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TAPE RECORDING

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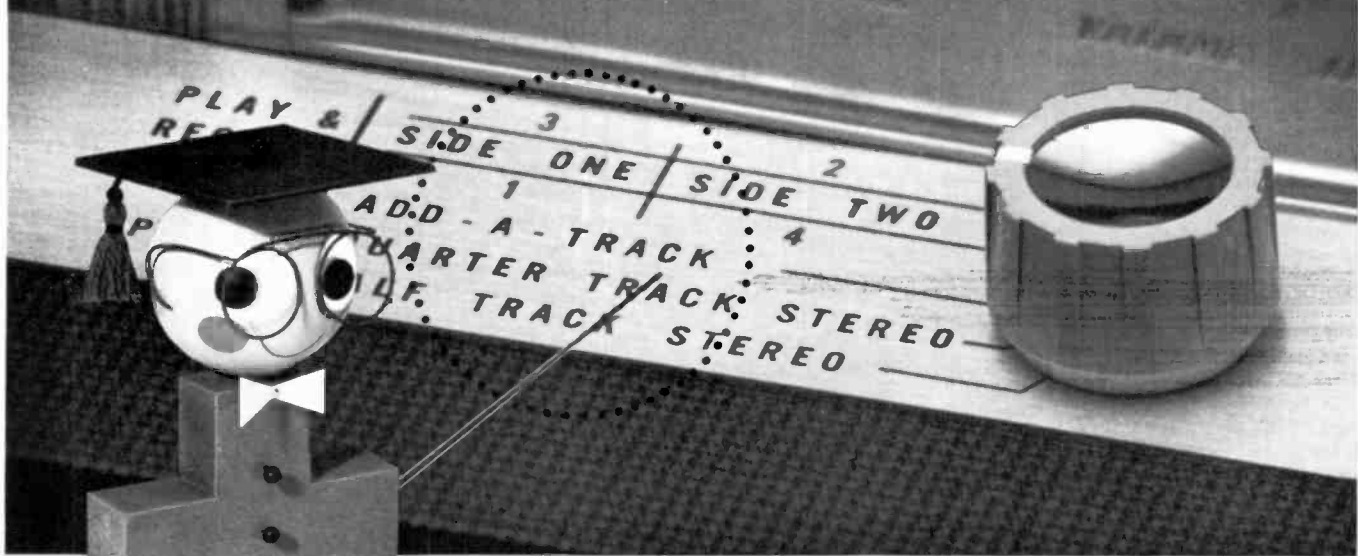
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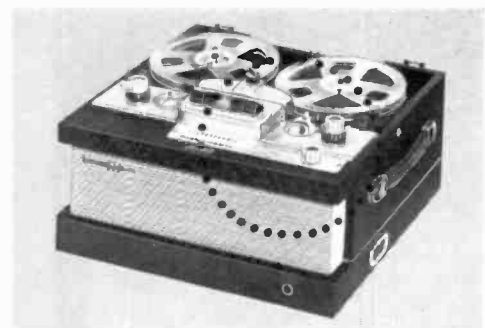
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NEW TAPES

★—Fair

★★—Good

★★★—Very Good

★★★★—Excellent

CLASSICAL

Reviewed by Robert E. Benson

STRAVINSKY | Le SACRE
PETRUSHKA | 1945



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

STRAVINSKY: *Le Sacre du Printemps* ("The Rite of Spring") *Petrushka*
Suisse Romande Orchestra, Ernest Ansermet, cond.

LONDON LCK 80006

4 track, 7½ ips

\$12.95...68 mins.

Ansermet's interpretation and mastery of these important scores is recognized and respected. Here are both in stereo on one tape, each uninterrupted. The stereodiscs were so good technically one cannot notice very much difference between them and the present tape except possibly for slightly more clarity in the high frequencies and somewhat lower distortion in loud passages. There seems to be a greater stereo effect as well, as a result of the complete channel separation tape makes possible.

As to the performances, I am in the minority, for I do not agree with Ansermet's approach to the music, nor do I like the

orchestral sound. To me the timbre of the Suisse Romande Orchestra is far too light for a score such as *Le Sacre du Printemps*, and such an orchestra cannot convey the barbaric elements of the score. The same was true with the RCA two-track tape with the Paris Conservatory Orchestra conducted by Pierre Monteux. It is very strange indeed to listen to a passage calling for eight French horns and hear what sounds like saxophones instead. *Petrushka* is more successful, but that too would benefit from more body in the orchestral tone. Regardless, I am in the minority, and here are two highly successful London recordings available via the perfection of stereo tape costing very little more than the stereo discs.



TCHAIKOVSKY: *Swan Lake Ballet*
Suisse Romande Orchestra conducted by Ernest Ansermet

LONDON LCK 80028

4 track, 7½ ips

\$11.95...83 mins.

Ansermet's highly rated two-disc recording of the *Swan Lake* is now conveniently available on one seven-inch reel of tape, with all of the natural advantages of tape over disc. This tape will provide almost an hour and a half of some of Tchaikovsky's finest and most accessible music, and London's crystal clear recording is superb. The Suisse Romande Orchestra gives a performance far better than most actual ballet performances, although there are moments of uncertainty in some of the playing. The lightness of the orchestral sound results in the loss of some of the power of Tchaikovsky's score.

This is not a complete recording of the ballet as the label states, as there are quite a few cuts. The only complete recording is Dorati's on Mercury, not available on stereo. It is unfortunate that London did not change their program notes to comply with the tape rather than the disc version. What use is there to refer to record sides and bands on a tape?



BRAHMS *Symphony No. 3 in F Major, Op. 90*
Houston Symphony Orchestra conducted by Leopold Stokowski

EVEREST T-43030

4 track, 7½ ips

\$7.95...37 mins.

Purists will object to Stokowski's highly mannered interpretation of this Symphony.

and rightfully so, for probably never before have so many liberties been taken in a recording of this familiar staple of the symphonic repertory. This is the only four-track tape of this work, but doubtless other more standard performances will follow soon Stokowski's rather flamboyant ideas are valid in their own way and result in a Brahms Third short on power but long on expressiveness, with a sensuous quality probably never dreamed of by the composer.

The Houston Symphony admirably follows Stokowski's eccentricities, and the sound is fine, although more distantly miked than the sound usually associated with Everest. The tape has a minimum of hiss, and is a delight sonically. There is absolutely no trace of cross-talk between the channels.



RAVEL *Daphnis and Chloe*

London Symphony Orchestra and Chorus of the Royal Opera House, Covent Garden conducted by Pierre Monteux

LONDON LCL 80034

4 track, 7½ ips

\$7.95...52 mins.

Daphnis and Chloe, a ballet in one act, was commissioned by Sergei Diaghileff, and the first performance was June 8, 1912 at the Theatre du Chatelet in Paris, with Nijinsky as Daphnis and Karsavina as Chloe. The ballet is best known to most listeners from the two suites drawn from it, particularly the *Suite No. 2*. The score abounds in subtle orchestral effects, and is an ideal stereo showpiece.

I had looked forward to this tape with great anticipation, and find it to be generally convincing, but not all that it should be. Pierre Monteux has had unfortunate luck in some of his recordings; for example, the three great Stravinsky ballets—*Firebird*, *Petrushka* and *Le Sacre du Printemps*—which he recorded several years ago for Victor with the Paris Conservatory Orchestra. In these three recordings Monteux's intentions were thwarted by an inferior orchestra. When recording companies have a master conductor such as Monteux, why don't they give them the best orchestra they have under contract? The London Symphony Orchestra sounds thin here, particularly the woodwind and brass. The low bass seems excessively ponderous and out of proportion, and the sound is more distantly miked than most London recordings. RCA has a 3¼ ips tape cartridge with the Munch-Boston Symphony performance of some years back. I haven't heard the tape version, but recall from the disc that the performance was a good one, with very adequate sound. Perhaps RCA will issue it on a 7½ ips four-track tape with the better sound and freedom from tape hiss the faster speed permits.

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POPULAR



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

HAVE ORGAN WILL TRAVEL

Granada, Far Away Places, Istanbul, I Love Paris, A Foggy Day, April in Paris, Funiculi Funicula, Londonderry Air, By the River Sainte Marie, Sabre Dance, Eastern Romance, Under Paris Skies, Veradero, German Medley

George Wright

HIFITAPE R 721

\$7.95...40 mins.

Mr. Wright again takes us on a world cruise via his selections and interpretations on this tape. The tunes are all remindful of other lands.

This versatile entertainer and the mighty Wurlitzer organ make a grand combination indeed. Mr. Wright has a way of adding his own unusual touches to a melody to give it more realism.

I do not like this tape as well as some earlier George Wright releases, but it is nevertheless most pleasing to hear.

It is becoming increasingly difficult to say a tape has poor fidelity, since there just aren't any tapes that reproduce badly what with the excellent equipment and tape now available. This one is no exception and the fidelity rates high.



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

TARGET FOR TONITE

Moon Over Miami, When You Wish Upon A Star, Moonlight Becomes You, Stareyes, Moonlight and Roses, Stairway to the Stars, Orchids in the Moonlight, Stardust, Moonlight in Vermont, Stars Fell on Alabama, How High the Moon, Count Every Star

The Starlight Music Orchestra

LIVINGSTON 4T-7

\$7.95...30 mins.

Hand me the black strap molasses tonic, Spring has taken hold.

Smooooth, dreamy, mellow melodies, elegantly arranged and performed. Grand to dance to with your special someone in your arms.

Not fancy, no frills, just pure silken music gliding through a moonlit night. No use confusing things with gilt-edged adjectives. Romance is the theme. The strings in this orchestra are delightful, the whole orchestra is delightful, the songs are delightful, the release is delightful.

Big auditorium sound, far reaching music that can hold you spellbound on this tape. Flawless fidelity.



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

THE CATS IN STEREO

Twelfth Street Rag, All Of Me, Sentimental Silly, I Love You, You Made Me Love You, Did I Remember, Bye Bye Blues, Heart Of My Heart, Swingin' Down The Lane, Diane, What A Diff'rence A Day Made, Jealous Jerry Mured's Harmonicats

MERCURY STA 60028

4 track, 7 1/2 ips

\$6.95...28 mins.

There is always that certain something about groups such as this which gives them a charm which in many cases is more entrancing than a full orchestra.

While the harmonica is very small in size, it is very big in sound. There is a variety of tone and color present that other instruments just cannot produce.

Now with stereo we are able to catch even more of this enticing sound.

This tape is mighty nice listening for any harmonica fan, and for any who may be prospective converts.

Excellent fidelity and engineering all the way.



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

SONGS OF BATTLE

Comin' In on a Wing and a Prayer, Wait Till the Sun Shines, Nellie, Lili Marlene, Praise the Lord and Pass the Ammunition, Yankee Doodle, Chester, Liberty Song, Taps, My Buddy, It's a Long, Long Way to Tipperary, Pack Up Your Troubles in Your Old Kit Bag, Over There, Reveille, You're in the Army Now, Mademoiselle from Armentieres, U. S. Air Force, The Caissons Go Rolling Along, The Marine's Hymn, Anchors Aweigh, Dixie, Tenting on the Old Camp Ground, Battle Hymn of the Republic, When Johnny Comes Marching Home, I've Got Sixpence

The Ralph Hunter Choir; with orchestra arranged and conducted by Sid Bass

RCA KPS-3067

4 track, 3 3/4 ips, cartridge

\$5.95...32 mins.

If you don't feel extra American after listening to this tape, you should have your blood tested for color. Rousing, stirring, high spirited service songs.

The marching feet and bugler's Taps on this release are real, the sounds having been recorded at Fort Monmouth, N. J.

The range of songs covers the Revolution to present day service themes.

Boistrous, strong male voices superbly blended, backed by the equally superb orchestra of Sid Bass.

Faultless stereo and fidelity.

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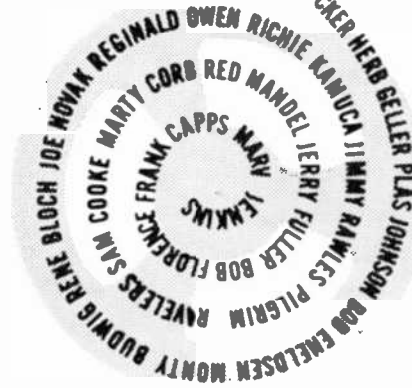
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JAZZ



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

THE FIVE PENNIES

Main Title, The Five Pennies, After You've Gone, Bill Bailey, Won't You Please Come Home, Back Home in Indiana, Good Night, Sleep Tight, Lullaby in Ragtime, Battle Hymn of the Republic, The Five Pennies Saints, Good Night, Sleep Tight Medley, Just the Blues, Carnival of Venice, The Music Goes 'Round and 'Round, Wail of the Winds, Jingle Bells, The Five Pennies Finale & Battle Hymn of the Republic Finale

Danny Kaye, Louis Armstrong, original sound track

BEL CANTO (DOT) ST/68

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

Original sound track performances from the motion picture, which depicted the dramatic life story of a jazz great, "Red" Nichols.

I've listened to too many folks speak of the classics which "stir" them. Now I don't have the slightest doubt that music can "stir" emotions and feelings greatly. Since reviewing these pure sounding tapes which approach excellence in musical reproduction to an extent never before dreamed of, I have on many occasions become a part of the music. It is, however, my contention that jazz is even more stirring than classics. It produces a much greater psychological reaction than most classics. With jazz, the music you hear doesn't appear as if in the background, but is rather the prominent factor.

On the duets with Danny and Louis, I note that Danny is lost compared to Louis. Sounds as if the "jazz master" was hugging the mike.

Otherwise, the horn blasts cut through the air like a razor. Sharp and clear.



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

CONTINENTAL JAZZ

Volare, Petite Fleur, White On White, St. Germain

Alouette, Moritat, Petit Fantasy, La Violetera

Les Cinq Modernes

BEL CANTO ST-73

\$6.95...30 mins.

Don't know the exact reason, but this tape doesn't move me at all. Perhaps its the easy, steady beat in the background that grows tiresome after a bit. Some of you will disagree I am sure and will want this one.

The music is a moody type jazz and the selections give it a more European flavor than American. This is definitely not the same type jazz I refer to in The Five Pennies review. I can picture these six musicians in a cafe, languidly playing to a drowsy audience in a smoke filled room.

Stereo effect on this tape is, however, exceptionally evident. There is an evenly balanced flow of music. Nothing is strictly directional, but is rather just intricately woven into one continuous network of sound.

FOLK



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

LEON BIBB SINGS FOLK SONGS

Sinner Man, Rocks and Gravel, Red Rosy Bush, East Virginia, Poor Lolette, Dink's Blues, Turtle Dove, Jerry, Look Over Yonder, Take This Hammer, Darlin', Skillet, Irene

Leon Bibb with chorus and orchestra, Milt Okun, conductor

STEREOPHONIC MUSIC SOCIETY C1

4 track, 3 3/4 ips, cartridge
 \$6.95...40 mins.

Every song Leon Bibb sings, he first must believe in and feel. His feeling is expressed in his voice intonation and inflections.

The arranging and interpretation on the selections is quite different from the usual straight run of folk songs, with the guitar and chorus adding just the right touches at just the right time.

A fine addition to any folk song collection.

We can find no fault with the fidelity here.

MISCELLANEOUS



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

SMASH FLOPS

Congratulations, Tom Dewey, I Wish I Was In Chicago, We're Depending On You, General Custer, When The Hindenburg Lands Today, The Confederate Victory Song, There'll Always Be Forty-Eight States in the U.S.A., When Amelia Earhart Flies Home, Little Rock, That All-American Town, Good Job, Well Done, Neville Chamberlain, Sleepy Cape Canaveral Moon, Columbus, You Big Bag of Steam, Bon Voyage Titanic

As sung by The Characters

OMEGATAPE MT-811

4 track, 7 1/2 ips
 \$4.95...20 mins.

This tape is what you might expect from the title and the performers listed. Satirical, tearful humor.

All selections are beamed to what might have been.

Certainly this tape is not for singing, dancing, or background—just for listening.

It appears to me, and I'm not being a prude, that some of the joshing on this release is not at all funny.

The four singers are backed by a rinky-tink piano and drums. While the Characters apparently earn their keep through sadistic humor, I personally would like to hear them do some serious harmony singing. They have a barbershop-quartet ring.

We note the "sssss" hiss terribly on most of the tunes. I believe the fellows could have been back some from the mikes for less sibillance noise.

Fidelity and engineering is fine otherwise.

NEW TAPES RECEIVED

REEL TO REEL

Bel Canto, Edmond De Luca's Conquerors of the Ages, The London Philharmonic Orchestra and Chorus conducted by Reinhard Linz, ST-94, 4 track, 7½ ips

Bel Canto, Gaité Parisienne — Offenbach, P. Montiel conducts Le Ballet Francais Orchestre, ST-74, 4 track, 7½ ips

Bel Canto, Pictures At An Exhibition, Moussorgsky-Ravel, The Nord Deutsches Symphony Orchestra conducted by Wilhelm Schuechter, ST-83, 4 track, 7½ ips

London, Mantovani Film Encores, Mantovani and his orchestra, LPK 70003, 4 track, 7½ ips

MGM, David Rose Plays David Rose, STC-3748, 4 track, 7½ ips

MGM, Get Those Elephants Out'a Here, The Mitchells—Red, Whitey and Blue with guest artist, Andre Previn, STC-1012, 4 track, 7½ ips

CARTRIDGES

SMS, Selections from Redhead, Hill Bowen and His Orchestra; chorus under the direction of Mike Sammes, C-22, 4 track, 3-¾ ips

RCA, Brigadoon, My Fair Lady, Robert Merrill, Jane Powell, Jan Peerce, Phil Harris, RCA Orchestra, KPS-4011, 4 track, 3-¾ ips

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Here's what the Stereo Record III does . . . and why it does it best!

High Fidelity Performance, Unsurpassed—Broad 40 to 20,000 cps frequency response; negligible wow and flutter 0.1% ; high -55 db signal-to-noise ratio and constant speed hysteresis-synchronous motor assure the highest possible performance standards.

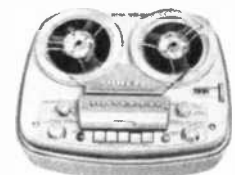
Versatility, Unlimited—Sound-on-sound! Play back on one track, record on the other—simultaneously. It plays either 2 or 4-track pre-recorded tape, 4-tracks of ½ mil tape, on a 7-inch reel, played at 1⅞ ips provide more than 17 hours of play. The optional AKUSTOMAT automatically operates the tape transport only when voice or program material reaches the microphone. The Stereo Record III is adaptable for synchronizing-automatic slide projectors.

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CROSSTALK

from the Editors

WE WERE QUITE interested in the comments concerning American tape ways made by a recent visitor to our shores, Mr. Ralph Gough, Managing Director of Fi-Cord, Ltd., as reported in our British contemporary, Tape Recording and Hi-Fi Magazine.

* * * * *

ONE OF HIS observations was that despite a substantial start in tape recording development by America after the war, the general impression is that the creative side of recording has made less impact on the public mind here than in England. Most Americans are prone to regard the recorder as another form of music reproducer.

* * * * *

WE FEEL that Mr. Gough is right and more is the pity. There is no reason why the tape recorder cannot be used in the same creative sense as the camera. England abounds with tape clubs. Not the kind where voicespondence is carried on by mail between members but honest to goodness clubs where the members meet face to face.

* * * * *

REGULAR MEETINGS ARE HELD at which times the clubs are addressed by outside experts, or one of their own members, on various phases of the tape recording art. Contests are held for the best tapes and equipment is brought in and demonstrated. Tape and movie synchronization is covered. Service committees in some clubs make tapes for use in hospitals, etc. Auctions of no longer needed equipment are held . . . the list of activities is large.

* * * * *

OVER THERE it is the feeling that the recorder should be used to create unusual and/or beautiful tapes, just as a photographer uses his camera to create a beautiful photograph. Such works are encouraged by competitions within the clubs and in interclub and international competition.

* * * * *

NATURALLY OUR British cousins also use the machines for recording off the air, for family fun, for business and for playing music in the home, as we do. But they have gone beyond us by pushing the creative side of tape recording which most certainly adds to the pleasure of owning a recorder.

* * * * *

IN FACT it more than merely adds to the pleasure of owning a recorder, it provides a means of self-expression and for the exercise of the creative instinct to those who would like to work in the field of sound as a medium of expression. This can be as equally rewarding as painting, photography, dramatics or any form of art.

* * * * *

BUT ANY ART form that is to succeed and grow must not only have its devotees but a wider audience as well. Paintings may be seen on the walls of art museums, photographs in photographic salons and at camera clubs, drama in the theater but the tape recorder has a potential audience far beyond any of these if some way can be found to reach it—and there is a way. We refer to the nation's broadcast stations whose sole product is sound. What more logical means of using the airwaves, what better way to bring a new art form to public notice and appreciation?

* * * * *

IF THIS can be brought to reality, the hobby of tape recording could become more meaningful and talents uncovered that now have no way of becoming known. We're thinking about it hard . . . any suggestions?

TAPE CLUB NEWS

Teen VS-ers

The Teen VS-ers section of The Voice-spence Club is getting underway for the season under the guidance of 17-year-old Jeanne Hahn of Chicago. Jeanne is getting in touch with all known teen-age members of the Club and is calling for participation by the teen children of older members. A full program of taping and a nice column of special news in the Club's magazine will be included in the coming year's activities.

Tarver Memorial Fund

As a special service to its blind members The Voicespence Club operates the Tarver Memorial Fund consisting of voluntary contributions used to assist handicapped persons to participate more actively in recording. During the past three months the Tarver Fund has sold to blind members of the Club 124 reels of 1-mil mylar base tape at prices less than cost in order to help them make greater use of their recorders.

JOIN A CLUB

AMERICAN TAPE EXCHANGE

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

BILINGUAL RECORDING CLUB OF CANADA

Rene Fontaine, Secretary
1657 Gifford St.
Montreal 34, P. Que. Canada

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, Cte, Montmagny,
P. Que., Canada

ORGAN MUSIC ENTHUSIASTS

Carl Williams, Secretary
152 Clizbe Avenue
Amsterdam, New York

TAPE RESPONDENTS INTERNATIONAL

Jim Greene, Secretary
P. O. Box 416, Dept. T, St. Louis 66, Mo.

THE VOICESPONDENCE CLUB

Charles Owen, Secretary
Noel, Virginia

WORLD TAPE PALS, Inc.

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

FOREIGN

AUSTRALIAN TAPE RECORDISTS ASSOC.

John F. Wallen, Hon. Secretary
Box 970, H., GPO, Adelaide, South Australia

TAPE RECORDER CLUB

A. Alexander, Secretary
123 Sutton Common Rd.
Sutton, Surrey, England

THE NEW ZEALAND TAPE RECORDING CLUB

Murray J. Spiers, Hon. Secretary
39 Ponsoby Road
Auckland, W.I., New Zealand

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

ATE Plays Cupid

Katherine LaMay joined the American Tape Exchange club in 1958 and was officially welcomed by Larry Duhamel, Chairman of the club's Welcoming Committee. After Kay answered Larry's tape, he began thinking she might be interested in contacting an unmarried friend of his, Phil Lamport of Stoneham, Mass. They started exchanging tapes and soon became good friends. Eventually Phil visited Kay in Rochester, New York where she lived, they became even better friends and eventually became engaged. The happy couple are now man and wife. The wedding ceremony was recorded—natch.

Member Offers Services

Club du Ruban Sonore member, Paul Beuve, has offered his services to all members who wish to visit France. He will be happy to send all the information about rates for best hotels, transportation, reservations, etc. for a wonderful stay in France. Paul may be contacted at 1 et 3 rue Dagobert, Saint Lo (Manche), France.

Ladies Welcome

The Australian Tape Recordists Association has noted a sudden influx of lady members which is most pleasing. A special Ladies Section is now being considered. American ladies, regardless of age, are cordially invited to join.

New B.R.C. of Canada Officer

Mr. Maurice Roussel, President of the Bilingual Recording Club of Canada, announces the appointment of Mr. Yvon Beauchesne as Assistant-Secretary and Publicist, due to the ever-increasing number of members.

The B.R.C. of Canada will hold its general annual meeting in Montreal, Que., during the month of May for the purpose of electing new officers and making necessary changes to the Constitution in order to meet the needs of members.

WTP Gets Seeing-Eye Dog

The far reaching effects of tape friendships are responsible for the acquisition of a seeing-eye dog by WTP Frank Merryman of Hearne, Texas. Frank's tape pal, Bob Brunson, WTE Library director, Oklahoma City, passed on to a California friend, also blind, the information that Frank could use a seeing-eye dog. The friend placed Frank's name on the waiting list of a San Francisco institution for the training and placement of these wonderful dogs even before he notified Frank. In February, Frank received word that he should come to California to train for a month with his dog.

On March 5, Frank's fellow townsman and musician Bob Freeman drove him to the Dallas home of their tape pal, Grover C. Godwin, 1562 E. Woodin, where a small group of local WTP's met and spent an enjoyable evening. Frank boarded a plane for California the next morning.

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Robert C. Snyder

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than 250 record listings.

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

LAST month we outlined a possible approach to teaching something about poetry and related song forms to elementary school students through the use of a tape recorded presentation.

Let us stay with our class in poetry and continue from where we left off last month. Our students have heard our poem told correctly. They have heard it done wrong in two different ways by other children and have been able to hear why the bad renditions were "bad."

Beyond this they have seen that the poem form is not only an end in itself but is also part of something more that goes on into the stories, plays, and songs which make up a part not only of childhood but also the intangible thing that is life itself.

In our first poetry lesson we left our students with a definite incentive to go home and learn the poem. They have been told that those who learn it can record and hear their own voices and this they will want to do. So now they come back to class next day, having learned some of the poem. How do we now use the tape recorder to further the instruction?

In a large class, with a poem of any substantial length, it is unreasonable to expect that we will be able to take enough time to record all the students all the way through the poem. Even if we could, it would certainly become boring to most of the class before we had recorded and played back all the recitations. So we must pick and choose, and we must do so in such a way that the learning objective is furthered.

First, next day let us have an audition. Refrain from picking your best reciter to do the first recording. You know your students well enough to know who will be best, who will do least well with poetry, and who will be in the middle group. From the middle group let the class listen to three or four and pick out the one they want to record first.

Record only about two stanzas. This is ample to capture the rhythm and flow of the student's recitation, and enough to establish his errors. And there *should be* errors in the first recordings. It is from hearing the errors of others and identifying these errors with their own faults that the other students will learn.

Now, with a couple of stanzas recorded, play back the tape. On the first playback, almost none of the students will be listening to the poem. They will be listening to the marvel of the recorded voice. The student who recorded probably will not recognize his own voice if he has never recorded before. You must allow for this initial fascination by playing the short selection back at least once just to hear it, then again for the purpose of commenting constructively on the rendition.

After the second or third playing, have a brief class discussion of what was good and what was bad in the first rendition. On the blackboard, have two columns, one for the good things, the other for the

faults, and write down the key good and bad points.

After the brief discussion, listen again to the short section so all may evaluate the recording in light of the discussion.

Then, without further comment on the first recording, ask for volunteers to try to *improve* on the first one. Again, record only the short section, or perhaps, only a part of the short section. Again, after recording, play the second recording through at least twice, once just to listen to and a second or third time for constructive comment.

When the class has developed a rather good understanding of the principles involved in the telling of the poem, and the first two or three stanzas have been worked over three or four times, move on to the next logical section of the poem, and repeat in the same fashion.

Let the class carry as much of the responsibility for the constructive commentary as possible, for in thinking and discussing comes learning and comprehension. If you do all or most of the correction they need only hear, not think. And the students are likely to be only waiting for you to stop talking so they can record their voices and hear themselves.

By moving from the students of middle ability to those of better performance several times with successive short sections you will have accomplished a fairly good grasp of the principles and perhaps even the practices of poem telling on the part of the middle and upper ability students in your class.

But what about the students of lower ability in this particular area?

If they are permitted to record with substantial faults won't the class comments sound more like derogatory fault finding rather than constructive criticism? How can we overcome this?

Suppose we now divide the class into smaller groups and take the three, four, five, or so of the students with poorer performance in the poetry area into a separate group. Let one of these students record one stanza or perhaps a bit more. Play it back two or three times for listening and silent evaluation by the small group, without any comment. Then either you, or one member of the group should pick out the *one* worst thing in the presentation. Help the student who recited overcome this *one* trouble by practicing briefly without recording. When the student shows clear signs of improving, let him record the same short section again, even two or three times if necessary, until he can see the improvement. Let the student move to *some measure of SUCCESS*, and then move on to the next student and take the next logical section of the poem for him to work on.

You may not create great poets or tellers of tales out of these students with relatively less ability in this area, but you can at least give them a taste of success, and this may be more important to those students than all the poetry ever written.

NEW PRODUCTS

DUAL-CHANNEL SPECIALIST



Bell & Howell Co., 7100 McCormick Road, Chicago 45, Ill., has introduced the Specialist 786-AV-1 tape recorder which is dual-channel and permits you to make separate recordings on each channel of a standard dual-track magnetic tape. Both channels can then be listened to either separately or simultaneously. Has a stereophonic half-track record/playback head, and a dual half-track erase head. Frequency response is 70 to 7000 cps plus or minus 4 db at 7½ ips; it has two 5¼ inch speakers, 5 push-button controls, twin volume controls, speeds of 7½ and 3¾ ips, and a pause lever. Accessories are available. For price and additional information, write to manufacturer.

NEW REEVES TAPE



Reeves Soundcraft Corp., Great Pasture Road, Danbury, Conn., is now marketing a new tape which contains an exclusive oxide formulation called FA-4, which stands for a new Frequency Adjusted oxide. The increased efficiency of this new oxide offers improved efficiency with new equipment and improves reproduction qualities of older recording equipment. All Soundcraft magnetic tapes will contain FA-4 with no additional cost for each reel of Mylar and acetate tapes. At the same time, Soundcraft has introduced its new packaging shown above. For prices, contact Reeves.

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The best prescription for this is Robins Head Demagnetizer (HD-6) listed by U.L. Most manufacturers recommend demagnetizing of recording heads after every 5-10 hrs. of use. Such knowledgeable care of your head will eliminate the cumulative effects of starting and stopping your recorder, switching, transients, line noise, etc. Magnetized heads can ruin recordings. Stay clear of annoyance from background noise and insure best possible performance by demagnetizing with Robins Head Demagnetizer HD-6 list \$10.00.

ROBINS NEWEST BOOKS!

"TELEVISION TAPE RECORDING" by George B. Goodall (48 pp. illus.) TE-48 A semi-technical hook by ROBINS on methods and techniques in the amazing new field of Video Tape Recording, just pub. Price \$1.00.

"HOW TO GET THE MOST OUT OF TAPE RECORDING," by Lee Sheridan (TE-128) 128 pp. illus. For the non-professional recordist, describes developments in stereo, how to buy and operate a tape recorder, etc. "TAPE EDITING AND SPLICING" (TE-24) 24 pp. illus. \$3.50.

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QUESTIONS AND ANSWERS

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

Balancing Speakers

Q—In my den, which I also use as a control room, I have a record player, television, radio and three tape recorders.

Located in various parts of our home are twelve speakers in six cabinets, all of which are controlled from a Vidaire multiple speaker switch. The leads from this switch panel to the speakers are ordinary lamp cord.

Were I to replace this lamp cord with shielded cable, would I obtain better results than with lamp cord? The volume at the source (record player, television, radio or recorders) is much greater than at the speaker outlet, which means that in order to get proper volume in rooms other than the control room, it is too loud in the control room.—C. C. D., Elkridge, Md.

A—Shielded cable is not the answer since the purpose of using shielded cable is to prevent the pickup by the wires of stray electrical disturbances which would add hum and noise.

We would suggest that you insert a volume control in each of the leads to your control room speakers so that you can turn them down. Better than a volume control would be an L or T pad attenuator which will keep the load on the amplifier constant.

As you probably know, the more speakers you switch in, the greater will be the volume necessary since you will be dividing the available current between the number of speakers on the lines. In your case, the speaker in your control room should either be ganged with the others or, as we have suggested be equipped with its own attenuator to get the proper volume.

Bad Tape

Q—I have owned three V-M tape recorders and am now using the new Add-A-Track model. When my tapes (which are not new ones, but have been used over a period of two years) reach the middle or three-quarter mark, they begin to squeal and squeak as they come off the left reel. This is apparent when recording and playing back. I have used the prescribed solutions on the tape and guides but to no avail. The only thing which seems to help is running the tape through once, which appears to alleviate a sticky condition and then they will play with less squeak, but it is not absent. I thought that perhaps the humidity had something to do with it but I find the cause is not that. I do find excessive amounts of red oxide on the recording and playback heads after about only 12-15 hours of use. Is it possible that these un-named tapes, which supposedly are as good as the name brands of tape is the cause of this squeak? It is necessary that I find a way of eliminating this since I want to copy some of the recordings and put

them on better tape. But I must eliminate the squeal in copying. If there is a good solution you can recommend, or some other advice you can give, I will appreciate it.—S. G., Rochester, N. Y.

A—We fear your trouble is due to a deterioration of the binder which holds the oxide to the tape. In moderate cases, solutions such as Long Life will provide relief. There are two things you might try, both are messy and you will have to clean the recorder. One is to put a fine grade of talcum powder on the tape by running it through a cloth impregnated with the powder, and the other is to coat the tape with graphite. We would suggest you try this on a section of tape before doing the whole area that is affected. You might also try removing any back tension on the tape by unwinding it tail end first into a large cardboard box and then running it through the recorder. Do not disturb the tape in the box or you will be in for tangles. We still say "name brand" tape is best.

Matching Speaker

Q—I am contemplating the purchase of a 25 watt hi-fi speaker system having a 16 ohm impedance. I hope to operate this speaker system from the 3.2 ohm external speaker jack on my Bell & Howell model 300L tape recorder, which has an 8 watt output.

Referring to the article "Use These Jacks" in the April 1958 issue, the story states, "any differences in impedance can easily be taken care of through the use of a transformer, one side of which has the same impedance as the speaker and the remaining side the same as the output jack on the recorder."

I have tried to purchase a 3.2 ohm or 4 ohm to 16 ohm transformer, however, I am told that no such type is manufactured.

Please advise where a transformer of this type can be purchased or what type of transformer can be used as an impedance matching transformer.—E. W. Z., Cleveland, Ohio.

A—A mismatch on the order of what you have is actually a small one and it may not be necessary to use a transformer at all except for absolute maximum fidelity. It might be worth a try to connect your speaker directly to the output jack on the recorder and see how it sounds.

One other possibility suggests itself and that is to tap off the output transformer in the recorder itself providing it has other taps built in. Your serviceman can determine this, or, if you have a schematic of the recorder giving the make and model number of the transformer you can determine it yourself. Many audio output transformers have taps for 3.2, 4, 8 and 16 ohms on them.

FEEDBACK

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

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

To the Editor:

I am a new short wave listener as well as a tape and FM radio fan. Your article "Taping Shortwave" by Jean Cover was very interesting and helpful. Only one thing I do not understand is why international station bands are interwoven with the ham code, aviation, etc. Wouldn't there be less interference and less hard to find the stations if all international broadcasting was on one band? For example, 7 to 14 MC or 6 to 12 MC or 10 to 20 MC, etc. and all hams, code, etc. on frequencies before and after the international band.

As for tape, I believe that all of these systems (reel, cartridge, 4 track, 2 track) is harmful for the industry. The layman wants simplicity. If I had my way this would be the standard for tape for home use:

1—All transistor, light, compact, with external jack for larger speaker.

2—Maximum reel size 5" (with double play tape and lower speed the bulky 7" reel is no longer needed). No cartridges!

3—4 track stereo, 2 track mono using tracks 1 & 4 so that mono tapes can be played on stereo machines without lowering or shifting heads (4 track mono is confusing to the layman).

4—3 speed, 3 3/4 ips for hi-fi (I could not tell the difference between a new, narrow gap head at 3 3/4 ips and a wider gap at 7 1/2 ips.)—or am I a "tin ear?" 1 7/8 for pre-1950 recordings and AM radio. 15/16 for voice or very soft background music.

As for FM stereo, I believe the Crosley system is best and stations that now use multiplex for background music will just do without stereo. The present AM-FM system is like listening to half Hi-Fi and half Lo-Fi with static on the AM. Keep up the good work—Charles Emanuell, New York, N. Y.

The allocation of the various bands is decided by an international body having members from most nations. They set the allocations and, since shortwave radio covers the earth, such a division is very neces-

sary. Local services, such as taxi and police radios are kept in a wavelength that, with low power, will not travel very far, for instance. Thus one or more countries might use the same bands for the same purposes with no danger of interference.

We do not believe Russia is a subscriber to this international radio control and consequently one of their broadcast stations is right in the middle of the frequencies allocated for the hams in the United States, with which they cause interference.

The allocation of wavelengths is set in the best interests of all the nations which subscribe to the international convention.

As is pointed out in the article in miniaturization in this issue, unless a recorder is intended to be used in the field, transistors are not necessary since vacuum tubes still are excellent devices and cheaper, at the moment, than transistors.

To the Editor:

Can I use tape letters instead of writing in long hand when I want to correspond with Tape Recording magazine?

Your editor's crosstalk for April hit the nail right on the head when you cut out the "Hi-Fi." I never did know what it was all about but you set me straight. And that full-track story on page 22 is one of the best I have read on tape recorder heads. After four years of tapesponding I just found out my old Webcor's are half-track. Some nut has been telling me they were dual motors, dual track and dual controls. The people who build tape recorders should read TAPE RECORDING magazine and enclose the head article with all their instructions.—George J. Keegan, Depew, New York.

Your correspondence has grown so heavy that we would actually prefer postcards, if you can make it. We do our best to keep up with things but sometimes we fall pretty far behind. Thanks for the kind words. Most of the people in the industry do read the magazine.

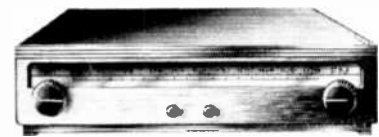
To the Editor:

I appreciate articles that include "build-it-yourself" schematics such as a mike mixer, remote control unit, etc.

I now use a Norelco 400 for V-S and home enjoyment. Also use a Steelman Transitate in my Driver Education Course for recording "Behind the Wheel" instruction of my student teachers as they instruct student drivers at Wilmington College. I find the 1 7/8 ips speed very adequate for both this and V-S.

Wish to add my approval to the removal of "Hi-Fi" from the masthead.—G. G. Petersen, Assistant Professor Wilmington College, Wilmington, Ohio.

TAPING YOUR FAVORITE FM PROGRAMS?



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If your vacation trip takes you abroad there will be many opportunities for recording, including street musicians, native instruments, etc. John Sanderson photo.

RECORDING

... preserve the sounds

THE only way to take a vacation and keep it too is to make a record of it. Millions of people do this every year, mostly in the form of pictures showing wifey against the Great Stone Face or little Sue throwing rocks into the Grand Canyon.

The reason most people take pictures on their vacations is that it is so easy to do so. If they had to carry the gear used by Matthew Brady when he made his famous pictures of the Civil War, there would be mighty few pictures taken. People simply wouldn't bother.

Judging from the rash of self-contained portables which have come on the market in the last year, the tape industry is beginning to catch a little of George Eastman's philosophy—You Push the Button and We do the Rest.

Here tape recording is one step ahead of photography already because there isn't any "rest" to do. When you record it, you have it without further processing.

The greater portion of our impressions and knowledge is gained through the use of our eyes, so naturally pictures are a powerful form of retaining sights we want to recall.

Of the remaining senses, that of hearing is the next broad avenue to our minds. Oftentimes it outshines sight.

Recording the voices of native children requires the same amount of coaxing that recording your own children does. Promise of a candy bar or gum for cooperation helps. John Sanderson photo.

For instance, a picture of a band does not bring forth the memory that an actual recording would.

Now that small, lightweight, and easily operated portable recorders are on the market, there is no good reason why vacations should not be recorded in sound as well as in pictures. Since most pictures are either color slides or home movies, the addition of sound becomes even more necessary.

Another phenomena in the marketplace is the appear-



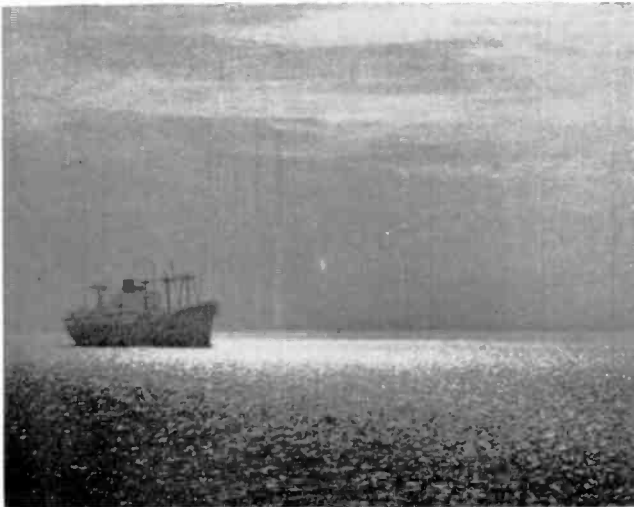
VACATIONS

by Bart Pierson

of your vacation fun.



In the photo above an expedition member is interviewing the paramount chief and clan chief with a Magnemite portable recorder. Much remains to be done in the area of recording native speech and dialects the world over.



ance within the last year of 8 mm magnetic sound movie cameras, there are now five different ones available.

Another phenomena is the appearance of devices to work a slide projector from a tape recorder.

Thus manufacturers have already provided the ring for a marriage of amateur sound and pictures. It is up to us to provide the ceremony.

While planning your trip, it is a good idea to make note of particular sounds you might want to record. For instance, should you be heading for Florida, there is the Bok Tower, in London, its Big Ben, in Mexico the cathedral bells, at Niagra, the roar of the falls, etc.

Just as important are the ordinary sounds which will bring back memories. Generally, if you make a picture of something which has sound associated with it (native singers, street musicians, town criers, harbor sounds, beggars or just plain characters) it is well to record the sound at the same time. Then this can be put on the movie sound track, or used in the tape that operates the slide projector.

At first you might think there would be little to record that would be worthwhile. But this is wrong for most of us simply do not listen . . . we have taken sound for granted. Just close your eyes for a minute and listen and you'll hear the sound picture of where you are. You'll find there is a lot more in it than you thought and much which contributes to the total impression.

Harbors are excellent sound subjects, the busier the better. The sounds of boat whistles and the cries of gulls can make much more vivid your home movies or slides.



Feeding time is the best time for zoo noises but don't go near the cages or you may not live to regret it. Get the cooperation and permission of the keeper before recording.

Wherever possible, batteries should be conserved when on a trip. Some models of portable recorders will operate, either directly or with an accessory from the car battery and if the recording can be made from the car this feature should be used. Some have rechargeable cells which you can charge up on overnight stops and others use ordinary flashlight type batteries or mercury cells obtainable almost anywhere.

If traveling to a foreign land, better check to see that batteries will be available or carry enough extra to see you through. Usually, the motor batteries will have the short-



Fires make exciting sound pictures, from the clangor of the arriving engines to the shouts of the firemen as they fight the blaze. Coupled with pictures you have a real audio-visual treat.

est life since the transistors use almost no current. The instruction booklets usually state the battery life that can be expected.

Generally speaking, you should get as close to your sound source as you can to get a good level and, if outdoors, to cut down the effect of wind noises and extraneous sounds.

Once you begin to think in terms of the world of sound, in addition to the world of sight, you will find your perception and appreciation is sharpened, with the net result of making each experience more enjoyable or more full of meaning. These are the things of which memories are made and the enjoyment of a pleasant vacation can be relived any time you wish. You can take your vacation and keep it too.



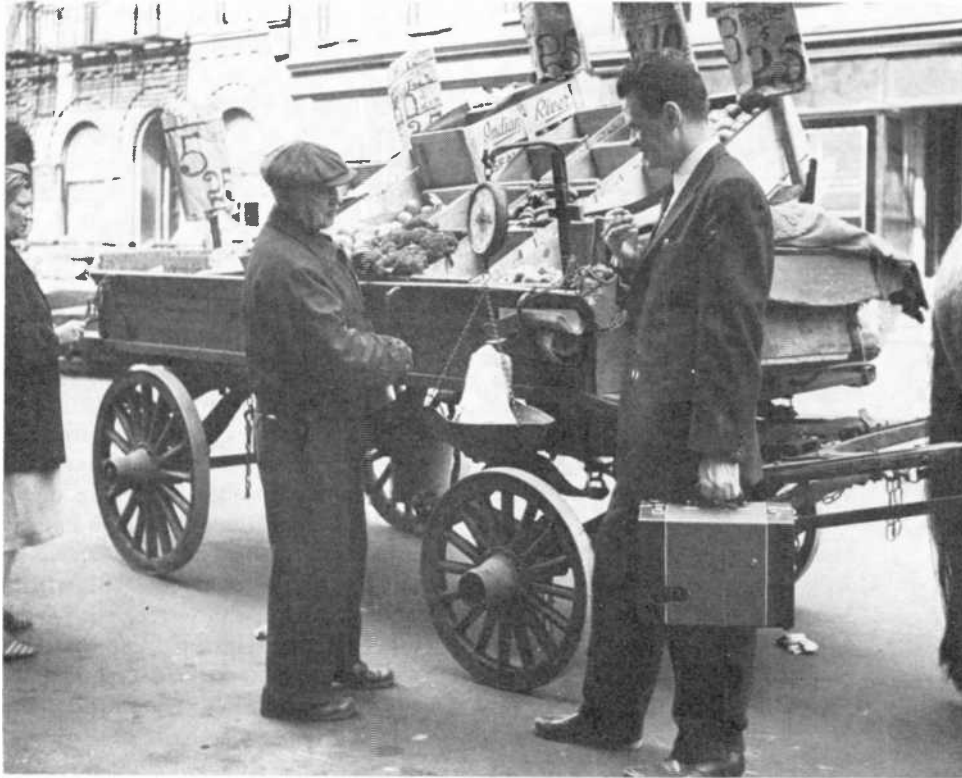
There are an increasing number of devices coming on the market which will enable the tape recorder to operate the projector from signals placed on the tape. Shown is the new Kodak Programmer and Calvacade automatic projector. Both slides and tapes should be edited carefully for maximum viewer interest.



Make Creative Sound Your Hobby

by Mark Mooney Jr.

. . . the time has arrived for tape recording to take its place with photography, painting, music and other arts.



Tony Schwartz of New York City is shown here interviewing a huckster, one of a fast disappearing group of people in our present day economy. The documentary creations of Tony Schwartz have found space in a time capsule and have been widely sold in the medium of disc records.

IN the hands of more than two million people is a tool which can be used to create a new form of expression. Yet, except by a small handful of people, its true potential is not being used—in fact it seems that it has not even been recognized. We are speaking, of course, of the tape recorder.

Everyone knows by now, that the recorder can do a thousand things and do them well. It can capture the baby's first words, copy music from radio or TV, take care of office dictation, analyze sounds or record data from satellites. It can teach a foreign language, operate a milling machine or send the president's voice from space. It gives the best reproduction of music in the home and it furnishes a means of talking with other recorder owners the world over through the tape correspondence clubs. Radio stations can be operated completely from tape and TV stations use it to record both sound and pictures. Giant electronic brains use it as a memory, it helps to explore for oil, it takes church services to the blind and shut-in. The list could fill pages and each would be an important and worthwhile use for the recorder.

But let us discount all these uses—what is left? Just

one thing, the recorder as a creative instrument. Yet, this one neglected use might turn out to be greater than all the others combined.

Down through the ages man has attempted to communicate his thoughts and feelings to others. Probably first with primeval grunts which gradually evolved into a spoken tongue. On the walls of caves in Spain and France can be found the crude, though excellent, drawings showing the animals, and some tribal activities, of a prehistoric era.

The Hittites, the Egyptians and others have left magnificent bas-reliefs and inscriptions depicting their life and times, from which archeologists have been able to glean insights into their culture. Then came the written word, laboriously inscribed on parchment or papyrus, transcribed and retranscribed again and again by dedicated men. Then came Gutenberg and his movable type which made it possible for the written word to be spread far and wide, and as presses were improved, the growth of knowledge and the interchange of ideas and doctrines spread like the ripples on a millpond when a stone is dropped into the water. The advance of civilization was speeded; the thoughts of



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.

the philosophers, the works of the mathematicians and the engineers was made available to all.

Fox-Talbot's first weak photo images were the forerunner of another means of communication, the mechanically created visual image and George Eastman with his roll film placed it in the hands of the public.

Through the medium of the motion picture, events could be depicted in sequence. The drama moved from the stage to the film and reached wider audiences.

Then the ever active mind of Thomas A. Edison wondered if sound could not be inscribed in some manner and found that it could. His words "Mary had a little lamb" heard weakly from the diaphragm of the first "talking machine" opened the doors to the preservation of speech and sound.

Lee deForrest's invention of the vacuum tube made it possible to amplify small currents and this, coupled with Marconi's wireless telegraph gave birth to another powerful means of disseminating information—radio. The great

music and the voices of statesmen were brought into homes that never might have heard them otherwise.

Then came the motion picture which talked and full, almost live, drama, reached the multitudes who might never have seen a professional production in their lifetimes.

The wedding of the motion picture and radio gave us TV, a still more powerful means of communication than either radio or movies alone, reaching as many as did radio and more than reached by the motion picture.

From the bygone and unknown caveman who drew the pictures on the walls and ceilings in charcoal and crude earth colors have come the generations of artists down through the ages. Some drew their subject matter in almost photographic form, others subjugated the actual subject to the thought or feeling that the artist sought to convey to the viewer of his finished work.

In recent years the photographer has used the camera and enlarger to express his feelings about a scene or thing and some have created photographic masterpieces. In camera clubs throughout the world the kindred spirits meet to criticize each other's work and to learn new techniques for their art.

The stories of mankind no longer need be handed down from generation to generation by word of mouth for since the invention of writing and then of printing, they may be made imperishable.

Philosophers have used the written word to spread their thoughts and theories and dramatists have written their plays in words to be spoken aloud by others.

Of all the forms of communication, sound is perhaps the oldest for man probably spoke before he got the idea that drawings could be made with a burnt stick on the walls of his cave. And yet, it is the newest, for only within the last relatively few years has there been a means by which sound could be recorded and preserved. And only since the invention of tape and the tape recorder has the way been opened for the creative worker in sound.

Just as paintings, the printed word, radio, movies and TV enabled the mass of people to enjoy a new cultural standard because they were able to see and hear the finest in music, drama and literature, so the tape recorder offers a similar opportunity for spreading the work of those who deal in sound.

Not only that, but since large portions of mankind are illiterate, being unable to read or write, they still are able to speak and hear. To these vast numbers recorded sound on tape can bring knowledge, hope and inspiration. This facet of the tape recorder's possibilities has been hardly explored.

But beyond that lies the realm of individual artistic expression through the medium of sound alone. By this we do not mean the recording of a composition written on paper and played upon some instrument, we mean the creation of something new, something that does not now exist.

Work on this plane began some years ago in Europe. In this country Dr. Vladimir A. Ussachevsky, of the music faculty of Columbia University has done notable work in collaboration with Professor Luening.

The French date back to 1946 on this kind of endeavor and they used musical instruments and other non-electric sound sources. Soon a German school of thought, choosing the title Electronic Music, began to use electronic instruments exclusively.

In 1959 under a Rockefeller Foundation grant, Princeton University joined Columbia in a five year program devoted to this new music form.

Basically, the method takes sounds, and by altering them in pitch, by means of speed changes on the recorders, by reversing them so that the decay of the sound comes before the attack, or putting the sound through filters or reverberation or feedback and mixing and dubbing, the result is like nothing else. It is something new.

The Louisville Symphony in 1954 performed one of their works *Rhapsodic Variations for Tape Recorder and Orchestra* in which a tape recorder was the star soloist. Since that time other works have come from the recorders of these versatile workers on the new frontier.

Another pioneer in creative taping is Tony Schwartz of New York whose subject is people. Roving the city with his portable recorder he recorded the everyday activities of the citizenry. He got the songs of children on a playground, the game rhymes as they played on the sidewalk, an Italian street festival, the spiel of pitchmen, street drilling, flower vendors, night club barkers, a Puerto Rican storefront-church service, a Jewish service, an auctioneer and sidewalk musicians. These he skillfully patterned into a recording that brought rave notices from the critics. His "New York 19" (which refers to the postal zone in which he lives) likewise received high praise for he had captured the spirit of the great city—from the everyday activities and sounds of its citizens. He created with tape a living impression of New York—with sound alone. In fact, in addition to his sounds of New York, he has a collection of folk music from over 40 countries, totalling over 10,000 foreign songs, secured by exchanging tapes with recordists abroad. A copy of his recording of children's game chants was buried in the Museum of Natural History's time capsule to be unearthed in a future century. The people of that day will then be able to hear the children's games of 1950.

A team that also deserves mention in the creative category is the award winning pair, Woody Sloan and Sid Dimond of Creative Associates of Boston. Their work has been in the field of documentation and has brought to all that have heard it a powerful message on freedom, what it means and what it could mean if we do not protect it.

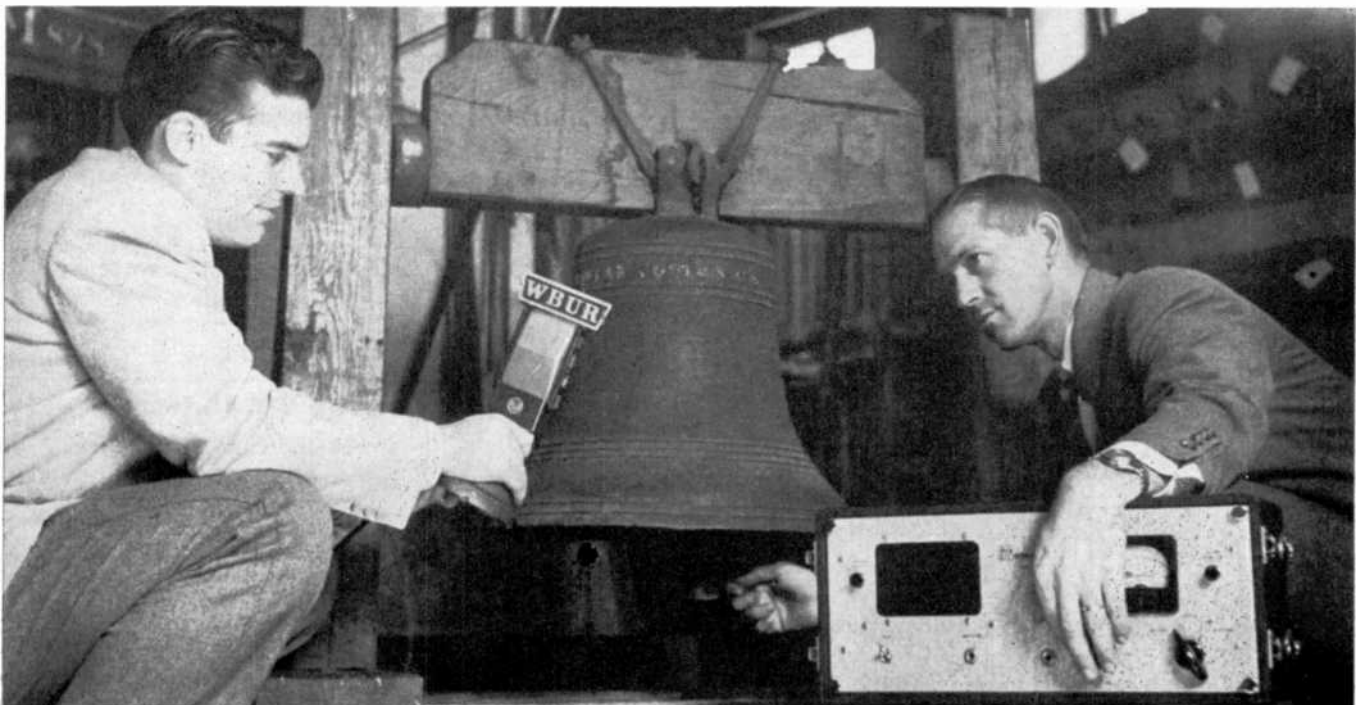
We cannot tell you how to be creative—either you are or you are not. Fortunately there seems to be a creative streak in most of us but sometimes this is submerged in the necessity for earning a living.

While no one can tell you how to be creative, the creative person does have some attributes which are easily seen. For one thing, the creative person has an overwhelming desire to seek out knowledge, in whatever form his interest may lie. He also has a drive to communicate his feelings and findings to his fellow man so that he too may share in his discoveries.

Money has nothing to do with it, for the creative person wants to work for the sheer purpose of uncovering a hidden truth, of advancing the sum total human knowledge or of communicating his interpretations to his fellow men. In most cases he will spend more than he ever gets back from it, in a monetary sense, and he will willingly devote long, hard hours completely without thought of pay to further his chosen field.

The creative person is a sensitive person. He is able to perceive many things which the average person misses but which the average person can appreciate when it is brought to his attention.

Oftentimes the creative worker is far ahead of the pack, so far ahead that his efforts might be frowned upon or even laughed at by the unknowing or unthinking. This, unfortunately, has been the lot of many creative people down through history. Copernicus was reviled because he said that the earth revolved around the sun. This was contrary to all the doctrines of his time. Columbus was laughed at because he felt the world was round and even Strauss'



Woody Sloan and Sid Dimond of Creative Associates of Boston, Mass. have won many awards for their imaginative use of the tape recorder in telling the story of our freedom and what it would mean should we lose it. They use sound excerpts coupled with a live platform presentation that produces a very dramatic and attention compelling result. Their tapes have also been aired.

waltzes were considered immoral when he first played them.

One thing more is a necessity to creative work; that is having something to say, either something entirely new which no one else has discovered or a new way of saying something that has been done before. Your work is an expression of your inward feelings toward the subject.

In the realm of sound, how can one be creative? There are many avenues open. The artist and photographer say to us—see how beautiful this is, or here is how I feel about this scene. The abstractionists have gone so far that the feelings have been depicted and the actual subject matter subjugated.

The writer and the playwright show us their thoughts and feelings through the medium of their puppets who speak the inner thoughts of their creators. The composer and musician depicts his feelings by using tones of varying frequencies and times.

The creative worker with the tape recorder works with sound, the entire gamut of sound, from the spoken word in any language on earth to the devastating roar of an atomic explosion. He may use musical notes but he can alter them as no musical instrument can, he may record the words of his fellow men as they are without script or play and he may create an impression of almost any subject or any magnitude through the manipulation of his tape recorders.

What are the tools of the trade? If you want to follow in the footsteps of Dr. Ussachevsky and his coworkers you will need at least two tape recorders so that you may shift speeds, copy back and forth, combine and recombine the sounds with which you work.

You will need mixers and filters. You will have to hit the books to learn the nature of sound and its psycho-acoustic effect on a human being. You will have to learn how the machines work and how you can alter them to make them do what you feel needs be done. You may have to go far afield to get the basic sounds that you wish to weave into a whole to present an aural picture or interpretation.

As you can easily see, your interests will range far and wide, from the soldering gun and parts to the farthest limits of man's present knowledge of the effect of sound on the individual. It is a new field, an unexplored region that can absorb as many hours of your time as you have to give.

Or perhaps your interests lie more along the lines of the work Tony Schwartz, or Woody Sloan and Sid Dimond.

Here portable recorders are a must and other recorders at home too, for editing dubbing and mixing. This phase of the tape recording art is more inclined to paint a picture, as grippingly and dramatically as possible through every means at the recordist's command.

Interest might range from the minute and almost unheard sounds to depicting a family at home. The entire world and all of its parts that are capable of giving off vibrations are fair game for exploration.

Although the creative process is in itself its own reward still the human ego likes to be noticed. There are few who can derive satisfaction from the creation of a beautiful thing if there is none to admire it. Part of creativity requires communication, which leads us to the possible audiences for creative sound.

The tape recorder music has been played before concert audiences, the work of Tony Schwartz has had wide circulation through the medium of the phono disk and tape. The tapes of Woody Sloan and Sid Dimond have been aired.

in addition to their use before live audiences where they form a dramatic background for a live presentation.

The camera fan has his camera club, which meets monthly, or even sometimes weekly, where he can see the work of his fellow members and display his own. The artist has shows to which he may submit paintings and throughout the land are groups who meet and paint under the leadership of a person with the requisite knowledge to teach painting.

The musician and composer has the live audience at concerts plus the widespread distribution of his work by radio, records and tapes. A body of critics has grown up in both the fields of art and music, as well as in the field of play acting, where the dramatist has his opportunity.

Literary works are legion, as are book reviewers and critics and the printed word may be purchased almost anywhere.

What are the opportunities for the creative worker in sound? At present they are rather limited. The tape clubs in the United States are primarily tape correspondence clubs, although some of them do hold regional meetings. Perhaps there should be tape clubs, similar to the camera clubs, where workers in sound may have an audience and the opportunity for criticism of their work.

The European tape recordists are ahead of those in this country in the matter of creativity and in the numbers of local clubs. Perhaps over here our preoccupation with the utility of the recorder for such things as learning and office uses, as well as a fine playback instrument for the reproduction of music has screened from our thoughts its great value as a creative tool.

Creativity is an adventure, one of the few chances to roam along unexplored paths that are open to us in this increasingly circumscribed world.

To foster this movement, Tape Recording Magazine will offer, from time to time, as they are received a new service—the "Sound Story."

Sound stories will be published in the magazine and will tell how creative work was done. This will range a wide variety of fields, humor, travel, off-beat material and others. A sample of the actual sounds described in the magazine article will be made available for a nominal sum, to cover costs of handling and production, to readers who may desire it. This will be in the form of a 3" reel of tape which will contain 8 minutes of recording, dual track at the 7½ ips speed.

We feel this will begin to furnish the necessary audience to those who already have done something in the creative sense and also will serve to give inspiration to all of us to "go thou and do likewise."



SOUND STORY No. 1

3" reel, 7½ ips, dual track

Side 1—Dr. Vladimir A. Ussachevsky. General examples and excerpts of tape recorder music.

Side 2—Tony Schwartz. Selection of sounds of New York City.

TO ORDER SOUND STORY No. 1:

Send \$1.00 and name and address to:

**Sound Story
Tape Recording Magazine
Severna Park, Md.**



Armour Research Foundation cartridge machine with top raised to show mechanism. Unit uses $\frac{1}{4}$ inch tape on reel-type spool and is said to be compatible with present day recorders.

ARMOUR RESEARCH CARTRIDGE SHOWN

AT the same meeting at which the Minnesota Mining-CBS cartridge was shown (reported in last issue), Marvin Camras of the Armour Research Foundation reported on work which the Institute had been doing on their cartridge.

This cartridge is compatible with most tape recorders now in use. A ball detent in the hub—costing about fifty cents—would be the only equipment necessary for manual operation of the new cartridges on existing recorders. Semi-automatic operation is possible on today's recorders by modifying them with inexpensive adapters.

The cartridge is 3.75 inches in diameter and contains standard $\frac{1}{4}$ inch tape. The central hole fits present recorders and on the end of the tape is a leader of Mylar which tapers from the tape width of .250 to .340 of an inch.

On the inner edge of each flange of the cartridge is a bead which holds the leader securely in place, sealing the inside to protect the tape from dust. The tape passes through the flanges with ample clearance after the leader has been unwound. A leader at the inner hub actuates the automatic reverse or rewind operation.

Protection against accidental erasure is provided by a safety groove in the bottom of the cartridge. If this groove is present, a "feeler" enters it when the machine is switched

to record position, allowing normal erase or recording.

If the groove is not present, the feeler is blocked and the machine is prevented from erasing or recording. Unrecorded cartridges are moulded with this groove, recorded cartridges are not. A removable insert is provided, so that protection may be added after the cartridge is recorded.

In the player demonstrated at the meeting, Camras inserted a cartridge into a slot. A shaft then pushed up through the cartridge hub and rotated the cartridge clockwise until a hook attached to the plastic leader was caught in a hole in the tape leader, which is threaded between the capstan and roller and onto the take-up reel. This leader always remains on the machine. The takeup spool was then activated, pulling both the machine leader and the tape leader along the proper threading path. The automatic threading operation required about three seconds.

He also showed drawings of a proposed system in which the cartridges are contained in individual compartments of a magazine. In response to a pushbutton, the desired compartment is moved into place and its cartridge is shifted into play position.

As of this writing, no manufacturer has indicated he will produce machines embodying the cartridge, nor are cartridges available.



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. Upper right: Old type tube, modern tube and transistors showing relative size reduction. Lower right: standard transformer, small object on top is transistor transformer.

BACK in the good old days any recorder was billed as a "portable" if it had a handle on it. Some of the old clunkers seemed to weigh a ton and lifting one made you feel like you were practicing for the weight lifting team in the Olympics.

This could hardly be blamed on the engineers who designed them, however, for the parts of those days were simply big and heavy. No one knew how to make them smaller and still retain their efficiency. Besides, no one cared very much since the recorder was not really designed to be carried about.

As recorders increased in popularity and came into wider and wider use in the schools, the women teachers began to pass a few remarks about their unhandiness and weight. Also about stiff springs and other controls that their more delicate muscles could not work easily.

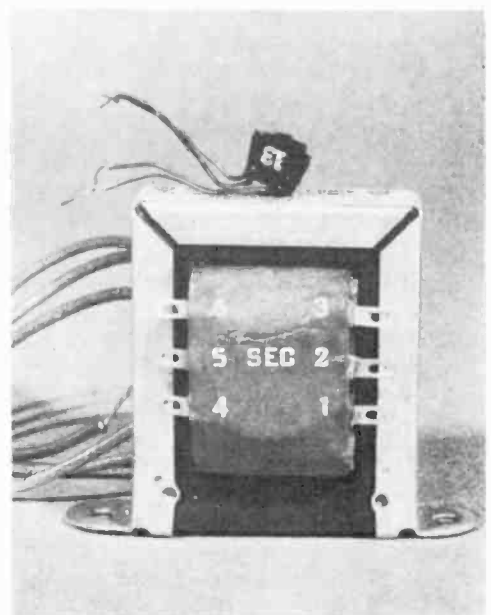
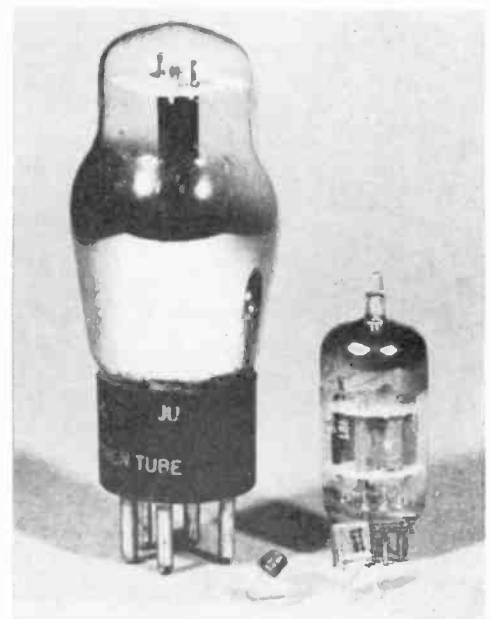
The net result was a gradual diminution in size of recorders but it was not really until a very few years ago that the regular type of tape recorder began to shed pounds. The use of lighter materials, such as magnesium castings, etc., and a more compact design helped in this respect. Smaller vacuum tubes, some of them actually two tubes in one glass envelope, helped in shrinking dimensions, too.

The present day portables that are completely self-contained might be considered to be a by-product of the race for space.

MINIATURIZATION

SAVES SPACE

... self contained portables are made possible through recent developments in miniature parts.





More energy packed in less space has made portable recorders possible. White cell at end of line is rechargeable, other batteries are standard dry-cell types ranging up to 67½ volts.

Since each fraction of an ounce in the payload of a space vehicle means pounds added to the thrust necessary to get it airborne the cry came for lighter components. Actual physical space in a rocket nose was also at a premium and again the demand arose for parts of maximum performance but minimum size.

Hand in hand with the production of smaller parts went improved manufacturing techniques. Printed circuits which are made by laminating copper to an insulating base and then etching away the unwanted parts, leaving only the circuit wiring, did away with much wiring and soldering.

After the smaller parts had been built for the space age people, the demand arose for them in things which were intended for everyday use.

Since many tape recorder manufacturers also do some defense business and the engineers keep up-to-date on new methods and material, it was not long before these began to find their way into tape recorders.

Today's tiny self-contained portable probably is the child of the transistor, more than any other miniature part. This tiny device, a small fraction of the size of a vacuum tube, can perform the tube's functions and perform them well. But the transistor is only of recent vintage and until it did appear really small radios and recorders were not possible. One of the advantages of the transistor, in addition to its tiny size and weight, lies in the fact that it uses practically no current. Thus this meant the end of heavy power transformers and associated equipment and also made it possible for recorders to use batteries without breaking the bank account for replacements.

Batteries themselves have, over the years, gotten more

powerful and smaller. Not only have the familiar dry cells shrunk in size but tiny rechargeable wet cells are now available which make self-contained portable operation even more economical.

The techniques applied to the tape recorder might be termed miniaturization but already the engineers are talking in terms of microminiaturization.

This is being made possible through a new development called molecular electronics. The research that went into the transistor, revealed new paths to research and scientists have found that extremely thin layers of various metals, some only a molecule in thickness have definite and useful properties. One of the leaders in this type of research is the Westinghouse Corporation which lately has come up with a 5 watt amplifier no larger than a dime.

So the end of making things smaller is not yet in sight and developments along these lines will be applied to the tape recorders of the future.

As can be seen from the directory of self-contained portable beginning on page 28 of this issue, the tape recorder has already shrunk considerably from the regular home model.

But the ordinary type tape recorder and the vacuum tube are not old hat, for they serve an entirely different purpose than the portables. In fact the well equipped tape recordist should have both a home outfit and a portable.

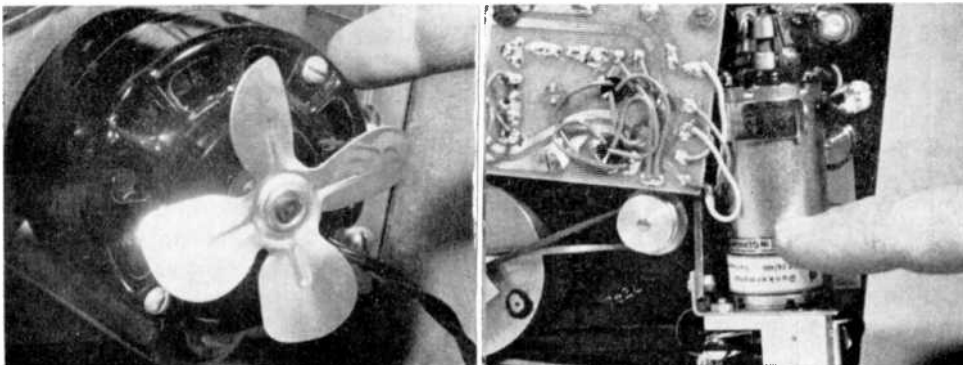
To some people the fact that if a piece of electronic gear, such as a recorder, is "transistorized" it is the newest of the new. While it may be the newest of the new, the vacuum tube still is as good or better in sets where there is no need for extreme weight and size savings and where current drain is of no importance because they are fed from the regular power lines. Tubes are also cheaper and easier to replace.

The small, self-contained portables have opened up a whole new world of recording pleasure to everyone. Light in weight, giving good quality results and independent of any power sources, they at last provide the long awaited opportunity to record where and when you want to.

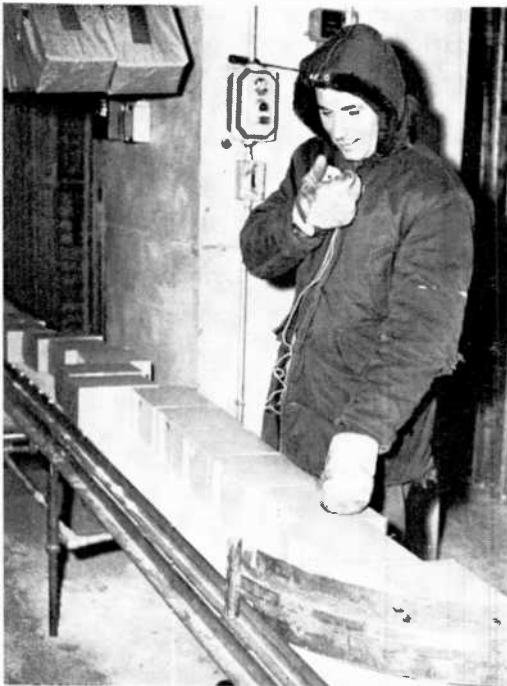
Tapes made on the portables can either be played back directly on the home machine, for editing or other purposes, or can be dubbed to regular tape if the portable uses a cartridge not suitable for use on a regular recorder.

All of these improvements have been made possible by miniaturization techniques, by the development of new materials and methods of manufacture that were practically unknown five years ago.

Today's portables can be slipped in a large coat pocket or be conveniently carried without any burden, a far cry from the days when you were lucky if you could lift the machine by yourself.



Miniaturization of motors has meant smaller and lighter units with smaller battery drain. Contrast standard motor at left with miniature motor in self-powered portable at right.



At 50° below zero, ice cream checker can make report without removing gloves to write and finish job in one session.

Portables Aid Business

... more and more firms are discovering the usefulness of portable recorders in their trade.



Inventory taking in Stop and Shop supermarket is done using portable recorder. Greater speed and convenience result.



In the comfort of a normally heated room the data on the ice cream inventory is typed off from tape made in the low temperature of the hardening room. Greater accuracy results.

BIG and small business is finding that the use of small portable recorders pays off. Jobs are speeded, on-the-spot reports are more complete and accurate and inventory taking, the bugaboo of most business becomes an easy and pleasant task.

Let's take a few typical examples: for instance the firm of William Kaufman of New York. This firm builds, modernizes, owns and finds tenants for office and factory buildings, warehouses and stores in a dozen cities. The territory they cover stretches from Connecticut to Maryland and west to Utah.

In the course of a year, Melvyn Kaufman travels about 75,000 miles to inspect properties during the period of acquisition and construction. To prepare the necessary reports requires making detailed notes of all phases of the operation, from the tax and mortgage status to their physical condition.



An inventory crew using Dictet portable recorders in the stockroom. Tapes are sent to home office where they are transcribed by secretaries. Inventory taking time has been halved.

On his inspection trips, Mr. Kaufman is frequently accompanied by a group including a contractor, architect and engineer. With the portable's mike clipped to his coat he simply talks his notes into it. Because this is so much faster and less distracting than hand note taking, he has no difficulty in observing, recording his notes and taking comments from those accompanying him. Frequently, when his notes are transcribed into written form, he finds that they constitute a report that requires little or no revision and is far more accurate and complete than it otherwise could have been.

The use of small portables also results in a great saving of expensive executive time. Mr. Kaufman on a recent trip inspected properties in Chicago, Cincinnati and Milwaukee within two days, turning in a complete report on each of the properties.

One occurrence during his travels usually brings a laugh

when recounted. Most of his travel is done by plane. Not long ago, using his Dictet on a plane, he clipped the mike to his lapel and had the recorder in his brief case. He noticed a number of other passengers were turning in their seats and staring at him curiously, evidently under the impression that he was talking to himself, since they couldn't see the recorder and either couldn't see the mike or didn't know what it was.

What he was doing was practicing a speech which he was scheduled to deliver in St. Louis at a meeting of the National Association for Retarded Children, of which he is a director.

While the Kaufman firm is a large one, small realtors and assessors are also finding it convenient to use a portable tape recorder in their work.

Small portables also help overcome difficult working conditions in plants. For instance the Knudson Brothers Dairy in North Haven, Connecticut.

The dairy turns out about a million gallons of ice cream annually. The problem came about because it was necessary to take inventory of the stock—during the summer when demand is heaviest, as many as four times a week. The ice cream is kept in the plant's hardening room where the temperature is 30 to 50 degrees below zero and the room holds 60,000 gallons of ice cream in two hundred and fifty different categories.

Rudolph L. Bernard, manager of the plant said, "When the inventory taker enters the room he is dressed from head to foot in Arctic clothing, including insulated mittens. Until we discovered how our Dictet helped us take inventory, he had to keep removing his mittens to use his pad and pencil. He could only work a few minutes before his fingers got so cold he had to come out and warm them. This meant that it took almost four hours to complete an inventory. It was a rough job and one that no one wanted. I doubt that we ever got a very accurate figure."

Using the small recorder, which is tucked inside the suit, the inventory taker now talks the inventory into a hand microphone. He can stay in the hardening room until the inventory is complete and it only takes an hour. Back at his desk he transcribes the tape to paper using a foot control and comes up with an accurate and complete report.

Big food chains are also finding the portables to be useful in taking inventory. Instead of two men cluttering up the aisles with a tabulator and interfering with shoppers, one man with a recorder can do the whole job faster and



Complete and accurate reports of construction progress, real estate property appraisals, etc. are possible with portable recorders.

more accurately. For instance, the inventory crew for the Stop & Shop chain, which has 112 stores consists, of 13 men in the field and four girls in the home office. The tapes are mailed in by the field men for transcribing. With the recorders, it has been possible to take an inventory every four months, providing better inventory control and saving dollars.

Quality control, time and motion study engineers, stockroom men, production people, are all finding the today's transistorized portable can save hours of hand note taking and provide more complete reports than they ever were able to turn out before.

In the midwest, one small company does nothing but take inventories for other companies using the portables and having the notes transcribed by women who used to be secretaries but now must stay at home because of small children.

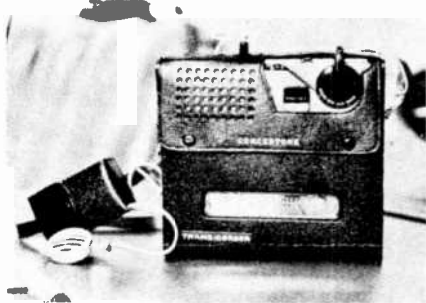


Left: checking production in a candy plant using an American Concertone TR 100 Transicorder. Center: quality control for the factory is expedited by on-the-spot use of the portable recorder. It is also useful in time and motion study work. Right: stockroom control and order filling are expedited by permitting purchasing and inventory personnel to record notes as stock is checked.

DIRECTORY OF BATTERY OPERATED PORTABLES

Compiled and Edited by Jean Cover

Specifications, features and price information contained herein were obtained from the manufacturers and are correct as of date of publication.

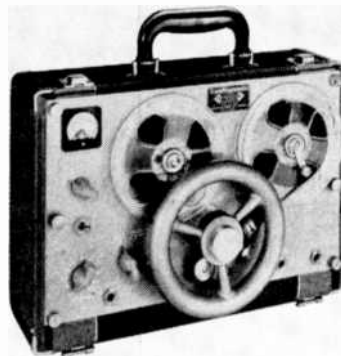


AMERICAN ELECTRONICS, INC., 9449 West Jefferson Blvd., Culver City, Calif.—TR 100 TRANSCORDER. Operates from its own built-in batteries, has built-in speaker, 6 transistors, weighs just 4 lbs., dual speed— $3\frac{3}{4}$ and $1\frac{7}{8}$ ips, VU meter indicates recording level and battery life. Uses standard 3" reel. Can be operated from the cigarette lighter receptacle of a car. AC adapter and other accessories available. One hour recording capacity. Price: \$199.95.

AMPLIFIER CORP. OF AMERICA, 398 Broadway, New York 13, N. Y.—TRANS MAGNEMITE (top). Operates on small dry rechargeable batteries which have a life of about 125 operating hours. Double barrelled Swiss-steel spring-motor; high-speed rewind; ultra-precision balanced fly-ball governor; transistorized rewind indicator; push-pull ultrasonic bias oscillator; eleven transistors; size— $11 \times 10 \times 7$ inches; weighs 15 lbs. Other features include: high-speed VU meter, large precision capstan, take-up guide post, adjustable tension pressure pad, etc. Various models with different tracks and speeds are available, and a VU model is also available. Write for literature. Prices range from \$525-\$840 list, \$315-\$505 net.

TRANS FLYWEIGHT (middle). Electric motor battery-operated portable available in various speeds and tracks. Has cast, machined, and dynamically balanced fly-wheel, separate rewind motor, ten transistors, weighs 8 lbs., and is powered by six replaceable or rechargeable mercury batteries. 12 volt car operation accessory available which enables motor to operate from cigarette lighter socket. Other features include long-life brushes and ball-bearing construction throughout, a VU meter for measuring recording and playback level and battery voltage, and a multiple shielded motor with special auxiliary noise suppressors. Furnished complete with batteries, tape, microphone plug, and instruction booklet. Other accessories available. Prices: From \$386-\$529, net.

SECRET RECORDER (bottom). Quiet running, concealed in false compartment of



a standard-size genuine top-grain cowhide leather briefcase. Normal speech may be recorded at a distance of 25 feet. Starts and stops instantly by touching a patented combination slide-lock and switch. Continuous recording for 3 hours at $15/16$ ips on a 5" reel 12 volt car operation accessory available which enables motor to operate from cigarette lighter socket. Features similar to those of machines above. Available in varied speeds and tracks. Prices: \$475-\$535, net

BROADCAST EQUIPMENT SPECIALTIES CORP., Box 149, Beacon, N. Y.—POCKETAPE. 6-8 volt batteries power mechanism and amplifier for average of about 25 cents per hour; batteries replaceable at intervals of 10-20 hours depending upon speed; available in any one speed of $7\frac{1}{2}$, $3\frac{3}{4}$, $1\frac{7}{8}$ or $15/16$ ips; size is $1\frac{1}{2} \times 4\frac{1}{2} \times$



$6\frac{7}{8}$ inches; weighs 2 lbs; recording time is from 15 continuous minutes at $7\frac{1}{2}$ to 4 hours at $15/16$ ips dual track; special metal reels are used; frequency response 5-transistor amplifier is within 3 db 200-9000 cps; external power can be used; all parts of unit are rustless, corrosion resistant and anodized-main section of amplifier is hermetically sealed; good level can be recorded up to 15 ft.; accessories, including patch cord to automobile cigarette lighter socket, available. Price: \$466.

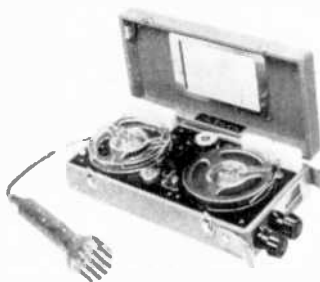
CONCORD ELECTRONICS CORP., 1549 North Vine St., Los Angeles 28, Calif.—HOSHO MODEL 1000. Operates on 3, 9 volt batteries; weighs 3 lbs.; reel size is 3"; tape speed $15/16$ ips; maximum recording time 4 hours; frequency response 60 to 5000 cps; built in speaker; VU meter; AC adaptor available. Price: \$169.96 including carrying case and microphone.



DEJUR-AMSCO CORPORATION, 4501 Northern Blvd., Long Island City 1, N.Y.—STENORETTE COMPANION. Battery operated, each battery charge from accessory charger insures 4 hours of continuous dictation. Pushbutton operated throughout, convenient microphone control, visible charge level, linear progress scale permits both location and indexing of any portion of recorded material; the carrying case is a handsome leatherette case with shoulder strap, roll-away cover. Cable, 6 and 12 volt, for connecting unit to cigarette lighter socket obtainable. The machine weighs 6 pounds and is $10\frac{1}{4} \times 5\frac{7}{8} \times 3\frac{1}{4}$ inches. Accessories available. Price: \$199.50.



DICTAPHONE CORP., 420 Lexington Ave., New York 17, N.Y.—DICTET. Battery-powered, with visual battery life indicators. Self-contained, weighs two pounds, 11 oz., and is $2 \times 4\frac{1}{2} \times 6\frac{5}{16}$ inches. Each tape comes in a magazine and is for one hour's recording. Any tape can be played back immediately by pushing a lever and holding the microphone to the ear. The mike is start-stop which enables the speaker to control the recording operation with his thumb. The Dictet fits snugly into a leather carrying case, complete with shoulder strap and compartment for microphone and spare batteries. Accessories available. Price: Contact manufacturer.



ELECTRONIC APPLICATIONS, 194 Richmond Hill Avenue, Stamford, Conn.—STELLAVOX SM 4 (top). Operates on four miniature dry cells, type RULAG, amplifier contains 7 transistors and 1 diode. Cells provide about three hours operation on an intermittent basis. Accessory charger available. Uses $3\frac{1}{2}$ " tape reels, with a recording time of 20 minutes. Frequency response

30-14,000 cps, plus or minus 2 db, signal to noise ratio about 50 db, weighs about 4 lbs., size— $2\frac{3}{8} \times 4\frac{7}{8} \times 10\frac{1}{4}$ inches. Other features include high frequency erase head in ferrite and combined record playback head for half track or two track, rewind is manual by use of a small handle, comes in a sturdy wooden case covered with grey leatherette. Price: Contact Electronic Applications.

NAGRA III (bottom, col. 1). Not a pocket unit, but a small, light recorder which runs on 12—1.5 volt flashlight batteries. 20 hours operation is available from ordinary batteries and up to 70 hours from the new long-life Eveready batteries. Has a special connection for remote operation; accommodates standard 5" reels with cover closed and 7" reels with it open; some models have more than one speed; has recording level meter and battery check. New automatic record position which controls microphone sensitivity and attenuates low frequencies. The Nagra IIIb has speeds of 15 and $7\frac{1}{2}$ ips, the Nagra IIIc operates at $7\frac{1}{2}$ ips, but can be specially designed for $3\frac{3}{4}$ or 15 ips upon request. Frequency response at 15 ips is 30 to 15,000 cps, dimensions— $8\frac{3}{4} \times 12\frac{1}{2} \times 4\frac{1}{4}$ inches, weighs 15 lbs. Power packs for adapting the recorder to almost any power supply or mains are available. Prices: Contact Electronic Applications.



ERCONA CORPORATION, 16 West 16th Street, New York 36, N.Y.—STUZZI MAGNETTE (top). Battery operated; amplifier system has seven transistors and two diodes; weighs 8 pounds; vibration proof; speeds of $1\frac{7}{8}$ and $3\frac{3}{4}$ ips; dual track; dimensions— $11 \times 4\frac{1}{2} \times 8$ inches; battery life up to 100 hours; maximum playing time up to 2 hours per reel; frequency range 50-9000 cps at faster speed. Other features include battery life indicator, separate motors for fast wind/capstan drive, can be used as a portable PA system, velvetouch pushbutton controls, VU level magic-eye, etc. Price: \$269.50.

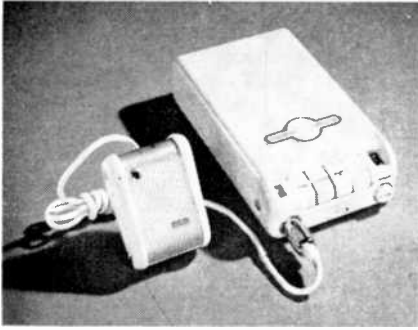
E.M.I. (bottom, col. 2) manufactured by Electric & Musical Industries, Ltd. of England Battery operated; weighs 14½ pounds; measures $14 \times 8 \times 7$ inches; uses standard 5" reels; available in three models— $3\frac{3}{4}$ ips for 30 minutes, $7\frac{1}{2}$ for 15 minutes, or 15 ips for $7\frac{1}{2}$ minutes; frequency response at 15 ips is within plus or minus 2 db of the response at 1000 cps, between 50 and 7000 cps, and within plus or minus 3 db from 7000-10,000 cps; signal to noise ratio is better than 45 db. Price: Contact Ercona distributor).



FILNOR PRODUCTS, INC., 101 West 31st Street, New York 1, N.Y.—TELTAPE. Imported from West Germany. Power supply—4 type C flashlight cells (good for about 15 hours of continuous use), is $8\frac{1}{2} \times 6\frac{1}{2} \times 2\frac{1}{4}$ inches, weighs two pounds, has a two-stage transistor amplifier. Plays for 16 minutes with 3" reel, response to 4000 cycles. Other features include instant braking, fast rewind, automatic slack take-up, and separate record-playback, erase heads. Price: \$29.95.



GBC AMERICA CORP., 89 Franklin Street New York 13, N.Y.—TRANSIVOICE. Operates on 100 hour standard Eveready, Burgess or Ray-O-Vac batteries (or equivalent); all transistor circuit, uses $3\frac{1}{2}$ " tape reel; records up to $1\frac{1}{2}$ hours at $3\frac{3}{4}$ ips; weighs little over 4 pounds; pushbutton controls; built-in conference speaker; accessories available. Price: \$159.50.



GEISS-AMERICA, 6424 North Western Avenue, Chicago 45, Illinois—MINIFON ATTACHE. Uses magazines; fully transistorized—fully automatic; weighs 1 $\frac{3}{4}$ lbs.; 3-15/16 x 6-11/16 x 1-9/16 inches; battery (rechargeable) or AC operated; has pushbutton controls; 30 minutes recording time; built-in battery meter; fast forward-fast rewind; automatic tape-end stop; tape speed 1 $\frac{7}{8}$ ips; frequency response 150-6000 cps; has 3-stage transistor amplifier; comes in lightweight sturdy metal case; has a start-stop microphone; accessories, including connecting cord for automobiles, available. Price: \$249.50.

This company also produces the Miniton P55 pocket size wire recorder which weighs just 28 oz. and gives up to 4 hours operation. Write for details.

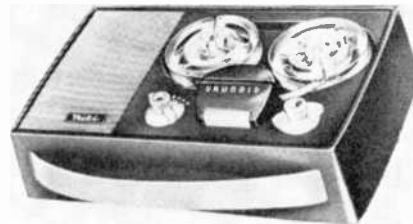


KINGDOM PRODUCTS LTD. (distributor), 514 Broadway, New York 12, N.Y.—FI-CORD (manufactured by Fi-Cord Ltd., England). Powered by four 2-volt accumulator batteries (rechargeable with Fi-Cord charger accessory); speeds of 1 $\frac{7}{8}$ and 7 $\frac{1}{2}$ ips; battery life 1 $\frac{1}{2}$ to 2 hours at 7 $\frac{1}{2}$ speed, 3 to 3 $\frac{1}{2}$ hours at 1 $\frac{7}{8}$ speed; 8 General Electric types GET3 and ET4.G transistors; built-in loudspeaker; weighs 4 $\frac{1}{2}$ lbs.; size—9 $\frac{5}{8}$ x 5 x 2 $\frac{5}{8}$ inches; frequency range at 7 $\frac{1}{2}$ ips is 50-12,000 cps plus or minus 3 db; wow and flutter is 0.4%; noise level, 35 db. Dual track; maximum recording time at 7 $\frac{1}{2}$ ips is 27 mins. at 1 $\frac{7}{8}$ ips is 108 minutes. Small, sensitive dynamic microphone is fitted with stop-start switch. Comes complete with mike, integral play back speaker and automatic battery charger. Price: \$299.50.

LAFAYETTE RADIO ELECTRONICS CORP., 165-08 Liberty Avenue, Jamaica 33, N.Y.—TRANSCORDER. Completely transistorized; operates on one battery; weighs three pounds; size—8 $\frac{1}{2}$ x 3 $\frac{7}{8}$ x 1 $\frac{7}{8}$ inches; one hour recording time at 1 $\frac{7}{8}$ ips; uses tape cartridges; microphone picks up



conversation as far as 30 feet way; has visual battery life indicator; transistorized power amplifier and 2" speaker (supplied separately) fit into the battery compartment. Complete with combination microphone—playback speaker—one hour tape recording cartridge and 12 hour battery. Price: \$249.50 list, \$189.50 net.



MAJESTIC INTERNATIONAL SALES, 743 N. La Salle Street, Chicago 10, Ill.—NIKI. Battery operated (4x1.5V monocells plus one battery—3V.), approximately 15 hours on one set of batteries; jack for car battery 6 volts-DC, dual track, recording time approximately 30 minutes, frequency response 150-6000 cps. Other features include permanent dynamic speaker, 2XOC71, 2XOV72, OC602 special transistors, 3 way jack, jack for car battery, and a durable moulded plastic case with carrying strap. Weighs approximately 5.5 lbs. Prices: Contact manufacturer.



MATTHEW STUART & CO., INC., 156 Fifth Avenue, New York 10, N.Y.—PHO-

NO-TRIX MARK II and MARK III. The Mark II (top, lower middle col.) has speeds of 1 $\frac{7}{8}$ or 3 $\frac{3}{4}$ ips, pushbutton control is powered by 4 standard flashlight batteries, is dual track, has up to 90 minutes recording time, and uses 3" reel tapes. It also has a built-in speaker, monitor switch, and it weighs 5 lbs. Price: \$79.95.

The Mark III (bottom, lower middle col.) is dual track, 3 $\frac{3}{4}$ ips, measures 9 x 5 x 4 $\frac{1}{2}$ inches, uses standard 3" reel tapes, operates on 4 standard (size D) flashlight batteries, and gets 44 minutes recording time on single 3" reel of tape. Other features include a fully governed motor, pause button, pushbutton control, recording monitor switch, fast rewind, volume control for recording and playback and an auxiliary output jack. Auxiliary cable for use with 6V auto battery available for both models. Price: \$99.95.



MINICORD CORP. OF AMERICA, 1915 Atlantic Ave., Atlantic City, N.J.—MINICORD. Will record continuously for two hours, has a three stage, high-gain printed circuit amplifier, weighs under two pounds, and is 4 $\frac{1}{4}$ x 6 $\frac{5}{8}$ x 1 $\frac{5}{8}$ inches in size. May be carried completely concealed with special shoulder harness and Dick Tracy type wrist watch microphone. Contact manufacturer for additional details. Price: \$239.50.

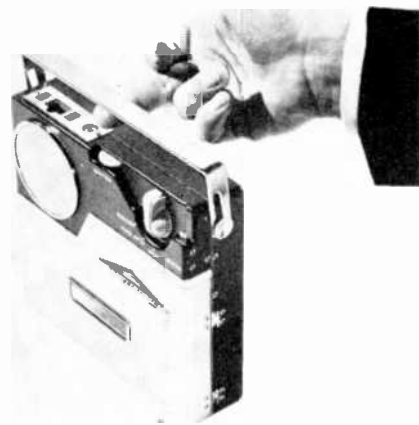


MOHAWK BUSINESS MACHINES CORP., 944 Halsey St., Brooklyn 33, N. Y.—MIDGETAPE. Operates from a small battery pack or from regular AC lines; weighs 2 $\frac{1}{2}$ lbs.; motor batteries last 25 hours and amplifier batteries 60 hours; records for one hour on two tracks at 1-7 $\frac{8}{8}$ ips; the tape is contained in a cartridge; has automatic volume control; frequency response is 150-4000 cps. Accessories available. Contact manufacturer for price.

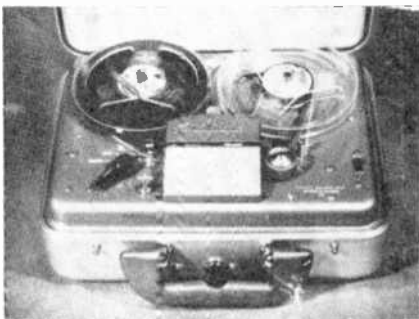
PETELY SALES CORP., 300 Park Avenue South, New York 10, N. Y.—HIDELITY MODEL TR-403 (top, page 31, col. 1). Has built-in speaker and transistorized amplifier. Power for amplifier—6VX4 penlight dry batteries; for motor—9VX6 penlight dry batteries. Battery life is 204 hours continuous use. Two speeds—3 $\frac{3}{4}$ and 1 $\frac{7}{8}$ ips, AC adapter, dual track, recording time is 34 minutes at 3 $\frac{3}{4}$ ips and 68 minutes at 1 $\frac{7}{8}$ ips, dimension—2 $\frac{3}{4}$ x 7 $\frac{1}{2}$ x 6 $\frac{7}{8}$ inches, weighs 5 lbs. Accessories available. Price: Contact manufacturer.



HI-DELITY MODEL TR-401B (bottom, above). 10 pencil type dry batteries supply all necessary power. Single lever control for Play, Record, and Rewind; battery lite for amplifier 6 hours, for motor 3 hours; four 2T60 transistors; tape speed $3\frac{3}{4}$ ips; dual track. Price: Contact manufacturer.



SCOPUS, INC., 404 Park Avenue South, New York 16, N.Y.—EXECUTIVE TR-10. Operates on self-contained penlite batteries, has six transistors and one diode, uses standard three inch tape reels, two speeds— $3\frac{3}{4}$ and $1\frac{7}{8}$ ips, weighs $3\frac{1}{2}$ pounds. Other features include safety interlock button, remote control jack, monitor jack and A.C. adapter jack. Can be operated from car battery. Accessories available. Price: \$169.95.



STANCIL-HOFFMAN CORP., 921 N. Highland Ave., Hollywood 38, Calif.—

MINITAPE. Has an extremely sensitive preamplifier with an unusual electronic gain control; uniform recording quality is assured with no meters or magic eyes to watch. Weighs only 1.3 lbs. and in its watertight aluminum case, it is built to operate in snow, rain or desert heat. Five inch reels furnish 30 minutes recording time at $7\frac{1}{2}$ ips (speeds of $3\frac{3}{4}$ or $1\frac{7}{8}$ may be ordered); flutter and wow less than 0.35% RMS; three all transistor amplifiers on plug-in cards, 7 transistors, 2 diodes, and 1 thermister; hermetically sealed nickel cadmium storage batteries power the amplifiers and drive motor for over 4 hours; battery may be charged from a 12 volt cigarette lighter attachment or an accessory automatic charger. No bearing can ever "freeze" and no oiling is required. Accessories available. Price: \$494.



STEELMAN PHONOGRAPH & RADIO CO., INC., 2-30 Anderson Ave. Mount Vernon, N.Y.—TRANSITAPE. Speeds of $1\frac{7}{8}$ and $3\frac{3}{4}$ ips; plays 1 hour, 4 min. at $1\frac{7}{8}$ with standard 3" reel $\frac{1}{2}$ mil tape, dual track; operates on Mercury cell penlight batteries—six for amplifier and seven for motor; is $2\frac{7}{8} \times 6\frac{1}{2} \times 9\frac{3}{4}$ inches in size; weighs 5 lbs., has permanently lubricated bearings; has a neon glow battery level indicator; has seven transistors plus two diodes. Other features include an extended range 1" Alnico P.M. speaker, fast forward speed, safety interlock button, separate volume control, and it comes in a luxurious leather case. Only an extension cord is required to connect the Transitaape directly to a 12 volt car battery. Price: \$199.50 (slightly higher South and West).

TURNING CORP. OF AMERICA, 60 East 42nd St., New York 17, N.Y.—BUTOBA MT1 (top). Can be operated on flashlight batteries or electric current; weighs 12 pounds, is $6 \times 9 \times 12$ inches, dual track, has seven transistors, speeds of $1\frac{7}{8}$ and $3\frac{3}{4}$ ips, frequency response 50-13,000 cps, noise level 40 db, playing time up to two hours on



each track and takes 5" reel. Also features pushbutton operation, fast rewind and fast forward, tone and volume controls, and volume indicator. Accessories available. Price: \$249.50.

BUTOBA TS 71 (bottom), and TS 61. Powered by four flashlight batteries, tape drive independently powered by a precision spring motor, has 6 transistors, weighs 20 lbs., is $12 \times 15 \times 5$ inches. The TS 71 is full track, $7\frac{1}{2}$ ips, 60-13,000 cps. The TS 61 is dual track, $1\frac{7}{8}$ and $3\frac{3}{4}$ ips, 50 plus or minus 9000 cps. Other features: separate tone and volume controls, time indicator, pushbutton controls, and volume level indicator. Accessory converter for all models available which works on 6V car battery. Prices: TS 71—\$295; TS 61—\$245.

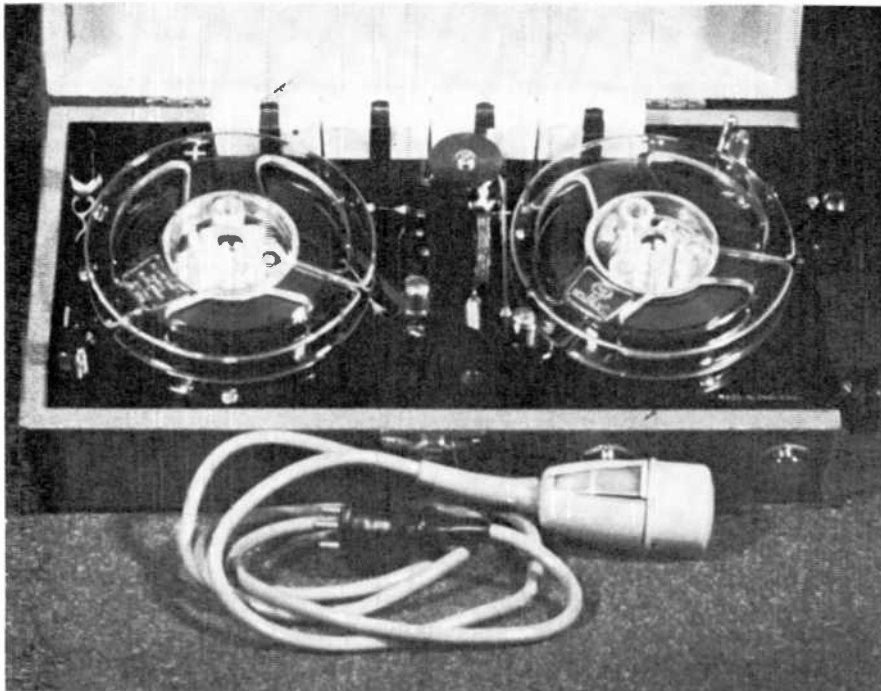
ACCESSORIES

Accessories available for many of these portables include: AC adaptor, carrying case, shoulder carrying case, shoulder holster, microphone, wrist watch mike, remote control mike, battery charger, cigarette lighter charger, loudspeaker, conference speaker, monitor headphones, earphones, tape, tape reels, magazines, auxiliary output jack, transcribe-dictate kit, telephone pickup, brief case with mike, pen desk set with mike, remote control, microphone/speaker, converters, erase head, splicing tape, shielded microphone plug, 600 ohm output transformer, pocket stop-start control, foot switch, mailing cartons, log-index slips, extra batteries, tape scissors, oiler, etc.

Consult individual manufacturers for specific accessories for their machines.

NEW PRODUCT REPORT

STA **OK** STED



FI-CORD SELF POWERED PORTABLE

... features 8 transistor circuit, rechargeable batteries, operation open or closed, small size

THE Fi-Cord is of British manufacture and is one of the smaller self-contained portables. It measures 9 $\frac{5}{8}$ " x 5" x 2 $\frac{5}{8}$ " with a weight of 2 $\frac{1}{2}$ pounds.

The unit has a detachable shoulder strap which is equipped with a non-skid pad and a case for the mike. The microphone is a dynamic with a stop-start switch built in. Also available, is a higher quality microphone than the one furnished with the recorder

The recorder is powered by four 2-volt rechargeable cells which may be charged on the Fi-Cord charger. Since the cells weigh only five ounces, it is a good plan to get a few extra sets so that one or more fully charged sets will always be available.

Recording time on one set of batteries runs from 1 $\frac{1}{2}$ to 2 hours at the 7 $\frac{1}{2}$ ips speed or 3 to 3 $\frac{1}{2}$ hours at the 1 $\frac{7}{8}$ ips speed (the two speeds on the recorder). The motor is a 3 volt DC

Product: Fi-Cord Model 1A

Distributor: Kingdom Products, Ltd., 514 Broadway, New York 13, N. Y.

Price: \$299.50 (with professional mike, \$330)

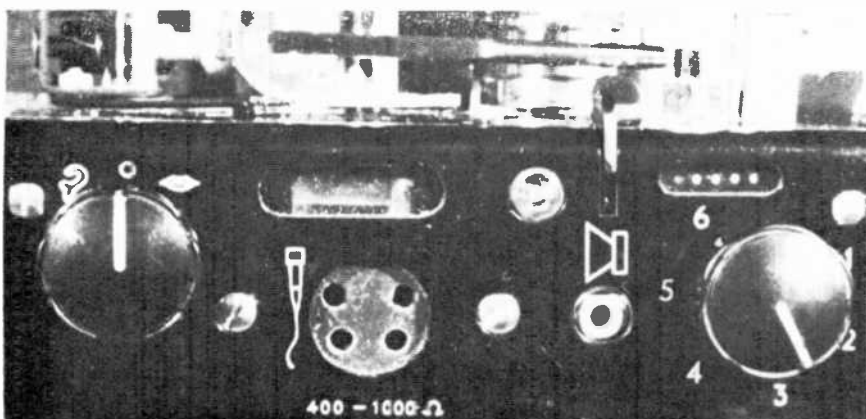
motor and the unit has eight transistors in the electronics.

A built-in loudspeaker for monitoring is found under the feed reel and it provides very good listening volume. The recorder also has an output jack for connecting it to an external amplifier and speaker system.

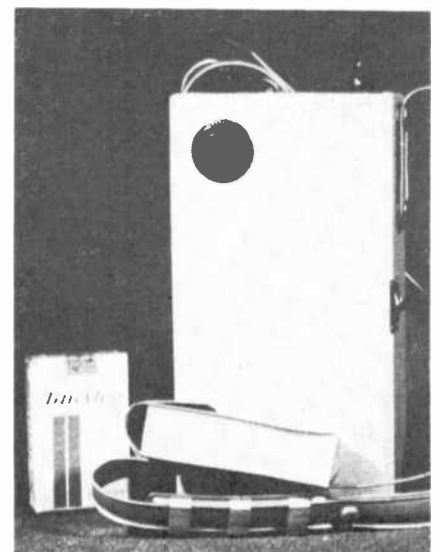
The recorder has both erase and record heads and is dual track with a playing time on 1 mil tape of 9 minutes per track at the 7 $\frac{1}{2}$ ips speed or 36 minutes per track at the 1 $\frac{7}{8}$ ips speed. Half-mil tape may also be used to triple these times.

Rewinding is accomplished by means of a small handle which is inserted in one of the spline holes in the reel or, the motor may be used for rewind by switching the reels and taking the tape straight from one to the other. This will sacrifice some of the battery life for recording.

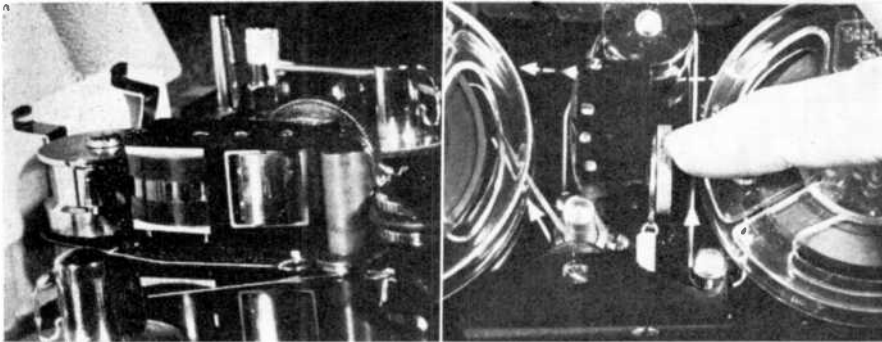
With the exception of the pressure release disc, which releases the roller from the capstan for threading or when the recorder is not in use, all controls are grouped on one end and the unit may be operated without opening the case. A magic-eye level



Control panel of recorder shown actual size. Knob at left is record/playback switch, mike input is next and above it magic eye recording level. Below speaker symbol is amplifier feed jack, above it speaker cut-off switch (when case is closed) and indicator light showing battery condition. Volume knob is at right and above numeral 6 is tape supply indicator.



Fi-Cord with case closed showing size relative to package of king size cigarettes. Recorder has shoulder strap with slip-proof pad and case for microphone.



Left: head arrangement. Erase head is at left and record/play head at right, no pressure pads are used. Right: finger indicates pressure release disc which engages roller against capstan and moves the tape. At the bottom is the transcribing control lever which may be pulled away from the tape to stop the motion.



Rewind can be done by hand, to save battery drain, by inserting handle furnished in one of the slots on the reel and turning it. Handle is stowed alongside batteries.

meter shows recording gain. The recorder may be used for transcribing by moving the pressure release disc on or off.

The record-play button should always be turned to off when rewinding, otherwise the tape will be erased.

Likewise, on playback, the mike should be unplugged or feedback may result.

Frequency response from input socket to output socket is claimed at 50 to 10,000 cycles, plus or minus 3 db. Wow and flutter is rated at 0.4%

and signal to noise ratio at 35 db.

The 1 $\frac{1}{8}$ speed we found to be more than adequate for voice and the 7 $\frac{1}{2}$ ips speed provided good music recording. As might be expected in a tiny machine, the flutter and wow is higher than in a large recorder but is not objectionable.

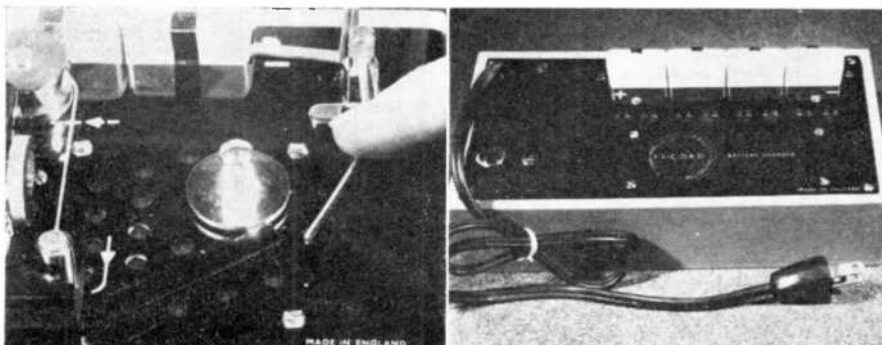
True, concentric reels must be used, just any old reel will not do or variation in the recording may result.

An indicator lamp on the control panel shows battery condition and so long as it lights, the recorder will record. When it goes out, it indicates the batteries need recharging.

We tried the Fi-Cord both indoors and out, on both music and speech. It is very convenient to operate and has adequate sensitivity. Tapes made upon it may be played on regular home recorders or the Fi-Cord may be used to feed an amplifier and speaker.

The switch on the microphone is a great convenience and since there is no need to open the case to actuate the machine, it may be used inconspicuously.

The unit operated in any position satisfactorily. It is sturdy and well constructed and nicely finished throughout.



Left: speaker is below deck and sound comes through holes shown. These are below feed reel. Finger rests on friction bar which operates tape supply indicator. Right: battery charger holds four batteries at one time. Operation is automatic and lights show battery condition. Usable with a wide range of voltages.

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2400 foot MYLAR (Polyester) 3.49

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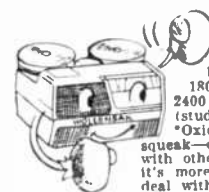
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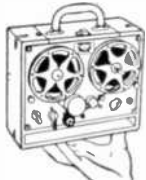
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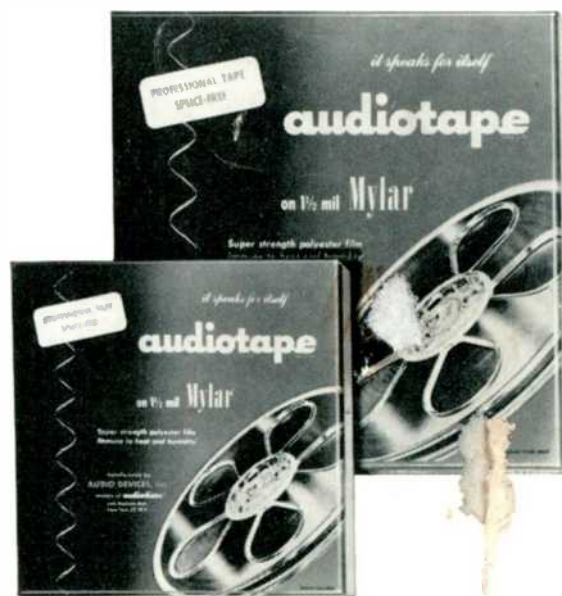
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