW 845

SHOW MUSIC

Fiorello! (Original Broadway Cast) ZO 1321
The King & I (Kerr, soundtrack) ZW 740
The Music Man (Original Cast) ZO 990
Carousel (MacRae, soundtrack) ZW 694

DRAGON, HOLLYWOOD BOWL

Concertos Under the Stars ZP 8326

ANGEL RECORDS

Soviet Army Chorus and Band ZS 35411

FULL DIMENSIONAL STEREO



teresting to compare the sound of the tympani with that of the bass drum. The latter is omnipresent when playing—an enormous, larger than life, rather bodiless thump—while tympani are recorded close, with a skin-stretching quality that makes them sound more like a tom-tom than tympani, out of proportion to the sound of the bass drum. Only if Angel releases on tape the Beecham-Royal Philharmonic recording of music from *Peer Gynt* will this London tape have competition. — R. E. Benson



Music ★★★★★
Performance ★★★
Fidelity ★★★
Stereo Effect ★★

CLASSICS THAT MADE THE HIT PARADE

We shall list below the original composition and follow it with the popularized variation taken from it. Borodin—Polovtsovian Dances (*Stranger In Paradise*); Tchaikovsky—Symphony No. 5 (*Moon Love*); Waldteufel—España Waltz (*Hot Diggity*); Chopin—Polonaise No. 6 (*Till The End of Time*); Tchaikovsky—Symphony No. 6 (*The Story of A Starry Night*); Rachmaninoff—Piano Concerto No. 2 (*Full Moon and Empty Arms*); Chopin—Fantasie Impromptu (*I'm Always Chasing Rainbows*); Tchaikovsky — Romeo And Juliet Overture (*Our Love*)

AUDIO DEVICES

2 track, 7½ ips

55 mins. (Available only from Audiotape dealers)

This tape contains "Classics for the Masses"; it is music that brings everyone closer to good music because it strikes a responsive chord. Anyone from 25 to — will remember these "tunes" from the early forties and fifties, all of which were lifted from ages old classics.

Good orchestration and techniques make for enjoyable listening. This is a tape that belongs in everyone's library giving a sampling of so much good music. Used as a primer it can even turn unbelievers into music worshippers. A theme carried through and through makes music instantly recognizable. This is a tape that gives one the feeling of familiarity.—R. Brosseau



Music ★★★★★
Performance ★★★★★
Fidelity ★★★
Stereo Effect ★★

FANTASIA

Tocatta and Fugue in D, Minor, Bach; The Nutcracker Suite, Tchaikovsky; The Sorcerer's Apprentice, Dukas; Rite of Spring, Stravinsky; The Pastoral Symphony, Beethoven; Dance of the Hours, Ponchielli; Night on Bald Mountain,

Moussorgsky and Ave Maria, Schubert. Leopold Stowkowski and the Philadelphia Orchestra

BEL CANTO WDX 101

4 track, 7½ ips

\$18.95 (2 reels, 24 page 4 color brochure)99 min.

We are very glad to see this music available on tape. The original recording was done on motion picture film in 1938 and we feel Bel Canto engineers have done a fine job in preserving the sound. The recording is not the equal of a modern stereo recording but the music is so magnificent that we feel it more than balances any shortcomings in the matter of very "hi-fi." Those who have seen the picture will recall many scenes just from hearing the music and the brochure has quite a few of them reproduced in full color.

To avoid any breaks in the music, the order of selections has been shifted from their order as they appeared originally in the film.

Fantasia was a pioneering effort in the recording of stereo sound with film. This tape is a record of that milestone and we found it most enjoyable. We are, quite frankly, Fantasia fans and see the picture every time it is re-circulated. The material on these two tapes is the equivalent of four \$7.95 reels. It is packed in a box measuring 12 x 12 to accommodate the booklet. We think you'll like it. — M. Mooney, Jr.

CHRISTMAS



Music ★★★★★
Performance ★★★
Fidelity ★★★★★
Stereo Effect ★★★

SEASON'S GREETINGS FROM PERRY COMO

Sequence A: Home for the Holidays, Winter Wonderland, Rudolph the Red-Nosed Reindeer, The Christmas Song, Santa Claus Is Comin' to Town, White Christmas

Sequence B: Here We Come A-Caroling; We Wish You a Merry Christmas, God Rest Ye Merry, Gentlemen, O Holy Night, The Story of the First Christmas; O Little Town of Bethlehem, Come, Come, Come to the Manger, The First Noel, O Come, All Ye Faithful, We Three Kings of Orient Are, Silent Night

Perry Como with Mitchell Ayres and His Orchestra and the Ray Charles Singers

RCA FTP-1030

4 track, 7½ ips

\$7.95. . . . 36 mins.

Perry Como's easy-going, relaxed manner seems to reach out to me whenever I hear him. His voice is suited to every song he sings. There is no straining to reach a note, no loss of rhythm, even though he does have a style all his own. He does not over-sing a song, he just simply and gently sings it.



Dance with
LAWRENCE WELK



"Julie is her name"
JULIE LONDON—Vol. II



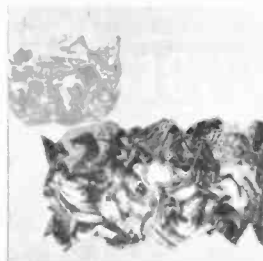
"Pat's Great Hits"—Vol. 2
PAT BOONE



"Benny Rides Again"
BENNY GOODMAN



LOUIS and KEELY



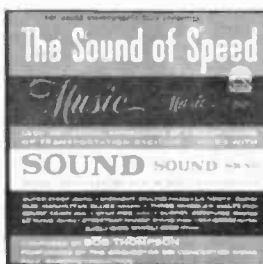
TCHAIKOWSKY'S
1812 OVERTURE



"Golden Saxophones"
BILLY VAUGHN



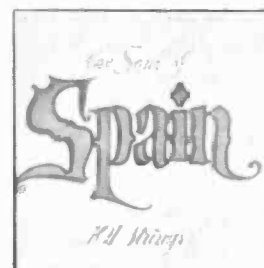
"Leave it to Jane"
ORIGINAL CAST



"Sound of Speed"
(Exciting Sounds of
Vehicles in Motion)



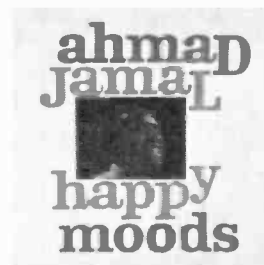
Voices and Strings of
LAWRENCE WELK



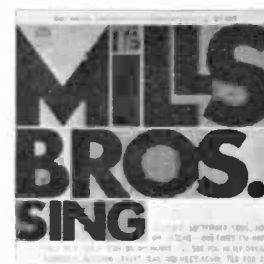
"Soul of Spain"
101 STRINGS



The GOLDEN AGE
of DANCE BANDS



"Happy Moods"
AHMAD JAMAL



The MILLS
BROTHERS SING

Now look what

bel canto

has for you on
2 and 4-Track and Cartridge

STEREO TAPE

(and there's more
where these came from)

bel canto Stereophonic Recordings
a subsidiary of Thompson Ramo Wooldridge Inc.
1977-1985 McAllister Avenue • COLUMBUS 5, OHIO

WRITE TODAY FOR FREE BEL CANTO
CATALOG OF STEREO TAPE HITS

The Original Magneraser®



Lifetime Guarantee!

ERASES YOUR TAPE PERFECTLY EVERY TIME

on the reel—no rewinding!

Now you can protect your tape from all the wear and tear against erase heads. For Magneraser erases your tape completely on the reel — in seconds.

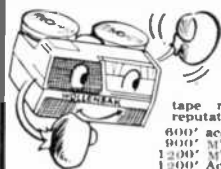
This amazing device actually lowers the noise level of unused tape 3 to 6 db. And it demagnetizes all record, play and erase heads. Also 8, 16 or 35 mm. magnetic sound film. Portable, compact — easy to use for all types of tape on any size reel.

Available at your dealers or direct from factory. Only \$18.00. Order yours now!

AMPLIFIER CORPORATION of AMERICA

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398 Broadway • New York 13, N. Y.

RECORDING TAPE



*Oxide guaranteed not to rub off or squeak — or money back. Compare ours with other "Bargain" tape. You'll find it's more than just "price" when you deal with us. We are original pioneers in the tape recorder business and our reputation means everything to us.

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900' MYLAR (Polyester), 5"	.95
1200' MYLAR, 1/2 mil, 5" reel	1.25
1200' Acetate (plastic), 7"	1.29
1200' MYLAR, 1 1/2 mil (strong)	1.95
1800' Acetate (plastic), 7"	1.79
1800' MYLAR, 1 mil thick, 7"	2.29
2400' MYLAR, untensilized, 7"	2.99
2400' MYLAR, tensilized, 7"	3.49

SEND FOR FREE CATALOG

2400' MYLAR, tensilized, 7" Studios, Large Users Even Lower

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MP-TV SERVICES, 7000-K Santa Monica Blvd., Hollywood, Calif.

I feel that Perry gives added impetus to feeling in singing Christmas songs. Probably because he has a happy home and family as well as a zooming career. You get the message easily enough—he loves Christmas and all it means and brings.

The seasonal selections chosen for this tape are well varied, but it is Perry's Story of the First Christmas which I especially like and I know you will too.

How many times have you heard the story of Christmas—you couldn't count them could you. But do you ever tire of hearing it? Don't you choke up a bit when you hear it? Don't you want your children to hear it over and over? Appropriate Christmas songs are sung at the appropriate moment as Perry narrates. Most delightful.

Add Mitchell Ayres and His Orchestra plus the Ray Charles Singers to Mr. Como and you have a perfectly charming tape.

Unmatchable tape reproduction of sound, together with living stereo, should be sold more by RCA, rather than too much emphasis on "sub-reproduction," which is all a disc is of an original tape recording.—*J. Cover.*



Music ★★★★★
Performance ★★★★★
Fidelity ★★★
Stereo Effect ★★

CHRISTMAS HYMNS BY GEORGE BEVERLY SHEA

Sequence A: Away in the Manger, O Holy Night, Thou Didst Leave Thy Throne, Sleep Precious Babe, The Birthday of a King, Silent Night

Sequence B: O Little Town of Bethlehem, I Wonder As I Wander, Go Tell It on the Mountain, Put the Christ Back Into Christmas, O Men from the Fields, Once in Royal David's City

George Beverly Shea; arranged and conducted by Norman Leyden

RCA FTP-1031

4 track, 7 1/2 ips
\$7.95...36 mins.

There is one selection on this release which sums up what the tape is conveying—"Put the Christ Back Into Christmas".

Personally, I'm sick to death of the disrespectful, unfeeling, commercializing of Christmas and I'm sure there are many others who feel the same way.

I am reminded here of what one of our fellow workers in this office told me. She reminisced over the time she and her husband took their small son to church on Christmas and during the course of the service, the child stood up and started to sing. His song? — "Happy Birthday to You".

Who, better than a child, could express the true joyful meaning of Christmas so simply, yet so well. He was celebrating the birth of Christ and his expression was certainly as much a prayer as any other uttered in the church at that service.

The hymns on this tape are simply beautiful, and deeply stirring. The expression given them by George Beverly Shea is so

reverent, so filled with the real spirit of Christmas, it is truly a sterling performance.

Mr. Shea's voice was predominantly reproduced from the left channel and the accompaniment was more subdued, but this, in my opinion added to the tenderness and brilliance of the singing which could have even stood alone.

Get this one for Christmas and sit your kids down (yourself too, of course) and let them give a good listen—it will be a highlight of your holiday sharing, the kind of highlight Christmas was meant to have.—*J. Cover*



Music ★★★★★
Performance ★★★
Fidelity ★★★
Stereo Effect ★★★

CHRISTMAS JOY

Sequence A: Jingle Bells, The First Noel, White Christmas, Good King Wenceslas, Rudolph the Red-Nosed Reindeer, God Rest Ye Merry, Gentlemen, Christmas Alphabet, Joy to the World
Sequence B: Winter Wonderland, Adeste Fideles, I Saw Mommy Kissing Santa Claus, Fairy on the Christmas Tree, Sleigh Ride, Silent Night, Santa Claus Is Comin' to Town, Hark! The Herald Angels Sing

George Melachrino and His Orchestra
RCA FTP-1032

4 track, 7 1/2 ips
\$7.95...45 mins.

The lush strings of George Melachrino and His Orchestra serve up a savory helping of Christmas music. Arrangements are apart from most we have heard of these seasonal favorites and they are pleasurable indeed.

Stereo in this case enhances the "Strings" and vice versa. If it could be said that a Christmas "spirit" engulfs you in the form of music, then the "spirit" of this tape is working overtime. Even if you listened to this in hot August, you could close your eyes and see the snow and evergreens.

This tape is excellent as background music at a Christmas gathering or perhaps as fill-in music at a Christmas pageant during intermissions. It is not a party, sing along type release; it has a more eloquent, sophisticated air. Even "I Saw Mommy Kissing Santa Claus" and "Santa Claus is Comin' to Town" are decked out more as semi-classical selections, rather than novelties.

An orchestra enhanced by additional strings has a rich sweetness about it when heard in stereo.—*J. Cover*



Music ★★★★★
Performance ★★★★★
Fidelity ★★★★★
Stereo Effect ★★★★★

A CHRISTMAS SOUND SPECTACULAR
Sequence A: White Christmas, Santa

Claus Is Comin' to Town, I Heard the Bells on Christmas Day, Carol of the Bells, Let It Snow! Let It Snow! Let It Snow!, Jingle Bells, Ave Maria
 Sequence B: Silver Bells, Rudolph the Red-Nosed Reindeer, Christ Was Born on Christmas Day; Angels We Have Heard on High, Frosty the Snow Man, Winter Wonderland, Gesu Bambino

John Klein at the Carillon Americana with Orchestra & Chorus

RCA FTP-1029
 4 track, 7 1/2 ips
 \$7.95...36 mins.

The Carillon Americana is truly a magnificent instrument. It consists of ten different sets of chromatically tuned bells, each of which produces its own series of strike tones, hum tones and overtones. The master console resembles that of a pipe organ and the carillonneur performs in much the same way as an organist. Using the individual sets as separate instruments, the performer may create unlimited tonal effects by employing them in various combinations.

Personally, I consider this one of the best Christmas releases I have ever had the pleasure of reviewing. The arrangements of familiar melodies take on a different "ring" and every tinkle is crystal clear.

The orchestra and chorus backing afforded the carillon makes for an entirely unusual effect on these seasonal ditties and old-fashioned hymns.

Beautiful, as everything at Christmas should be. Brilliant engineering, faultless reproduction.—*J. Cover*



Music ★★★★★
 Performance ★★★
 Fidelity ★★★
 Stereo Effect ★★★

MERRY CHRISTMAS

Track A: Here Comes Santa Claus, Christmas Song, Santa Claus Is Coming To Town, White Christmas, Jingle Bells, I'll Be Home For Christmas

Track B: God Rest Ye Merry, Gentlemen, Silent Night, O Little Town of Bethlehem, Joy To The World, O Holy Night, Adeste Fideles

The Mills Brothers
 DOT (Bel Canto) DST-25232
 4 track, 7 1/2 ips
 \$7.95...24 mins.

Traditionals mixed in with comparatively newer Christmas renditions, sweetly, reverently, sung by the Mills brothers. These fellows harmoniously blend their voices in season's greetings. No fancy arrangements, just simple, lovely interpretations.

Smooth as a well mixed cake batter. The backing orchestral group is unnamed on the box label, but they too lend a smooth overtone to this whole tape.

Pleasant, enjoyable listening music-wise and fidelity-wise.—*J. Cover*



Music ★★★★★
 Performance ★★★
 Fidelity ★★★
 Stereo Effect ★★★

WHITE CHRISTMAS

Track A: White Christmas, Jingle Bells, Adeste Fideles, God Rest Ye Merry, Gentlemen, O Little Town of Bethlehem, Silver Bells, Santa Claus Is Coming To Town
 Track B: Silent Night, O Holy Night, Hark The Herald Angels Sing, The First Noel, I'll Be Home For Christmas, Joy to the World, It Came Upon A Midnight Clear, Here Comes Santa Claus

Pat Boone
 DOT (BEL CANTO) DST-25222
 4 track, 7 1/2 ips
 \$7.95...36 mins.

To me Pat Boone has one of the most versatile voices of the popular male singers today. He sings most any type song quite well, and this collection of Christmas favorites is no exception.

Pat sings with heartfelt feeling and with the same ease as Perry Como. He has a well balanced choral backing here. We are sure all his fans will want this reel in their collection.

Well reproduced sound. Joyous seasonal music, equally joyous to hear.—*J. Cover*



Music ★★★★★
 Performance ★★★
 Fidelity ★★★
 Stereo Effect ★★★

AN ALBUM OF CHRISTMAS FAVORITES

Jingle Bells, Chestnuts Roasting on an Open Fire, Winter Wonderland, Sleigh Ride, Toyland, Rudolph, The Red-Nosed Reindeer, White Christmas, Joy to the World, O Little Town of Bethlehem, The First Noel, It Came Upon a Midnight Clear, Hark! The Herald Angels Sing, Silent Night, O Holy Night, O Come All Ye Faithful

Tom and Jerry Vincent at the Piano & Hammond Organ
 LIVINGSTON 1108F
 2 track, 7 1/2 ips
 \$9.95...32 mins.
 Also available in 4 track, \$7.95 (4CR1108)

Piano and organ are a grand duo for this type music, and Tom and Jerry Vincent represent the tops in musicianship. I have never heard better arranging of these Christmas favorites. And it is very easy to sing along with them—in fact, it is hard to resist doing so.

The effect of chimes is also used on some of the selections and in some of these instances, such as the beginning of White Christmas, we would have preferred hearing just the organ and piano. The chimes are not as loud as they might be and without changing the volume we cannot hear them too well. Silent Night is much too low a level. I would think a bit closer miking for the sections with chimes



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would have added to their enjoyment.

All in all, however, the tape is most pleasant and would be a welcome addition to your holiday festivities.—J. Cover



Music ★★★★★
Performance ★★
Fidelity ★★★★★
Stereo Effect ★★

CHRISTMAS ORGAN AND CHIMES

Track 1: Chimes Introduction, Silent Night, Holy Night, Joy To The World, Hark! The Herald Angels Sing, Greensleeves, Good King Wenceslas, O Little Town of Bethlehem, O Come All Ye Faithful
Track 2: It Came Upon the Midnight Clear, Once in Royal David's City, I Saw Three Ships, O Tannenbaum, While Shepherds Watched, In Dulci Jubilo, From Every Spire On Christmas Eve, The First Nowell

Charles Smart, organ; James Blades, chimes
LONDON LPM 70037

4 track, 7 1/2 ips
\$7.95...40 mins.

Every year at the Christmas season I become more thankful than ever that I have the God-given gift of hearing. Without it the carols, the warm wishes of friends, the laughter, the bustling crowds, the ring of a sidewalk Santa's bell, midnight church, so much would be lost to me.

Listening to these Christmas tapes brings it all back—all the remembrances of other Christmases, as they will to you. These remembrances for most of us are ones we never want to forget. And hearing the carols again adds more delight to an already delightful holiday.

This combination of organ and chimes is perfect for carols and although you might not think so, you can sing along with this one quite well.

There doesn't seem to be a great need for stereo effect on this tape, and it is not too pronounced, but the sound envelops you, and the fidelity is of the highest.—J. Cover

POPULAR



Music ★★★
Performance ★★★
Fidelity ★★★★★
Stereo Effect ★★★

FLIVVERS, FLAPPERS AND FOX TROTS

Sequence A: Yes Sir, That's My Baby, Heart of My Heart, Tiger Rag, What's the Password?, When My Baby Smiles at Me, Ridin' High

Sequence B: Speakeasy, Some of These Days, Bye Bye Blackbird, Me and My Shadow, Varsity Trot, The Flivver Song

Del Wood

RCA KPS-3125

4 track, 3 3/4 ips, cartridge
\$5.95...28 mins.

Ah, the roaring twenties, a never-to-be-forgotten era for sure. Somehow people were gayer, life was brighter, tranquilizers

and head shrinkers were unnecessary. So too is this tape a gay, bright release, aglow with the charm of happy people.

If I sound nostalgic, don't disturb the mood, that's the way I like it, and for these 28 minutes, at least, I want to be a Flapper.

I'd better put this one in a safe, out of the way place, otherwise some tape-happy scoundrel will cart it away to his private collection.

You just can't tell any difference between the fidelity of this 3 3/4 ips reel and a 7 1/2 ips brother. The sound is crystal clear from the tinkle of every rinky-dink piano key to the twang of every banjo pluck.

Even if you don't have a cartridge machine and have to transfer this to a reel, get this one if you like this type music.—J. Cover



Music ★★★★★
Performance ★★★★★
Fidelity ★★★★★
Stereo Effect ★★★★★

THE MANCINI TOUCH

Side 1: Bijou, Mostly for Lovers, Like Young, My One and Only Love, Politely, Trav'lin' Light

Side 2: Let's Walk, Snowfall, A Cool Shade of Blue, Robbin's Nest, Free and Easy, That's All

Henry Mancini and His Orchestra

RCA FTP-1006

4 track, 7 1/2 ips

\$7.95...39 mins.

This is a really impressive tape. A thirty-five piece orchestra consisting of twenty strings, four French horns, four trombones, five rhythm and two solo woodwinds. Add to this the Mancini touch, and he really has a touch, as this tape proves, then look over the list of selections above.

Five are Mancini's own compositions; "Like Young" is a recent Andre Previn original and the rest are classics, a few from as far back as the thirties, the lush days of Paul Whiteman, the Goodmans, Millers and Dorseys. To all these ingredients, Mancini has added the following featured performers: Bob Bain, guitar; Vince DeRosa, 1st French horn; Vic Felman, vibes and marimba; Ronnie Lang, baritone sax and alto flute; Shelly Manne, drums; Dick Nash, 1st trombone; Ted Nash, alto sax; Johnny Williams, piano.

This is a lot of good talent and a lot of good material and it has all been used to good advantage. The results are four star in all departments.

Performance is excellent, big orchestra effect, but never any overwhelming confusion of sound. Each instrument is sharply defined and the solo instrumentalists are picked up one after another smoothly and correctly balanced in level with the rest of the orchestra.

Stereo effect is very pronounced, but not to the point of exaggeration.

Instrument placement is easily visualized.

There is, however, one minor criticism, there is a slow fadeout at the conclusion of the song "Let's Walk" which was not too

effective. It was too drawn out and was obviously accomplished by manipulation of a master gain control and not by the orchestra. As a result, the ears had plenty of time to notice a change in tonal balance due to the so-called "Fletcher-Munson" effect.

Recording engineer, Al Shmitt and producer Dick Pierce deserve a lot of credit for this worthwhile production.—*C. Parody*



Music ★★★
Performance ★★★
Fidelity ★★★
Stereo Effect ★★★★★

LIKE BLUE

Side 1: You and the Blues, The Blue Room, Serenade in Blue, Blue Holiday, Blue Again, (What Did I Do to Be So) Black and Blue

Side 2: Like Blue, Little Girl Blue, Between the Devil and the Deep Blue Sea, The Blue Subterranean, Blue, Turning Grey Over You, Born To Be Blue

Andre Previn/David Rose
MGM STC-3811
4 track, 7½ ips
\$7.95... 33 mins.

This is the second time Previn and Rose have combined their talents to produce an album for MGM. This one contains two new compositions by Previn, "The Blue Subterranean" and "Like Blue," composed for the MGM, Arthur Freed production, The Subterraneans. David Rose has composed especially for this album "Blue Holiday" and "You and the Blues." The remaining selections are representative of the entire gamut of the "Blues" type from Rodgers and Hart's "The Blue Room" to "Black and Blue" by "Fats" Waller, Harry Brooks and Andy Razaf. The Previn-Rose combination has, as would be expected, produced an outstanding tape that will provide endless listening pleasure time after time.

The recording is excellent with perfect balance between piano and orchestra and extremely fine instrument definition throughout the orchestra.—*C. Parody*

NEW TAPES RECEIVED

REEL TO REEL

Capitol, The Music Man, original Broadway cast, ZO 990, 4 track, 7½ ips

Columbia, The Sound of Music, original Broadway cast, OQ 311, 4 track, 7½ ips

Kapp, Songs of The Fabulous Fifties, Roger Williams, KT-45008, 4 track, 7½ ips

London, The Pirates of Penzance, The D'Oyly Carte Opera Company with The New Symphony Orchestra of London conducted by Isidore Godfrey, LOH 9002, 4 track, 7½ ips

Mercury, Oldies but Goodies, Griff Williams and his Sweet Music, STB 60068, 4 track, 7½ ips

RCA, Show Stoppers in Dance Time, Frankie Carle, his piano and orchestra, FTP-1005, 4 track, 7½ ips

INDUSTRY NEWS

JAPANESE MINISTRY of International Trade and Industry has set quality standards for tape recorders exported from Japan. Exports are said to number 50,000 to 60,000 machines monthly, most destined for the U.S.

AMPEX automatic threader on new PR-10 professional machine may be adapted to home-type models if enough market exists. The accessory lists at \$35 for the PR-10.

SONOTONE has been selected to produce Dr. Salk's "Securitone" heartbeat simulator which has great effect on infants by simulating mother's heartbeat after infant is born. Device does not use tape but tape recorders played role in research leading to invention of device.

NIPPON COLUMBIA has a new magnetic sheet recorder called the Nakavision. It is transistorized and battery operated. Each sheet will take three minutes of recording, may be drawn or written upon or may be erased and reused.

AMERICAN CONCERTONE has predicted a doubling of its annual sales volume in 1961. Richard J. Bamberry, new vice president feels that the mass consumer market for recorders has arrived.

MINNESOTA MINING has reduced the price of their High Output tapes down to the level of standard recording tapes. The tape provides double the output for increasing the dynamic range. Base is either acetate or Mylar 1½ mil.

RCA expects to be in full production of video tapes, instrumentation tapes and regular tape for audio use in the near future.

Both SARKES-TARZIAN and the BURGESS BATTERY CO. are reported to be entering the production of raw tape. The Sarkes-Tarzian product will be known as Sarkes Tarzian Professional Magnetic Recording Tape and Burgess will market their tape under the firm name.

RHEEM CALIFONE has introduced a mobile classroom for language instruction of from 8 to 27 stations housed in a trailer, available in 35, 42 and 55 foot lengths as an economical solution to the problem of teaching languages in rural areas.

PENTRON is expecting a 25% increase in sales during the coming year.

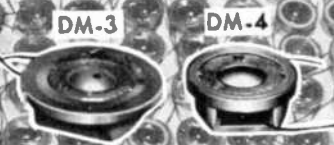
AMERICAN GELOSO ELECTRONICS has introduced a remote radio recording system that ties a citizen band radio to a recorder through a control box. The unit is accentuated by a wireless microphone which may be tuned to any of the 23 Citizens Band channels. Globe Electronics is making the transmitting and receiving units.

W. H. BRADY COMPANY, 727 W. Glendale Ave., Milwaukee 9, Wis., has brought out metalized contact tabs for use on machines having controls operated by tabs placed on the tape. The tabs are affixed to a card from which they may be easily removed to apply to the tape. They have their own adhesive which welds them to the tape.

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Among the every kind of dynamic microphone units we are selling the DM-3, DM-4 are one of the most popular. This really excellent microphone units are now being installed into the microphone cases of the majority of tape recorder manufacturers in Japan, resulting in a complete and perfect tape recorder microphone. Frequency response: 70-10,000 c/s ±3 dB available Unit Impedance: 40 ohm.

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DM-194

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DM-173-T

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Directional Characteristic: Non Directional

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TAPE CLUB NEWS

"Golden Mike" Prize



Do you use your recorder boldly and imaginatively to make up interesting little tapes of your own devising? Then perhaps you'd be interested in The Voicespondence Club's Tape Contest. Members of the club are eligible to enter short tapes in any of three categories to compete for attractive "Golden Mike" trophies. Categories include Productions, On-the-spot Sounds, and Miscellaneous, and entries are rated first on originality and execution with quality of recording being of minor importance. Winning entries will be placed in the club's tape library and winners' names will be given in this magazine after the contest closes. Judges are internationally famous recordists Tony Schwartz and Ken Miller of New York and Derek Worman of South Africa.

Voicespondence Helps Blind

The Voicespondence Club is again offering free tape recorders to worthy blind persons. The recorders, together with a supply of tape and a free membership in the club with each, are being given away completely without cost to blind persons who need them badly and who cannot afford them for themselves. The club operates as a public service the Melvin D. Cohen Honor Fund through special arrangements with Ways and Means for the Blind, Inc., and it is through this fund that the recorders will be furnished. Club monies are not involved. So if you know of any blind persons who need the benefits of tape recording and the pleasures of voicespondence around the world write to the secretary and give full information. Perhaps your friends may be among those who get recorders.

O.M.E. Secretary Travels

Among the many members visited by the secretary of Organ Music Enthusiasts, Carl Williams, this summer, were George

and Tessa Wagner, twelve and fifteen respectively. These children are extremely versatile at any electronic, electric, or pipe organ. They are noted for their concerts in the Olympia, Wash. area and are seeking to widen their field. They also have professional recording equipment. Under the supervision of Norman Lange, they play on a Concert Hammond in their own home. All practice sessions and lessons are tape recorded.

Carl also visited John Ledwon. John, who is eighteen years old, played the big Wurlitzer pipe organ installed in his home. He also has a Hammond and a grand piano in his music room, together with excellent recording equipment.

Another member Carl visited was Les Dubey, who is a former theater organist from Rochester, N.Y. He now works as a telegrapher for the Santa Fe Railroad and works part time as an engineer in an FM station in Los Angeles. He has the best of recording equipment at his disposal and hopes to go on the air with a recorded organ program of one hour.

Also included in Carl's visits were Ray Weimar, La Crosse, Wis.; Richard Estavanik, Harvey, Illinois; and Mr. and Mrs. Frank L. O'Neil, Hollywood, Calif.

World Tapes for Education

World Tape Pals recently issued a revised and greatly expanded listing of its World Tapes for Education. This service offers members educational tapes covering a wide range of subjects free of cost except for postage. It is presently being handled by Bob Brunson, recording supervisor for the Oklahoma City, Oklahoma, public schools.

In addition to the main library, branch libraries have been established in other countries, so that members there might have access to these tapes without long delays in transit. These include: Germany, England, Japan, Italy, Israel, Australia, New Zealand and South Africa.

The hundreds of reels of tape necessary for the functioning of this department have been provided by WTP headquarters.

WTE facilities are widely used by teachers and classroom groups as well as individual members. New tapes are being added constantly from the 60 countries in which WTP now has members.

Offers to Lend Tapes

World Tape Pal Jack Davis has a library of over 100 two track stereo tapes which he is offering to loan to fellow club members free of charge. Anyone who wishes to, may make a small donation to "The Association for the Advancement of Blind Children, Inc." for this privilege. Jack will forward any such donations to the charity.

Those interested may contact Jack and he will send along a listing of his tapes. He requests that not more than three tapes be selected on a loan basis.

New Representative for BRC of Canada

At the last B.R.C. general meeting at the Pepsi-Cola Hall in Montreal, Dr. O. Lewis Levitt of 1250 Ocean Ave., Brooklyn, N. Y., was appointed general representative and recruiter for the United States for the Bilingual Recording Club of Canada.

Club Mention On Radio

Rev. Father Phillip P. Kehoe, OSA of the St. Augustine Priory of Kyabram, Victoria, Australia was kind enough to speak several minutes over a local radio station concerning the activities of Catholic Tape Recorders, International. A dubbing of the program was sent to headquarters by the club's representative in Australia by Tom O'Dwyer of Rockhampton, Queensland.

New Stereo Club

We have received a most interesting letter from Roland Hahn who tells us about

a club known as Stereo International. It was organized in 1958 and is operated by a group of charter members, who elect, by vote, the directors of the club. At present, its main officers are Mr. O. B. Sloat, Brooklyn, N.Y., who is in charge of the U.S.A.; Mr. Roy Victor, Huddlestone, England, who is in charge of the U.K.; and Roland, who has leadership of Europe, Africa, and South America. A directorship is now being opened for Australia and surrounding countries.

Meetings are held by assistant directors in their own localities. A roster is prepared annually in September, and quarterly bulletin-supplements are issued. All correspondence, bulletins, etc. are done solely on tape. The roster is monaural, and the bulletins are stereophonic. Persons who have only playback units are not eligible for membership.

The club has a committee in charge of dramatic stereo plays which are especially written for this type of recording. Another committee handles "Stereo Rounds" which are exchanged internationally and locally. There is also a club library and librarian.

Dues of "Stereo International" cover the cost of tape and mailing, and are adjusted to conditions in various countries. The United States fee is \$5.00 per year; the club is operated entirely without profit. Its aims are to establish interest in stereo everywhere, and to promote more home recording in stereo.

Beginning this issue we will include Stereo International in our club box listing.

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P. Que., Canada

ORGAN MUSIC ENTHUSIASTS

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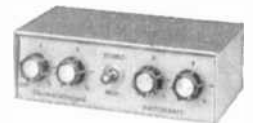
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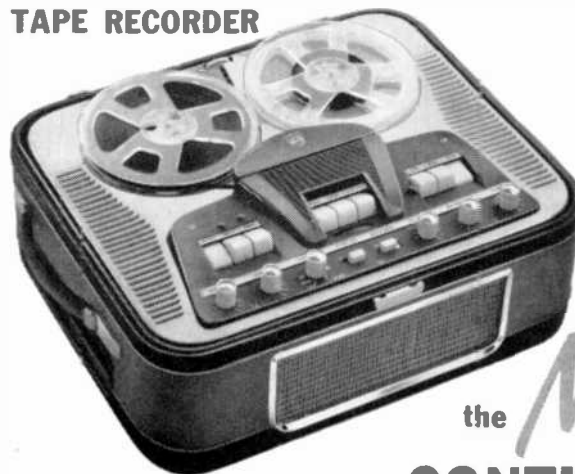


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YOU enjoy reading about the experiences of amateur and professional recordists all over the world and—

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TAPE RECORDING magazine is for you. You get all the above *plus* regular features such as Questions & Answers, Feedback, Crosstalk, Tape Club News, Classified Ads, etc. in this magazine, which is devoted to tape and the unmatched reproduction and versatility of which it is capable.

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NEW PRODUCTS

PENTRON ASTRA-SONIC II



Pentron Corp., 777 S. Tripp Ave., Chicago 24, Illinois is marketing their Astra-Sonic II tape recorder in both monophonic and stereophonic models. This machine has a hand wired AC amplifier chassis which is transformer powered; a 4-pole, shaded pole, self-induced motor which minimizes "wow" and harmonic distortion; a 20 oz. statically and dynamically balanced flywheel, and, according to the manufacturer, the combination of the 4 pole motor and heavy flywheel gives the machine the lowest vibration rate of any recorder in the industry. Other features include a Nortronics head, a 4" round speaker, plus a 4" X 6" oval, plus a high frequency coaxial tweeter, straight-line tape threading, pushbutton controls, digital index counter, electron eye recording level indicator, monitor switch, pause control lever, and automatic shutoff. Prices: \$189.95 monophonic; \$219.95 stereophonic.

NEW SCOTCH TAPE



Minnesota Mining and Manufacturing Co., 900 Bush Ave., St. Paul 6, Minn. has added tensilized magnetic tape in two double-play lengths to "Scotch" brand's Tartan Series line. This double length, double strength tape dubbed brand No. 144 has a polyester backing only 6/10th mil thick. It costs \$4.50 for 1200 feet or \$7.95 for 2400 feet. All tapes in the Tartan Series line feature stereo quality high potency oxide coating with built-in silicone lubrication for smooth operation and protection against recording head wear.

COLLARO RECORDER



The Rockbar Corp., 650 Halstead Ave., Mamaroneck, N. Y., has announced the introduction of a new Collaro three speed, three motor tape transport. This tape deck unit is designed to connect to an existing music system. The speeds are 1 7/8, 3 3/4 and 7 1/2 ips. As a quarter track stereo/monaural recorder-reproducer, it contains separate heads for erasing, recording and monitoring. When equipped with a reproducing head only, it accommodates 4 track tapes. Other features include: band type brakes, low wow and flutter, full shielding on each of the three motors, head configurations available to suit individual requirements, and six jacks for input and output circuits. Price \$99.50 and up. Rockbar can supply more information.

NEW BUTOBA MODEL



Turning Corporation of America, 34 Park Row, New York 38, N. Y., announced the addition of Model MT-5 to the Butoba line of self-powered portable tape recorders. It is powered either by 4 ordinary flashlight batteries or a converter for 110-260V AC and 6V DC. Other features include dual tracks, dual speeds—3 3/4 and 1 7/8, 5" reels, playing time up to 4 hours per reel, response of 50-13,000 cps, push-button controls, fast forward and rewind, pause switch, separate volume and tone controls, recording level indicator, and tape count clock. The price is \$249.50. Write manufacturer for complete information.

TAPE IN EDUCATION

Robert C. Snyder

(This month's column is a continuation of a series begun in September on the theory and practice of instruction in modern foreign languages.)

LANGUAGE instruction must be considered first as a problem of *learning* rather than as a problem of *teaching*. In order to determine how to *teach* a language to learners of different ages or in different grades, it is first necessary to determine how the learner *learns* at those ages or in those grades.

Language learners are sometimes said to be divided into two principal groups, those learning a mother tongue for the first time, and those who already know a mother tongue and are now learning an additional language.

Attempting to establish a language learning system by considering only those learners at the extreme ends of the language learning scale seems to me to be far too limiting. I would suggest recognition of at least four levels of language learners.

The first, of course, is the individual who knows absolutely no language. In general, this type of learner is represented by the infant which is still so new to social experience that it has not yet acquired either understanding or use of any of the organized sound patterns that we know as speech.

The second level is that normally represented by the child of some months of age which has already learned patterns of behavior, but which does not yet have the ability to express itself readily. This learner is well aware of language and responds to words.

The third level is that represented by the young adolescent or late pre-adolescent which is learning words at a greater rate than concepts and which—at a certain point—may tend to know more words, *as words*, than it understands as completely developed concepts.

The fourth level is that represented by the relatively mature learner which has not only established an understanding of some substantial part of a mother tongue, but usually has also established some definite patterns of learning. These patterns may be conscious or unconscious, but—none-the-less—they constitute a habitual method of *approach* or, perhaps, *resistance* to dealing with new information.

Even these four generalized levels, however, do not begin to cover adequately the many levels of learners. In addition to degrees of pre-learning, such as the four outlined above, there are also degrees of learning aptitude, which usually vary greatly from subject to subject within the same individual.

So, we approach the infant as a language learner. Depending upon the aptitude of the individual, some infants learn to make

deliberate, organized sounds—recognizable as words—from an age of some weeks. Others do not come to the same point until they have reached an age of some months.

At this beginning point there appears to be no evidence that the infant learns one language more readily than another. The aptitude for language learning exists in greater or lesser degree in the individual with no apparent relationship to the particular first language being learned.

In fact, up to the age of two, three, or four years, many a child has begun to speak one language and then, through circumstances, has gone on to learn a totally different language. Frequently, when this happens early enough, the individual does not appear to retain any knowledge of the discontinued language. Evidently, the learning process has not proceeded far enough to make a permanent impression on the young child.

Even up to the age of four, five, six, or seven, experience shows that a child readily learns an additional language or languages in the same fashion it learned the first. No translation process is required and learning the second language is not dependent in any way upon use of the first.

The standard example of this situation is the young child brought up in a country which speaks a language different from that of the child's parents. From its parents, the child learns the so-called "mother tongue" with or without a deliberate program of instruction. At the same time, the child readily learns the second language "on the street" from its playmates and their elders.

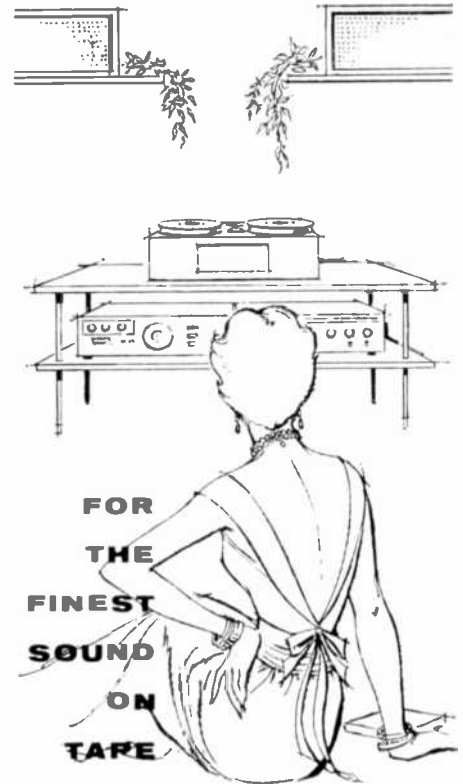
If the child goes on to school in the foreign country speaking the foreign language—and at the same time has an organized program of instruction in the mother language of its parents—the child will grow up bi-lingual, having fluency in two (or conceivably more) languages with almost no language learning by translation. Each language has been learned almost entirely directly in itself without reference to the other language.

Such bi-lingual people are not at all rare. They exist in nearly all countries at nearly all levels of literacy and intellect from the lowest illiterate laborer to the highest academic or professional levels.

Where such multi-lingual learning is possible from infancy or early childhood, it would appear to be an ideal way to learn more than one language.

But, such idealized situations do not generally exist. What, then, is the best method for teaching an additional language to the ordinary child which grows up in an essentially integrated community speaking only the one mother tongue?

(To be continued next month)



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QUESTIONS AND ANSWERS

Questions for this department may be sent by means of a postcard or letter. Please Address your queries to "Questions and Answers." TAPE RECORDING, Severna Park, Maryland. The most interesting and widely applicable questions will be used in this department.

Tape Storage

Q—About tape storage. Are metal cans and files unsatisfactory for storage of recorded tapes? What is the best composition to use for building storage cabinets? Why?

We know that tapes are sold on plastic reels rather than metal, perhaps for some specific reason other than weight, etc. We of course, have metal cans as well as storage cases for filing film but wonder about the advisability of storing recorded tapes in the same type material. We will appreciate your reply commenting on the storage situation.—I. W., Greeley, Colorado.

A—Metal cans and files are the best type of storage for tapes. If the tapes are kept in metal containers, such as those made by the Magnetic Shield Division, Perfection Mica Co., 1322 N. Elston Ave., Chicago 22, Ill., then the cabinets which hold them may be of any available material. Really valuable masters, data tapes, etc. are generally kept in vaults that are fireproof and sometimes air conditioned.

Stray magnetic fields from many sources, such as generators, power lines, motors and transformers, etc. can damage recordings by exerting an erasing effect or adding noise.

Because metal cans will protect the tape from these fields, it will prevent the recordings from being erased.

Tape is marketed on plastic reels because these are cheapest and have proved generally satisfactory over the years. Of course, as you mention, weight is also a consideration, especially in shipping.

The base of film and tape is generally the same material, cellulose acetate and what is good for one is good for the other. An exception to this exists in the case of Mylar or polyester base tapes which need no special protection from the effects of heat or humidity changes. But such tapes would still need magnetic protection if there is any chance that they would be exposed to stray magnetic fields. This condition most often occurs when tapes are transported where they may be exposed while in transit.

Optimum storage conditions call for a temperature of 60 to 70° F. at a humidity range of 40 to 60%. As with films, tapes destined for long storage, without use, should be sealed in the cans to prevent changes of humidity within the container.

Look Alikes

Q—It is common public knowledge that automobile manufacturers go to great length to spy and steal each other's design secrets. I have never thought about this in tape recorders until I saw the Magnecord 728 and the Newcomb SM-310. They look a lot alike. Could this be true or do you know?

Also can you tell me which one of these

machines was introduced first—who is America's oldest tape recorder manufacturer, Ampex or Magnecord?—B. M., Ft. Worth, Texas.

A—We doubt very much that there is any design stealing in the tape recording industry as there is no reason for it. Automobiles have reached the point where they look very much alike, in fact, it is sometimes difficult to tell the front from the back. Hence, small details and design changes could be important to sales. Tape recorders have not yet reached this point so any similarities are more coincidental than deliberate.

The oldest tape recorder manufacturer was Brush, now part of the Clevite Corporation. They marketed the Soundmirror in 1937 which used steel tape.

In 1939 Brush was marketing paper tapes with the black oxide coating.

In 1947 Minnesota Mining developed the first red oxide plastic tape and in the same year Amplifier Corporation of America, Sound Recorder and Reproducer Co., Brush Development Co., Rangertone and Webster Electric were making tape recorders.

Magnecord was formed in 1946 and the first tape recorder was shown in May 1948. Ampex was in the business of building electric motors at the close of the war and when they saw the Magnetophone that John T. Mullin had brought back from Germany they knew it was for them. Their first machine was patterned after the German device and delivered to Bing Crosby in April 1948. ABC bought 12 at \$5200 each and then 12 more. Capitol records bought two and the dam had burst since now both tape and machines were in supply. 1948 also saw the introduction of the Berlant Concertone, the Crestwood, International Electronics "Reeles" and the Stancil Hoffman Minitape.

Warped Reels

Q—I picked up a copy of your magazine on a local newstand and enjoyed it very much. I wonder if you could send me some information concerning the following problem.

I have a number of pre-recorded tapes and these, as well as some of my other reels, seem to be somewhat warped. When I play the tapes there appears a very annoying squeak. Is there something I can do to fix this?—M. J. C., Green Bay, Wisconsin.

A—If the reels are badly warped we would suggest that you purchase new empty reels and spool the tapes onto them. Then discard the warped reels. If the reels rub the recorder deck and cause the squeak, it is sometimes possible to place a piece of cardboard under them to raise them slightly, but mostly the squeak comes from the tape hitting the edges of the reel. For this there is no cure except new reels.

FEEDBACK

Excerpts from readers' letters will be used in this column.

Address all correspondence to: The Editor: TAPE RECORDING, Severna Park, Maryland

Wanta Argue?

To the Editor:

Often people wonder why it is that a record that has been copied onto tape sounds better than it did when the record itself was played. Not having seen the explanation kicked around lately I will offer one and maybe I can start an argument.

If one plays a record having plenty of dynamic range and turns off the volume control, entirely nothing, and I mean *nothing* should be audible. Usually there is a certain amount of residual chatter or rasping heard and while this is much lower than it used to be in the days of heavy pickups some of it still remains. Years ago it was called "needle talk." When I was with RCA this was investigated quite thoroughly and surprisingly enough it does not come from the pickup or needle, the moving surfaces are too small to produce much sound pressure. It is the result of a wave of mechanical displacement within the record disc itself, resulting from the reaction of the mechanical impedance of the moving armature system of the pickup which produces various forces against the record surface at an audio rate. A wave is propagated throughout the record material and is radiated from all parts of the surface. Of course there are no low frequencies because of insufficient amplitude and lack of baffling. The air borne sounds, worse luck, contain a large component that is at double frequency, because of "pinch effect" when a spherical stylus attempts to follow a groove cut with a plane faced chisel-like recording stylus. This frequency doubling, of course, coincides with nothing in the original music hence it is simply gross distortion.

How this source of noise was traced might be of interest. Tiny microphones placed close to the pickup revealed it was not originating there but when the same microphone was brought near the record surface there it was. Records were greased down to a heavy steel turntable and the upper surface covered with thick grease and felt except the grooves that were being played, resulting in an almost complete suppression of the unwanted sounds. The two pickup method was also tried, in which one pickup plays in a music groove and the other in a blank groove. The mass reaction forces produced against the record surface by the first pickup are heard in the amplified output of the second. The first pickup is not connected to an amplifier, of course, in this test.

As to the nuisance value of this distortion let it be said that the louder a record is played the less objectionable it becomes and conversely if the record is played softly it is much worse since the air borne distortion, which is not coming from the loudspeaker, but as the crow flies, is effectively louder. The wanted music does not drown it out as much. Old phonographs used to have lids to stop the non-

sense. Modern turntables are thought to not need such treatment because the racket has been reduced. But has it been eliminated? I think not.

If the air borne distortion can be heard at all under any condition of listening it is probably equivalent to at least 5% total rms distortion, for that used to be the figure at which waveform distortion was considered to become audible to the average person. Now we have better ears and there are those who claim to be able to hear 1% and consequently amplifiers have been researched to death producing only a fraction of that amount. If this is not straining at gnats and swallowing elephants what is?

There are three ways to eliminate this form of disturbing noise which immediately come to mind. One is to put the record player in a box. The second is don't play records. The third is re-record them on tape, but not with a microphone.

This all comes under the heading of "disgusting discoveries" the result of living a number of years. Maybe you would like to get me started on the subject of relative distortion of hill and dale vs lateral cut disc records. Vertical records finally gave up and were replaced by lateral, simply on the basis of the greater distortion of the former. Scientists investigated this thoroughly and numerous papers were presented at technical meetings covering the subject with accompanying mathematics in staggering amounts. No one ever hears about vertical recording any more. Now it's called stereo. (Two vertically cut tracks slanted at 90 degrees). How do you want your elephants cooked?

There may be something wrong with tape but I haven't found it yet.—H. J. Hasbronck. Teaneck, N. J.

A Dealer Replies

To the Editor:

I have just read Mr. Cade's letter in the Feedback column of the November issue in regard to wanting to buy tapes but being unable to listen to them before buying them.

I am a UST tape dealer and would like to make an offer to Mr. Cade or anyone else who might be interested in purchasing tapes. I will ship a tape to anyone at list price and they in turn can keep it and play it as much as they wish for a period of three days. At the end of this period they may return the tape for exchange, if they don't like it, or, if nothing else will satisfy them, I will make a full refund, short of a small charge for shipping and postage, which should run about 35c per tape. This is of course, with the provision that the tape is not damaged by breaks, or partial erasure. I think this is a fair offer and should promote the sale of tapes to anyone who is interested in purchasing same. — Bob's Tape Service, P. O. Box 13325, Fort Worth, 18, Texas.



WEBCOR IS BUILT

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Now you can record and play back all the sounds of life—on one self-contained tape recorder! The Webcor *REGENT CORONET* is professionally engineered for three-speed 4-track stereo (and monaural) record and playback, as well as the new learning tool, Add-Track. This enables you to record a second track while listening to a first track, and play back both simultaneously—for language or music study. Two each—wide range speakers, stereo microphones, volume controls. Dual-channel amplifier, tape counter, VU recording level meter, and lots more. Webcor tape recorders start at \$139.95—slightly higher South and West.

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Test these exclusive advantages by buying and trying a reel of your favorite brand of tape made of "Mylar". Want to make a recording fan happy this Christmas? Give him tapes of "Mylar". The Du Pont Co., Wilmington 98, Delaware.



*"Mylar" is Du Pont's registered trademark for its brand of polyester film. Du Pont manufactures "Mylar", not finished magnetic recording tape. All manufacturers make tapes of "Mylar".



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Note: New low prices on heavy-duty tapes of "Mylar" give you their advantages at a cost just a trifle higher than ordinary tapes

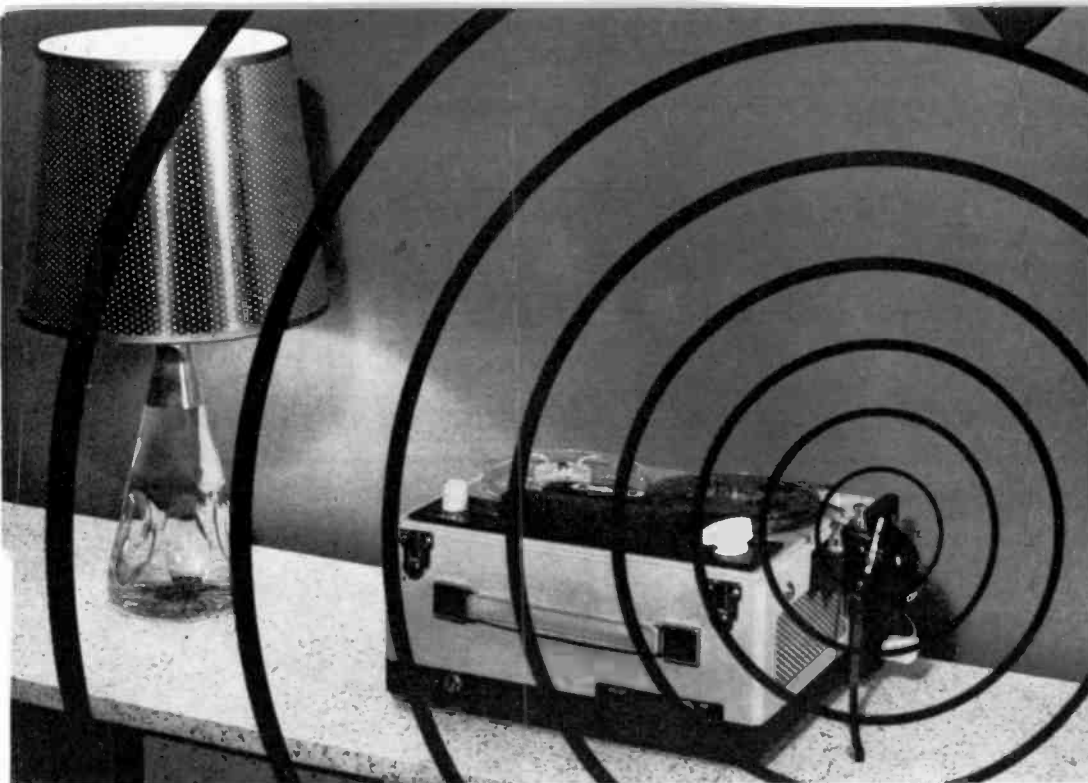


Fig. 1—Brr-rr-riiinggg! That's the alarm buzzer going off, letting you know in no uncertain terms that the tape is finished. Easily assembled and hooked to your recorder, this shut-off/alarm is always ready for immediate use. With or without the alarm, it completely shuts off your recorder when the tape reaches the end.

Add A Shut-Off Alarm to Your Recorder

by Tommy Thomas

... costing only a few dollars, this device is simple and positive.

WHEN'S the last time you forgot you had a reel of music playing on your recorder . . . only to come back later to find it spinning and flapping madly because you hadn't been around to turn it off at the exact second it came to the end? Or maybe you were out of the room during the unhappy moment when a section of overstressed tape decided to snap in mid-reel, causing the machine to "take off" like a regular dervish? Of course, if you have one of the more expensive types of recorders (complete with automatic shut-off), then this isn't your problem and you can skip on to the next article. This particular news is directed toward us "lesser fortunates," who have recorders lacking this luxury feature.

Fortunately for us, the Acro Division of the Robertshaw-Fulton Controls Company has come to our rescue. They recently added a special *tape recorder cut-off switch* to their line of excellent miniature snap-action switches. The tiny device (Fig. 3) incorporates a white, non-magnetic nylon leaf with rounded surfaces, around which the recording tape passes. As long as the tape pressure is maintained, the switch remains on. But the moment the tape is at an end, or breaks, the pressure is released and the switch automatically reverts to its off position. (The hook-up can be reversed, as you will see further on.)

This is a wonderful thing! For it means that now, for just a few dollars and a little bit of ingenuity on your part, you can advance your "old" recorder another notch up the scale of convenience. In fact, you can not only add *this* luxury shut-off feature, but you can also add an *alarm system that even the most expensive recorders do NOT have.*

Here's how it works!

I discovered a long time ago the convenience of having a long microphone cord to work with. My crystal mike is hooked up to 32 feet of cable so that I can leave the recorder in the den and wander around a goodly portion of our house, recording as I go. This makes for practically a portable effect, whether around our own home or when



Fig. 2—The shut-off/alarm is fastened semi-permanently to the side of the recorder. To put it into use at any time, just thread the tape around the guide posts before going on to the take-up reel and flip on one or both of the toggle switches. Here the tape has come to the end, releasing its pressure on the white switch actuator, hence stopping the machine.

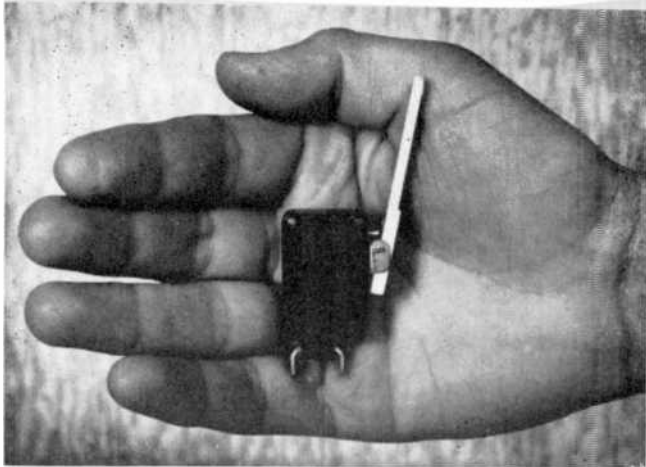


Fig. 3—This tiny, specially designed recorder switch is UL approved at 3 amperes, 250 V.A.C., which is more than ample for handling the needs of your recorder. The main body of the switch is less than 1/2" in length, with the non-magnetic nylon "leaf" adding another 1/4" to this, and it's only 1/4-inch thick.

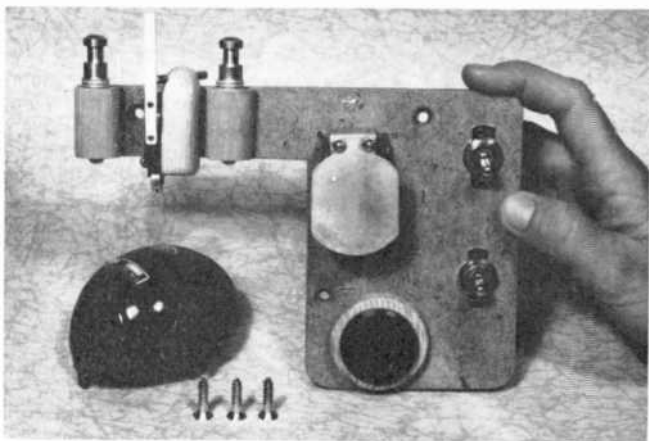


Fig. 4—This is the complete (though unpainted and unwired) assembly showing the parts mounted on the masonite board. The Acro switch is at the upper left, between the two guide posts. It's a good idea to leave the buzzer housing off not only for painting but until the wiring is completed and the unit tested. Then, if you wish to make any adjustment of the tone, it can still be done easily.

I take my recorder to parties, basketball games, bowling alleys, etc. But, and it's a big "BUT," I soon discovered that a major disadvantage of this system was the fact that I did not always know when I'd run out of tape. Once out of sight of your recorder, it's easy to lose track of time and not realize that you have used up your tape and are no longer recording. It's sometimes quite a shock, coming back to your machine and finding the reel of tape flapping, with lots of material completely unrecorded.

Again, the same Acro switch comes to the rescue. For you can hook it up so that it not only turns the recorder completely OFF when the end of the reel of tape is reached, but it can also TURN ON a small buzzer or alarm bell that will signal you (off recording elsewhere) that you've run out of tape.

Pretty keen, huh?

Now let's get down to the actual assembly of the device that you will need. Each recorder is different, so I won't attempt to give you plans to *exactly* fit your particular type. You'll have to note what was done here, and work accordingly, changing things here and there to fit your own machine, and perhaps to include a few ideas of your own. The perfect system, of course, is to incorporate the switch and all the other parts *inside* the recorder (more about that later). But, unless you have a rather extensive shop to work

in, and experience along these lines, this will likely be beyond most of you (and me). Also, your recorder may not be able to spare the extra room. So, let's make an "outrigger" affair, that can be fastened to the side of the recorder as inconspicuously as possible. This can be done quite neatly with simple tools and, by finishing up with a special "wrinkle" varnish, you can end up with a handsome piece of apparatus that will have a most professional appearance.

THE BASIC SUPPORT—I decided right at the start that this shut-off/alarm system was important enough so that I would want to leave it hooked up to my recorder practically full time. Therefore I designed it to fasten to the outside of the case semi-permanently with three wood screws, and in such a way that the lid of the recorder would still fit on unimpeded, as before. It looked a bit "strange," at first, attached to the outside of the recorder that way, but now I'm so used to it that I don't even notice. In fact, it's so useful and handy that I'd feel lost without it, and it would now seem strange NOT to have it there ready for immediate use. Anyway, however you decide to make the supporting board, notice that it must hold the tape guides and the white switch "actuator" in perfect alignment with the *take-up* reel of the recorder. Also, be sure that you don't unnecessarily block a loudspeaker or ventilation grill. And, naturally, make it large enough to conveniently hold all the necessary parts. The form shown here (Fig. 4) was made with all this in mind. I used ordinary 1/4"-thick masonite for the front part, with 1/8-inch masonite glued here and there to the back (Fig. 6) so as to give me that extra depth for "run-ways" for my wires. The various parts were glued and/or screwed to the masonite support as shown in the accompanying photos.

THE CUT-OFF SWITCH—As mentioned before, this switch was especially designed for recorder use by the Robertshaw-Fulton Controls Company (Acro Division, 2040 E. Main St., Columbus 16, Ohio). Ask for the Model "CM" Tape Recorder Cut-Off Switch, for \$1.75 plus 10c postage. The nylon leaf, being completely non-magnetic, will not affect the tape as it passes across its smooth surface.



Fig. 5—So that the tape will "ride" easily between the guide posts and over the white switch actuator, it's essential that it be kept exactly upright (at a perfect right angle to the flow of the tape) when pressure is applied by the tape. Here, a set-screw acts as a "stop" and permanently keeps the actuator from going beyond the desired 90° position.

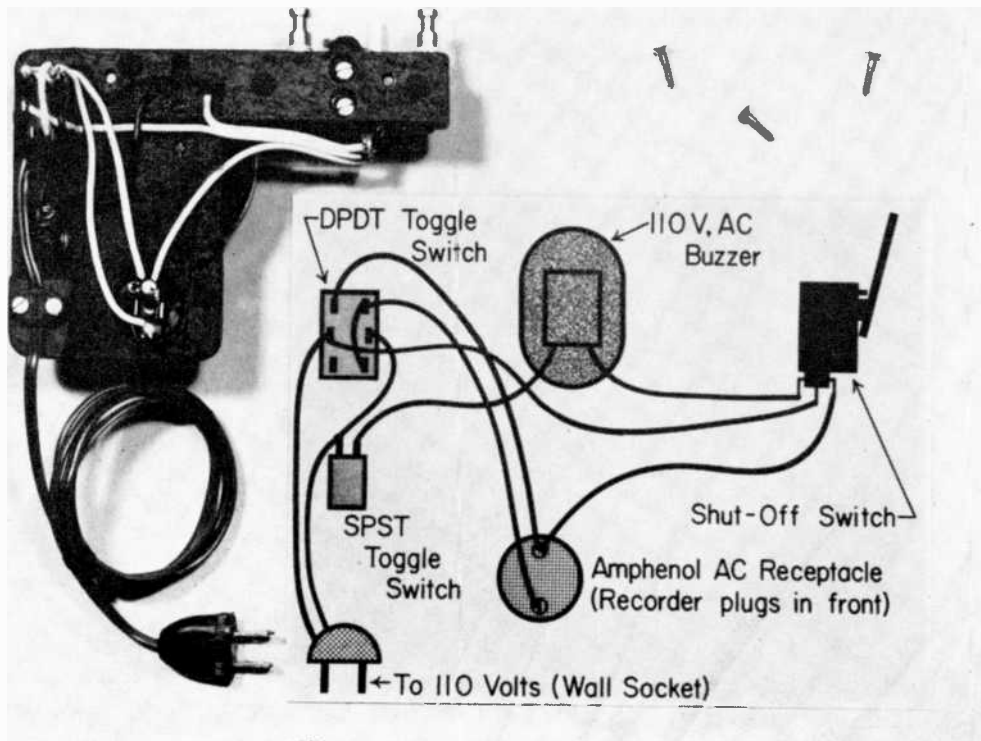


Fig. 6—This is the rear of the assembly, complete with corresponding wiring diagram. If you wish, for any reason, you could replace the buzzer alarm with another 110-volt device to be turned on . . . such as a socket and red "warning" light bulb. Or both could go on. Or you might even want to eliminate the buzzer idea completely, in which case you can leave off the SPST toggle switch also.

And the pressure needed to actuate this switch is extremely light, therefore—when once correctly aligned—there is no undue strain added that might slow down or otherwise adversely affect the passage of the tape. Notice that the switch has been fastened so that the white nylon leaf is sticking up at an *exact right angle to the flow of the tape*. This is accomplished in two directions: (1) the switch itself is fastened at right angles to the recorder case, which makes for convenience mostly, and—*very importantly*—(2) a "stop" is located immediately behind the nylon leaf (Fig. 5) so that this leaf will only travel far enough so as to reach a 90° position. The way I have it hooked up here, it reaches this point and is stopped in position *just after* it actually activates the tiny switch. Later, if you wish, you can saw off any excess of the white nylon if it extends up too far. I cut mine down so that it was only a quarter inch higher than the tape . . . for greater ease in all future "threadings."

TAPE GUIDE POSTS—These are absolutely necessary if you are to keep the tape in good alignment horizontally. The goal here is to lead the tape from the head/capstan position, past and around the nylon switch leaf, and back to the take-up reel without letting it "drop" down. Too much of a drop (and it doesn't take much to be *too* much) and you're asking for trouble. Either the tape will be pulled away from correct alignment across the tape head(s), and/or it will start scraping the sides of the take-up reel, making extra noise and perhaps other trouble. Actually, these tape guide posts are quite easily installed . . . being mostly a matter of deciding *where* they should be placed (and this is not very critical except in the up-and-down position, which can be adjusted later with aluminum washers placed under the guides). The posts are available from the Nortronics Co., 1015 So. Sixth St., Minn. 4, Minn. There are two models available. The TG-5, at 70c, which is a chrome-plated brass tape guide post, with rapped hole in base. And the TG-6, for \$1, with nylon anti-friction roller, to be used where the tape travel angles

very severely. But unless the tape *really* doubles back well beyond a 90° angle, the TG-5 posts are to be preferred, as they were here. Also, if you need longer screws for mounting than are supplied with the posts, it's a standard thread that can be duplicated in almost any length at your hardware.

110-VOLT AC BUZZER—Small 110-volt AC bells and buzzers are hard to locate, I discovered. The regular door-bell types sold in dime stores and hardwares are from 6-10 volts, and necessitate the addition of a bulky, two-or-three buck transformer so as to work off 110 volts as is necessary here. I finally located just what I was looking for at the Lafayette Radio Electronics Corp., 165-08 Liberty Ave., Jamaica 33, N.Y. It's an imported buzzer (Model EL-86,



Fig. 7—The completed unit again, fastened to the recorder with three wood screws (also painted). Notice that the white wire and plug coming from the recorder go directly to the amphenol receptacle. And that the plug from the shut-off/alarm—and not from the recorder directly—goes over to a 110-volt AC wall socket. The special "wrinkle" varnish presents a professional appearance.

Fig. 8—The ideal situation is where you can make the special cut-off switch and the rest of the items an integral part of the recorder . . . though this is much easier said than done. Here the tiny Acro switch has been mounted mostly beneath the tape deck, and in a very convenient position for effortless tape threading. This accomplished, getting any other "hardware" out of sight is easy.



\$1.29 plus postage on 10 oz.) and it's *Extra Loud*. If you should find this *too loud* you can reduce the sound by taking off the outer shell and bending the "clapper" back and forth a bit, or even by putting a piece of tape against where it hits. Personally, I like the loud noise because it reaches me never-faillingly all through the house, even when I'm behind a closed door making a recording . . . and it's especially great during noisy parties or at a howling basketball game.

THE OTHER ITEMS—These can be obtained at your local hardware store (items such as wire, a male 110-volt plug and even the simple SPST toggle switch) and at various local or mailorder electronics supply houses. Lafayette has a terrific buy on a heavy duty 6-amp DPDT toggle switch: their No. SW-22 for 32c plus 6 oz. postage. And I had to go to the Allied Radio Corp., 100 N. Western Ave., Chicago 80, Ill., for the following two items. The Amphenol AC Receptacle, Cat. No. 40H682, Type 61-F1, 29c, 3 oz. And the special No. 60 "Ruf-Koar" Varnish, Cat. No. 43N480 (black), No. 43N481 (brown) or No. 43N482 (gray), 82c, 8 oz. shpg. wt. This is the air-drying wrinkle varnish—the same type as used by manufacturers on their own equipment—that brushes on easily and turns out so well that even the most homemade looking device gains quite a professional appearance. I used three coats of the brown, and it worked out most handsomely.

By the way, be sure to notice that the alarm buzzer is controlled *independently* by the SPST toggle switch. The main control (which shuts the recorder completely off when the tape is through) is the one used most often, and the alarm switched in only when needed for a special purpose, as previously noted.

MOUNTING INTERNALLY—It takes a bit of ingenuity to figure out the best way to add one of these switches "internally" such as was so neatly done on the Revere recorder shown here (Figs. 8 & 9), but it can be done, and the convenience it affords more than compensates for any inconvenience encountered in mounting.

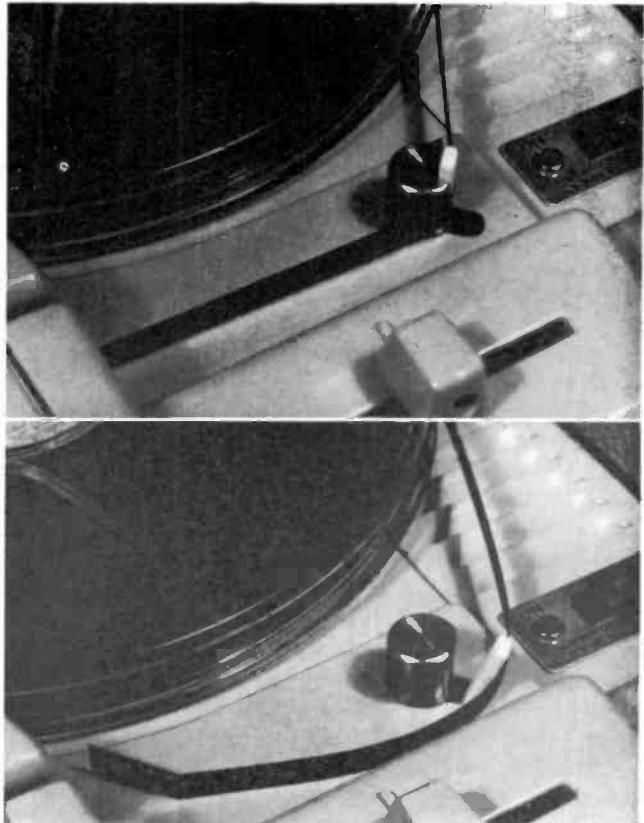
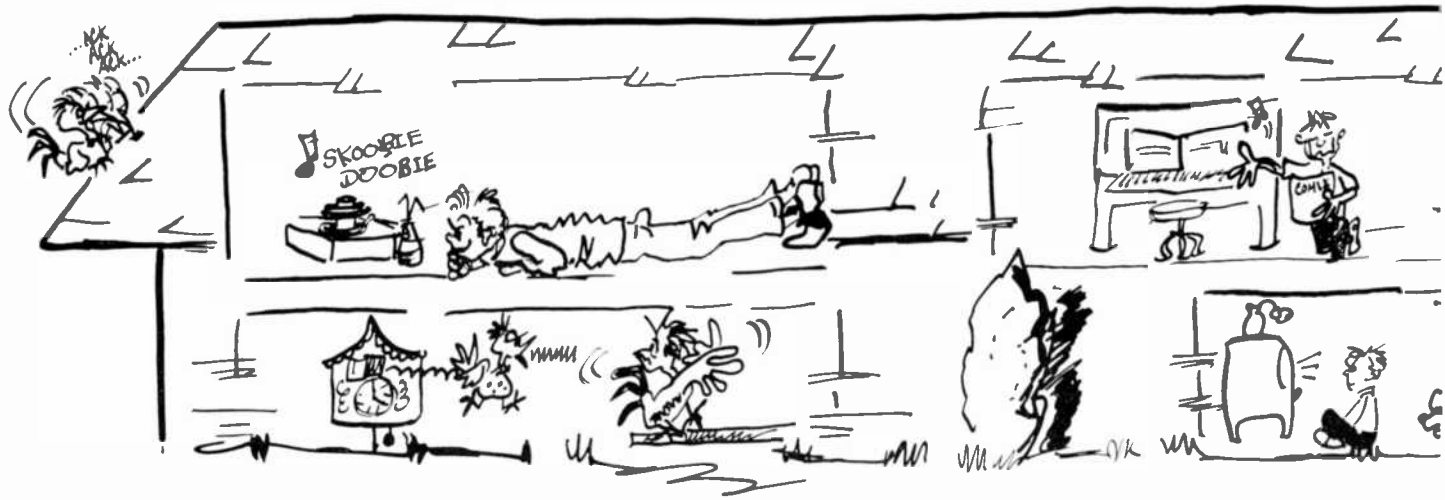


Fig. 9a, top: Notice that the passage of the tape from the head/capstan area to the take-up reel has been interrupted hardly at all by the addition of the cut-off switch. A cylindrical piece of brass (both durable and non-magnetic) has a notch cut into it, recessed for the white switch actuator. This acts both as a "stop" for the actuator, and forms a smooth surface for the tape detour.

Fig. 9b, bottom: The moment the tape comes to the end, or breaks, the pressure on the switch is released and the entire recorder goes off instantly. An alternative arrangement is to wire the switch so as to cut off only the motor moving the tape. One advantage to this is that it gets you back to the machine more quickly, letting you release the capstan pressure sooner (always a good idea).



RECORDING THE

DO you live in a city apartment where the roar of traffic, the honk of taxis and the gabble of pedestrians comes floating through the window?

Or do you live in the suburbs where the sound of steaks broiling on the outdoor grille, the chatter of birds, the wailing of the volunteer fire company siren and the songs of the crickets and katydids are about the only disturbers of the peace?

Or do you live still further out in exurbia, or the open county where the coughing of the wind, the clank of your water pump or the gay haloo and yoicks of the fox hunters resound as they tear across your melon patch? Sometimes it is so quiet you can hear things happening a half-mile away.

Or perhaps you live near the water and hear the whine of the 75 horsepower outboard motors on a 14 foot boat. Or the "oof" of the water skier as he slams into the pier, or maybe its just the occasional splat of a leaping fish or the gentle lap of waves on the beach that disturbs your stillness.

No matter where you live, your home is in the center of a barrage of sound waves of one kind or another. They are characteristic of your location and, indeed, of your own household.

Your refrigerator probably has a characteristic sound when it switches on, your vacuum cleaner in your room, on your rugs, will sound like no other one. The sound of your leaking faucet or bathroom plumbing are equally characteristic of your place.

Your children, your TV, your oil burner, your pets, become such familiar sounds that you no longer hear them. But it might pay you to really listen.

This is accomplished by sitting in a comfortable chair closing the eyes and opening the ears. Every sound that reaches you should be listened to intently. We would be

willing to wager that you will be surprised at the number of distinctly different sounds you will hear.

Somewhere in your snapshot album you probably have a picture of your house. The object of the exercise outlined in the preceding paragraph was to help in determining how a sound picture of your home would shape up.

Just as a photographer must select the right angle from which to shoot his picture, which he determines by viewing his subject from all angles, so the sound hunter must make a similar beginning by determining what sounds are available and characteristic.

It might be well to make a list of the sounds which, to you, would paint a picture of your home.

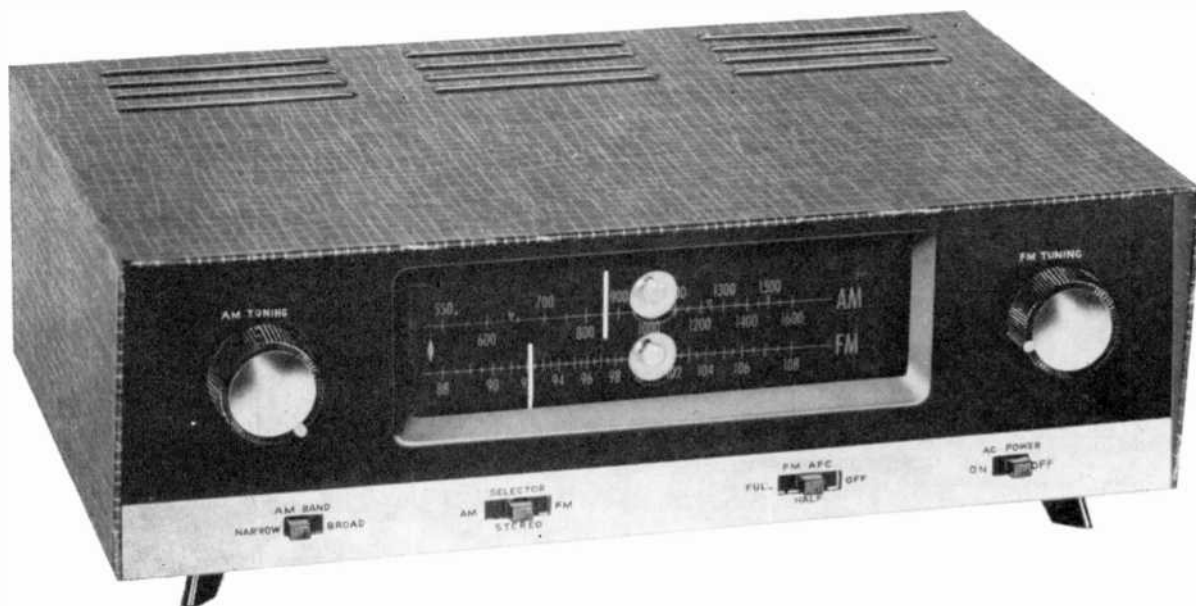
Just as a photographer must consider the perspective of his picture, so must the recordist consider the sound perspective, and his job is a bit harder than that of the photographer.

For instance, let us suppose that you are a suburban dweller in an area served by a volunteer fire company. The fire siren on the firehouse may be a mile or more from you.

If you were to determine that this sound was one which should be made part of the record, then you would have to determine the perspective at which you would record it to get the effect you wanted. You might go to the firehouse and make the recording but the odds are that this close-up perspective would give the impression that you lived next door to the place.

Recording it from your own home might hit it right on the nose, insofar as volume and surrounding sounds are concerned or it might not, for a microphone is not as sensitive as a human ear. Possibly you would have to make the recording somewhere between your home and the firehouse to get on the tape the kind of sound you wanted.

This same determination of sound perspective also ap-



A TUNER FOR YOUR TAPER

. . . Heathkit AJ-10 AM-FM Stereo Tuner proves to be a hot rig after construction according to directions.

“WHO me put a kit together? Are you out of your mind?”

This was the reaction of an acquaintance to whom we had made the suggestion.

But we conned him into it anyhow so we could do this story. When the kit arrived (a Heathkit AJ-10 AM-FM Stereo Tuner) his wife took one look at the pile of parts and opined that he'd never get it together. A friend who stopped in took a look also and agreed with his wife.

The chap in question had never done anything of this kind. About the whys and wherefores of electronics, or the innards of radio sets he knew nothing.

It would have been simpler had the kit been a simple one but the AJ-10 has both an AM and an FM section using a common power supply. This is the kind of kit that makes a man of you all at once.

Other than to admonish him to follow the directions to the letter, we gave no help whatever, during the construction of the kit.

Our object in all of this, of course, was to find out if an ordinary mortal could put one of these kits together and come out on top. Kits can save money for the builder and there are lots of them, such as amplifiers, speakers and tuners, that can be used very well in conjunction with a tape recorder.

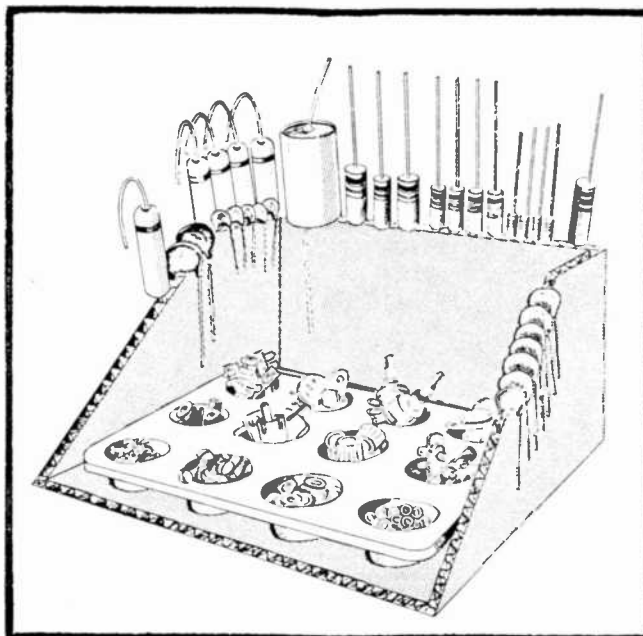
Bolting the pieces, sockets, condensers, etc. to the chassis is no more difficult than putting together an erector set, for the large diagrams supplied with the direction booklet show exactly where each piece goes and even tell which bolts and nuts to use.

Once all the pieces are attached, the next job is the wiring. This, likewise, is done following pictorial type diagrams and each step of the way is described in the

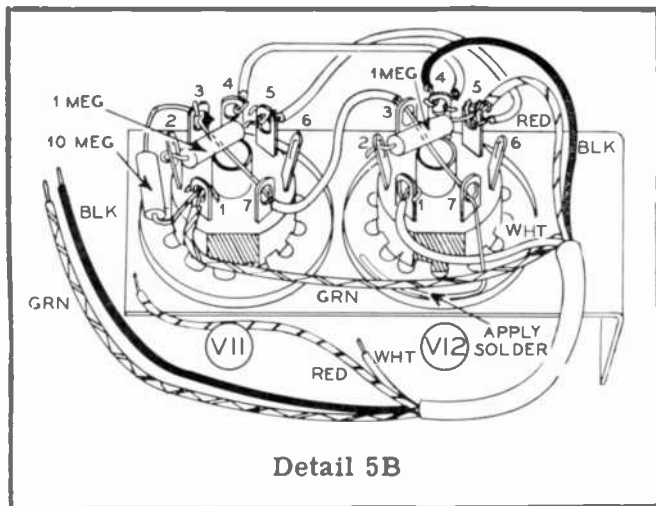
text like this: (and we quote right from the book).

“() Trim each lead of a 100 K resistor (brown-black-yellow) to 1½” and connect between lug 3 of transformer T7 (S-2) and the center ground post of tube socket V9 (NS).”

The parenthesis is checked off when the particular step is completed. You'll note that the resistor is described, the cutoff length specified, and the connections points



A corrugated paper box cut as shown makes a handy sorter for kit parts. A muffin tin placed between the side walls is used to hold the larger parts.



Where the going gets complicated, the directions contain exploded views such as that shown above. The point-to-point wiring is not at all difficult.

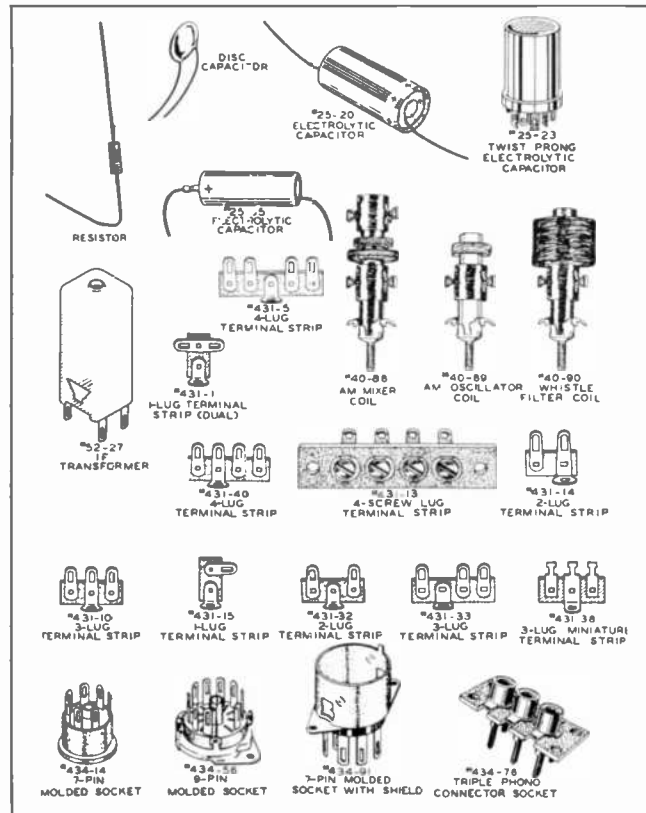
named. These are readily identified from the drawings. The "(S-2)" indicates that there are now 2 wires at this point and should be soldered. The "(NS)" indicates that the connections are made but not soldered because additional connections must be made before solder is applied.

If this point to point wiring is done with care and the directions followed and if each step is checked there is no reason why a perfect job cannot be done.

Our acquaintance ran into trouble with his solder. The Heathkit manual calls for "ROSIN CORE RADIO SOLDER." He got rosin core but it wasn't radio solder which is of small diameter and melts easily. As a consequence his soldered joints were not of the best and caused some trouble later.

When a kit is completely wired it is plugged in and turned on. This, to avid kit builders, is known as the "smoke test." If something is not wired right, smoke may come up—in which case you pull the plug but fast. In our acquaintance's case, the fuse in the tuner blew out—so he brought it to us.

We found that most of the difficulty had come about because of the poor solder which had shorted by flowing where it should not have been. A careful circuit check uncovered a few mistakes in the wiring which were corrected easily. The unit then performed like a good tuner

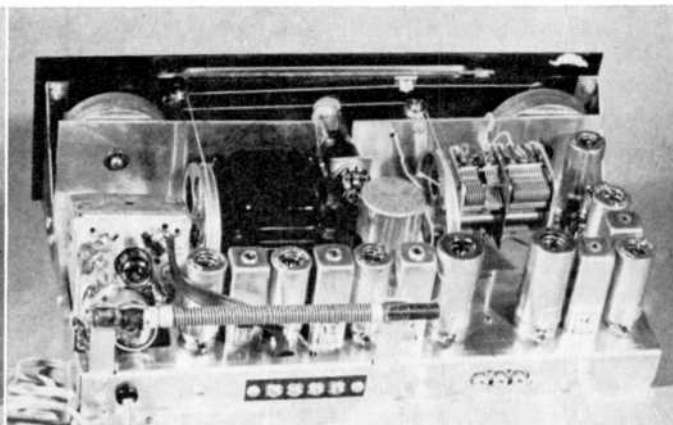
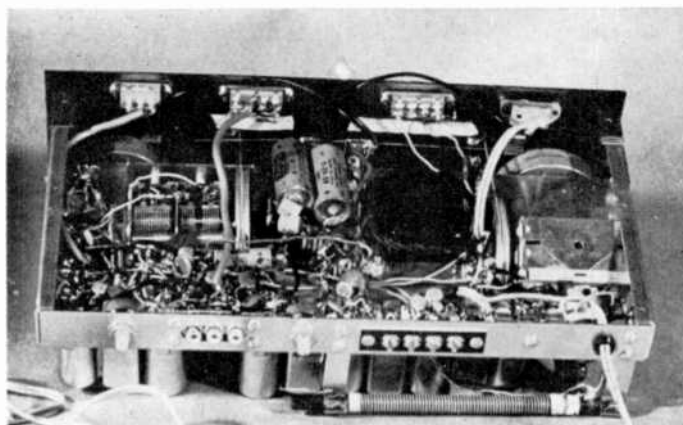


Afraid that you won't know a resistor from a capacitor, from an antenna coil—no sweat, for they are all pictured in the direction booklet so you'll know what's what.

should. For instance, we pulled in 21 different FM stations and scads of AM. This is a sweet little tuner.

Should a novice attempt a kit? We think so if he will follow the directions and work with care. If it fails to work and the trouble cannot be located, it may be returned to the factory where, for a nominal charge, the trouble will be located and fixed. Kits are fun to put together and provide a great deal of personal satisfaction when the job is done.

Our acquaintance now believes this too, in fact he is now talking about tackling an amplifier to go with the tuner. His wife is very pleased with the fine sound. (PS—wives make excellent solderers and wirers, too, and one is almost a necessity when stringing the blanket-blank dial cord).



If you look at the wiring in a radio after it is completed you wonder how on earth anyone ever managed to do it but just as a building is put together one brick at a time, so the parts are added in kit construction. Right: top side of the Heath AJ-10 showing neat arrangement of parts.



Cream of

... our selections of some of the best recorded tapes now available.

WITH Christmas just around the corner, tape enthusiasts may want to make plans for Christmas tape purchases they'll be making, both for themselves and for their friends. The staff of TAPE RECORDING MAGAZINE has selected the following as the "Cream of the Crop"—the best tapes currently available in all categories mostly on four-track, 7½ ips tape. All of these tapes are certain to delight the audiophile and the music lover as well, with the highest technical quality and stereo effectiveness, and performances to match. Because a particular tape *isn't* on this list doesn't necessarily mean it shouldn't be, but you can be certain you won't go wrong on any of the following. These selections are top tapes available as of this writing. Other fine releases are being issued daily.

SYMPHONY

Starting with the standard classical repertory, we suggest the new Everest Twin-Pack of the Beethoven *Symphony No. 3 "Eroica"* and *Symphony No. 7* (TT 43-005, \$11.95), played by the London Symphony Orchestra conducted by Josef Krips, which is a convenient coupling and should be a staple in any basic tape library. Hermann Scherchen's treatment of the Haydn *Military Symphony* is well-known to hi-fi enthusiasts since the early days of Westminster, and here it is now in stereo coupled with the same composer's *Symphony No. 45* (Westminster C 130, \$7.95). For two more standard symphonies, Leopold Ludwig conducts the London Symphony Orchestra in Mozart's *Symphony No. 40* and Schubert's *Unfinished* (Everest T4-3036, \$7.95). Rafael Kubelik conducts the Vienna Philharmonic Orchestra in the *Third* and *Fourth Symphonies* of Brahms on London (CK 80055, \$11.95). Even in this Mahler year, there are only three of his ten symphonies on four-track tape, Boult's version of the *Symphony No. 1* (Everest T4-3005, \$7.95), the *Symphony No. 2*, with two soloists and chorus conducted by Hermann Scherchen (Westminster WTP 139, \$11.95), and Reiner's rather cold-blooded *Symphony No. 4* (RCA FTC 2027, \$8.95).

Perhaps soon we'll have good recordings of the *Third* and *Eighth* symphonies, both of which with their scoring

for large orchestra and chorus cry out for stereo. In the modern symphony repertory, you can hear Stokowski at his best in two symphonies of Dimitri Shostakovitch, the *Symphony No. 1* (United Artists UATC 2209, \$7.95, also containing two other brief works of Shostakovitch), and the *Symphony No. 5* (Everest T4-3010, \$7.95).

For less-familiar but easily accessible Tchaikovsky, try his *Manfred Symphony*, with Sir Eugene Goossens conducting the London Symphony, a tape guaranteed to test any equipment (Everest T4-3035, \$7.95). Strangely enough, there are at the present time no particularly outstanding tapes of the most popular Tchaikovsky symphonies, the 4th, 5th and 6th.

One of the most important American symphonies is Aaron Copland's *Third*, which is available with the composer conducting the London Symphony Orchestra (Everest T4-3018, \$7.95). No list would be complete without that hi-fi favorite, Saint-Saens' *Organ Symphony*, with Paul Paray conducting the Detroit Symphony Orchestra (Mercury STC 90012, \$7.95), a good, if not ideal, performance and recording.

CONCERTOS

The superb Brahms *Concerto No. 1* with Leon Fleisher as pianist and the Cleveland Orchestra conducted by George Szell, is now available on tape (Epic EC 802, \$7.95). Peter Katin's versions of the Rachmaninoff *Second Concerto* and *Tchaikovsky Concerto No. 1* are real bargains on Richmond at only \$4.95 each (RCH 40002 and RCH 40003). Van Cliburn's Rachmaninoff *Third* from the Carnegie Hall performance (RCA FTC 2001, \$8.95) belongs in every tape library for the extraordinary performance, despite non-sensational sound. The Jascha Heifetz recording of the Sibelius *Violin Concerto* on Victor (FTC 2011, \$8.95) could be highly recommended if it weren't for the fine Ricci tape (London LCK 80046, \$11.95) which contains both the Sibelius *Concerto* and Lalo's *Symphonie Espagnole*, each uninterrupted and costing only \$3 more for the two. Erica Morini's fine coupling of the Brahms and Tchaikovsky *D Major Violin Concertos* is on Westminster (P125, \$11.95), and Rudolf Serkin has a dazzling



the Crop

by Robert E. Benson

new release of the two Mendelssohn *Piano Concertos* on Columbia (MQ 308, \$7.95).

For something unusual in the area of concertos, try the Rodrigo *Guitar Concerto* coupled with de Falla's *Nights in the Gardens of Spain* (London LCL 80010, \$7.95). Also novel is Dohnányi's *Variations on a Nursery Tune* for piano and orchestra played by Julius Katchen, with Sir Adrian Boult conducting the London Philharmonic, on London (LCL 80036, \$7.95), paired with Rachmaninoff's *Rhapsody on a Theme of Paganini*. If you prefer lighter listening, you can't go wrong with a tape called "*Concertos Under the Stars*" (Capitol ZP8326, \$7.98), featuring pianist Leonard Pennario with the Hollywood Bowl Symphony Orchestra conducted by Carmen Dragon, including such favorites as the *Cornish Rhapsody* and *Warsaw Concerto*.

MISCELLANEOUS ORCHESTRAL

One of the greatest bargains on tape is the Everest coupling of *Pictures at an Exhibition*, *A Night on Bald Mountain*, Prokofiev's *Lt. Kije Suite*, and the *Ninth Symphony* of Shostakovich, all with Sir Malcolm Sargent conducting the London Symphony Orchestra (TT 43-004, \$11.95). Bartók's exciting *Concerto for Orchestra* is available on a fine Vox tape (XTC 704, \$7.95) with Heinrich Hollreiser conducting, and Epic has a definitive tape of the Van Beinum-Concertgebouw Orchestra performance of Handel's complete *Water Music* (EC 803, \$7.95). Victor has a number of superb recordings of the Chicago Symphony Orchestra conducted by Fritz Reiner, in particular the two Respighi symphonic poems *The Pines of Rome* and *The Fountains of Rome* (FTC 2012, \$8.95), and a collection of vivacious Rossini Overtures (FTC 2021, \$8.95). Victor also has several tapes of Arthur Fiedler and the Boston Pops Orchestra. "*The Music of Franz Liszt*" is outstanding, with probably the best reproduction of this orchestra Victor has ever achieved (FTC 2015 \$8.95). A collection called "*Fiedler's All-Time Favorites*" includes the *Light Cavalry Overture*, the *Bacchanale* from *Samson and Delilah* and six other popular classics (FTC 2016 \$8.95). Stokowski's great Everest tape combining two

works of Villa-Lobos, the exotic symphonic poem *Uraperu* with its colorful scoring for percussion and *Modinha*, scored for an orchestra of cellos, with excerpts from Prokofiev's *Cinderella Ballet* on the reverse track, is a must (T4-3016, \$7.95).

George Szell conducts the Cleveland Orchestra (Epic EC 801, \$7.95) in brilliant performances of four favorites—Tchaikovsky's *Capriccio Italien*, Rimsky-Korsakov's *Capriccio Espagnole*, the *Prelude* to Moussorgsky's *Khovantchina*, and Borodin's *Polovetzian Dances*, which is an extraordinary bargain when compared with the Victor tape with Kiril Kondrashin conducting the RCA Victor Orchestra in the Tchaikovsky and Rimsky-Korsakov works only, costing a dollar more (FTC 2009, \$8.95). Leopold Stokowski conducts the Philadelphia Orchestra with magical results (Columbia MQ 309, \$7.95) in performances of de Falla's sensuous *El Amor Brujo* with the young American mezzo-soprano Shirley Verrett-Carter as soloist. This tape also includes love music from Wagner's *Tristan and Isolde* arranged by Leopold Stokowski, who also has an Everest tape (T4-3031, \$7.95) with the Houston Symphony Orchestra in music from Wagner's *Parsifal*. Lastly, for a stimulating semi-modern score, one cannot overlook Boult and the London Philharmonic performing *Job, A Masque for Dancing* by Ralph Vaughan Williams (Everest T4-3009, \$7.95).

BALLET MUSIC

No less than three different versions of Tchaikovsky's complete *Nutcracker Ballet* are available on four-track tape. Robert Irving conducts the New York City Ballet Orchestra (Kapp 45007), Artur Rodzinski conducts the Philharmonic Symphony Orchestra of London on Westminster (WTP 138), and Ernest Ansermet conducts the Suisse Romande Orchestra on London (CK 80027), \$11.95 each. All are good, with our preference leaning toward the Rodzinski tape. Ansermet also directs two other relatively complete recordings of Tchaikovsky ballets, *Swan Lake* (K-80028, \$11.95), and *Sleeping Beauty* (LCG 80035, \$19.95).

Of the three great Stravinsky ballets, only the *Firebird* is

missing on four-track tape. Everest has a Twin-Pack combining *The Rite of Spring* and *Petrushka*, conducted by Sir Eugene Goossens (TT 43-002, \$11.95). This same coupling is available on London (K-80006, \$11.95) with Ernest Ansermet conducting. We feel the preferred tape is the Goossens for its bolder sound and richer orchestra, but Ansermet's authority must be respected. Victor has a tape with Pierre Monteux conducting the Boston Symphony Orchestra in *Petrushka* (FTC 2007, \$8.95), and fine though it is, it isn't a very attractive value when compared to the other versions.

Two more brilliant ballet scores are combined on another Everest Twin Pack (TT 43-003, \$11.95), which presents Enrique Jorda conducting the London Symphony in de Falla's complete *Three Cornered Hat*, and Anatole Fistoulari conducting the same orchestra in Khachaturian's *Gayne Ballet*, which includes the familiar *Sabre Dance*. Vanguard has released a fine *Scheherazade* with Mario Rossi conducting the Vienna State Opera Orchestra, coupled with four of Liszt's *Hungarian Rhapsodies* played by the same orchestra conducted by Anatole Fistoulari (Vanguard 1612, \$11.95). But the best *Scheherazade* is on Victor (FTC 2017, \$8.95), with Fritz Reiner and the Chicago Symphony, which is a stunning display of superb playing and magnificent sound, and which warrants the higher price.

CHAMBER MUSIC

First on the list of chamber music is the superb Epic tape of Vivaldi's *The Seasons* performed by the instrumental group I Musici (EC 804, \$7.95). Another easy introduction to chamber music is the delightful "18th Century Concert" of music of Bach, Haydn, Corelli and Torelli played by I Solisti di Zagreb (Vanguard 1617, \$7.95). For the connoisseur, Concertapes has issued three reels containing all six Bartok Quartets played by the Fine Arts Quartet (5003, 5004 and 5005, \$8.95 each). The Fine Arts Quartet is widely represented on four-track tapes with more accessible music, notably their collaboration in a performance of Mendelssohn's *Octet in E Flat Major* (3021, \$6.95).

Perhaps because the solo piano is not particularly enhanced by stereo, there are few solo piano recordings on four-track tape. If you want piano music, you might try the Chopin collection on Westminster (115, \$6.95).

OPERATIC AND VOCAL

Hats off to London, the only company to place special emphasis on complete operatic recordings. First on the list is their *Das Rheingold* (R 90006, \$21.95) which is in a class by itself as a superlative performance recorded with awesome realism. *Aida* is a close second (R 90015, \$21.95). Both of these are with the Vienna Philharmonic Orchestra conducted by Georg Solti and Herbert von Karajan, respectively. In a lighter vein, London offers three complete D'Oyle Carte Gilbert & Sullivan productions, *The Pirates of Penzance* (H 90002), *The Mikado* (H 90001) and *H.M.S. Pinafore* (H 90024), \$12.95 each. Let's hope that some of the other companies will issue four-track tapes of complete operas, notably the Capitol *Carmen* with Beecham conducting and Victoria de los Angeles in the title role, the all-star Angel *Don Giovanni*, and the Victor *Turandot*.

Erich Kunz and the Vienna State Opera Chorus and Orchestra provide zestful performances of a varied group

of German University Songs (Vanguard 1607, \$11.95), the Don Cossack Chorus can be heard on Decca (74-10016, \$7.95), and the West Point Cadet Glee Club is well recorded on SMS tapes (SMS S-19 and S-12, \$7.95 each). Lighter still is a collection of Fred Waring Standards on Capitol (ZW 845, \$7.98).

SHOW MUSIC

Some of the most important and best-known musicals and movie scores are now on tape, including many original cast performances. In particular, we might mention *My Fair Lady* (Columbia OQ 310, \$9.95), *South Pacific* (Victor FTO 5001, \$8.95), *The Music Man* (Capitol ZO 990, \$8.98), *The Sound of Music* (Columbia OQ 311, \$9.95), *Carousel* (Capitol ZW 694, \$7.98), *Fiorello* (Capitol ZO 1321, \$8.98), *The King and I* (Capitol ZW 740, \$7.98), *Gigi* (MGM 3641 \$7.95) and *Destry Rides Again* (Decca 74-9075, \$7.95), and *The Desert Song* with Mario Lanza (Victor FTC 2014, \$8.95). The great soundtrack recording for *Around the World in 80 Days* is on Decca 74-9046, \$7.95).

DEMONSTRATION TAPES

Most of the tapes listed in this article would qualify as demonstration tapes, as their technical quality is of the very highest, but there are some tapes aimed particularly at the audiophile. First on the list is the spectacular *Queen's Birthday Salute* (Vanguard VTC 1602, \$7.95) complete with cannons and marching troops. Ferrante and Teicher and their souped-up duo pianos let loose in *Soundproof* on Westminster (C 146, \$7.95). Morton Gould's version of Tchaikovsky's *1812 Overture* and Ravel's *Bolero* can be had on Victor (FTC 2005), less than thirty minutes of music costing \$8.95. Dick Schory's New Percussion Ensemble can be heard in a stunning display on Victor (FTP 1009, \$7.95). Epic has a Dixieland tape designed for demonstration purposes, called Ping Pong Percussion (EN 604, \$6.95). Mercury, and Westminster have particularly fine demonstration tapes (DEMS-3-\$7.95) and (WTC 144, \$7.95). And last, one of the best known of all demonstration tapes—*Railroad Sounds*—on Audio Fidelity (1843/4, \$8.95).

POPULAR

While we can find many popular tapes which are four star material in one phase or another, very few are in this category on all four points; namely, Music, Performance, Fidelity, and Stereo Effect. There are exceptions, however, and we are going to list these. Those mentioned were all reviewed in this magazine during 1960.

Leroy Anderson Presents (Stereophonic Music Society, S15, \$7.95) is a gathering of light symphonic music. Mr. Anderson always comes through with gilt-edged arranging and conducting.

Johnny Puleo and His Harmonica Gang (Audio Fidelity, AFST 1830, \$8.95) perform with such verve and enthusiasm, they are more of a pleasure to listen to than many full orchestras.

Alma Mater (Liberty, 7134, \$7.95) features the Johnny Mann singers, composed of 25 male voices, which are most harmonious and extremely well-blended.

Mallet Magic (Audio Fidelity, AFST 1825, \$8.95), with Harry Breuer and His Quintet utilize mallets to play their instruments. Thus played, they give off a crystal clear ring.

Army Blue (Stereophonic Music Society, S19, \$7.95)

brings us the voices of The West Point Glee Club. This group sings unitedly, never losing their harmonious solidarity.

The Voices and Strings of Lawrence Welk (Bel Canto, ST/67, \$7.95) is brimming with talented performances. The whole thing is a smooth, well organized, well directed, assemblage.

Sing Along With Mitch (Columbia, GCB 70, \$6.95) has Mitch Miller and His Gang singing up a storm. This is a musical binge that requires participation and you'll want to do just that from beginning to end. Sing Along in Stereo (Kapp, KT 41001, \$7.95) also has this same magnetic pull which makes you want to join in.

Ella Swings Lightly (Verve, VSTC-222, \$7.95). Ella Fitzgerald uses her voice like a musical instrument of great range and tonal beauty and with great skill and seeming ease.

So many other pop releases came so close to having complete four star ratings that we feel they are worthy of mention. Among these are: Let's Dance (Mercury, STA 60001, \$6.95); More Songs of the Fabulous Fifties, Roger Williams (Kapp, KT-41015, \$7.95); Mr. Guitar, Chet Atkins (RCA, KPS-2012, \$5.95); Show Tunes and Old Favorites, Lenny Herman (Livingston, 4T-5, \$7.95); The Eddy Duchin Story, Carmen Cavallaro (Decca, ST 7-8289, \$7.95); Golden Saxophones, Billy Vaughn (Bel Canto-Dot, ST-96, \$7.95); The Cash Box Instrumental Hits, Stanley Black (London, LPM-70011, \$6.95); and The Hi-Lo's in Stereo (Omegatape, SST 800, \$7.95).

LATIN-POP

That Latin Beat For Dancing Feet (Vox, XTC-711, \$7.95) was recorded specifically for Latin dancing and it is decidedly good for that purpose. Two other tapes of the same order are Cha Cha Cha (Stereophonic Music Society, S7, \$7.95); and Merengues and Mambos (Stereophonic Music Society, S46-C, \$7.95).

JAZZ

Jazz has many forms. One of the oldest and best loved is Dixieland jazz. The Dukes of Dixieland (Audio Fidelity, AFST 1851, Vol. 3, \$8.95) can really swing out this type sassy, toe-tapping rhythm. At times the clarinet cuts through the air like a streak of lightning. Another rollicking Dixieland group is Larry Fotine and The Beale Street Buskers, and on Plain Vanilla (Bel Canto, STB 38, \$9.95) they exhibit their professionalism.

For years now, it seems no one mentions jazz without also mentioning Louis Armstrong. Louis is getting along in years himself and every so often when he blows, a note seems to fall or quiver out of tune. We'd like to mention Louis too, but with a friend—the one and only Danny Kaye. The Five Pennies (Bel Canto-Dot, ST/68, \$7.95) is an original soundtrack recording from the motion picture of the same name starring these two great entertainers. After hearing this, you become somewhat aware of the psychological reaction jazz music can invoke.

Then we have what we shall term "blues jazz." A perfect example of this style is found on 101 Strings Play the Blues (Bel Canto, ST-80, \$6.95). This music has a hypnotic, entrancing beat which leaves you in a semi-depressed mood. On this release, the blues is richly played by a full orchestra.

Finally, we arrive at modern jazz music, which has a fundamental appeal to many people. For others it is hard to comprehend. In order to like it, you must understand it. If you've ever watched musicians and an audience at a

modern jazz festival you know they *definitely* understand that which they are hearing. They simply swoon into another world apart from their immediate surroundings. Along this line we suggest Time Out (Columbia, GCB 72, \$6.95) featuring The Dave Brubeck Quartet.

FOLK

Chain Gang Songs (Elektra, ETC-1505, \$7.95) with Josh White abounds in expression and feeling. Most of these songs speak of trouble and misery. Josh White, and also Harry Belafonte (Swing Dat Hammer, RCA, FTP-1025, \$7.95) and Leon Bibb (Leon Bibb Sings Folk Songs, Stereophonic Music Society, S1, \$7.95) can deliver folk songs with great feeling.

For a different, amusing type of folk music, we recommend The Limeliter (Elektra, ETC-1509, \$7.95). These fellows have taken folk songs, added their own brand of wit and zany humor, blended in a banjo, guitar, bass and sound effects to come up with a new, charming style of presentation.

If you appreciate foreign or dialect folk music, you may like Russian Fair (Decca, ST 7-10016, \$7.95) featuring the Don Cossack Choir, or Songs of a Russian Gypsy (Elektra, ETC-1501, \$7.95) with Theodore Bikel.

There is a spiritual folk tape which we especially like and wish to mention. This is Didn't It Rain (Bel Canto, STB/46, \$9.95). This tape is truly inspirational. Featured on this tape are "The Exciting Voices," heretofore a relatively unknown group of Gospel singers.

NOVELTY

Smash Flops, as sung by The Characters (4 of them) (Omegatape, MT-811, \$4.95) is a collection of old tunes, with new words, all touched with the most sadistic humor we ever heard.

Exotica, Vol. 1, with the Martin Denny Group (Bel Canto-Liberty, 7034, \$7.95). We put this tape under the "Novelty" heading more because of the way it is played, rather than the music itself. Mr. Denny uses more paraphernalia than any musician we have heard heretofore, with perhaps the exception of Arthur Lyman and his group (Bahia, Hifitape, R815, \$7.95). Any gadget from a dime store musical instrument to bamboo sticks with drum heads will do, just so it has a different sound distinctly its own.

In Orienta (RCA, EPS-243, \$11.95) the Markko Polo Adventurers couple sounds and effects with interesting melodies and varied rhythms to come up with a tape that's different from the customary run of releases.

Bob and Ray Throw A Stereo Spectacular (RCA, KPS-3024, \$6.95) is a crazy, but wonderful, novelty tape which you have to hear, a written description just cannot do it justice.

Sound in the Round (Concertapes, 4T-3001, \$6.95) is a tape of true reproductions of a variety of sounds. This tape gives a grand demonstration of what stereophonic sound is like.

CHRISTMAS

Since Christmas tapes are not in too great an abundance, we are going to give a complete listing of those which are available, even though we have not yet had the opportunity of hearing them all. Some we *have* listened to are included in our review column in this issue.

Not having had the opportunity to hear them all means, of course, we can give qualified recommendations only on those we have reviewed.

Those available as of this writing include:

Concertapes, 4T-3014, 4T, Carols for Christmas: Dr. Austin C. Lovelace, organist

Decca, ST7-8925, 4T, A Christmas Festival: LeRoy Anderson

Dot (Bel Canto), DST-25232, 4T, Merry Christmas: The Mills Brothers

Dot (Bel Canto), DST-25222, 4T, White Christmas: Pat Boone

Hifitapes, 4T-410, 4T, Christmas From Hawaii: The Surfers

Hifitapes, 4T-706, 4T, Merry Christmas: George Wright

Hifitapes, 4T-418, 4T, Christmas Greetings: Town Pipers

Hifitapes, 4T-705, 4T, Music for Christmas: Richard Purvis

Kapp, KT-41019, 4T, Christmas Time: Roger Williams

Liberty, LC-7706, 4T, Merry Christmas in Carols: Organ & Chimes

Liberty, LC-7708, 4T, We Wish You a Merry Christmas: Robert Rheims Chorals

Livingston, 4CR1108, 4T, or 1108F, 2T, An Album of Christmas Favorites: Tom & Jerry Vincent, piano, organ and bells

London, LPM-70036, 4T, Christmas Carols: Mantovani

London, LPM-70037, 4T, Christmas Organ & Chimes

Medallion, MST-47012, 4T, Sound of Christmas—Deck the Halls: Medallion Orchestra and Chorus

Omegatape, SST-812, 4T, Christmas in Stereo: Vienna Choir

Omegatape, SST-833, Christmas in Stereo: Sing Along Singers

Richmond, RCE-45014, 4T, Music for a Merry Christmas: F. Chacksfield

Richmond, RCE-45015, 4T, Children's Christmas Album: Cyril Stapleton

Warner Bros., WST-1338, 4T, Best Loved Christmas Piano Concertos: George Greeley, Warner Bros. Orchestra

Warner Bros., WST-1341, 4T, Happy Holiday: Wally Scott

Westminster, WTW-134, 4T, Messiah-Handel: Herman Scherchen

MISCELLANEOUS

Tahiti (Hifitape, R417, \$7.95), with The Surfers, presents a tape of Hawaiian music. The sometimes tender, sometimes lively, songs of the South Seas are charming indeed.

Marches in Stereo, John Gart at the Conn Electronic Organ (Kapp, KT 41005, \$7.95)—Mr. Gart has accumulated an impressive array of 25 different percussion instruments to accompany his masterful organ interpretations of these marches and together they are superb.

A closing note of caution . . . There is no question about the enduring quality and superior sound possible with tape. But care must be taken to preserve this quality. All tapes must be wound tightly and evenly, particularly four-track, where one track of the signal is so close to the tape's outer edge. If this isn't done, your precious tapes may become warped and unusable. And if it does happen, it's your own fault for not taking care of them.

With the ever-increasing assortment of recorded tapes available, it is now possible to build a lasting library of sound, the best possible reproduced sound on the market today, and this season of giving is a good time to either lay the foundation, or add another section to your own or someone else's library.

Cartographatron Uses Tape In Processing Data

An electronic device called a Cartographatron provides an inexpensive, rapid and graphic means of processing, evaluating and displaying massive amounts of data used in planning new transportation facilities.

Designed and constructed for the Chicago Area Transportation Study by Armour Research Foundation, the device has made it possible to process complex data that previously was impracticable to process, (nearly 370,000 records were required in the Chicago survey) and to display these data in a form that eliminates the need for extensive map preparation.

New super highways and transportation facilities are planned, in large measure, on the basis of where they are needed. In an attempt to measure and determine where these new transportation arteries should be built in the Chicago area and where they should originate and terminate, vast amounts of information was collected by the survey people from citizens, transportation officials and commercial trucking firms in regard to normal trips made on weekdays.

Basically, this information took the form of addresses of points of origin and destination. It was in the collecting and processing of some 370,000 original trip cards that the need for such a machine as the Cartographatron was realized. Some efficient and, especially, inexpensive way of processing the data and actually mapping the "trip

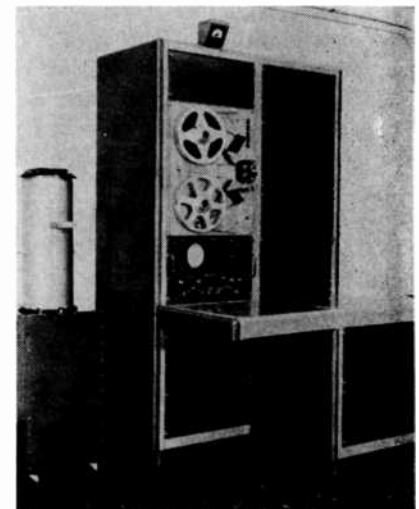
desire lines"—lines stretching between an origin point and a destination representing one trip taken by a person—was needed.

In operation, the Cartographatron plots trip-desire lines and then displays these lines in a composite photo. The input for the machine is a magnetic tape on which the necessary information (origin point, destination, direction of travel, etc.) is stored. The output of the Cartographatron is a photographic plate upon which the desire lines have been continuously recorded through a cathode-ray tube. Since a system of grid coordinates is used in which the points of origin and destination are accurately plotted, the composite photographic plate is literally a map.

Some important advantages of the Cartographatron are speed of handling huge masses of card information (trip records are read and displayed at a rate of approximately 48 per second) and the ability of the machine to be selective in processing certain types of trip information. The entire trip file of 369,194 records on 21 reels can be displayed in about three and one-half hours. Part of the speed advantage is in the elimination of map preparation, plotting, and coloring.

Flexibility in design of the Cartographatron permits display of trip desire lines or of merely the origin dots of the desire lines. Another advantage of the machine lies in its facility for selecting only that

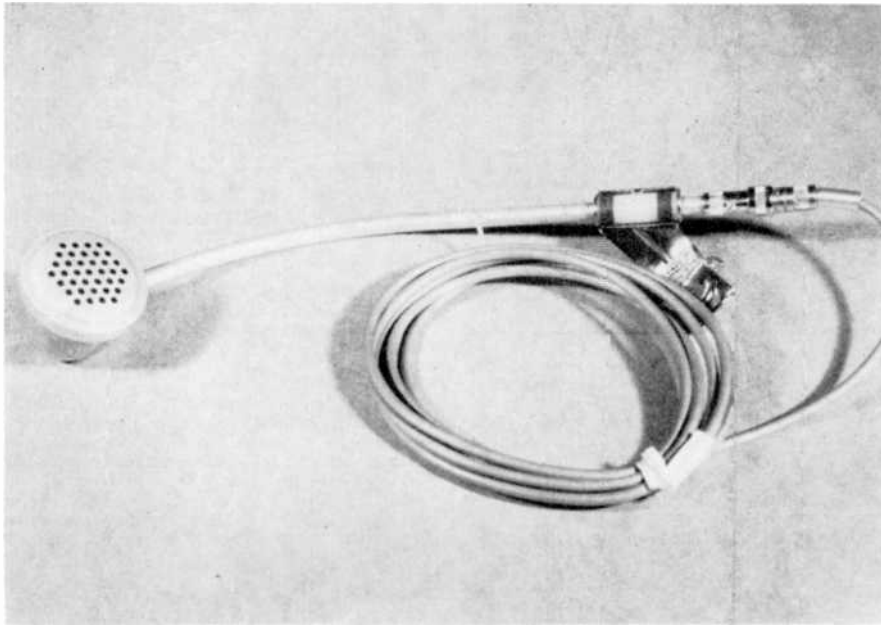
information from the tape data that is required. For example, if only automobile trips from home to work during morning rush hour are desired for some purpose, the machine will, after proper setting, deliver the line or origin dot displays for that type of trip.



The Cartographatron, developed by Armour Research Foundation for the Chicago Area Transportation Study. This machine rapidly processes complex transportation data and displays it in map form.

NEW PRODUCT REPORT

STA **OK** STED



TURNER 260 MICROPHONES

... available in crystal and dynamic forms adaptable to any headset.

WHILE the Turner 260 microphones are more or less designed to be used in language labs where the student hears his own voice and where listening and then speaking are important, they none-the-less have a wider application.

They would be useful with any Add-A-Track recorder for learning situations or in ham radio or talk backs for radio or TV stations.

The model 260 X is a crystal high impedance mike with a frequency response of 50 to 10,000 cycles per second, more than adequate coverage for the voice range. It weights only 2-2/3 ounces.

The 260 D is the dynamic counterpart of the 260 crystal and has a frequency response of 75 to 9000 cps. Impedance is 300 ohms. It is more rugged than the crystal and is unaffected by humidity or temperature changes.

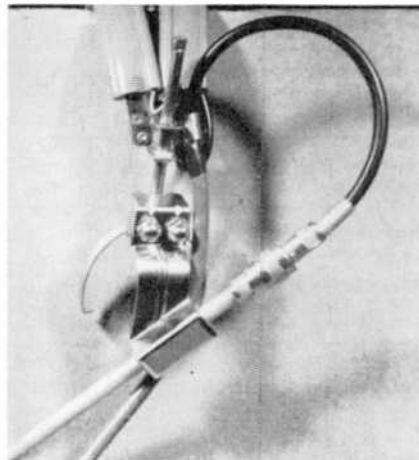
The microphones are fitted with a universal clamp that will fit any headset.

It is reported that the Turner Company is working on a complete headset-microphone combination with but

a single cord containing both the microphone and headphone leads. The headband would also be included, making a complete unit. This is not ready for production as yet.

The microphone we had for test was the 260X, crystal mike. We found that the microphone had very good voice quality and good definition.

It is well made, with an attractive



Closeup showing how clamp fits any headset. U bolt goes around post and notches hook over phone holder.

Product: Turner 260 microphones

Manufacturer: The Turner Microphone Co., Cedar Rapids, Iowa

Price: Crystal \$24.50, Dynamic \$38.00

grey hammertone finish. The cup which holds the microphone element is cast zinc alloy and the boom is anodized.

Because the microphone is designed to be held in position relatively close to the lips, it has incorporated in it a moisture-proof barrier. This is true of both the crystal and dynamic models.

The cable leading from the mike is single conductor shielded with a grey plastic covering. One end has a connector which screws to the mating part on the end of the boom at the headset as shown.

The other end is without plug so that the user may install a plug compatible with the equipment being used.

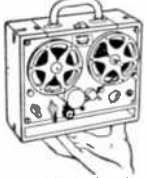
The light weight of the mike makes it comfortable to use and since it can be positioned to one side and retain an effective pickup, it does not get in the way when following or reading printed text.

The adjustments operated smoothly and held position when once set. All in all, we feel this unit will perform very well the jobs for which it is designed.



The 260 in use. Note how mike is held clear of face to avoid interference with reading or following text matter.

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TAPE RECORDING Published Monthly at Severna Park, Maryland for 1960

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

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Editor: Mark Mooney, Jr.	Severna Park, Md.
Managing Editor: None	
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MARK MOONEY, JR.
(Signature)

Sworn to and subscribed before me this 22nd day of September, 1960.

[SEAL] JEAN MARIE COVER
(My commission expires May 1, 1961)

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In figuring the number of words in your advertisement, be sure to include your name and address. Count each abbreviation, initial, single figure or group of figures as a word. Hyphenated words count as two words. The name of your city, local postal zone and state count as two words. Maximum caps first four words. Proof is not submitted on classified ads.

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WANTED: Someone to take over monthly payments on Ampex model 910 tape recorder. Write Ronald Baringer, 449 E. 7th St., Red Wing, Minn. for details.

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Listening to a recording with excessive noise level is like looking at a photograph that has a flat, gray tonal value with low contrast.



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