

TAPE RECORDING

TENTH

ANNIVERSARY

ISSUE

Mr. Roy Perrin
231 Woodland Ave.
Rutherford, New Jersey

December, 1962

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12/1/62



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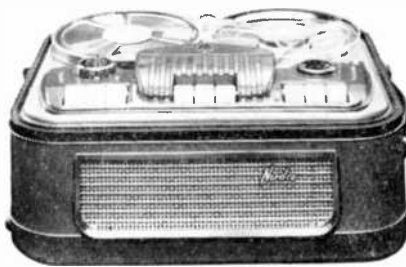
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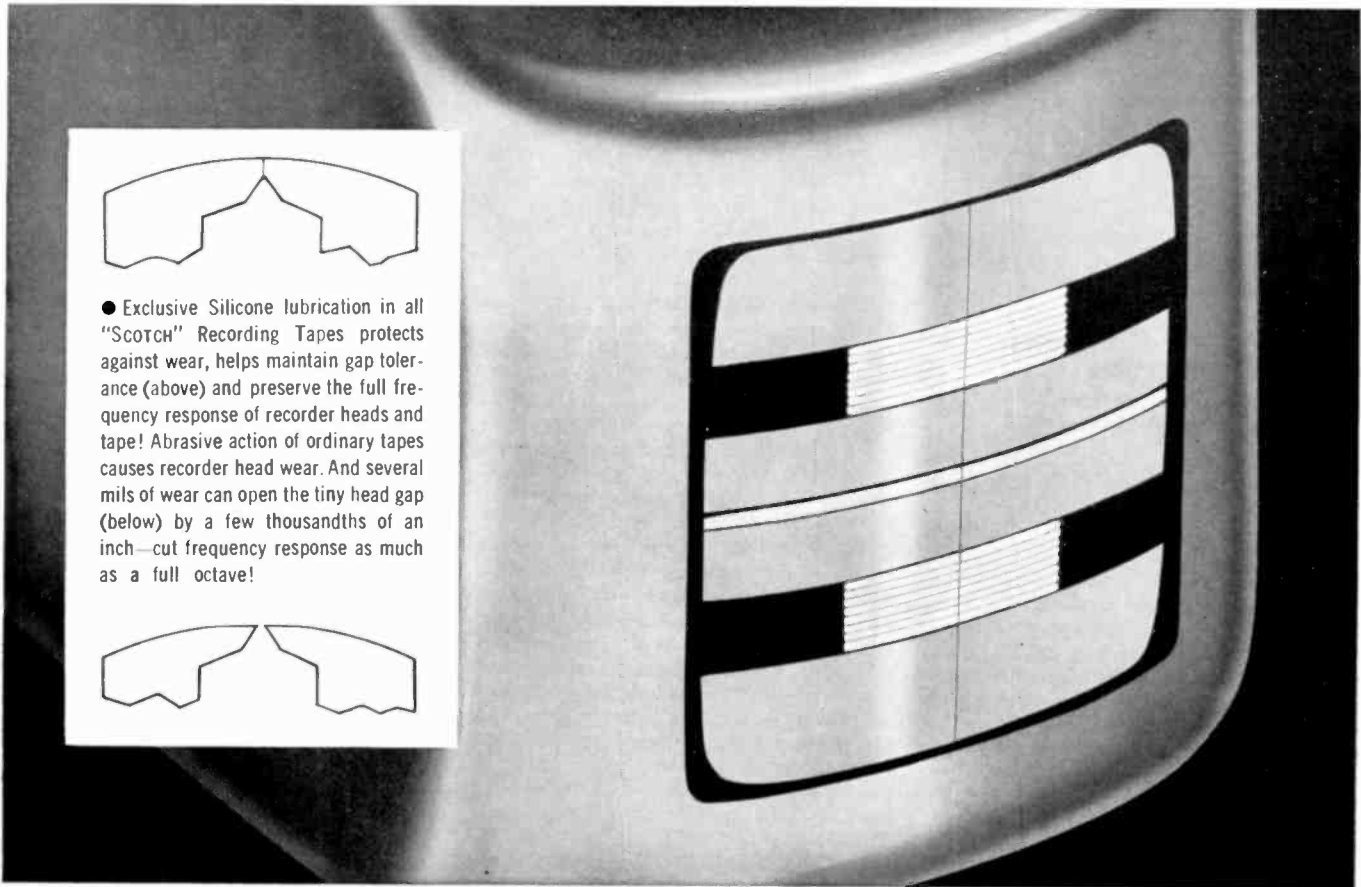
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Magnetic Products Division **3M** COMPANY

NEW TAPES

★—Fair

★★—Good

★★★—Very Good

★★★★—Excellent

CLASSICAL

Reviewed by Robert E. Benson

GREIG: Piano Concerto in A Minor, Op. 16
Arthur Rubinstein, pianist, with Orchestra
conducted by Alfred Wallentein

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

RCA FTC 2100

4 track, 7½ ips, 43 mins., \$8.95

GREIG: Piano Concerto in A Minor, Op. 16
SCHUMANN: Piano Concerto in A Minor,
Op. 54

Leon Fleisher, pianist; Cleveland Orchestra
conducted by George Szell

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

EPIC EC 812

4 track, 7½ ips, 60 mins., \$7.75

Victor has recorded the Greig Concerto with Rubinstein at least twice before this; the last one was issued on two-track tape with the same conductor as in this new version. It was quite poor technically, with a minute orchestra all but completely covered up by the soloist. Victor evidently realized how inadequate this was, and we now have a new recording, which can be recommended without hesitation, although it does have four-track competition.

Rubinstein is in top form here, and the close-up recording of the piano produces tone of steely brilliance. The orchestra is nicely spread out, with extraordinarily clear sound; a slight rasp on the violins is not objectionable. The first two movements of the Concerto are on track one, with the third movement on track two. Rubinstein fills out the tape with some of his favorite encores—Schumann's *Romance in F Sharp*, *Polichinelle* by Villa-Lobos, *Valse Oubliee No. 1* by Liszt, the March from Prokofiev's *Love for Three Oranges*, and Falla's *Ritual Fire Dance*.

The Epic tape with Leon Fleisher has many advantages, primarily that on it one can hear the Greig Concerto without interruption on one track, and the complete Schumann Concerto on track two. Fleisher offers high-powered performances, with bigger orchestral sound than Rubinstein's unidentified orchestra provides. However, two different copies of the Fleisher-Szell collaboration had the same defect—low-frequency cross-talk so bad that the tape was totally unlistenable. If this were corrected, the Epic tape would definitely be the preferred version.

STRAUSS: *Death and Transfiguration*, Op. 24, *Till Eulenspiegel*, Op. 28, *Dance of the Seven Veils* from "Salome"
Vienna Philharmonic Orchestra conducted by Herbert von Karajan

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

LONDON LCL 80078

4 track, 7½ ips, 48 mins., \$7.95

The music of Richard Strauss doesn't seem to be particularly akin to the talents of Herbert von Karajan; at least his recorded efforts on behalf of Strauss are quite disappointing. London tape LCL 80023 of *Also Sprach Zarathustra* should have been a stunner and wasn't, and a recent version of *Don Juan* (London LCL 80072, coupled with Tchaikovsky's *Romeo and Juliet*) was hardly more than a routine interpretation. This new tape combining the symphonic poems *Death and Transfiguration* and *Till Eulenspiegel* with the *Dance of the Seven Veils* is an understatement of all three musically, and even if the performances were of more interest, the tape could not be recommended because of technical shortcomings.

There is little natural bloom to the sound of the orchestra, although there is plenty of stereo right and left. Really clean high frequencies are lacking, bass is boomy, and the brass lacks bite. Tape surfaces were extraordinarily hissy on the review copy, although this will doubtless be corrected on later issues. How unfortunate that London doesn't achieve on its purely orchestral recordings the glorious sound of the orchestra as in its operatic recordings of *Rhinegold* and *Tristan*. For a much preferable Strauss coupling, try Epic EC 805. \$7.95, which has George Szell's superlative performances with the Cleveland Orchestra of *Death and Transfiguration*, *Till Eulenspiegel* and *Don Juan*.

SHOSTAKOVITCH: Symphony No. 5 in D,
Op. 47

New York Philharmonic conducted by
Leonard Bernstein

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

COLUMBIA MQ 375

4 track, 7½ ips, 46 mins., \$7.95

The *Symphony No. 5* is perhaps the best known and most important work of Shostakovich. This is music of great power, majesty and imagination, lacking complete the triteness which characterizes so much of this composer's music. Scored for large orchestra, it is a showpiece demanding stereo for maximum effect, and it hasn't lacked in good recordings on discs. This is the second four-track version available, the other being the Stokowski-Stadium Orchestra tape (Everest 3010, \$7.95).

Bernstein and the New York Philharmonic performed this symphony when touring Russia in 1959 (Shostakovich

himself applauded their performances in Russia), and they recorded it shortly after their return to the United States. Sound is clean and bright, with the exaggerated high frequencies which now seem to be standard with Columbia, but with control juggling, the sound can be made quite acceptable. I prefer the Stokowski approach to this music, and the Everest recording is more spacious, although it has moments of slight distortion. This important modern symphony should be in every tape library, and we now have two fine recordings of it.

MOZART: Piano Concerto No. 24 in C
Minor, K. 491, Rondo in A Minor, K. 511
Artur Rubinstein, pianist; Orchestra con-
ducted by Josef Krips

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

RCA FTC 2052

4 track, 7½ ips, 42 mins., \$8.95

Mozart's *Piano Concerto No. 24* was written immediately before his opera *The Marriage of Figaro*, and there is a remarkable contrast between the two works. The opera is perhaps the masterpiece of comic writing for the operatic stage, but the concerto is tragic in nature and highly emotional. But what a masterpiece it is, achieving its effect with sometimes stark simplicity of writing.

Rubinstein usually isn't associated with the music of Mozart, and his steely touch doesn't seem particularly appropriate for his music. Krips and the unidentified orchestra accompany admirably, and the sound is wide-spread and effective. Victor has faithfully captured the Rubinstein tone—incarescent, supple and somewhat percussive.

Vanguard's tape of this concerto (VTP 1608, \$11.95) featuring Denis Matthews with the Vienna State Opera Orchestra conducted by Hans Swarowsky is a much better buy in playing time as it also contains the *Piano Concerto No. 20* and two short piano sonatas, with a total playing time of 88 minutes for only \$3.00 more. However, the reproduction on the Vanguard tape is their best and this new Victor tape is the preferred, though more expensive, version.

MORE CLASSICAL MUSIC FOR PEOPLE WHO HATE CLASSICAL MUSIC

Boston "Pops" Orchestra conducted by Arthur Fiedler

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

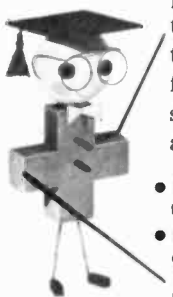
Zampa Overture (Herold); The Last Spring (Grieg); Aragonaise from "Le Cid" (Massenet); Hungarian Rhapsody No. 6. (Liszt); Fatinitza Overture (Von Suppe); Waltz from Serenade for Strings (Tchaikovsky); Hungarian Dance No. 6 (Brahms); Der Freischutz Overture (Weber).

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THE VOICE  OF MUSIC®

RCA FTC 2067
4 track, 7 1/2 ips, 46 mins., \$8.95

It seems rather violent to classify a collection of musical works as being for people who *hate* classical music. Doubtless this title strikes home with some listeners and will help sell this recording to those who aren't very familiar with the classics.

The present program is tuneful and easy on the ears, with Arthur Fiedler in his true element in the light dances and thoroughly adept performances by the Boston "Pops." These recordings sound to me like they might have been recorded some time ago. Technically there are spectacular moments, but sound is congested in the loud passages, with more than occasional distortion.

POPULAR MUSIC FOR THE FIRESIDE

Paul Weston

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

Side 1: Tenderly, Love Walked In, If I Could Be With You, I Cover The Waterfront, Stars Fell On Alabama, Autumn Leaves

Side 2: September In the Rain, Where Or When, La Vie en Rose, Something to Remember You By, Dardanella, When April Comes Again.

CAPITOL ZT 1192

4 track, 7 1/2 ips, 34 mins., \$6.98

Paul Weston has taken the same numbers originally played in his "Music for the Fireside" disc, issued several years ago, enlarged his orchestra, made new arrangements, and used today's modern stereo recording techniques to produce some easy-to-listen-to mood music. These well-known favorites are styled in the typical Weston manner; smooth, pensive and melodic.

The well balanced stereo recording makes this tape have a more brilliant response than the original monaural record. This tape is certainly a must for your collection.—*F. N. West*

VICTOR HERBERT ON STAGE

Roger Wagner Chorale and Orchestra

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

Side 1: In Old New York, Ah! Sweet Mystery of Life, Every Day Is Ladies' Day With Me, A Kiss in the Dark, I'm Falling



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in Love With Someone, Kiss Me Again, Toyland.

Side 2: Tramp, Tramp, Tramp, Indian Summer, Slumber On My Little Gypsy Sweetheart, When You're Away, Thine Alone, Moonbeams.

CAPITOL ZW 1707

4 track, 7 1/2 ips, 41 mins., \$7.98

Few composers can match Victor Herbert in composing successful light operettas that will never be forgotten. Starting just before the turn of the century, he produced one musical gem after another, and now the Roger Wagner Chorale recreates the music in a way that would have pleased Herbert himself.

This talented group of vocalists demonstrate their feeling for this type of music, as they take you back to the good old days, with a group of beautiful melodies from Herbert's biggest successes. These are the tunes most likely to be sung by Mom and Dad. Tunes nostalgic, sentimental and sweet.

Sound is well recorded, with well balanced stereo effect complimenting the Chorale's efforts.—*F. N. West*

JANE MORGAN AT THE COCONUT GROVE

Jane Morgan with Dick Hazard's Orchestra

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

Side 1: Opening, Paris Medley, The Second Time Around, The Day The Rains Came.

Side 2: Lillian Russell Medley, It Takes Love.

KAPP KTL 41044

4 track, 7 1/2 ips, 35:15 mins., \$7.95

Recorded live at the Coconut Grove, Los Angeles, this latest offering of Jane's is vastly different from her earlier ones. Her song stylings are done in full voice, with a warmth and intimacy that appeals to her live audience. Charming, friendly, and show-wise, she wins her way apparently without effort.

The first side of the tape has the "Fascination" girl weaving her magic spell with several show and French tunes, while the second side features a Lillian Russell Medley.

With talent and versatility that enables Jane to handle any material, it is no wonder that this sweet singer remains one of the favorites of audiences everywhere.

Stereo effect provides the proper atmosphere and presence for her performance. Sound is well recorded.—*F. N. West*

THE SPECTACULAR SOUND OF SOUSA

Paul Lavalle and the Band of America

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

Side 1: The Thunderer, King Cotton, The Fairest of the Fair, Washington Post March, El Capitan, Semper Fidelis, U. S. Field Artillery.

Side 2: High School Cadets, Hands Across The Sea, Liberty Bell, New York Hippodrome, The Stars and Stripes Forever.

MGM STC 3976

4 track, 7 1/2 ips, 35:15 mins., \$7.95

Since Paul Lavalle and his Band of America have long been exponents of March Music on radio, television, and records, it is only natural that they should pay their respects to John Philip Sousa, with what is undoubtedly one of the best recordings of the March King's compositions to date.

Truly music to thrill every listener, this stirring presentation is so real it actually raises goose-pimples as you thrill to the everlasting martial music of the one and only Sousa.

All of the popular band favorites are here, with the big-band sound, captured in full-dimensional stereo of beautiful quality by MGM's engineers.

This is one that every lover of good band music should have.—*F. N. West*

TOUCHDOWN, U.S.A.

University of Michigan Band; William D. Revelli, conductor

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

The "Big Ten" and other great College Marches of the Gridiron.

VANGUARD VTC 1647

4 track, 7 1/2 ips, 41:30 mins., \$7.95

The University of Michigan Symphony Band, which is the most eminent of that University's three Bands, presents a program of football marches representing the "Big Ten" and other colleges.

While they give a good account of themselves, they can't quite match Paul Lavalle's Band of America when it comes to stirring music. Studio presence is there, but the sweetly played songs lack the lustre of a big marching band.

Prominent in each number are small drums, but the boom of the big ones is generally missing.

However, gridiron fans who want to cheer for their Alma Mater will enjoy the entire program.—*F. N. West*

LOLLIPOPS AND ROSES

Jack Jones

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

Side 1: This Was My Love, There Will Never Be Another You, Lollipops and Roses, Moonlight Becomes You, They Didn't Believe Me.

Side 2: Love Letters, You Stepped Out of a Dream, My Romance, The Girl Next Door, Julie.

KAPP KTL 41042

4 track, 7 1/2 ips, 36:35 mins., \$7.95

Jack Jones has a lyric voice with deep quality for a young man of 22. In this group he displays emotional sensitiveness and mannerisms of an old pro. He sings much as a sincere person serenading his best gal, not show-offy, but down to earth. It is refreshing to hear a singer rely on the quality of his voice instead of tricks, to put his songs over.

Well recorded and quite pleasant, Pete King's Orchestra plays fitting accompaniments that complement the singer's presentation.—*F. N. West*

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along or language- and music-learning.

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WINTER

Music by Camarata

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

Track A: Winter Wonderland, Skater's Waltz, Majestic Cascades, Moonlight In Vermont, In the Still of the Night.

Track B: The Silver Tree, June In January, Jing-a-ling, Let It Snow, Snowflower, Snowflakes.

DISNEYLAND WDT 3026
4 track, 7½ ips, 31 mins., \$7.95

The musical endeavors of Tutti Camarata and his Orchestra have been devoted for many years to the sweet, lush instrumentals. In this album he captures some of the more mellow moods of winter, with a group of frosty tunes well suited to this season.

The memories of an old-fashioned winter are conveyed by such selections as "Winter Wonderland," "Skater's Waltz," "June In January," "Let It Snow" and other nostalgic melodies.

If the mood is joyful, romantic, or thoughtful, Camarata's interpretation of the music is thoroughly delightful. Smooth violins and tinkling high notes enhance the sparkling stereo sound, and make this tape an enjoyable holiday treat.—*F. N. West*

SEASONAL

MARIAN ANDERSON—CHRISTMAS CAROLS

Orchestra and Chorus cond. by Robert Russell Bennett

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

Sequence A: We Wish You a Merry Christmas, Silent Night, Deck The Halls, Angel's Song, The First Noel, Ave Maria. Sequence B: God Rest You Merry, Gentlemen, It Came Upon A Midnight Clear, Joy To The World, O Sanctissima, Jingle Bells, Away in a Manger, The Twelve Days of Christmas.

RCA Victor FTC 2118
4 track, 7½ ips, 43 mins., \$8.95

For those who want Christmas music of a more serious nature, this tape will have wide appeal. Marian Anderson has a voice that is rich, melodic and sonorous. She imparts feeling and compassion to all of the familiar Christmas Carols, and the use

of the choral group and orchestra of Robert Russell Bennett enhances the beauty of the music, adding much to the lustre of the tape.

Of particular interest to Marian Anderson's admirers is the inclusion of a new recording of Ave Maria, her third version since 1936.

This tape is a moving, religious offering of high quality.—*F. N. West*

SHOWS

MOON RIVER AND OTHER HIT MOTION PICTURE THEMES

Living Strings

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

Side 1: Fanny, Breakfast at Tiffany's, Moon River, West Side Story, Maria, The Pleasure of His Company Theme, Goodbye Again Theme.

Side 2: La Dolce Vita, The Guns Of Navarone, The Parent Trap, Love In the Afternoon, One-Eyed Jacks.

RCA CAMDEN CTR 673
4 track, 7½ ips, 30 mins., \$4:95

The movies have set a pattern for slow music played by large orchestras, which can well be considered tonal epics.

The Living Strings, in a new low priced series by RCA Camden, have produced a pleasant program of these film hits that are familiar to most listeners by now.

Arranged and conducted by Chucho Zarzosa, and recorded in Mexico, the tape has a clean well balanced sound, with good stereo effect.—*F. N. West*

CAPSULE REVIEWS

RCA FTC 2026, CHRISTMAS HYMNS AND CAROLS. Vol. 1, 4 track, 7½ ips, 47 mins., \$8.95. Robert Shaw Chorale.

RCA KCS-4084 CARTRIDGE, 47 mins., \$6.95. Of particular interest at this season is the new release of Christmas Hymns and Carols by the Robert Shaw Chorale, who give a splendid rendition of twenty-three selections. Some of these are traditional folk melodies from England, France and Germany, but are not as well known as many of the old familiar "standards." They all benefit, however, from splendid vocalizing of this talented group. Good Yuletide music. Available in open reel or cartridge.

POPULAR

COLUMBIA OQ 455. ALL AMERICAN. Original Broadway Cast, 4 track, 7½ ips, 46 min., \$9.95. This short lived musical of last season stars Ray Bolger with some songs and dances that his fans might enjoy again. Eileen Herlie sings several duets with Ray, and the rest of the cast do their best with a mediocre score. Sound is well recorded and the stereo effect is satisfactory. Interesting to those who saw the show.

KAPP KTL 41043, ROGER WILLIAMS—GREATEST HITS. Roger Williams, 4 track, 7½ ips., 36:45 mins., \$7.95. All of Roger Williams tapes have been uniformly good, and, as is natural,

NO STRINGS

Original Broadway Cast

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

Side 1: The Sweetest Sounds, How Sad, Loads of Love, The Man Who Has Everything, Be My Host, La La La, You Don't Tell Me, Love Makes The World Go.

Side 2: Nobody Told Me, Look No Further, Maine, An Orthodox Fool, Eager Beaver, No Strings, Finale; The Sweetest Sounds.

CAPITOL ZO 1695
4-track, 7½ ips, 46 mins., \$8.98

This new musical introduces Richard Rodgers' first attempt at both words and music, and has resulted in a smash hit that should have a long life on Broadway. While not quite up to the calibre of some of the Rodgers and Hammerstein successes, the lyrics are properly conceived, and the music is pretty, emotional and sweet.

The story centers about lush life in Paris and the affairs d'amour of a good time novelist, who is so far taken from his field of writing by love, that it appears he will end up a dismal failure. His affairs are more than interesting as he finally realizes that Paris will wreck him, gives up his romance with his model girl friend, and goes home to Maine to write.

Richard Kiley fills the part adequately, though not impressively, but it is Diahann Carroll, as the model, who dominates the show with an outstanding performance of nine songs. The remainder of the cast have about one number each.

Stereo, balance and recording are exactly right, aided by excellent musical arrangements.—*F. N. West*

each had it's high spots. This is a collection of his greatest hits, combined in one sparkling tape. Roger has a piano style that is his alone. This presents him at his best.

RCA CAMDEN CTR 476, EVERYBODY CHA CHA! The Fred Astaire Dance Studio Orchestra, 4 track, 7½ ips, 25 mins., \$4.95. This tape is primarily for those who want to dance the Cha-Cha, or are interested in this type of music. There is not much to offer otherwise, with performance, fidelity and stereo effect just fair.

RCA FTP 1119, YOUNG AND WARM AND WONDERFUL. Peter Nero, 4 track, 7½ ips, 38 mins., \$7.95.

RCA FTP 1141, FOR THE NEROMINDED, Peter Nero, 4 track, 7½ ips, 39 mins., \$7.95. This talented young pianist continues his imaginative and creative keyboard stylings in these two albums. Using his own arrangements, he gives a special touch to each of the numbers in "Young, Warm and Wonderful," to provide romantic as well as highly listenable mood music in the modern manner.

"For The Nero Minded" is varied as Peter weaves classical themes through popular numbers, using full orchestral treatment on some, while others have him alone at the keyboard for solo work. Marty Gold conducts the orchestra for both tapes, and gives excellent support. Recording and stereo effect are of the best.

YOUR TAPES NEED FilMagic!

FilMagic Pylon (patented automatic silicone applicator), with Long-Life Conditioner and Cleaner Fluid insures clean, "wow-free" tapes and constant head lubrication. Pylon kit contains all essentials. One Pylon Applicator (suction-grip, flange or "spin-in" base), bottles of Tape Conditioner and Cleaner Fluid, extra sleeves, fluid dispensing pipette, and full instructions. At your dealer or send \$3.45 for postpaid U. S. delivery to:

The Distributor's Group, Inc.
204 Fourteenth Street, N. W. • Atlanta-13, Georgia



NO MORE blurred, distorted sound



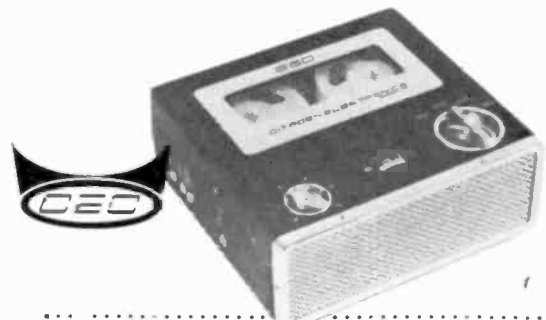
ALWAYS perfect reproduction like this

YOU CAN TAPE IT WITH YOU ANYWHERE...

Play/record with the 6-lb.

Model 660

CEC portable tape recorder



Like a picture, irreplaceable *sounds* can be recorded "out of focus". Answer is the CEC professional Model 660. Six pounds light, fully portable. Runs on six penlight batteries, AC or in your car. Capture the sounds you want anywhere—anytime—keep them forever. Covers widest frequency range with professional-type microphone. That means you record what you hear—and what you want to keep. Send 25¢ for booklet on how a portable tape recorder can work and play with you 24 hours a day! Name of your nearest CEC dealer will be included.

CITROEN ELECTRONICS Dept. TR 122
729 N. Highland Avenue, Los Angeles 38, California

- CEC Booklet containing ingenious suggestions on how to get the most from a tape recorder at work or play. I enclose 25¢ (coin, stamps) for postage and handling.
- Name of nearest CEC dealer.

Name.....

Address.....

City..... Zone..... State.....

TAPE CLUB NEWS

Leaflet Offered

The Magneto-Vox Club Secretariat has available a leaflet entitled "How To Get More enjoyment Out of Your Tape Recorder" and it is available free to any amateur tape recordist without the necessity of sending a stamped envelope. The leaflet is also available in French. To get a copy, just send your name and address to the Magneto-Vox Club at the address shown in the roster.

Tape Spree

During the first two weeks of October, the Club Du Ruban Sonore experimented with the activity of a tape network, or a tape spree. Twenty-four members in Canada and the U. S. responded to the call as the result of two identical circulars sent out at the beginning of September. The participants, having received the list of all who had accepted, were free to tape to those they had never taped with. Messages were to be recorded on a three inch reel at 3¾ ips and not exceed four minutes. Replies were to be made within 48 hours after arrival, and not to exceed four minutes. The aim of this two week project was to stimulate tape correspondence and it appears that the project has been a successful one. It may be tried out again in the months to come.

New Directory

Congratulations to the American Tape Exchange on their up-to-date, well done, directory and bulletin. The directory lists some of the Tape Respondents International (disbanded) members as it promised

it would. There are new sections and features in the bulletin, including a department for teenagers, letters of the month, and a poem of the month. The sketches too are very good. Keep it up ATE.

New WTP Reels

Formation of Reel #9 in New Zealand brings the number of WTP Reels outside the U. S. to three. The Otago Tape Recording Club, with John Jago of Dunedin as corresponding secretary, applied for a reel charter in September, 1962. President of the new Reel is Martin Swinkles, of Dunedin.

Reel #8, sparked by O. J. Borrowman, is the Prince Albert Tape Recording Club, Prince Albert, Saskatchewan, Canada; and Reel #6 is the Tanganyika Tape Recording Society, with Clement Segueira as secretary.

Suggestion for Clubs

In the interest of tape recording as a hobby, I would like to bring up an idea for the tape clubs. Since I am also interested in ham radio, I have wondered why the different tape clubs are not as active and do not have as many followers as ham radio. Tape exchanges and ham radio offer somewhat opposite advantages and disadvantages, although both are hobbies of communication.

It is my belief that the various certificate programs to qualify for certificate awards have given ham radio the boost toward

frequent contacts. For example, a certificate for contacting a certain number of countries, a certain number of members of a certain club or just a certain number of contacts anywhere.

One such award that could be given by each and every tape recording club is an Honor Member All States award. The clubs could contact amateur radio operators or the ham publications and get illustrations of such certificates for an idea of format.

This Honor Member All States award would be given to any club member who has exchanged recording tapes with a club member in every state represented in the club's membership roster. As verification and proof that exchanges were made, club members could save the postmarked envelopes in which the tapes were received. The necessary number of postmarked envelopes could then be forwarded to the respective club officer or officers to receive the award.

The situation today is that most club members start tapespondence with a few members and never get around to tape exchange with other members. This type of certificate award program would create a large number of one time contacts that would put new blood into any tape club's membership.

In the interest of tape recording as a hobby, your magazine could also offer such an award for 100, 200, 300, 500 etc. contacts with any different members or recordists anywhere in the world. It is my belief that certificate programs would do as well for recording clubs as they have for ham radio. Possibly your readers who are recording club members might care to comment on this idea, to you and to their clubs.—*John C. Bobbitt, Memphis, Tennessee.*

JOIN A CLUB

TAPE RECORDING Magazine assumes no responsibility for the management or operation of the clubs listed. This directory of clubs is maintained as a service to our readers. Please write directly to the club in which you are interested regarding membership or other matters.

Please enclose self addressed, stamped envelope when writing to the clubs.

AMATEUR TAPE EXCHANGE ASSOCIATION
Ernest Rawlings, President
5411 Bocado Street
Cartierville, Montreal 9, P. Q., Canada

AMERICAN TAPE EXCHANGE
Clarence J. Rutledge, Director
1422 No. 45th Street
East St. Louis, Illinois

CARTRIDGE CORRESPONDENCE CLUB
George C. Ekmalian, Sect.-Treas.
45 Haumont Terr.
Springfield, Mass.

CATHOLIC TAPE RECORDERS OF AMERICA, INTERNATIONAL
Jerome W. Ciarrocchi, Secretary
26 South Mount Vernon Avenue
Uniontown, Pennsylvania

CLUB DU RUBAN SONORE
J. A. Freddy Masson, Secretary
Grosse Ile, Cts. Montmagny,
P. Que., Canada

INDIANA RECORDING CLUB
Mazie Coffman, Secretary
4770 E. 39th St.
Indianapolis 18, Indiana

INTERNATIONAL VOICES OF YOUTH
P. O. Box 3041-T
San Mateo, California

MAGNETO-VOX CLUB
J. M. Roussel, Secretary
7915 Des Erables
Montreal 35, Que., Canada

ORGAN MUSIC ENTHUSIASTS
Carl Williams, Secretary
152 Clizbe Avenue
Amsterdam, New York

STEREO INTERNATIONAL
O. B. Sloat, Director
1067 Flatbush Avenue
Brooklyn 26, N. Y.

TAPEWORMS INTERNATIONAL TAPE RECORDING CLUB
Marion Chism, Co-ordinator
129 South Broad Street
Carlinville, Illinois

THE SOCIETY OF TAPE HOBBYISTS
Ralph Holder, General Secretary
116-06 139th Street
South Ozone Park 36, N. Y.

THE VOICESPONDENCE CLUB
Charles Owen, Secretary
Noel, Virginia

UNION MONDIALE DES VOIX FRANCAISES
Emile Garin, Secretary
c/o Romance Languages—Rm. 1617
Cathedral of Learning
University of Pittsburgh
Pittsburgh 13, Pa.

UNIVERSAL TAPE NETWORK
Larry Duhamel, President
R. F. D. #1, Main St.
East Douglas, Mass.

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

OVERSEAS

AUSTRALIAN TAPE RECORDISTS ASSOC.
Bob Nardi, Hon. Sec./Treas.
P. O. Box 67, Eastwood,
New South Wales,
Australia

ENGLISH SPEAKING TAPE RESPONDENTS' ASSOCIATION
Robert Ellis, Secretary and Treasurer
Schoolhouse, Whitson By Duns
Berwickshire, Scotland

INTERNATIONAL TAPE FELLOWSHIP
Fred Rimmer, Overseas Rep.
21 Mount Pleasant
Sutton-in-Ashfield
Nottinghamshire, England

STEREO TAPE CLUB
P. J. Kruger, Secretary
3 Clan Building
181 Main Road
Diep River
Capetown, South Africa

THE NEW ZEALAND TAPE RECORDING CLUB
Kenneth M. Tuxford
P. O. Box 7060
Auckland, W. I., New Zealand



THE FIRE AND POETRY OF SONY SOUND



NEW SONY STERECORDER 464 CS: A COMPLETE, PORTABLE STEREO RECORDER AT A REMARKABLY LOW PRICE

Another Sony triumph in tape recorder engineering, the new Sony 464 CS Sterecorder *records and plays back stereo* tapes with the professional purity of studio recording. Whether it's the delicate tone of a Stradivarius, the fire and poetry of Flamenco, the resounding blare of seventy-six trombones, or the full magnificence of a London Symphony—all the richness of stereo sound—yours to command for only \$299.50. *All Sony Sterecorders are Multiplex Ready!*

SUPERSCOPE

The Tapeway to Stereo

The new Sony 464 CS is a completely self-contained stereo system with two microphones, two extended range stereo speakers and such additional features as sound-on-sound recording, push button channel selection, dual recording indicators, automatic tape lifters, digital counter, pause control and FM stereo recording inputs. Also available, model 464-D for custom installation, (464 CS less case, speakers and microphones) \$199.50. ■ Sony, the world's most respected name in quality tape recording equipment, manufactures a complete line of monophonic and stereophonic recorders, priced from \$79.50 to \$595.00. ■ Sold only at Superscope franchised dealers, the better stores everywhere. ■ For literature or nearest dealer, write Superscope, Inc., Dept. 15, Sun Valley, Calif.

CROSSTALK

from the Editors

WITH THIS ISSUE, Tape Recording begins its 10th year of publication. To those of us who make up the editorial staff it hardly seems possible that so much time has elapsed since the first issue.

* * * * *

WE STARTED LIFE with the title of "Magnetic Film and Tape Recording" in 1953 and made the switch to just plain "Tape Recording" after it became apparent that information on magnetic film was very sparse—and so it has continued to this day.

* * * * *

WE HAD TEN advertisers in our first issue: Amplifier Corporation of America, Audio Devices, Charles Transcript Service, Magnecord, Inc., Minnesota Mining and Manufacturing Company, Radio Corporation of America, Reeves Soundcraft, Revere Camera Company, Shure Brothers and Webcor.

* * * * *

WITH THE EXCEPTION of RCA and Magnecord, who are still in business today and Charles Transcript Service, who is not, all the other companies are advertisers in this issue—and they have been consistent advertisers over the years. Needless to say, we are grateful to those firms for their loyalty over the years. We are grateful also to firms who have entered the market since our inception and have, likewise, been consistent advertisers.

* * * * *

AS THE ONLY magazine serving industry exclusively, we have literally had to run to keep up with it. Tape never was, and probably never will be a static medium. The industry has, perhaps, an overabundance of inventors who sometimes have produced confusion in the marketplace by their profuse output.

* * * * *

WHERE TEN YEARS ago a tape recorder in the home was almost a novelty, today it has become an accepted member of the family in millions of homes. As the base of recorder ownership broadened so did the numbers of models.

* * * * *

THE VARIETY OF uses to which tape has been put over the years has constantly increased. Designed primarily as a means of recording and playing back audio material, it now records TV, is the heart of the giant computers which do everything from keep bank accounts to predicting elections and make up payrolls and tax returns. In fact, the Internal Revenue Department plans to put all tax returns on tape and then the machine can compare personal returns with employer returns to turn up any cheating. Tape programs satellites, guides machines and does countless other tasks.

* * * * *

THIS PANORAMA OF development and change has been a fascinating one to watch and report to our readers. Editorially, it has not been an easy life, for the industry is a bit like the legendary general who mounted his horse and rode off in all directions at once.

* * * * *

WHEN WE STARTED THE magazine, the arguments were still waxing fairly hot about the merits of dual track tape as contrasted to full track. It was said that dual track could never equal full track because of a drop in signal level and an increase in the signal to noise ratio. But then the manufacturers came up with better heads and everyone was happy again. The same arguments were dusted off and used over when four track came along but again, better heads solved the problem. And so it has gone—from improvement to improvement.

* * * * *

ALL IN ALL it has been a busy ten years for us, and the industry. Since there is no sign of a letup, it looks like more of the same for the next ten.



New, fifth-row-center-sound...the Wollensak 1580

Compact and portable and amazingly easy to use, the 1580 also is a totally new experience. It brings you concert or public event, picnic or party, anything you choose to record...in the startling realism of full stereo. With true high fidelity! The 1580 has an awesome ability to place you each time in the perfect seat...in Fifth Row Center. A remarkable instrument! /

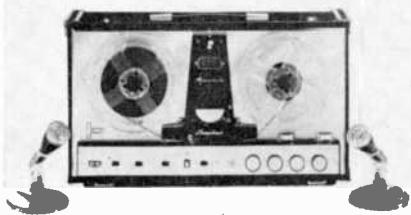
Yet this new recorder gives you even more: the "professional" features you wanted. Multipurpose fingertip tab controls...balanced tone controls...instant tape stop...neon record level meters...two tape speeds...recording and playback in two and four track stereo and monophonic...recording and play simultaneously...sound-with-sound...live narration with playback...

PA system...and more! It has plenty of power (22 watts audio output), and Wollensak precision, ruggedness and reliability. And, it is beautiful. As you see. / But hear it to believe it! Try the 1580 at your favorite dealer. Get ready for the big sound thrill!!!

Wollensak 3M
AN AFFILIATE OF 3M COMPANY

NEW PRODUCTS

NEW GEMARK LINE



General Magnetics & Electronics Division, Estey Electronics, Inc., 59 Hempstead Gardens Drive, West Hempstead, New York has introduced three new tape recorders. Heading the line is the Model 430W (top), stereo recorder which retails for \$379.95, including auxiliary speakers. It features "Dub-A-Track" or the sound-on-sound principle, has four track monaural and stereo record and play, digital counter for rapid location of selections, two VU-type level meters, and automatic shut-off.

Model 430 (middle) is identical to 430W except in finish and the fact that external speakers are an optional item, and it retails for \$299.95.

Model 207 (bottom) is a monaural dual-track machine that costs \$99.95. It has

dual speaker outputs for 3-way speaker operation, low speed variation, low amplifier distortion and excellent fidelity, according to the manufacturer.

All three Gemark units record at $3\frac{3}{4}$, and $7\frac{1}{2}$ ips, all are UL approved, and all operate on AC current only. For complete details, write to manufacturer above.

SIX-CHANNEL RECORDER



A six-channel tape recorder designed specifically for courtroom use which enables the court reporter to accurately monitor testimony in six separate areas of the courtroom, simultaneously, was introduced recently by the Special Products Division of Fairchild Camera and Instrument Corp., 5550 Harbor Street, Los Angeles, Calif. Almost five hours of continuous recording time on each of the six recording channels is available on a single seven inch reel. During playback, the unit can present the voice inputs from any of the six channels separately or all at once. All six channels have individual recording level controls and neon monitoring lights. A VU meter allows the operator to get the proper amount of sound on each channel. A plug-in headset allows audio monitoring by the operator; an accurate footage counter enables the operator to quickly locate any specific segment of the tape; a three-position foot switch is available for remote operation; it has plug-in board circuitry for simple maintenance; and a push-pull power amplifier gives the unit increased power with less distortion when using the loudspeaker. This unit is known as the Sonarex and it retails for \$1,180. All details available from the manufacturer.

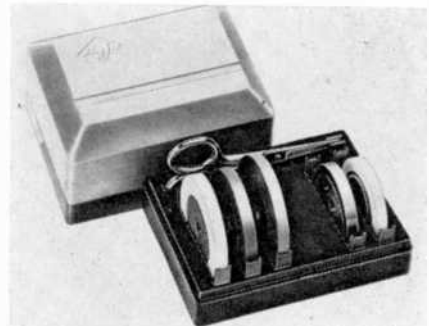
NEW KALIMAR RECORDER



The new Kalimar 1600 A.C. tape recorder is a two-speed, 4-tube unit with such features as visual recording-level meter, instant-pause lever, record lock but-

ton, fast forward and fast rewind. It has jacks for monitor and external speaker. Tape speeds are $3\frac{3}{4}$ and $7\frac{1}{2}$ ips, wow and flutter is less than 0.35% at the faster speed, and recording time is one hour at $7\frac{1}{2}$ ips and two hours at $3\frac{3}{4}$ ips. The amplifier circuit of this machine has standard tubes, and is fitted with a high quality 4" x 6" speaker. It is supplied complete with microphone, set of alligator clips for recording direct from speaker leads of radio or phone, takeup reel. The cost is \$99.50. Contact Kalimar, Inc., 1909 S. Kingshighway, St. Louis 10, Missouri for more information.

EDITING KIT



A complete editing kit for magnetic tape is now available from Agfa, Inc., Rockleigh, New Jersey. The unit, self-contained in an Agfa blue-and-orange plastic box, includes everything needed for marking and mending tape, including a small pair of scissors, and it sells for \$3.95. The cover of the box has a $\frac{1}{4}$ " groove which serves as a tape splicer. Three rolls, 80 feet each, of red, green and white tape, and a 33-foot roll of silver contact tape and a 33-foot roll of splicing tape complete the kit. These items are also available separately for replacement. For further details, contact: Harold Martin, at Agfa.

EXTRA-SPEED KIT



All Citroen Electronics Models 550 and 660 portable tape recorders are now being equipped with a $7\frac{1}{2}$ ips kit for professional applications. This kit gives the machines three-speed performance. There is no charge for the $7\frac{1}{2}$ ips kit. Model 550 CEC tape recorder still sells for \$129.50 and Model 660, a two-speaker portable, for \$149.50. Literature on the machines and the kit is now available from Citroen Electronics Corp., 729 N. Highland Avenue, Los Angeles 38, California.

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New York 16, N. Y. Visit Our Showroom



“WHAT IS THE RIGHT RECORDING TAPE FOR YOU?”

Have you ever been uncertain as to which kind of recording tape to use? If so, the following facts may help you decide what kind of tape will give you best results. Most leading manufacturers of tape offer two types—at two prices: acetate based (sometimes called plastic) and polyester based. The acetate based tapes cost less.

strong or super strong

Although both tape bases have ample strength for recording purposes, polyester is much stronger than acetate. It is so strong, in fact, that polyester will stretch before it will break. This would be a distinct advantage except for the fact that a stretched tape affects the quality of reproduction, creating a condition known as “wow.” The result is a wavering of pitch that can't be corrected.

Acetate, on the other hand, will snap before it stretches. If such a break should occur, it can be repaired handily—without loss of tape length or reproduction quality.

long play or standard length reels

In order to get the advantage of extra long play, thinner tape base must be used. Such reels must be handled with extreme care. While both polyester and acetate based tapes are available in long play reels, polyester offers the advantage of greater strength.

However, since long play tape is thin, there is always the possibility of “print through” of loud passages. This happens when the tape is reeled, and the loud passages come in close contact with the tape immediately under and above it. This “print through” manifests itself as a second sound or echo, and is particularly noticeable if the passages affected have a low sound level of their own. As a general rule: if the length of play is vital to your purposes and fidelity of reproduction is of lesser importance, then long play reels are what you require. But, all things considered, standard length reels are advisable—particularly if you want best results in terms of high-fidelity reproduction.

what about tape life?

Tape life depends on many factors. The film base is only one of them. Such things as quality of manufacture, the adhesive which binds the iron oxide particles, and the care used in playback and storage all affect tape life.

Both polyester and acetate bases have proved their ability to last through the years. In this respect, both types can be considered as long lasting materials.

what about price?

Acetate based tapes cost less than the polyester type. But this fact alone is not sufficient to explain the overwhelming popularity of acetate in tape recording.

When you buy recorded reels: classical, popular, shows or seasonal offerings, most often you'll find them recorded on acetate based tapes. Recording companies like its fidelity . . . its protection from “print through” . . . its resistance to distortion through stress . . . its all around quality. And you will, too. Celanese Plastics Company, 744 Broad Street, Newark 2, N. J.

Celanese[®]

Celanese does not manufacture recording tape. It produces and supplies acetate film for this purpose to leading tape manufacturers.

Celanese Plastics Company is a division of Celanese Corporation of America.
Canadian Affiliate: Canadian Chemical Company, Limited, Montreal, Toronto, Vancouver
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 522 Fifth Ave., New York 36, N. Y.

Celanese
PLASTICS
COMPANY

- ◆ REMARKABLE
- ◆ PRACTICAL
- ◆ SCIENTIFIC

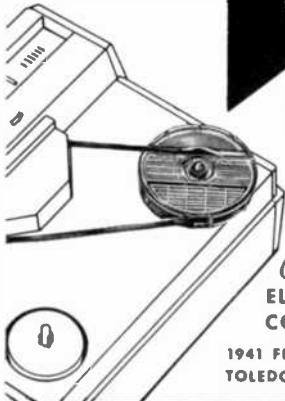
Nothing to change

No rewinding

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\$9.75
15 minute size

Cousino
AUDIO-VENDOR



ENDLESS TAPE
FOR AUTOMATIC AND CONTINUOUS PLAYBACK
fits any recorder

Ideal for party music, helping Johnny with studies, language practice, sleep learning, unlimited commercial use... displays, dictation, exhibits, promotions, broadcast programs.



MODEL U-1310

Cousino
ELECTRONICS CORPORATION

1941 FRANKLIN AVENUE
TOLEDO 2, OHIO

record or erase as with standard re-wind tapes

"Truly A Club to Service You"

Livingston Tape Club

All tapes at discount prices
★ All labels available ★ A bonus tape for joining the club ★ Postage prepaid on domestic shipments ★ Monthly specials

For complete details write to:

LIVINGSTON AUDIO PRODUCTS CORPORATION

1259 U. S. HIGHWAY 46
PARSIPPANY, N. J.

"WHY MY RECORDER IS IMPORTANT TO ME" CONTEST

WIN A REEL OF TAPE. Tell us in your own words why your recorder is important to you, not why it could be important to someone else. Entries will be judged on the basis of their usefulness to others and on the uniqueness of the recorder use. No entries will be returned. Address your entry to: Important Recorder Contest, Tape Recording Magazine, Severna Park, Md.

Gentlemen:

I use my tape recorder in many different ways that are important to me, but most of all I use it to bring entertainment to others and that is when it really has a chance to do its stuff.

I like to make up special reels designed especially as entertainment for shutins, for children, and for people who are hospitalized. Sometimes I have them copied and give them to hospitals, schools for the blind, etc., and sometimes I bring my own record player around and play the reels to them. I would rather give out copies of the tapes, so the recipients can keep them on hand to play over again at any time, but my finances are very limited so I cannot always do this.

The tapes themselves vary. Sometimes I tell the story of a musical show, and illustrate it with the music from the show taken off their regular album. Sometimes I create a kind of a minstrel show—jokes and things between fast paced recorded music. Sometimes I get to interview an important person who would be known to the people who get to hear the tape. Sometimes it's a tape recording of a church choir singing.

Right now I am taping with a number of people all over the country, and each of these people contribute things for my "audience." I take it off the tape they send and put it on another, compiling a taped "magazine" of various interesting items from all over the country. These have proven so popular I'd like to get a whole lot more people taping to me. One man sends descriptions of Hawaii and authentic music from the islands. Another just talks interestingly about the place where he lives. Another was telling me about the work he does in a zoo. All these things, plus favorite records, comedy bits, and anything else interesting, find their way into my "tape magazine." Of course I give credit to the people who contribute each item. The shutins, the sick and the blind love this feeling of being in touch with actual people all over the country.

Now that radio has degenerated into a music-and-news deal, these tapes fill a mighty important place in the entertainment of the blind. I would like to encourage other tape recorder owners to do this same thing in their locality. I would also like to hear from anyone who would like to help in this work by sending in taped material I can use. It would be a chance for them to make their tape recorder important to them, as well.—*Paul Sheldon, 6 Rollins St. Concord, New Hampshire.*

Dear Editor:

My recorder is important to me as it helps me obey a verse in the Bible and yet be able to be at home. The verse is

"Go ye into all the World and Preach the Gospel to every creature," *Mark 16:15.*

I have been recording religious music and sermons of different pastors and sending them to Missionaries around the world. First it is a blessing to them to hear these tapes and then, too, the material can be passed on in the native tongues to many, many people. It makes me a part of the service the missionary is doing and I feel I am serving my God more through this means.—*Charles E. Toelcke, Villa Park, Ill.*

Dear Editor:

My recorder is important to me because it helps me in my school work. I am a high school student and I am studying Spanish. My tape recorder helps me study the language better, by being able to hear myself speak it. My recorder has also helped me study for important exams.

Being interested in amateur radio my tape recorder has also helped me to learn the Morse code. By recording code broadcasts from short-wave stations and playing them back as many times as necessary, I am able to increase my receiving speed. Thanks to my recorder I am getting better marks in school and I am ready to take my novice license test.—*Kenneth Usen, Bronx, N. Y.*

Dear Sirs:

My tape recorder has played a most important factor in my life within the last year, since I've been the proud possessor of one.

First, my joining the Voicispondent Club has opened a whole new horizon for me, which enabled me to broaden my information through reading books of my choice and to increase my circle of friends throughout the world.

Second, by hearing excellent recordings by the readers, my diction, enunciation and vocabulary have increased steadily. Recently, when appearing on a panel, I felt self-composed and sure of myself; as, I had recorded my talk in advance and could improve on my delivery.

Without my tape recorder, I could never have known these most kind, interested and humane people, especially those whom I have met through the Voicispondent Club. My faith has been restored in humanity because of these individuals, who give so much of themselves to enrich the lives of others.

The greatest pleasure I derive, after a day's work, is the anticipation of using my tape recorder, either for reading purposes or to again hear from new friends in all walks of life in any place in the world—also, to record replies to them.—*Celia Feldman, Baltimore, Md.*

P.S. Celia is a physical therapist and is blind.

TAPE IN EDUCATION

From an address by Dr. Wm. J. Smither, Director of the Language Laboratory, Tulane University, given to MRJA. Part II. Part I appeared last month.

Now, after two years of experimentation, we have a consistent pattern of superiority in all skills in favor of the wholly-monitored sections, *but* our statistician tells us that the superiority, while real, cannot be regarded as significant.

In other words we can say tentatively that *carefully prepared* tape can work alone with the student more than half the time with no statistically significant adverse consequences. Both of these types of experimentals have the tape and machine at all times.

How do they compare with the conventional courses at Tulane that have the tape only 22% of the time?

Sixteen tests in 3 skills during 1961-62 gave the experimentals a huge superiority in 10 instances, a fair superiority in 2 more and equality with the controls in the remaining four. Two of the latter four, non-superior, items were a listening skill in January which changed to clear superiority in May. The other two were in reading, which we do not teach at all in the experimental first year.

We regard it as some sort of mystic victory that the tape-taught students can read as well as those who spend much of their time reading. Actually they test a little better but the statistician says the difference is not significant.

And now the specific hows.

The hearing and speaking come first. A body of material must be memorized from hearing—not seeing. The earliest portions are so contrived that all of the significant sounds in the target language are contained in context. All hearing and speaking is done at native pace from the first moment.

Grammar is so drilled in—not analyzed—that we give a cue and get a grammatically correct oral reaction which the student can no more explain than he could explain all of his English reactions at age 10. He just does it.

Most drills are teaching devices, not tests. This simple concept is one of the hardest for college teacher and student to grasp. Traditionally, foreign language "exercises" were something to be prepared outside class—or lab—and good performance was expected at all times in "recitation" periods.

Our aim is to program these tape drills so that each new step is minimal, but it is also to be expected that the student will fall on his face in the first few utterances in a new structure pattern. It is in this phase that the monitoring teacher is of greatest value. It is a trial and error system

and the teacher can reduce the number of tries needed to reduce the errors.

But these teaching drills can be transformed into tests. In the purely audio-lingual elementary course such as our experimentals all tests and responses are oral. At the present stage in our development we must test two aspects of active language skill:

1. the degree and quality of memorization of basic material, and
2. the ability to manipulate the memorized structures—*instantaneously* applied grammar.

The timing of the pause for student response is an integral part of the test. At this point we want a response, not a thoughtful answer. The thinking must come after the reactions are established.

The direction we are moving is toward carefully programmed sequences in sound presented through equipment that puts every student equally close to the source and gives him a modicum of privacy in which he can fail repeatedly without embarrassment.

Implications of magnetic tape in language teaching go far beyond the obvious benefits. It is easy to see that we are multiplying native voices, that we can allow recording and comparing by the student, and that we can help meet teacher shortage with machine and tape. But it is only when the teacher begins to manipulate these magnetic strips of seconds and minutes that he begins to realize the immense possibilities of economy of time. Infinite pains in programming the tapes can cram far more learning into, say, six minutes and 40 seconds. Furthermore the student performance used to vanish without an echo in a good classroom leaving only a subjective impression on the teacher. Now, captured on tape, the live language can be studied, analyzed, pondered.

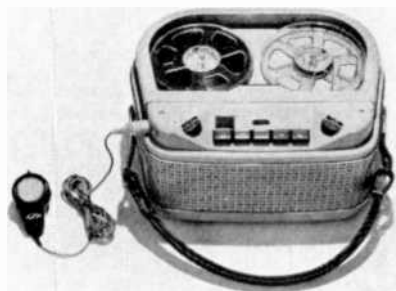
Tape is a hard master for the teacher—I said "infinite pains." Moments of sloppy teaching could once be covered by a good personality; now the tape makes such lapses too glaring. But once the programming is done, its high quality of instruction can upgrade the teaching in any number of classrooms. The large universities, where freshman classes are taught by graduate assistants, now have possibilities of controlled excellence regardless of the experience of the teachers.

As a graduate assistant at Wisconsin my classes were visited by senior staff members 3 times a semester. I was very good those three hours. Now at Tulane every hour in French and Spanish is paced by tape that may have cost many hours and involved several people in preparation.

The role of the foreign language teacher is changing. Instead of being the drillmaster he is now the listening diagnostician, the adviser, the analyst not only of teaching theory and language skill but of the psyche—he must watch for signs of rebellion against the timed lockstep and treat those symptoms with humanity.



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TAPESPENDENTS WANTED

This listing is for those seeking tape correspondents, looking for swaps of tapes, etc. and it is a free service for our readers. If you wish your name listed send us the following information on a post card: 1-Name, 2-Mailing Address, 3-Kind of recorder, speed and number of tracks, 4-Subjects on which you want to tapespond or items for which you are looking. 5-Indicate whether you are an adult or teenager. Listing will run two months and then be dropped to make way for new listings. Address your postcard to: TAPESPENDENTS WANTED, Tape Recording Magazine, 101 Baltimore-Annapolis Blvd., Severna Park, Md. Tape Recording magazine assumes no responsibility for any inquiries between people listed in this column which are not answered.

Ray Sholders, 209 Helms Ave., Swedesboro, N. J.; Recorder: V-M 720, 3 3/4 & 7 1/2 ips, 4 track monaural with stereo playback; Interests: Big band stereo tapes, general topics on hunting, fishing, boating, camping in other parts of the country.

Stuart Albert, 31 Lott Ave., Brooklyn 12, N. Y.; Recorder: Wollensak 1515-4, 3 3/4 & 7 1/2 ips, 2 or 4 track; Interests: Electronics, stereo, hi-fi, jazz, drums and music in general. I am an electronics technician going for engineering. I will talk to anybody, any place; Adult.

Steve Barker, 306 Rutherford St., Athens, Ga.; Recorder: V-M Tape-O-Matic 722, 3 3/4 & 7 1/2 ips, 4 track (dual and full track), stereo; Interests: Classical and popular music; hypnotism, tape letters, historical events, electronics, stereo. I am particularly interested in science-fiction and sound effects. Answer all; Teenager.

Elaine Burnett (Miss), 201 Derby Ave., Louisville 18, Kentucky; Recorder: V-M Tape-O-Matic, Model 710, 3 3/4 & 7 1/2 ips, dual track; Interests: Flamenco music, 35 mm slide photography, travel, stereo, pre-recorded tapes, oriental music, boating, Corvette sport cars; Age 20 (single).

Steve Friedman (Spike), 714 Crestview Place, Walla Walla, Wash.; Recorder: monaural, two track, Revere, with 3 3/4 ips only; Interests: "Tapals" wanted interested in exchanging and returning tapes and ideas on sleep learning, new and old R' n R'; hypnotism. Would preferably like to hear from male or female in this general area; Teenager.

Franzel C. Buck, 146 Duke of Gloucester Street, Annapolis, Maryland; Recorder: mono-stereo, 3 3/4 & 7 1/2 ips, 2 and 4 track; Interests: Anthroposophy, designing, general interests (English and German)—will answer all tapes.

Ron Bisset, 45 Adderley Terr., Dunedin, New Zealand; Recorder: Telefunken M24, 7 1/2 and 3 3/4 ips at half track; Interests: Radio programs and commercials, color slides, and general tapespondents; Adult (24), married, recording studio manager.

Gene Wahrman, 952 No. Ardmore, Hollywood 29, Calif.; Recorder: Roberts, 4 track, stereo,

3 3/4 & 7 1/2 ips; Interests: Light classical music; I would like to exchange copies from pre-recorded stereo tapes; looking for stereo tape of "Show Boat" motion picture; Adult (27).

Elmer H. Fuehr, 4113 Evergreen Rd., Pittsburgh 14, Penna.; Recorder: Pentron NL-3, 3 3/4 and 7 1/2, dual track, 2 track stereo, will have 4 track recorder soon; Interests: High fidelity, 35 mm photography, citizen band radio, 6 and 2 meter amateur radio, travel, current events high school teaching degree in social science. Interested in these subjects and philosophy; Adult (38), single.

Robert Hodges, 435 Diversey, Chicago 14, Ill.; Recorder: Viking 75, 2 track, 7 1/2 and 3 3/4 ips; Interests: Would like to find tapes of Susanah Foster on Lux Radio theatre broadcast, early forties—"Phantom of the Opera," and early movie sound tracks; also Helen Traubel Met broadcasts and radio; Adult (33).

Thomas A. Roker, Jr., 31-07 49th Street, Woodside 77, N. Y.; Recorders: Philco, V-M 711, 7 1/2 & 3 3/4 ips, 2 track, stereo; Ekotape tape deck 346, 7 1/2 & 3 3/4 ips, 2 and 4 track stereo; Eicor 115, 7 1/2 ips, dual track; Interests: Modern jazz and classical music; would like to tapespond with those interested with the aspects of tape recording and beginners in tapesponding interested in improving their techniques. I am also looking for copies of any dynamic classical organ works; Adult (35).

Syd Finley, Jr., 939 H Street N.W., Wash. 1, D. C.; Recorder: Telefunken & Grundig, 1 1/2, 3 3/4 & 7 1/2 ips, dual track; Interests: Motorcycles, sports cars, women and music; Adult, single.

Barbara Confino, 1561 Sheridan Avenue, Bx. 57, N. Y.; Recorder: Revere T-2000, mono, 2 track, 2 speeds; Interest: I would like to trade opera tapes; Adult.

Dr. Harold Kahn, 444 Superior St., Toledo 4, Ohio; Recorder: Norelco 400, 1 1/2, 3 3/4 & 7 1/2 ips, 4 track; Interest: Jewish and Yiddish music, old and new; Adult (45).

Dave A. Amaral, 38553 Logan Drive, Fremont, Calif.; Recorders: V-M 714, V-M 722, Ampex 601-2; Interests: 1939-40 records by Sons of the Ozarks on RCA Bluebird. 1942 records by Rusty Draper on coast, Draper air-checks, tapespondent in field of radio or television broadcasting wanted; Adult (25).

Walter O'Malley, 7722 So. Austin Ave., Oak Lawn, Ill.; Recorder: Webcor Royalite, two track, 1 1/2, 3 3/4 & 7 1/2 ips; Interests: Irish and Scotch music, comedy satire; Adult (31).

Richard M. Semerak, 4327 So. Sacramento Ave., Chicago 32, Ill.; Recorders: Viking Model B6 and Webcor, 2 and 4 track, full track, 3 3/4 and 7 1/2 ips; Interests: Japanese folk and popular music, opera, dance bands, general folk music and classical music. Interested in tape of Yukiji Asaoka singing "Sayonara" on the Dinah Shore show of Dec. 25, 1960 and Izumi Yukimura singing Japanese folk song on Victor Borge show of Oct. 6, 1960; Adult.

Robert J. Linden, 610 Knoll Drive, Lansdale, Penna.; Recorder: Wollensak, 3 3/4 & 7 1/2 ips;

Interest: Want to hear from Reading Railroad ramble trip tapers either aboard train or on ground recordings; Adult.

William Swisher, 409 Taylor Street, Sandusky, Ohio; Recorders: Webcor 2711, dual track, 3 3/4 & 7 1/2 ips; and V-M 730, dual track, 1 1/2, 3 3/4 & 7 1/2 ips; Interests: Would like to swap tapes of 78 rpm records by Glenn Miller and his orchestra, and tapes of David Brinkley prior to 1961; Teenager (16).

Audrey C. Monroe, 116 Drake Ave., South San Francisco, Calif.; Recorder: Sony 300 Stereocorder, 3 3/4 or 7 1/2 ips, monaural, 2 or 4 track; Interests: Magic, fishing, organ music, photography, plus old fashioned every day "chit-chat"; Adult.

Frank X. Ricallef, 101, Stuart Street, Gzira, Malta; Recorder: Norelco 400, 7 1/2, 3 3/4 & 1 1/2 ips, 4 track, stereo; Interests: Wants tape pals from USA, Germany, France, Italy, North Africa, and Japan. Most types of music mono or stereo, folk music, but no pop songs. Peculiar humor, hilarious or serious conversations on most human activities except sports. Italian opera. Unusual and "queer" music. I also seek lady tape friends around 30 years old, international FM broadcasts. I have much musical and spoken word material (in English) to offer. Sound effects. I have spent the last 22 years in England, Germany, Egypt, Libya, Israel, Ceylon, Singapore. Express myself best in English although I am familiar with a few other tongues of the countries I have lived in; Adult (38).

Merrill A. Maynard, P. O. Box 4, Taunton, Mass. Several Recorders: monaural, dual track, 3 3/4 ips; Interest: Operate a lending library for Catholic listeners, send tape for list, or if you are interested in serving as a volunteer reader; Adult (43).

Edmund K. Krause, 571 Edgemont Ave., Lansdale, Penna.; Recorder: Fujiya FL-77, two track, monaural, 3 3/4 & 7 1/2 ips; Interests: Historical shrines, Archeology, nature study, tapes of bird calls, and also of general conversation; Adult.

Victor Wise, 1331 Teller Ave., Bx. 56, N. Y.; Recorder: Concertone 505-4, 4 track (stereo-mono), 2 and 4 track playback, also half track mono; Interests: Classical, Jazz (all types) music; would especially like to exchange ideas on broadcasting techniques in announcing, sound effects, general conversation, D.J. Shows; Adult (22).

Bob Franzenburg, 8 Gutheil Lane, Great Neck, L. I., N. Y.; Recorder: Webcor "Regent Corneret," stereo, 1/4 track and 1/2 track, 1 1/2, 3 3/4 & 7 1/2 ips; "Technicorder" battery operated, half track, 1 1/2 & 3 3/4 ips; Interests: Would like to write to people about sleep learning and exchange self-help recordings on the subject with them. Also: Anyone having a tape recording of TV's production of "Meet Me In St. Louis" starring Tab Hunter, etc. I would like to have all musical songs. Also: I have many "candid" conversations of great interest, if you collect such conversations of people's gossip, arguments, fights or just plain interest—will exchange mine for yours . . . got some gemst Battery miniature hidden recorder does the trick; Teenager (19).

Jack M. Walters, Box 302, Plant City, Florida; Recorder: Silver-tone Model 9047, 3 3/4 or 7 1/2 ips, stereo playback; Interests: Music of all types, postmark collecting, also post cards—interested in exchange of both. Also general topics of conversation; Adult (27), male.

David G. Hillier, 13 Haig Road, Grand Falls, Newfoundland, Canada; Recorder: Phillips (Norelco) 400, 1 1/2, 3 3/4 & 7 1/2 ips, 2 and 4 track stereo and monaural; Interests: Music (except Dixieland and R' & R'), travel, general conversation, languages—French and German (just learning), sports; Adult (24).

Edward Greenberg, 15869 Cherrylawn, Detroit 38, Mich.; Recorder: Bell RT 65-B, 1 1/2, 3 3/4 & 7 1/2 ips, dual track, monophonic; Interests: Rock n' Roll and a variety of popular and classical

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music, tape recording, hi-fi, science fiction, space, and tape conversation. Will answer all tapes, especially want to tape to other teens; Teenager (15).

Stephen S. Buggie, 2421 Garfield Avenue South, Minneapolis 5, Minn.; Recorders: Norelco 400, Sony 101, 1 $\frac{1}{8}$, 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips, two or four track stereo or mono; Interests: Poetry, school, foreign affairs, travel, religion, hi-fi, school, science-fiction, dialects, radio broadcasting, politics, fine arts, helping people, fighting JD, soothing music, musical comedies, satire (especially Stan Freeberg); Teenager (16).

Walter Nasso, 5611 8th Avenue, Brooklyn 20, N. Y.; Recorder: Wollensak, 3 $\frac{3}{4}$ & 7 $\frac{1}{2}$ ips, 4 track; Interests: Piano music especially Peter Nero, Joe Bushkin, Andre Previn, shows and film music, exchanging tapes and general tape-spending; Adult (37).

Charles A. Brown, c/o 58 Park Crescent, Harrow Weald, Middx., England; Recorders: 2 Brennels, 1 $\frac{1}{8}$ to 15 ips, two track; Interests: Outside recordings, big band swing, big band jazz (most kinds of music), country and western, etc.—organ music especially; Adult (35).

Anthony Perry, 1921 N. Sayre Ave., Chicago, Illinois; Recorder: Wollensak T-1515-4, records 4 track monaural, plays monaural and stereo; Interests: Air shots or transcriptions of Roy Eldridge, Clark Terry, Rex Stewart, Jonah Jones and Bunny Berigan with their own bands or as sidemen in other bands copied to tape. Will trade for your wants; Adult.

Graham B. Rothaus, 247 East 39th Street, New York 16, N. Y.; Recorder: Norelco 400, 1 $\frac{1}{8}$, 3 $\frac{3}{4}$ & 7 $\frac{1}{2}$ ips, 2 track stereo and monaural; Interests: Opera, Lieders.

Francis A. Feest, 28 Albion Street, Waterbury 5, Connecticut; Recorder: Silverstone, 3 $\frac{3}{4}$ & 7 $\frac{1}{2}$ ips, dual track, monaural; Interests: Hi-fi, Chamber music, Baroque music, general chitchatting, getting to know people, WTP member, English only; Adult (21), single.

Lucille Guth, 323 Harrison Ave., Highland Park, New Jersey; Recorder: Crescent, 2 track, 3 $\frac{3}{4}$ ips; Interests: Movies, TV, theater, musical shows, athletics, etc.; School-girl, fourth grade, age 9.

Alan Guth, 323 Harrison Ave., Highland Park, New Jersey; Recorder: Crescent, 2 track, 3 $\frac{3}{4}$ ips; Interests: Science, theater, debating, bowling, tennis. Will tapespond with boy or girl; Teenage (15).

Donald F. Sibley, 113 E. Prentiss St., Iowa City, Iowa; Recorders: Webcor Regent, half track; Grundig Niki Transistor, Webcor speeds 1 $\frac{1}{8}$, 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$, both monaural; Interests: Correspond with young adults and adults on any subject; wants popular and standard recordings, especially instrumentals to exchange and return; interested in music, movies, bowling, general conversation; will answer all tapes sent; young adult (20).

Lorraine Sele, 4325 W. 104th St., Inglewood 2, California; Recorder: Viking 85, Mono, 3 $\frac{3}{4}$, 7 $\frac{1}{2}$ ips, dual track, 7" reel maximum, stereo, two track-record, playback, four track-playback; Interests: Music, record collecting (78's-LP's), radio and television program recording, comedy-humor-satire, show business (all phases), spoken word, poetry-prose. Am interested in obtaining series of programs entitled "Recollections at Thirty" on NBC/radio in '56/'57. Would like to form an organization devoted to record/tape collectors; Adult.

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Edward Luker, 40 LaRancheria, Carmel Valley, Calif.; Recorders: Norelco 400 and Wollensak T-1515-4, 90% at 7 $\frac{1}{2}$, balance 3 $\frac{3}{4}$, 4 track mono and 4 track stereo. Can make or copy any speed or type tape. Interest: I have 40 opera, some musicals, many Camden records, some opera collector items, many classical. Will send complete list to parties interested; Adult.

A. B. Hafey, 1580 Bathurst St., Apt. 27, Toronto 10, Ontario, Canada; Recorders: Brinell mono, half and full track, 4 speeds; Pentron modified, half track mono; Interests: Frank Sinatra and Stan Kenton non-commercial material; I am anxious to contact others willing to swap tapes or color slides of Sydney, Australia for Sinatra, Kenton or other non-commercial material I have.


Wallace J. Parsons, c/o General Delivery, Postal Station "F," Toronto, Canada; Recorders: I build my own recording equipment. Can handle half-track monophonic only (or quarter-track mono, on tracks 1 and 4 only—works quite well on half-track heads), 7 $\frac{1}{2}$ ips only; Interests: English only spoken, fluently, music, particularly classical, psychology, para-psychology, magic and related subjects, sound, hi-fi recording and reproduction, on a technical or non-technical level, science-fiction, arts and sciences in general, and religion I will return, unanswered, all tapes from persons wishing to save my soul—my parish priest seems eminently qualified to help there. And if I can help anyone in these or related matters, I'll gladly do so. All other tapes will be answered. I would prefer female spondents around my own age (27), as well as priests and religious, especially those involved or interested in religious broadcasting, or in church music.



"A complete recording studio in itself," says Dick Van Dyke—star of Columbia's forthcoming musical "Bye Bye Birdie" and his own CBS TV show.

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NOTE: We have a backlog of names on file which we must hold until we have space to publish them. We are publishing each name in two issues as stated in our heading. Please be patient until your name is used.

THE PAST TEN YEARS

... tape recording has come a long way over the last ten years, not without many trials and tribulations.

by Mark Mooney, Jr.

THE headlines of ten years ago were much the same as today with the international situation commanding the most attention. Stalin had died, the Mau Mau were running wild in Africa, Mount Everest was conquered, Truman seized the steel mills, the first hydrogen device was exploded by the U. S. and some months later Russia announced a similar explosion.

These news items do not seem to have happened a long time ago, in fact we rather imagine that you can picture the actual headlines as they were printed in your local paper.

The same is true of developments in the field of tape recording. Many things which we now think of as being new and up-to-date actually made news years ago. For instance, in the very first issue of TAPE RECORDING MAGAZINE, the Amplifier Corporation of America advertised a self-powered portable *stereo* recorder! Yet only within the last two years have battery-powered portables appeared on the market in any great numbers. Of course, this has been made possible by the development of the transistor, the Amplifier Corporation model used regular vacuum tubes in its electronics.

In 1953 the Magnetic Recording Industry Association was formed after Joseph F. Hards called a meeting of industry people at the Audio Fair in New York City. He served four terms as its president and over the years it has grown from a handful of members to forty-nine firms. The organization now represents all major manufacturers of tape, machines and musical tapes.

Color TV would seem to be new judging from the current advertising yet in 1953 RCA announced the recording and playback of color TV from tape. Crosby Enterprises had, in 1951, successfully recorded and played back black and white TV signals.

In the home movie field there is much talk today of the great future for 8 mm sound movies yet soundstripping is ten years old and in 1952 Victor Animatograph brought out its Magnesound for converting 16 mm optical sound projectors to magnetic sound.

Ten years ago the idea that the wire recorder was finished and would be supplanted by tape had not yet reached the newspapers which continued to say "wire recorder" when they meant tape recorder. There were still quite a few wire recorders being used.

Tapesponding and the tape clubs were in their infancy. The Voicespondence Club was formed when it absorbed the membership of the old wirespondence club, which was the first club to be devoted to the idea of correspondence between recorder owners.

Today there are 19 such clubs, some of them of a general nature, such as Voicespondence and World Tape Pals, and others, and some of specialized natures such as the Organ Music Enthusiasts, and the Cartridge Correspondence Club which employs cartridges for message exchange instead of the conventional reels.

Monophonic, or, as it was called then, monaural music on tape was the coming thing ten years ago. Among

the pioneers in this field were Hack Swain, Concertapes and A-V Tape Libraries, the latter starting life with eight tapes and a one sheet catalog.

In order to be able to demonstrate how good the recorder was as a music playing instrument, two firms, Webcor and 3M, brought out their own recorded tapes in an effort to help the field grow and encourage others to join in.

But already the seeds for the demise of mono tape were being sown in 1954 when Livingston Electronics brought out a small library of stereo tapes and a stereo tape player. The first tapes were dual track with the two tracks staggered about $2\frac{1}{4}$ " apart. It had to be this way since no one made a stacked head and it was necessary to use two regular heads, one placed upsidedown in relation to the other.

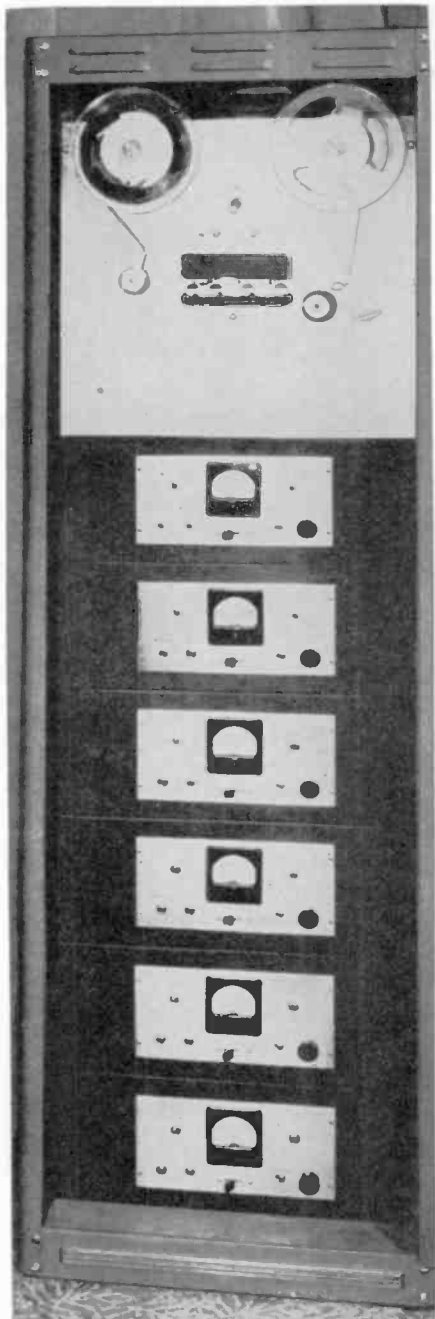
It was in this same year that Audio Devices introduced colored tape, Irish announced its Ferrosheen tape, 3M announced its extra play (1 mil) tape and Reeves Soundcraft was awarded a movie "Oscar" for its part in the development of magnetic sound featured in the picture "The Robe." Reeves also announced a 1 mil Mylar tape.

It was in 1954 that Ekotape announced their recorder for operating a slide projector and Revere Camera Company put out "synchro-tape" which was striped on the back to provide a strobe effect when used with a home movie projector.

In the field of miniaturization, Broadcast Equipment Specialties introduced a recorder using standard 1 mil tape which was small enough to fit in the hand and easily slipped into the pocket. The Mohawk "Midgetape" also saw the light of day in 1954 and it too was a very small



Joseph F. Hards who, in 1953, called together a number of industry people to form the Magnetic Recording Industry Association which now has in its membership all of the important firms in the industry.



Left: the Pentron electronic orchestra. This unit had six separate channels on 1/4 inch tape, one for each of the six instruments in the band. It was shown in 1953. Right: a reproduction of the first stereo tape catalog. This single sheet was put out by Livingston in May 1954. Below: Livingston designed and sold this stereo player, the first on the market to provide something for the public to play its tapes on. It had staggered heads, as had the first Magnecords.

machine, although larger than the Broadcast Equipment unit.

New names included the V-M Corporation with the first of a long line of Tape-O-Matics and U. S. Time Corporation which attempted a magnetic disc recorder which never went over.

With staggered stereo gaining ground V-M announced a conversion kit to convert its earlier mono model to the new sound. Berndt-Bach brought out the first 16 mm sound on magnetic film movie camera.

In 1956 Ampex stunned the broadcast industry by showing their video recorder which ran at only 15 ips in contrast to the others operating in the 100 ips range. So well had the secret of its construction been kept that no one in the industry was aware of the new machine until it was officially shown.

AUDIOSPHERE

THE AUDIOSPHERE TAPE LIBRARY

To meet the rapidly growing demand for what may, in its truest sense, be classed as HIGH FIDELITY pre-recorded tape, AUDIOSPHERE, Inc., has extended its recording activities into that field and now offers the following initial releases.

The May Festival Series, for example, has been specifically recorded for both the hi-fi enthusiast and the music lover and contains superlative programs recorded with professional equipment to the highest standards of the art. The series includes 12 selections recorded in the famous *Teatro Comunale* in Florence, Italy, with the 97-piece May Festival Orchestra under the direction of one of Europe's most eminent conductors, *Vittorio Gui*. Result — superb musicianship, majestic and dynamic range and true concert hall presence.

Reel Number (Monaural)	Reel Number (Binaural)	Selections
701	BN701	<i>Schubert</i> : Unfinished Symphony <i>Sibelius</i> : Finlandia
702	BN702	<i>Wagner</i> : Tannhaeuser Overture <i>Wagner</i> : Flying Dutchman Overture
703	BN703	<i>Massorgsky</i> : Night on Bald Mountain <i>Borodin</i> : Polovtsian Dances <i>Sibelius</i> : Valse Triste
704	BN704	<i>Debussy</i> : Afternoon of a Faun <i>Schumann</i> : Manfred Overture <i>Glinka</i> : Kamarinskaja
705	BN705	<i>Rossini</i> : William Tell Overture <i>Brahms</i> : Academic Festival Overture <i>Massenet</i> : Under the Lindentrees

In addition to the above series, the following releases are now available:

706	BN706	VOICES FROM VIENNA, Vol. I (The Music of Strauss)
707	BN707	VOICES FROM VIENNA, Vol. II

The above two reels are separate programs of the type of material which is responsible for the excellent reception of the Audiosphere disc release. Programmed differently for tape, with much new material added, each of these reels should sell itself.

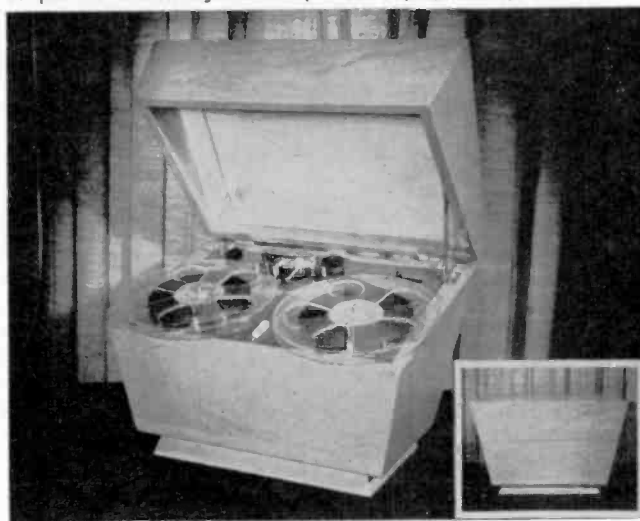
708	BN708	<i>Pfitzner</i> : Little Symphony, opus 44 (performed by the Vienna String Symphony, Collegium Musicum Wien, under Kurt Rapf)
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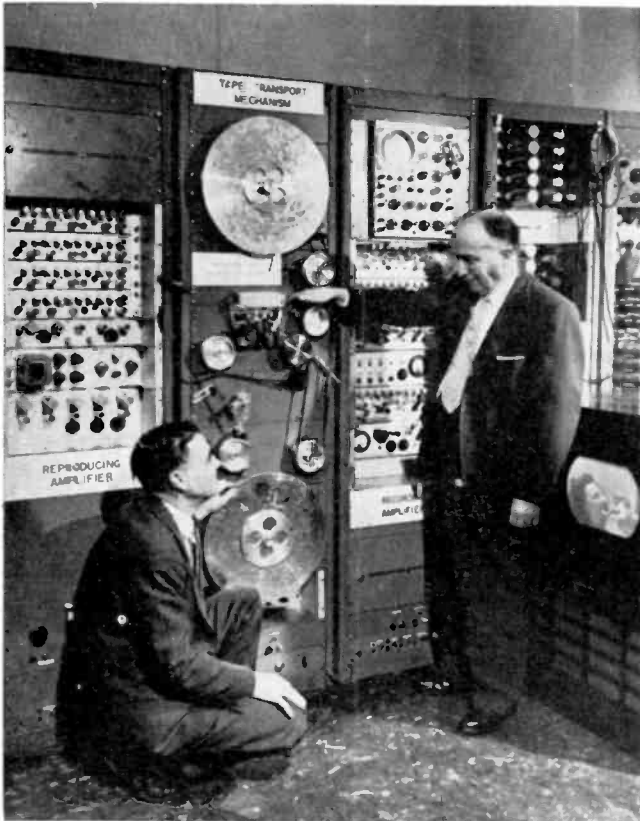
Dukas: Sorcerer's Apprentice
(performed by the Florence May Festival Orchestra under Vittorio Gui)

All programs are on 7" reels, 7.5 IPS, and are available either as full-track or BINAURAL recordings; they are priced at \$10.00 each for either monaural or binaural tapes.

FOR THE DISCRIMINATING MUSIC LOVER
HIGH-FIDELITY
MAGNETIC TAPE RECORDING

AUDIOSPHERE, INC. LIVINGSTON, N. J.





Orders for it were placed immediately by the networks and a new era in TV was born. Shows originating on the east coast could be shown on the west coast in their proper time slot through video tape. Commercials were recorded on tape instead of film so retakes could be made while the actors were still at hand. Highlights of football games and other sporting events were ready for immediate use in game post mortems. By 1962 there were 1,000 of the video recorders on operation.



The Ampex Video Tape Recorder was developed in great secrecy and first demonstrated in the NARTB show in May of 1956. The machine created a sensation and the networks immediately placed orders. This is the first unit to be delivered to an independent station, the King Broadcasting Company which operates KING-TV and KGW-TV in Oregon.



Above: the first video recorder was developed by Crosby Enterprises and shown publicly for the first time in November of 1951. The Crosby name has long been associated with tape recording, singer Bing Crosby having been instrumental in getting tape recording into U. S. radio back in 1946. Left: the RCA video recorder which was demonstrated in September 1953 with color TV recording. The first net transmission of color TV took place in September 1955.

RCA showed a lab prototype of a "see-hear" video recorder for home use which would play video tapes through the home TV set but after the announcement nothing has been heard of it since.

Things were beginning to pick up in the field of recorded tape with 15 firms offering tapes for sale; some 150 of the tapes were stereo.

Toward the end of the year an increasing number of firms including Viking, RCA and Ampex were becoming active on the stereo front.

In 1957 Cousino demonstrated their endless loop cartridge and player and 3M sold its first reel of commercial video tape at \$306 per reel.

By this time the staggered head versus stacked head controversy was in full tilt with the larger firms switching to the stacked head, outmoding the older staggered head system. V-M offered a recorder which would play both. At the end of the year there were 39 companies issuing stereo tapes and the catalog listed 650 different ones.

1958 was the year of the big shakeup. The stereo disc was announced and rushed on the market. With discs costing half as much as stereo tape, sales in the tape industry came to a screeching halt. By this time there were 970 different stereo tapes on the market produced by 47 companies. As later events proved, those tapes were almost dead items.

To counter the stereo disc, Shure Brothers announced the development of the four track head which made it possible to put twice as much music on the same length of tape.

This meant the price of stereo tapes could be cut about in half and thus make them competitive with stereo discs. In 1959 the previously announced RCA cartridge machine came on the market. The result was close to utter con-

fusion with staggered tapes, stacked tapes, four-track tapes and cartridges all available at the same time. Bell Sound also came out with a machine to take the RCA type cartridge.

The chaos was reflected in sales when neither the dealers or the customers could decide upon which way the wind was going to blow. The net result has been "peaceful co-existence" between the cartridge and reel-to-reel, the disappearance of staggered and two-track stereo tapes and the emergence of the four-track machine as the dominant type for stereo.

United Stereo Tapes was formed to get four-track stereo tape off the ground and today is the distributor for a great number of companies. V-M brought out its Add+ A+Track recorder which opened new vistas for the recorder as a learning machine by permitting simultaneous listening and recording. This is the principle used in the language labs in schools. Tandberg brought out a three speed machine which included the $1\frac{7}{8}$ ips speed, forerunner of the reduced speeds toward which the industry is heading.

In 1960 with stereo on four-tracks picking up, CBS Labs in conjunction with 3M held a press demonstration of a new device. This was a cartridge machine which used tape only $\frac{1}{8}$ " wide and played at the $1\frac{7}{8}$ ips speed. The unit was a laboratory prototype and its audio quality was excellent, in fact practically indistinguishable from playbacks from master tapes.

Again the industry wondered what effect this new device would have. But the new item disappeared back into the labs and 3M publicly stated that it would not be marketed until it was ready and they didn't know when that would be. This was in sharp contrast to the RCA machine which was announced as available and then did not appear for almost two years. 3M bought the Revere Camera Company that year and it was assumed that Revere would bring out the cartridge machine when it was ready for market. This proved to be correct.

1962 has seen a continuing growth in practically all elements of the tape industry. The number of tape clubs has increased until there are now 19 listed on the club directory page. The ability to talk to persons all over the world through the medium of tape can go far in promoting better understanding between peoples.

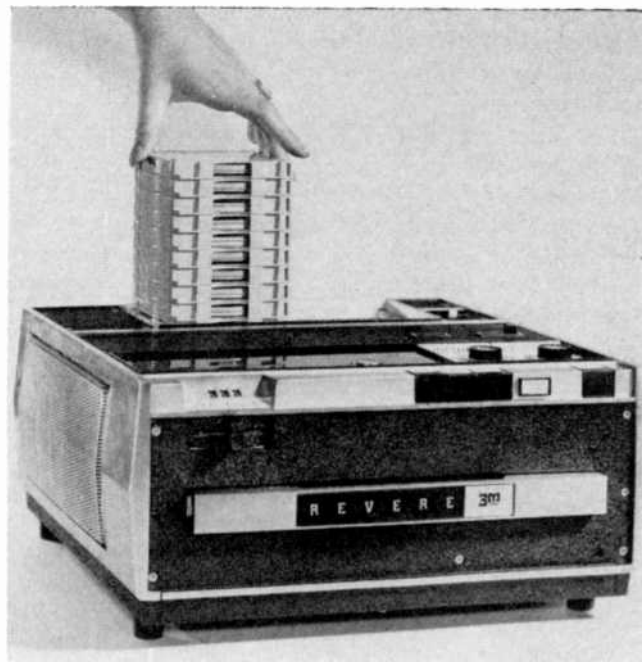
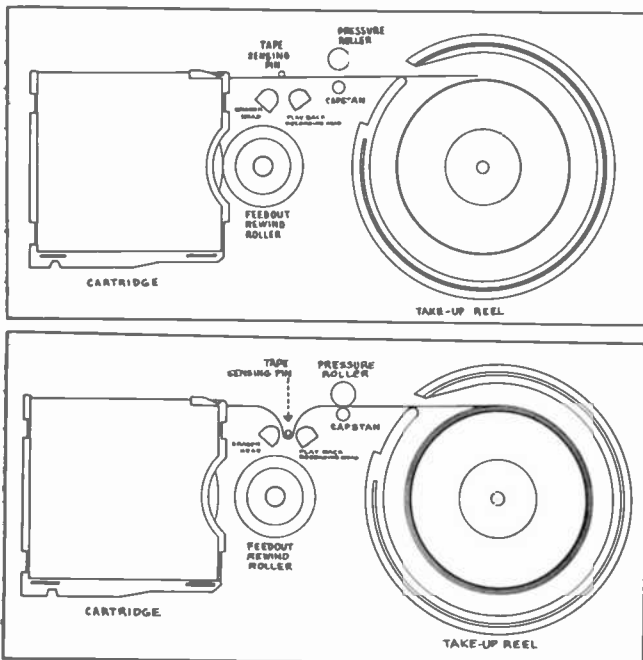
The 60's to date have also seen the marketing of large numbers of imported self-powered portable machines and the day when the tape recorder will take its place alongside the camera as a traveling companion may not be far off. The relatively inexpensive machines have also introduced a large number of people to tape recording and made them potential purchasers for larger and better home type machines.

Four-track stereo tape has enjoyed a continuing growth since its inception and there are now an estimated 1,500 reels available.

Over the last ten years an estimated four to six million



Cartridge developments over the years. Rear left and right is the Cousino continuous loop repeating cartridge in small and large sizes. In center is Fidelipac cartridge developed by George Eash in 1956. Circular cartridges are: left, Cousino Audio Vendor for use on standard machines and, right, Armour Foundation spool. At left foreground is RCA type cartridge and at right the cartridge used on Norelco dictating machines. Not shown is the new 3M cartridge shown on next page.



The new 3M-Reverse Stereo cartridge machine. Diagrams at left show tape threading path from cartridge to take up reel. Tape is threaded automatically. To play, the tape sensing pin moves down to press the tape against the heads and the capstan and roller come into contact with the tape which is only $\frac{1}{8}$ " in width. Machine automatically rewinds tape back into cartridge. At right is shown the machine which will play any number of cartridges in succession. Each cartridge will hold up to 45 minutes of material. Machine costs \$450.

recorders have been sold and yet the per capita ownership of tape recorders is below that of some European countries.

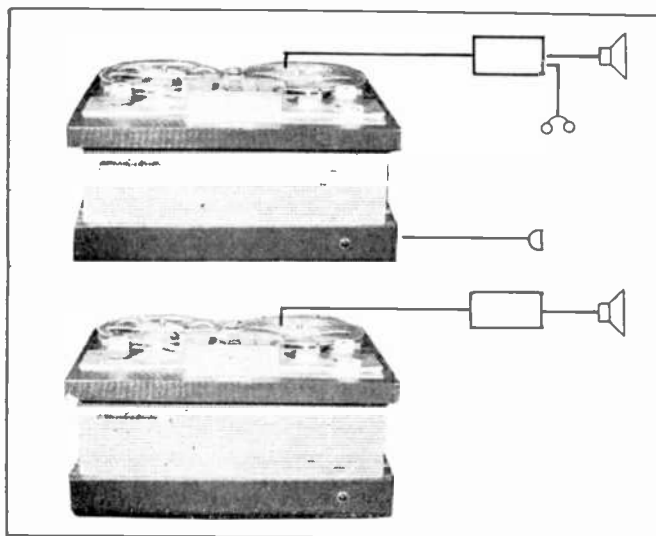
Looking backward over the past ten years it becomes apparent that the basic reel-to-reel machine is virtually unchanged in basic design. Heads and trackage widths have changed over the years.

Despite all the talk about stereo, the number of dual track monaural machines produced today is equal to or

greater than the stereo units. Perhaps the growth of FM multiplex will change this.

Of the past ten years, the time of the appearance of the stereo disc, the promise of the cartridge that was delayed almost two years, and the resultant confusion were the worse. Other than this period, the sales of recorders and allied products has shown an increase year after year.

The years have not been without turmoil but through it has come steady improvement and usefulness of tape recorders.



The Add+A+Track recorder brought out by V-M has the capability of playing one track while recording on the other. Top drawing shows how second channel can be heard either through the use of an external amplifier-speaker or headphones while microphone is plugged into mike jack to make recording at same time. Lower drawing shows setup for listening. Master track is played through external speaker and recorded voice comes out through speaker in tape recorder. Right: modern language laboratories in nation's schools employ this principle in teaching foreign languages to students.

THE NEXT TEN YEARS

. . . an anonymous prophet takes a look into what the future might hold based on past developments.

PROPHETS, nowadays, lead a dangerous life. While eyebrows may be raised in disbelief when their prophecies are made, as the years pass their forecasts usually fall so far short of the mark that they are laughed at.

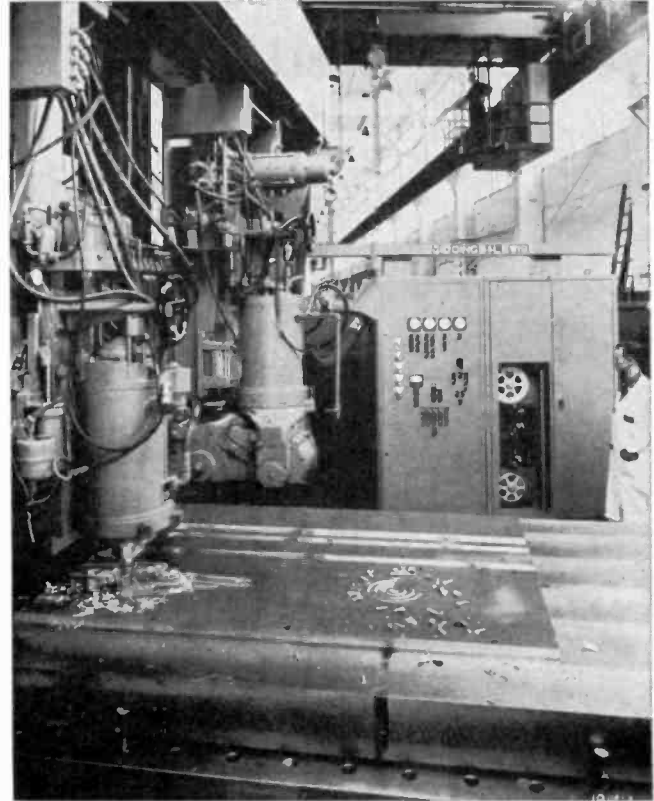
It should always be remembered that developments are now taking place at an exponential rate—i.e. the number of developments compared to the time in which the developments take place is constantly accelerating.

There is no reason why tape developments should be any less affected than other fields of human endeavor. While the actual developments take place, they may not reach the market place as swiftly. This process takes years; witness the fact that it was some ten years after the introduction of the 33 1/3 rpm record that the last of the 78 rpm discs were made. So there is no need to fear that your recorder will go out of style overnight.

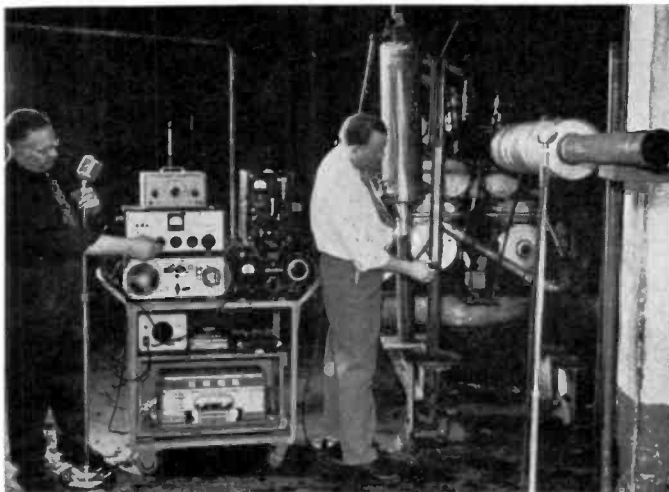
It was in 1935 that the Germans had tape machines which operated at a speed of 30 inches per second—a speed made necessary by the heads and tapes of that day. In the ensuing 25 years we have seen speeds drop from 30 ips to 15, then to 7½, then to 3¾ and 1⅞ and the new Norelco Model 401, and the Uher recorders have incorporated in them a new speed of 15/16 ips.

At the same time we have witnessed the number of tracks on the tape increase from one to four. Yet these drops in speed and the increasing narrowness of the tracks has not meant loss in quality since both tapes and heads have been vastly improved over their early forebearers. Each step was met by resistance and many thought each time the ultimate had been reached but events proved otherwise.

There will be further improvements in tape. 3M has just announced a high resolution oxide that makes possible



Machine tool automatic control by magnetic tape is demonstrated by this aircraft spar and skin milling machine system designed by the Giddings and Lewis company. Tape unit in background caused milling head to perform precision cuts called "plunge," "pocket" and "channel" on aluminum sheet in foreground.



Left: Tape recorders are widely used in testing laboratories to achieve product improvement, especially in the automobile industry. Here noise level tests are run and recorded on tape for scientific comparisons between various muffler designs for industrial engines. Right: Tape handling units for an IBM electronic computer serve as versatile "filing cabinets" which store millions of bits of data, yet produce it upon command in a matter of seconds. Future developments will reduce size of units and increase storage capacity.



Above: an example of micro-miniaturization is this Westinghouse developed molecular electronic function block being used as an audio amplifier in a conventional system. Frequency range is 0 to 20,000 cycles and output is 5 watts. Amplifier itself (at right in black mounting) is tiny device whose volume is .001 cubic inch. Device at left is molecular electronic preamp.

their cartridge player which operates at a speed of $1\frac{7}{8}$ ips with high audio quality. We also believe that further improvements in high remnance qualities will someday produce a non-erasable tape for use in the recorded tape field.

The physical form of the tape may change also. Now we use a plastic ribbon a fraction of an inch wide but of great length. The machines of the future may be able to accomplish the same thing using the magnetic material coated on a card, perhaps as small as a 3 x 5 index card which will be read by revolving heads.

Some steps in this direction have already been taken in the Canon Synchro-reader which uses a magnetic sheet which can be printed on one side and has the recording on the other. It is read by three revolving heads which spiral across the sheet as it is raised in the machine.

There is also no doubt that home recording of TV will be accomplished either through the use of higher resolution tapes or by using a narrower bandwidth, or even employment of a slow-scan system.

This in turn will also open the door to the making of home movies on tape instead of film which will be played back through the home TV receiver.

The transistor will move more and more into the picture. Already the transistor has made possible the many battery-powered portables now on the market and their uses in home machines will increase. The chief advantage will be zero warmup time so that the recorder will be ready to go the instant it is switched on. In addition, the

heat problem will be solved completely and power requirements will drop.

The use of magnetic recording materials by industry has already surpassed the use of it in the home instrument field. We look for this to continue and for both to grow to an ultimate balance of 70 to 30 in favor of industry.

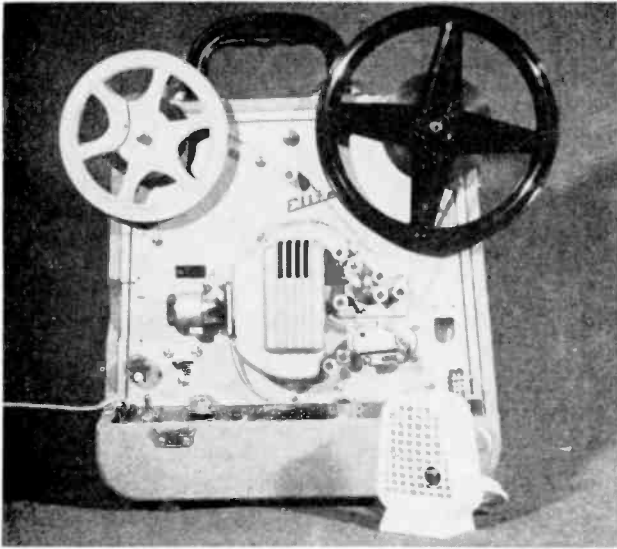
The use of magnetic materials in education will continue to increase and new machines will be developed to make learning easier and faster.

There will be other weddings of sight with sound at present exemplified by devices to control a slide projector from a recorder, by home movies made with magnetically striped film and by Revere Camera Company's new development of the sound right on the slide mount. There is also the further possibility that the photographic images will be outmoded in favor of magnetic images which will be reproduced electronically.

Tape is solidly entrenched in the computer industry at present but already computer engineers are asking for magnetic coatings capable of holding more bits of in-



Dr. Vladimir Ussachevsky and his colleagues at the Columbia-Princeton Electronic Music Center at Columbia University have been exploring the frontiers of music created using the tape recorder. More of this work will be done in the future.



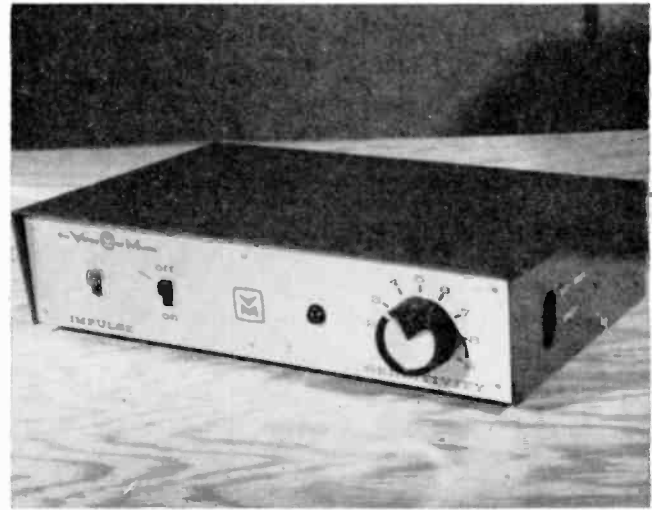
A great future is envisioned for 8mm film with sound on a magnetic track. This Elite projector by Tandberg will both record and play back the magnetic soundtrack.

formation than present coatings. This, again, will call for a tape of higher resolving power.

Tape will continue as a recording medium for seismographic work, machine tool control, performance recording of tests in aircraft, etc. but the equipment with which it is used will undergo changes in the direction of smaller size and weight.

Miniaturization through molecular electronics is quite likely and just recently it was discovered that solid state devices can be used as microphones making a mike the size of a pinhead a possibility. A 5 watt amplifier has been built which occupies only .001 of a cubic inch. Using molecular electronics an entire recorder could be packed in a present day head except for the drive system.

Tape recorder controls will be simplified to be less "scary" to the uninitiated. Whether or not any of the present cartridge types will persist and win favor is in the laps of the consumers. The cartridge concept is a valid one but remembering that it took ten years to outmode the 78 rpm record, progress may be very halting and



The V-M synchronizer may be used to put signals on the same track as the narration or on a second track of a stereo pair. It employs a 60 cycle tone which is usually masked by the voice or music placed on the tape. This is typical of a number of such synchronizers now on the market. More sight and sound "weddings" will be forthcoming in the next ten years.

slow, especially at first. The use of cartridges will continue to increase in specialized fields. It is not impossible that both tape, as we know it now, and cartridges will be outmoded by some as yet undiscovered method of using magnetic materials.

As can easily be seen from the developments that have taken place over the last ten years, the industry has never lacked for inventors. With such a versatile medium to work with it is not surprising that so many different ways to make use of magnetic recording have been found.

Taking the basic ingredients of a magnetizable material of high remnance, a means of selectively magnetizing the material and a means of recovery of the information recorded, any of which may take many forms, the possibilities for new methods become great.

The past ten years has seen remarkable strides made but if the exponential progress rate continues, as it shows every sign of doing, then the next ten years should produce even more startling developments.



The new Reverse Sound Slide Projector may be the forerunner of a new type projector. It has the sound right on the slide mount and each mount will hold up to 20 seconds of recorded sound. Projector both records and plays back and slide changes are automatic. The recording head moves in a spiral path around the mount which is coated with magnetic material.

BUILD YOUR OWN DE-GAUSSER

by John W. Berridge

. . . bulk erasure is still the best way to keep tapes free from background noise and clicks.

DE-GAUSSER? Just a fancy name for the good old-fashioned bulk eraser, and there are some pretty fancy bulk erasers in use these days. It's the fastest, most trouble-free and efficient method of erasing tape. In fact, bulk erasing a brand new tape can actually reduce its inherent noise level to a new low. How does this happen?

HOW IT WORKS

Tape can only be magnetized to a certain level, known as the saturation point, and normal recording magnetizes a tape to various levels some way below this point. Now these magnetizations are fairly permanent and to remove them you must first saturate all the tape completely. All the tape is thus at the same magnetic level and produces . . . no, not NO signal, but a steady signal of no specific frequency, better known as random noise. This is why tape erased by a permanent magnet or a D.C. erase head has a very high noise level.

The next step is to remove this magnetization. It can be done by reversing the magnetizing field until the existing magnetization has been cancelled and then switching the field off before it starts to magnetize in the opposite direction. Perfectly possible in theory, but since the whole

operation takes place in a matter of microseconds, a little impractical. However, let's carry the idea a little farther.

If an alternating field is applied, strong enough to saturate the tape, all the signal will be wiped from it because at the peak of each half-cycle of field, the tape is magnetized to saturation. Halfway between this half-cycle peak and the next though, the field and the magnetization are both zero which is what's wanted. In other words, the magnetization is alternating between saturation in one polarity and saturation in the other about the zero point. The sum total of magnetization over one full cycle is zero.

However, the chances of switching off the field at the exact moment that it is actually zero are practically nil, particularly since the easiest alternating field to produce is a 60-cycle one. If the field is merely switched off there's a very good chance that some residual magnetism will remain and this reproduces as very heavy noise on subsequent recordings. Another approach is called for.

Since the field alternates about the zero point, its strength can be decreased and the resultant will still be zero. Thus, if the field starts at the saturation level and gradually decreases to zero, the end result will be a cancellation of all magnetism on the tape. Gradually means over the

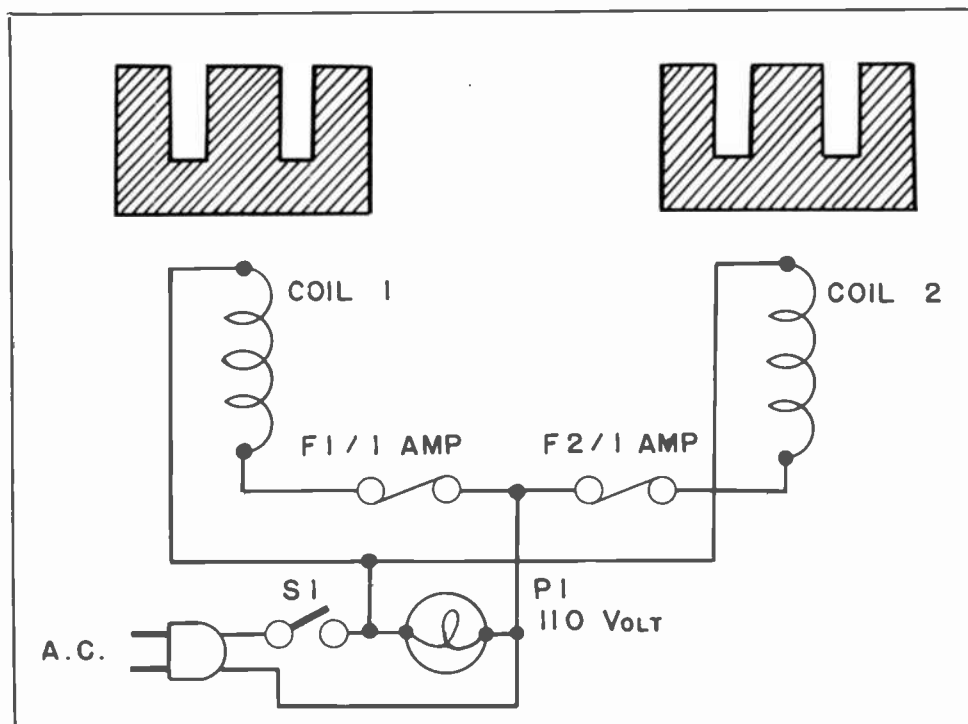


Fig. 1. Schematic of the completed bulk eraser. Wiring layout is not critical just as long as no A.C. appears on any external metal parts. Use a terminal block for the connections and soldering will be unnecessary.

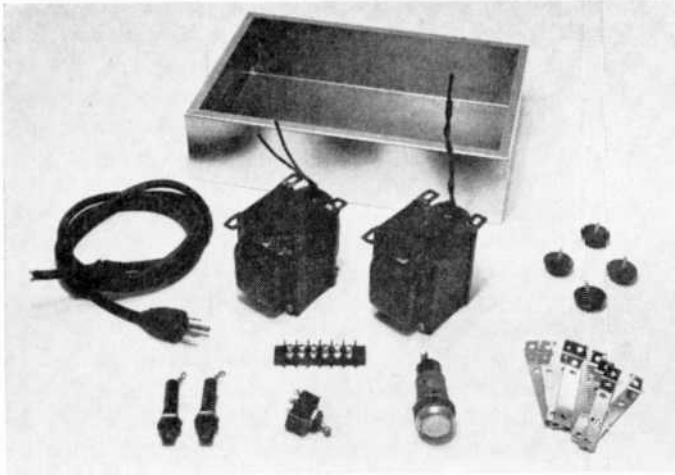


Fig. 2. The only new part in this collection is the chassis which was purchased with a bright finish for appearance. The brackets happened to be handy but can easily be made up from scrap aluminum.

period of at least a half-dozen cycles. Remember this for the moment because it affects the method of operation of a bulk eraser.

How to decrease the field slowly? Well, there's always the possibility of "fading down" the voltage on the electromagnet generating the field, but there's an easier and cheaper way of doing it than this. Since the actual strength of the field is inversely proportional to the square of the distance from its source, then separating the electromagnet (eraser) and the tape will achieve the same purpose . . . at less expense. Again, I'll deal with this in a moment.

Now that the operation of a bulk eraser is known, it isn't too hard to construct one. All we need, basically, is a 115-volt, 60-cycle electromagnet and a switch. Such an electromagnet is usually an expensive item, will anything else do? Well, all an electromagnet is is a coil wound around an open core, usually laminated. Now a choke is a coil wound around a closed core and a transformer is a choke with secondary windings added. Forget the extra windings and find a way to open up the core, and a power transformer will do the job nicely. It's just a question of picking one that can be broken down.

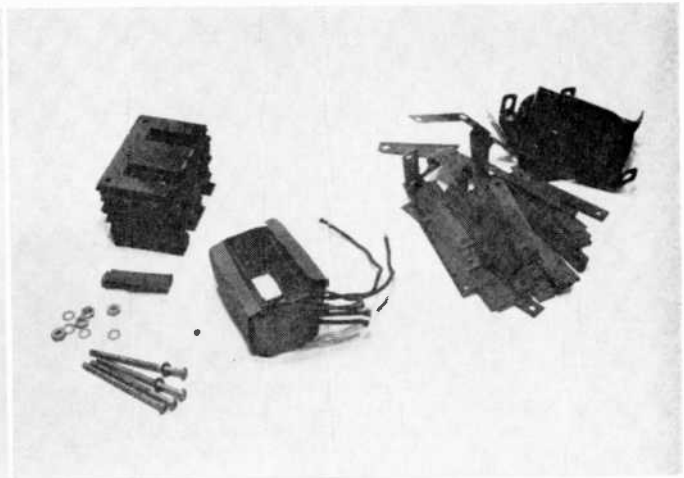


Fig. 3. Break each of the transformers down into its various parts. The coil in the center, the E laminations and securing screws on the left will all be used, the I laminations and covers can be thrown away. Check the coil to be sure that the windings or insulation haven't been cut thru anywhere.

HOW TO MAKE IT

A cheap power transformer will actually be better for this job than one of the more expensive ones. Good transformers use potting techniques which protect the thing but make it hard to get apart, and shielding to keep the field within the core (which is the LAST thing wanted here!). If it has a burnt-out secondary winding, so much the better, since it can be resurrected from the scrap-heap for next to nothing. The eraser detailed here is similar to the big commercial variety and will erase reels all the way from the little 3" type up to the big 10½" NAB variety. For this it needs two coils and two similar transformers were used. They were donated by a friend since they had very poor regulation and were hardly capable of handling any current whatever. One of the two had a secondary lead adrift anyway.

First step is to break down the transformer into its various parts, coils, laminations, covers and securing screws. The covers are thrown out since they would bridge the open ends of the cores and act as a magnetic short-circuit. First the coils. Snip off all the secondary leads as short as

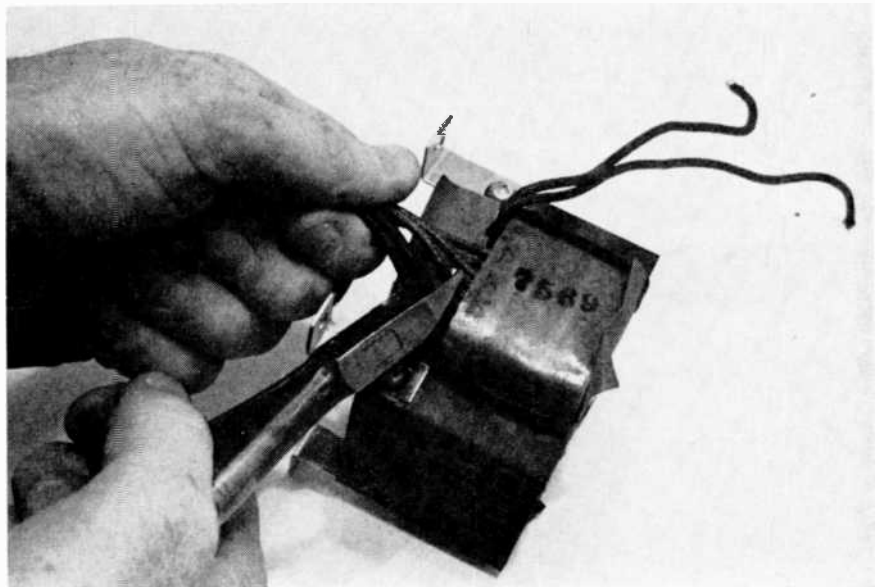


Fig. 4. Replace all the E laminations facing the same way and bolt on the brackets. The holes in these brackets are so drilled that the face of the laminations will be flush with the top of the chassis when they are bolted down. Complete the work on the coils by cutting off all the old secondary leads (making sure they ARE the secondary).

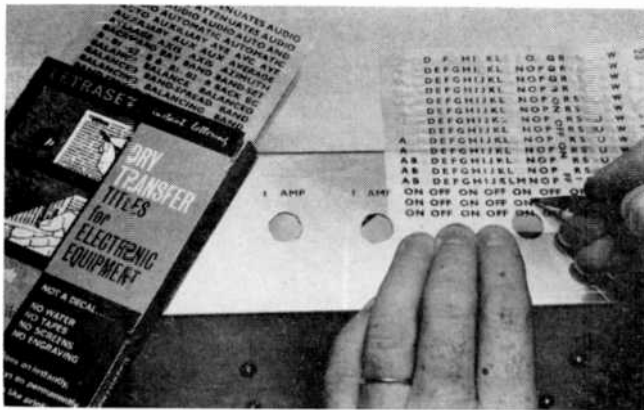


Fig. 5. Letter the chassis before mounting any of the front panel parts. The INSTANT LETTERING system shown goes on with a quick rub of a pencil and mistakes can be easily removed, yet the lettering is permanent. A complete set of 24 sheets costs \$4.95 from Data Corp., Guttenberg, New Jersey.

possible (they aren't wanted) but make darned sure they ARE the secondaries first. Now turn to the laminations. These take two forms, short straight ones called I's and others shaped like large-sized E's. There may also be a couple of E's with longer legs than the remainder which were on the outside ends of the stack. Throw these out with the I's, they aren't needed anymore either. Originally the E's were interleaved, half in one way, half in the other, with an I across the tips of each E to form a closed loop. Now replace all the E's facing the same way around. They should be a nice tight fit so use a small hammer to tap them evenly into place, and be careful not to hammer them in at an angle or they'll cut through the insulation and short out the coils. Do the same with the second transformer.

Next, the mounting of what are now large electromagnets. Originally, four securing screws held the transformers together but the E laminations have only two holes drilled in them (the I's had the other two) so use two of the securing screws to attach four right-angle brackets to the base of each electromagnet. Since the field is radiated off the open end of the laminations, the magnets should be mounted with the open ends upwards out of whatever

box you choose to mount them in.

My own choice was a new 8" x 12" x 3" steel chassis, cadmium plated and purchased without the steel baseplate. The bright finish makes a better looking job. All the necessary holes were cut in it for other hardware such as switch, pilot light (115-volt variety), terminal block, two fuse-holders (panel mounting) and a made-up A.C. cord with protective rubber lead-through. Spacing of the mounting holes for the magnets is important. The strongest field will be developed between the limbs of the laminations on each magnet, and the two should be mounted in such a way that either one or both covers the whole thickness of tape as wound on any reel from 3" to 10½". The best spacing will probably be on the center line of the chassis with one magnet almost at one end and the other separated from it by about 4". An 8" x 12" top cover plate (the chassis is used upside down) of some insulating material such as hardboard or phenolic is made up. A metal plate will NOT do as it would shield the magnetic field.

On this top cover is mounted a spindle for the reels, consisting of a large washer to space the reels slightly away from the cover so that they're free to turn, and a 5/16" diameter spacer about 3/4" long, all held together with a long mounting bolt. The head of the bolt shouldn't be more than 5/16" diameter or the reels won't pass over it. When reels up to 7" are sat on this spindle they can be rotated by hand through the field and then removed and pulled away. For 10½" reels with an NAB hub, the easiest way to make a spindle for them is to get hold of an old box in which these reels are sold. There's a stamped-out metal boss in them to hold the reel in place in the box. Cut out this boss, drill a 5/16" hole in the center of it and lay it over the spindle fixed to the cover. It may buzz when the field is turned on but it's only needed if you do intend to use those bigger reels.

The interior work can be completed by connecting up the magnets with the fuses, switch and pilot light as shown in the diagram, then screwing on the top cover. Since the whole lot will be a closed box when the cover is in place, it's necessary to use sheet-metal screws (or wood screws if

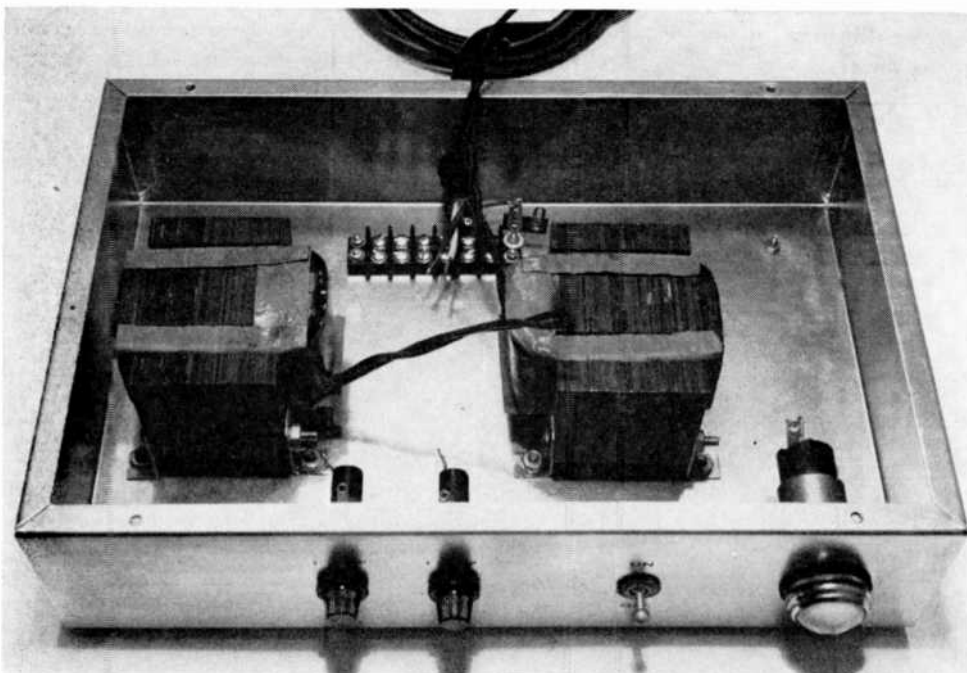


Fig. 6. Here is how the parts are laid out in the chassis. Placement of the coils is important as shown in Fig. 7, but there is plenty of room to spare. The holes around the outside lip of the chassis are drilled to take sheet metal screws, since the chassis will be a closed box when the cover is put on.

you've used a wooden case) to secure it. The holes in the cover will be clearance holes for the screws but in the box will need to be smaller tapping holes so that the screws can cut their own thread.

Finishing touches? Paint the top cover if you think it needs it. Add four rubber feet to the underside to prevent scratching the furniture. Finally, letter the fuseholders with their rating, the switch with its "on" and "off" positions and the top or front with the legend "CAUTION! DO NOT EXCEED TEN MINUTES CONTINUOUS OPERATION." This I'll explain also in a moment. For the lettering itself, the simplest and best way is by means of a product just on the market called "Instant Lettering." This is a dry transfer process in which the letter or word is transferred direct from a plastic carrying sheet to almost any smooth surface with a quick rub of a pencil or ball pen. Mistakes can be lifted off with the sticky side of a piece of adhesive tape, but when the lettering is rubbed over with a piece of the waxed paper that protects it in its package, it becomes quite permanent. A package of 24 assorted electronic phrases, alphabets and numbers is available for \$4.95 from The Data Corporation, 63 71st Street, Guttenberg, N. J., or from the mail-order houses like Lafayette and so on. One big advantage with it is that if you run out of a particular word, you can make it up with one or more letters culled from less used words, a "borrowing" technique that isn't possible with other methods.

HOW TO USE IT

The need to decrease the field slowly dictates how a bulk eraser should be used. Obviously, if the tape is plunked down, the eraser switched on and then off again, you'll leave a dose of residual magnetism on the tape and also, because the magnets are arranged on a radius from the center of the reel, any tape at right-angles to this radius will hardly be touched at all. So, place the reel on the spindle, switch the eraser on, rotate the reel slowly by hand a couple of times, then withdraw it from the spindle slowly for two or three feet before switching off the eraser. Continue rotating it as it's being withdrawn from the spindle if possible.

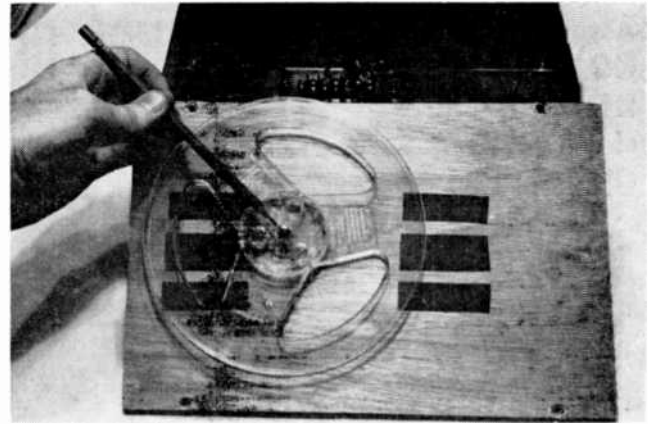


Fig. 7. Black tape in the same relative position as the pole pieces of the coils show the importance of coil location and also help position the spindle on which the reels will be placed. From this it can be seen that the left-hand coil will cover the smaller reels and the inner half of bigger reels while the right-hand coil covers the outside half of bigger reels.

Why the caution about continuous operation? A transformer is designed to be operated with a closed core and a loaded secondary. If the core is not a closed loop and no load exists on the secondary windings (which have been cut short remember), all the energy which would otherwise go into the load placed on that secondary is now dispersed in the form of a strong radiated field, which we do not want, and very heavy heat losses, which we certainly don't. If these magnets are left on for too long they burn up. It's a good practice to turn the eraser off after each tape, regardless of whether you have others to do or not.

Two final comments. Don't stack valuable recordings on or near the eraser. Switch it on, even by accident, and there goes your recordings. An eraser like this will put out a field strong enough to wipe a tape, if only partially, at 18" or more.

If this unit is too bulky for you or you aren't ever likely to use bigger reels, then you can use one transformer and make it up into a little hand-held unit which you can pass over the reel. It can be just as effective on 7" or smaller reels, but it will be a heavy thing to hold if you have more than one tape to erase at a time.



Fig. 8. Finally in operation and working perfectly. One evenings work produces a piece of equipment which looks as good as commercial gear, works equally as well and costs a fraction of the price.

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

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Managing Editor: None
Business Manager: None

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

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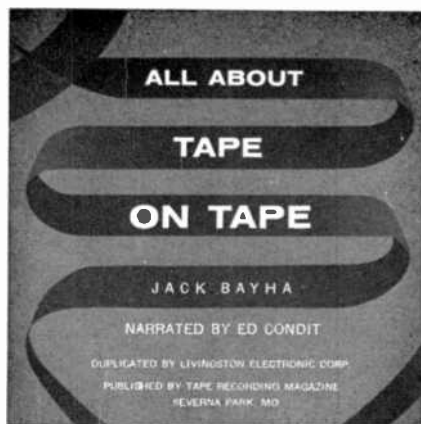
5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 21,088.

MARK MOONEY, JR.
(Signature)

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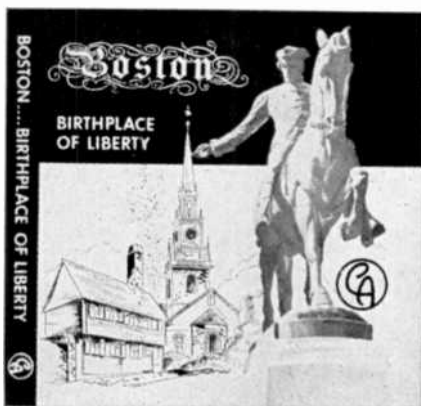
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