



TAPE RECORDING

ELECTRONIC HALLOWE'EN PARTY

HOW TO MAKE A BULK ERASER

HOW TO MAKE A FLYING SPLICE

UCLA TAPES GRIDIRON SKITS



November, 1957

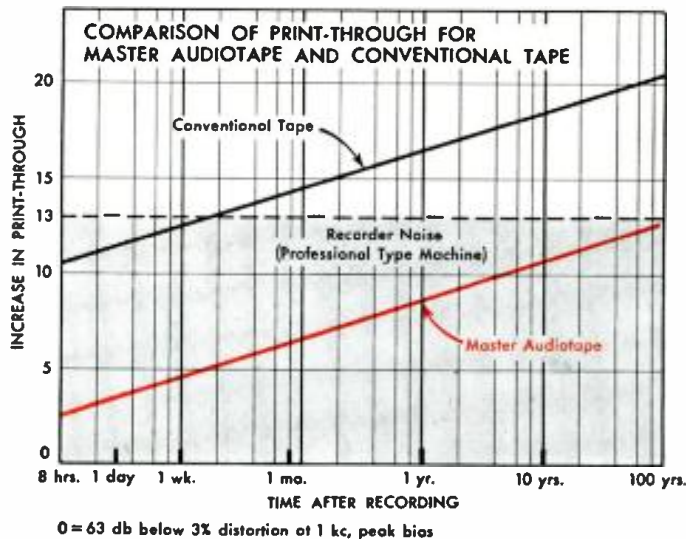
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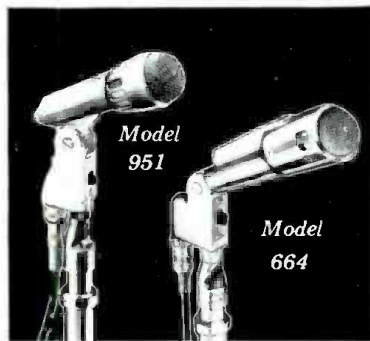
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HI-FI

TAPE RECORDING

VOL. 4 NO. 12

NOVEMBER 1957

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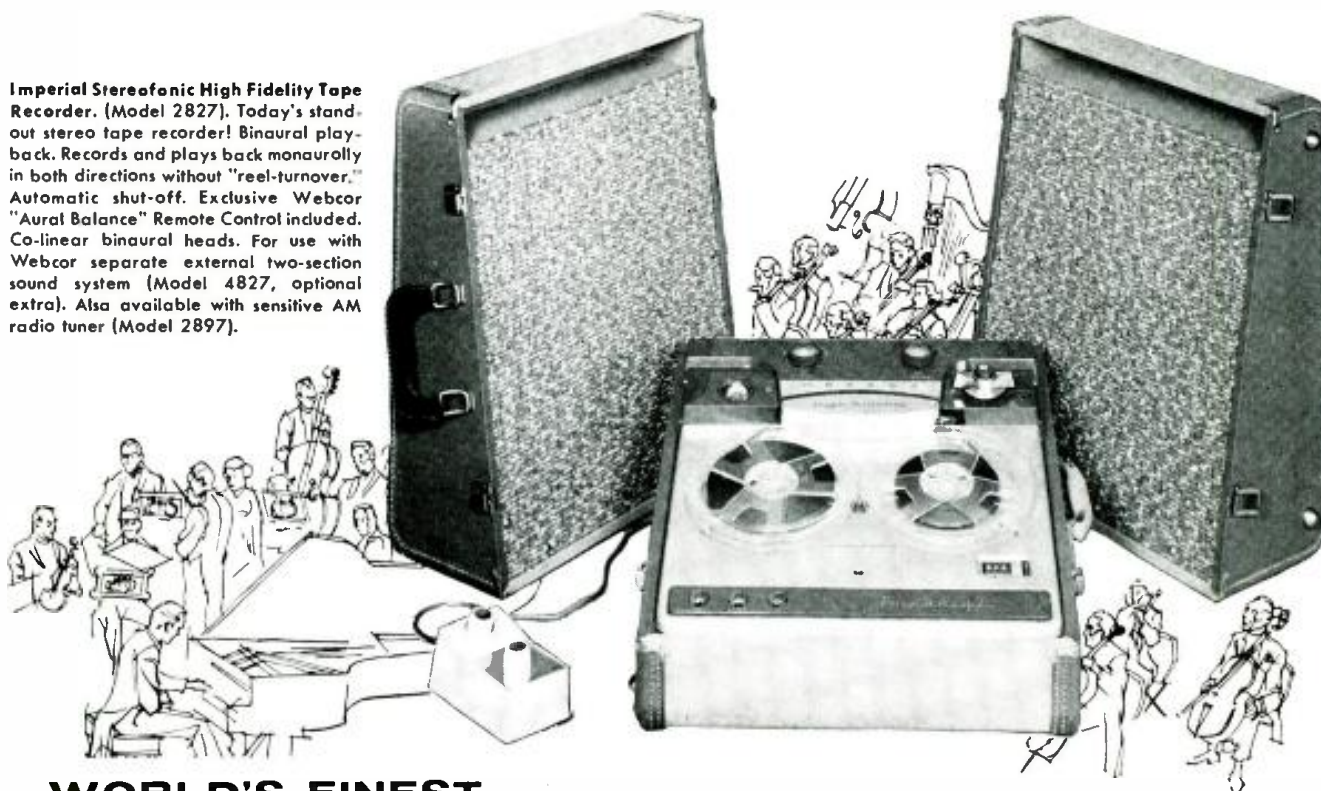


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NEW TAPES

By Georgie Sigsbee

CLASSICAL SYMPHONY

HAYDN

- Symphony No. 99 in E Flat—VRT 3001
- Symphony No. 100 in G, "Military"—VRT 3002
- Symphony No. 101 in D, "Clock"—VRT 3003
- Symphony No. 104 in D, "London"—VRT 3004

Vienna State Opera Orchestra
Mogens Woldike, Conductor

VANGUARD Series 3001-4
Stereo ... \$11.95 each

Haydn wrote twelve symphonies, # 93-# 104, for his London concerts. It was during his second visit to England (1794-5) that he wrote the last six symphonies of this "London" series.

Mr. Woldike, the well-known Danish musical leader and scholar of eighteenth century music, has recorded on disc the last six of these Haydn symphonies for Vanguard. I hope the chronological numbers given these tapes is not indicative that

102 and # 103 will not be released on tape. This would create a gap in a very fine musical collection. These performances are based on the original autographed manuscripts and will, therefore, have added appeal to scholars and musicians. Both Mr Woldike and the "Volk-soper" turn in performances displaying discernment, skill and the ability to embrace Haydn's flexible orchestral styles with facility.

For those who may feel that creative productivity ceases beyond age sixty (and there are many examples to the contrary), it is an impressive fact that Haydn composed his 99th symphony when he was 62. He certainly did not lack in spirit as this is an intensely exhilarating symphony. The expressive, poignant second movement is artfully interpreted by Mr. Woldike. The reproduction is of faithful concert-hall quality.

100 is a dramatic and powerful composition. Haydn evokes strong emotions with the wide-spread application of percussive elements and with stereo sound, the drum rolls, close-up fanfare of trumpets, cymbals, etc., is most impressive. This is, in all respects, a highly-satisfactory recording.

The light, charming # 101, which derives its nickname of "The Clock" from the rhythmic beat in the andante movement, is given a solid, somewhat literal, translation. However, it does not lack in gaiety and delicacy. The reproduction is very good and a live concert realism is achieved.

The last of Haydn's symphonies, # 104, with its solemn, yet poetic, nature is granted an admirable reading.

If you have, by any chance, been hidin' from Haydn... try these symphonies. You will derive hours of musical pleasure from all of them.

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HAYDN

Symphony No. 101 in D, "Clock"
Orchstre Padeloup De Paris
Louis Martin, Conductor
CONCERT HALL CHT/BN-4
Stereo ... \$11.95

Mr. Martin skips lightly through the # 101 in apparent cheerful disposition. His string section all but dances and sings its way along. The acoustics of the hall where this was recorded result in an ultra-brilliant, resonant tape. The keen resonance actually contributes much to the airy, light touch dispensed by Mr. Martin and the orchestra.

BEETHOVEN

SYMPHONY NO. 4 IN B FLAT
Frankfurt Opera Orchestra
Walter Goehr, Conductor
CONCERT HALL CHT/BN-36
Stereo ... \$11.95

The rich, translucent instrumentation and full stereo afforded this recording are somehow weighted down by a lack of buoyance. Mr. Goehr approaches this

composition in, what seems to me, a more serious vein than applicable. His strong, concise delivery bequeaths a reaction of deep sobriety which is contrary to the happy, genial character of this symphony. I would wax enthusiastic had I derived the feeling of lyricism which, I feel, should flow throughout this romantic work of Beethoven's. At times, particularly in the first movement, the strings and woodwinds try to penetrate the darkness with shafts of lighter tenderness but they do not light the way for long.

On the side label of my box CH has listed Bamberger as conductor . . . if you find this discrepancy, you may wish to scratch it and replace with Goehr's name.

BRAHMS

SYMPHONY NO. 1
 Boston Symphony Orchestra
 Charles Munch, Conductor
 RCA GCS-42
 Stereo . . . \$18.95

Equipped with an excellent orchestra and a top-notch group of stereo engineers, Mr. Munch produces an acceptable reading of this beautiful symphony. In the recording respect this stereo offering rates high on the abundant list of available readings of Brahms' First. Insofar as the interpretation rendered, this release rates "good." I must admit, here and now, that this is one of my long-time favorites. I have long since set a very high criterion as to how I want this symphony to sound and, in my opinion, there are but few who have managed to reach the edelweiss. Although Mr. Munch does well he falls short of packing the proper emotional wallop. He fails to get me up to the gates of heaven in the second movement and he slows his pace to such a degree in the final movement that I find myself reaching for the baton!

Having, long ago, compared some seven of the readings of this work . . . my prejudice is somewhat solidified and it will take something most unusual to change it.

GREIG

SYMPHONIC DANCES, Op. 64
 Pro Musica Symphony, Vienna
 Edouard Van Remoortel, Conductor
 PHONOTAPES SONORE S-706
 Stereo . . . \$11.95

The thematic material for the Symphonic Dances is drawn almost entirely from the great organist, L. M. Lindeman's, collection of 600 Norwegian folk melodies. The four dances consist of two hallings (mountain dances resembling the reel); a spring dance; and a march-like dance, the source of which was a mountain ballad. All are presented as free fantasias.

Coupled with the Phonotapes PM 116 (Feb. 1957, Bamberg Symphony, Remoortel) containing the Lyric and Hollberg Suites, Norwegian Dances, Op. 35 and Wedding Day at Troldhaugen, any lover of Greig will be able to possess a fine pair of tapes. Mr. Remoortel continues to uphold his excellent reputation as a fine interpreter of Greig's scores. This young Belgian conductor may, some day, be referred to as "great."

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DVORAK
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 Los Angeles Woodwinds
 David Raksin, Conductor

STEREOTAPE # 8
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This warm, serene composition by the Czech composer, Dvorak, which contains the orthodox four movements, is performed in its entirety (23 minutes) with all repeat marks observed. This "Serenade" is a very colorful, expressive work for woodwinds and the ensemble portrays it with satisfaction.

The Los Angeles Woodwinds is composed mainly of first chair men from several of the large motion-picture studio orchestras. Mr. Raksin, himself, has had a long association with the musical aspect of that industry. The personnel roster is as follows: Gordon Pope and Don Leake, oboes; Hugo Raimondi and William Ulyate, clarinets; Don Christlieb, Ray Nowlin, bassoons; James Decker, George Hyde and Arthur Frantz, horns; Curt Reher, cello; and Chico Rivera, bass. These men give a worthy, penetrating performance under the competent direction of Mr. Raksin.

The recording was made in the band room at UCLA and the acoustical setup there is good. The tonal clarity of the instruments and the full, rich-blended sound is a pleasure to hear.

HANDEL, G. F.
 Water Music, Complete
 Frankfurt Opera Orchestra
 Carl Bamberger, Conductor
CONCERT HALL CHT/BN-14
 Stereo...\$17.90

If you can get your head above the water on this, financially, it is worth it. This is a beautiful 45-minute recording of the twenty movements of this enchanting music which was composed by Handel for a royal boating party on the Thames. Those of you who have enjoyed Sir Hamilton Harty's six extractions (The Water Music Suite) will undoubtedly wish to own this complete edition.

The abundance of colorful wind instrumentation, particularly noteworthy in such movements as # 4, # 10 and # 20, is an aural, as well as musical, delight. The separation and sound of the instruments is distinct and pure.

Mr. Bamberger and the orchestra turn in a grade-A performance as do the engineers who officiated at this recording session.

RAVEL
 Rhapsodie Espagnole
 La Valse
 Boston Symphony Orchestra
 Charles Munch, Conductor
RCA CCS-36
 Stereo...\$10.95

Ravel's voluptuous, variegated score of the *Rhapsodie* is presented in a most effective manner by Mr. Munch, the Boston Orchestra, and the RCA stereo engineers. It is with special delight that I welcome this tape as one of the 78 discs in our Koussevitsky-Boston album is broken.

One of the wonderful things about music is that you are not forced to conjure up in your mind exactly what the composer might have had on his mind when creating a particular composition. Your own imagination can run rampant and often differs drastically from that of the composer. A good case in point is what I visualize when I hear the beginning of "La Valse." Ravel likened the opening to "swirling clouds which scatter little by little until one sees an immense hall peopled with a twirling crowd." I have always felt it was somewhat like hearing a record which had run down on the old Victrola. You crank the machine and slowly it comes to life and finally reaches proper speed. So it goes with one's imagination!

Vigorously performed under the direction of Mr. Munch, this virile waltz almost reaches the peak of high fidelity saturation at the finale. The tape is a fine example of brilliant engineering.

Both of these numbers are included on the Leibowitz (monaural) tape. (Phonotapes PM 107, June 1956).

HI-FI FIEDLER
ROSSINI
 William Tell Overture
TCHAIKOVSKY
 Marche Slave, Op. 31
 Boston Pops Orchestra
 Arthur Fiedler, Conductor
RCA BCS-41
 Stereo...\$8.95

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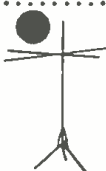
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FRED WARING & THE PENNSYLVANIANS
IN HI-FI (ZD-12)



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the label "Hi-Fi" and here we find Mr. Fiedler is no exception. He follows through in a justifiable way with the capable backing of the Pops and the RCA reproduction crew.

The perennial old standby, the *Tell Overture*, is given a lively play. I'm afraid, for me, the association with William Tell has long since been broken. I never hear the final portion of this selection without imagining, not Swiss soldiers marching, but the Lone Ranger riding again!

For another review of this overture see the August 1954 issue, *Audiosphere* * 705.

The "*Marche Slave*" filled as it is with vivid folk themes and stimulating rhythms is well-suited to stereo and high fidelity—to the music lover as well as the sound addict.

Mr. Fiedler and the Pops render as good performances as you are apt to find. I must admit I lean heavily toward Mr. Perlea's very dynamic interpretation of "*Marche Slave*" (Phonotapes PM 112, Aug. 1956) although the recording does not boast the added shot of audio adrenalin provided by Munch's stereo recording.

RIMSKY-KORSAKOV

Scheherazade, Op. 35
 Vienna State Opera Orchestra (Volkoper)
 Miriam Solovieff, Solo Violin
 Mario Rossi, Conductor
VANGUARD VRT 4001
 Stereo... \$14.95

Rossi gives this symphonic suite a good reading but it is the sound which makes this recording an extraordinary one. The luminescent quality of the solo violin, horns and strings... in fact the overall sounds emitted by the Volkoper... are spell-binding.

Hats off to the Vanguard stereo engineers!

TCHAIKOVSKY

1812 Overture
 Chicago Symphony Orchestra
 Fritz Reiner, Conductor
RCA ACS-26
 Stereo... \$6.95

Reiner gets up on this old warhorse and leads his men in a dramatic dash through a musical page of Russian history. This is a tense, compelling performance. He builds to a brisk, triumphal climax which is a musical tour de force, yet he does not resort to the added acoustical gymnastics (however effective) of carillons and cannons.

An excellent tape.

POPULAR

PAGE CAVANAUGH AND YOU

Can't Get Out Of This Mood
That Old Feeling
Mood Indigo
Perfume, Jewels and Curls
But Not Far Me
It Used To Be
That'll Be The Day
There She Goes
Just For Laughs
I'm Lost

Gloomy Sunday
I'm Through With Love
STEREOTAPE * 6
 Stereo... \$11.95 (full reel)

Page sings, and plays the piano, in a calm, easy style. He recalls to my mind the old (not in age) Mel Torme. Accompanied by bass, guitar, drums, sax, oboe, and a vocal trio, Page and his group pool their talents and render songs dedicated to unrequited love. The note is definitely blue... so much so that they have included "Gloomy Sunday" in the collection of tunes.

This is the type of musical fare one associates with a small, dimly-lit bistro. The close feeling the group conveys is broken only at the beginning and end of selection * 8 when the sounds of nightclub hubbub are injected.

The fidelity throughout the thirty-one minutes is of high-stereo quality.

FOR WHOM THE BELL TOLLS

For Whom The Bell Tolls
Around the World
My Foolish Heart
Song of Delilia
Johnny Guitar
When I Fall in Love
Blue Star
I Love You So
Love Letters
Theme for Love
Moonlight Serenade
Golden Earrings
BEL CANTO * 15
 Stereo... \$11.95

This recording is a musical tribute to the late Victor Young and features Harry Sukman at the piano. Mr. Sukman was a protege of Mr. Young and performs these selections with sensitivity. The mood is one of soft, dreamy intimacy. Providing more fullness and balance is a guitarist who plays with finesse and adheres to the set mood. There is some occasional quiet brush work and added coloring of castanets and tambourine.

If you want to be lulled into a tranquil mood and forget the cares of the day, this lovely music, as produced by Mr. Sukman, should do the trick.

A fine job of engineering... excellent stereo.

CANADIAN SUNSET

Lies
Subway Serenade
Rendezvous for Two
Blues in a Happy Mood
Heywood's Beguine
Canadian Sunset
Now You're Mine
Dearest Darling
 Eddie Heywood, Pianist
RCA CPS-76
 Stereo... \$10.95

Heywood is represented on this tape in three capacities... that of composer, pianist and rhythm leader. His artistry at the keyboard is backed by a trio in three of the numbers. My particular favorite is "Subway Serenade" wherein there is some very supple work between piano, bass, and brush man. During the rest of the selections Heywood is given support by a full orchestra which uses lavish string effects. "Canad-

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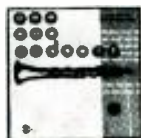


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ian Sunset" is performed with the trio so don't expect the more popularized Winterhalter-Heywood rendition.

This is one of those tapes I was sorry to hear end. The fidelity is tops.

THE MERRY MACS IN STEREOVILLE

You Made Me Love You
Jingle Jangle Jingle
Sentimental Journey
I Get The Blues When It Rains
Dolores

STEREOTAPE * 9

Stereo...\$7.95 (half-reel)

This popular vocal foursome, accompanied by the Stereotape band, sing their way, in an agreeable manner, through these five old standards. For those who enjoy pop vocal quartets, this group provides some thirteen minutes of music on the smooth side.

The stereo effect is good and the fidelity faultless.

CLUB STEREO

Just You, Just Me
When Your Lover Has Gone
Miami Beach Rumba
S'Wonderful
Moonlight in Vermont
Dearly Beloved
You Do Something to Me
Stella By Starlight
The Moon Was Yellow
Love Walked In

Mack Sheppard and His Orchestra

STEREOPHONY, INC., B 125
\$7.95

This is a smaller group than Donahue's. They perform with zest and maintain a pretty steady dance beat. Their styling is similar to that of many dance bands to be found in night spots across the country. There is an accordionist, some very fine keyboard work, and even a brief bit for electronic organ in "You Do Something to Me."

The recording is close-in and very "live."

SHOW TUNES

NEW GIRL IN TOWN

Roll Yer Socks Up
Anna Lilla
Sunshine Girl
Flings
It's Good to Be Alive
Look at 'er
Yer My Friend Ain'tcha?
Did You Close Your Eyes?
At the Check Apron Ball
Chess and Checkers

Original Cast Recording

RCA CPS-79
Stereo...\$10.95

This musical version of O'Neill's drama "Anna Christie" contains some spontaneous and amusing tunes by Bob Merrill. While a far cry from such composers as Rodgers and Hammerstein's more romantic (and commercial) songs, this music is certainly both lively and entertaining. The rollicking "Roll Yer Socks Up;" the refreshing "Flings;" and the catchy, honky-tonk style of "Sunshine Girl;" are but a few of the musical highlights from the show.

On this original cast recording will be heard the talented Gwen Verdon as "Anna;" the wonderful Thelma Ritter as

"Martha;" Cameron Prud'homme as Anna's father; George Wallace as her suitor; and a most exuberant chorus. There are several dialogue bridges preceding some of the selections which lend a cohesive quality to the entire recording.

It seems to me that "It's Good to Be Alive" should be a song titled "On the Farm."

On my copy there was fluctuation during a good part of "Did You Close Your Eyes," but otherwise the engineering is flawless. Stereo is very effective in the chorus numbers.

JAZZ

THAT GELLER FELLER

Jitterbug Waltz
S'Pacific View
Marable Eyes
The Fruit
An Air for the Heir
Here's What I'm Here For
Herb Geller Sextet
BEL CANTO * 16
Stereo...\$11.95

Talented lead-off man Herb Geller (alto sax) is aided and abetted by Lou Levy at the piano, Larry Marable beating it out on drums, Harold Land playing a fine tenor sax, Kenny Dorham skillfully blowing trumpet and Ray Brown working out at the bass. The repertoire they have chosen is fresh and the group gives out with rather intense, driving performances. They ease-off and play in a relaxed fashion during the final number, "Here's What I'm Here For." This sextet works together in tight-knit unison, taking plenty of solo breaks. Marable and Brown get a workout throughout the recording and bind the aggregation together. The "fellers" with Geller and versatile musicians and the "jazzophile" should derive some "cool" moments from this recording.

The fidelity is "cool" too.

IF THIS AIN'T THE BLUES

Sometimes I Think I Do
I Can't Understand
Pennies from Heaven
If This Ain't the Blues
Take Me With You, Baby
Jimmy Rushing and All-Star Band
VANGUARD VRT-3005
Stereo...\$11.95

The great blues singer, Jimmy Rushing, plus the members of the All-Star Band (aptly named), are familiar to jazz fans everywhere and this tape should prove readily popular with the jazz advocates.

In the lineup are ex-Basicities Emmett Berry, trumpet; Buddy Tate, tenor sax; Jo Jones, drums; Vic Dickenson, trombone; and Rushing. Rounding out the band are Roy Gaines on guitar, Clarence Johnson at piano, Marlowe Morris playing organ, and Aaron Bell at bass.

Their ensemble work is good and the solo breaks impressive. The title number is a good example of their musical unity as well as their individuality. Rushing sings the blues in his usual captivating style. I especially like "I Can't Understand" which has the added beat of clapping hands. The extremely talented and expressive jazz guitarist, Roy Gaines, comes through with some top work.

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At the beginning of the tape I thought there was distortion until I realized that it was the off-beat sound of Marlowe Morris playing the organ in jazzy style.

This is another fine jazz tape, both in performance and sound.

THE BLUES

Dinah
Squeeze Me
Oh Love
Cool Too
Blues Blasé
My Friend, Mr. Blues
Jimmy Rushing and Octet
Buck Clayton Septet
VANGUARD VRT-3008
Stereo... \$11.95

The recording score is 3-3 and makes for an excellent cross-section of the two groups found on Vanguard's VRT 3005 and 3006. On the Rushing team Emmett Berry gets in some good licks on the trumpet as does Gaines at the guitar. Rushing in his capacity of clean-up man brings in a winning team. On the Clayton side "Cool Too" is a homerun number made with the bases loaded. Jo Jones gets in some hot drum work and the entire group is properly inspired. Clayton does some healthy blowing in this number and provides some smooth trumpet blues in "Blues Blasé."

A star-studded jazz tape ... big league men really batting it out.

DEMONSTRATION

HALLMARK DEMONSTRATION TAPE
(Paramount Enterprises, Inc.)
Stereo... \$3.50

With twelve pop releases for September, and some twenty-five on the agenda for October-November, the Hallmark label makes its bow into the stereo tape field. Featured on their recordings will be such artists as Vic Damone, Kay Armen, Lanny Ross, Martha Wright, Vivian Della Chiesa and Felix Knight.

On this tape are seven pop numbers performed by various orchestras (selection # 6 has a male crooner) encompassing mood, dance and cha cha. For an ear-opener catch the beginning to "Sunny Side of the Street" from the "Tribute to Tommy Dorsey" album.

The announcer states that Hallmark will produce full 7-inch reels for \$9.95. He goes on to say "by this time you have noticed that Hallmark recordings use the full complement of musicians necessary to produce the sound called for—none of this trio or quartet business ... Well, sports fans, this sorta threw me a curve ball. Do they mean that when I listen to the Barbara Carroll, Fred Kaz or Page Cavanaugh trios, or the Joe Halland or Dick Marx quartets (or for that matter the Red Norvo quintette), that I am not listening to the full complement of musicians necessary to produce the sound called for?"

The Hallmark line sounds promising and we're looking forward to hearing their productions.

STEREO HOLIDAY

Overture to The Merry Widow
Greensleeves
Bali 'Hai, There Is Nothing Like a Dame,

A Wonderful Guy, Some Enchanted Evening (medley)
Londonderry Air
Algiers
The Lamp Is Low
Overture and My Home Is in the Mountains from The Gypsy Princess
Tabora
Paradise
OMEGATAPE STD-10
Stereo... \$5.95

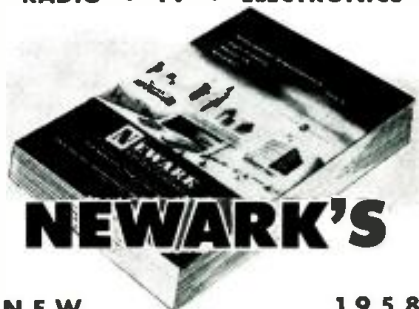
A king-sized demo tape of selections culled from Omega's latest stereo releases. The "itinerary" starts with the one minute overture to the "Merry Widow" which, as delivered by the Vienna State Orchestra, is quite a sonic beginning to the fictitious trip taken vicariously through the medium of these various musical numbers. You'll hear two minutes of some lovely harp music during "Greensleeves," followed by Gordon Kibbee at the pipe organ, Andre Montero and so on; each depicting some spot on the map as well as available album. I think just the overture from "The Gypsy Princess" (or perhaps a stereo bit by Anton Karas) might have been more in keeping with the other pieces rather than the inclusion of the vocal excerpt from the opera. Lovely though it is, it breaks the continuity of the otherwise strictly instrumental tape.

A fine, and varied, example of Omega's keen stereo tape reproduction.

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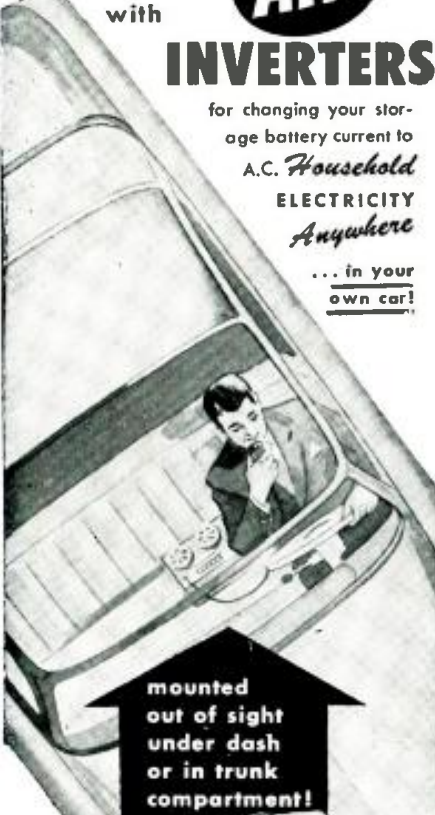
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TAPES TO THE EDITOR

When sending tapes to the editor please use the 3" reel and indicate the speed at which it was recorded and whether it is dual or single track. We will listen to your tape, make notes from it for use in this column and then reply on your tape. Please keep tapes reasonably brief.
 If you do not own a recorder, a letter will be acceptable. Address tapes or letters to: The Editor, Hi-Fi TAPE RECORDING, Severna Park, Md.

To the Editor:
 It is about time that you faced a few sour facts. Although stereo is now the last thing, and countless firms are now entering the field, and your magazine has probably gone up considerably in circulation from the days when I first started reading it, the tape recording industry has failed considerably in many ways.

The main complaint that hundreds of thousands, both in this city and probably many others have, is not only that the new stereo equipment is high, together with the recorded tapes but that old monaural tapes are still high in price and show no indication of coming down in the near future. The main use I have for my machine is to play these tapes, since it is an excellent high fidelity machine. I do not fool around with the electronic side except when I use my machine in conjunction with other equipment I have.

That emblem you carry on your mast-head page, about belonging to the Magnetic Recording Industry or something, must be complete nonsense. Stereo is a novelty now and will die out like three D movies if something isn't done fast to counteract the situation.

I realize that your livelihood depends upon saying something good about every phase of the industry, but I don't think a few editorials by your staff on this subject would be at all out of place.

I am renewing my subscription for one more year in which time I expect to see some rapid improvement in the industry and some hard hitting editorials from you.
 —Arthur Landau, Brooklyn, N. Y.

The cost of tape is coming down and probably will continue the trend when volume increases. One firm is selling monaural tapes for \$2.98 and stereo tapes are available too for as little as \$6.95. The "sampler" tapes are even cheaper. The MRIA has been doing a lot of work for tape recordists that is never mentioned in the public press but is mighty essential. It does such unromantic things as determine standards so that tapes made on one machine can be played on another, it helps standardize reel sizes and tapes and playback characteristics, etc. You would miss them very much if they weren't there.

We are under no obligation to say something nice about all phases of the industry. If we were, the magazine would be valueless to the readers. If something needs a spanking, we are quite willing to spank it. However, we do report things as they are, we do not make spurious and unprovable comments merely to stir up controversy. In Hi-Fi Tape Recording you get it straight and right the first time.

To the Editor:
 This German tape recorder I have is the

second one I've ever owned. But it seems I've always wanted one. I don't know whether I have the best or not—I'm just satisfied with this.

All that is lacking is company . . . some other stricken souls who own tape recorders. I've looked in all the papers in the area, read numerous magazines and FINALLY found your magazine.

I'm still in a pickle—there is not a tape club closer than two thousand miles from me! So I've decided to start my own, with your help and guidance, of course.

Through this club, I think we could get some radio station to play part of their daily (or even weekly) programs for us tape-o-philes. As it now stands, whenever I record some numbers on tape I must practically sit on the radio in order to be on hand when the number is over so I don't record the commercial. Then, too, one doesn't know how long the record is going to go . . . for the sake of the remaining tape on hand. It would be nice if they would preface their playing of a number by 1—the title, 2—who's starring on it, 3—how long it will take to play it.

It's just a thought, but I think there must be some tape recorder owners in the Los Angeles area, huh? If you know of any who would like to join a club please have them write or phone me.—Gordon G. Hair, 2641 Southwest Drive, Los Angeles 43, Cal. Phone is PLeasant 9-7536, evenings.

There's your opportunity Los Angelinos for a real face-to-face club. Give Mr. Hair a call.

To the Editor:
 I receive your magazine from a Texas pal of mine and would like to say that I much enjoy it. It is by far the most informative magazine in the field.

I wonder if you could print an invitation to tapespond with me. Normally, I would, of course, put an advertisement in but due to the fact that I cannot send any money out of England, this is impossible.

I wish to contact anybody in America who is a supporter of Stan Kenton's work in the jazz world. I have two recorders dual track, any speed. I have a large collection of Stan Kenton's records.

Thanking you, I wish every success to Hi-Fi Tape Recording.—J. Lomax, 43 Claverine Avenue, Barnes, London, SW 13, England.

To the Editor:
 I have always admired the many different ideas that Americans seem to develop when it concerns advertising and publicity. Your sales letter with the notification of my renewal to Hi-Fi Tape Recording reached me this morning and is, according

to my opinion, another good example of skillful work. Of course, I want to continue my subscription.

The reason for my writing already today is that I happened to note a little mistake in the end of your subscription reminder. It says . . . "before you can say bandopptaker. Translation—Tape Recorder in Swedish."

Just in case other Scandinavians receive your letter I wish to correct this and say that "tape recorder" in Swedish is *bandspelare* or *bandupptagare*, whereas in Norway they call the machine a *båndopptaker*. The Danes, again, say *båndoptager* sometimes but they mostly call them tape recorders, as they love foreign words in that country. Excuse me for troubling you with worthless chatter. With all my best wishes.—Erik Lindgren. Lund, Sweden.

Thanks for setting us straight on the Bandupptagares.

To the Editor:

A few months ago I bought a tape recorder which has stereophonic record and playback features. When I purchased this recorder some of my friends were disappointed to find that I had settled upon a recorder with staggered heads. This meant they would not be able to borrow any of the tapes that I recorded as their tape recorders all had staggered heads.

The problem was basically this. Was it possible to duplicate tapes in the home which had been recorded on an "in-line" machine so that they would give satisfactory playback on a machine with staggered heads? This would have been no problem if the other recorders would have recorded stereophonically but this was not the case. Many hours were passed in argument over the pros and cons of this problem but no one was convinced and the problem remained unsolved. However, I argued that it seemed possible to me and explained it as follows:

If you take a recorded "in-line" tape and play it on a "staggered" machine you have two audible outputs which would be out of phase with each other by the amount of phase which would take to pass a tape from one staggered head to the next at 7½ ips. If these two signals were in turn fed to the in-line heads of the stereophonic recorder, you would have a recorded tape with the correct separation of signal for playback on a machine with staggered heads.

Subsequent experiment with this type of set-up proved that this set-up was practical although it was possible, by hooking the signal inputs to the incorrect heads, to have a resultant tape with the outputs staggered the wrong way. In this instance the playback signal was delayed two times the time delay of the tape to pass from one head to the next at 7½ ips. This was easily remedied by switching inputs to the recording heads.

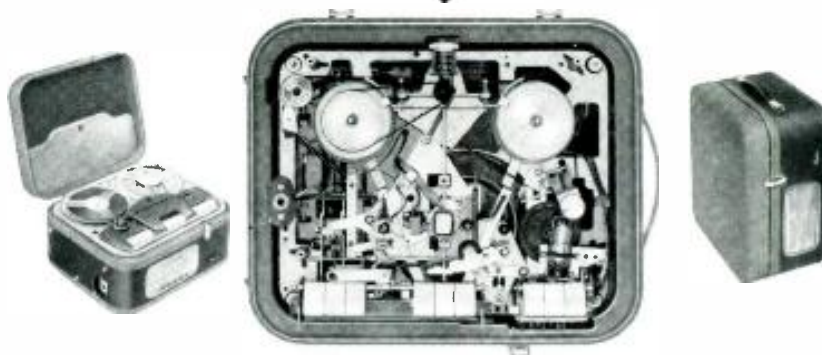
I thought this information might be of interest to someone.—George C. Polhemus. Cynwyd, Pa.

We do believe it will be of interest to others and we're passing it along via this column. Thanks for the contribution.—Ed.

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because it's built like this!



the new imported

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world's most advanced all-in-one portable
TAPE RECORDER

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Built-in, wide-range Norelco speaker
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(portable)
with built in
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3 $\frac{3}{4}$ -7 $\frac{1}{2}$ ips
\$379.50

The world's finest hi-fi tape recorder

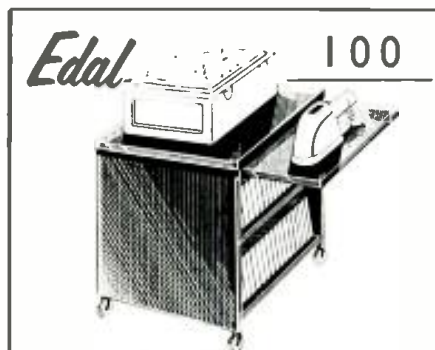
The ultimate in high-fidelity tape recorders for home and professional use. Dual-speed, dual-track FERROGRAPH recorders are also available in custom models (tape decks available, from \$195.) and with 7 $\frac{1}{2}$ and 15 ips speeds. Independent field performance tests rate Frequency Response at ± 2 db between 50 and 10,000 cycles with wow and flutter less than 0.2% at 7 $\frac{1}{2}$ ips.

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QUESTIONS & ANSWERS

Questions for this department may be sent on tape or by means of a postcard or letter. Please address your queries to, "Questions and Answers," Hi-Fi TAPE RECORDING, Severna Park, Maryland. The most interesting and widely applicable questions will be used in this department and all inquiries will receive a tape or letter reply.

Q—I would appreciate your answering the following questions for me if possible. How long would it be possible to store a magnetic tape recorded at an average level before the magnetic impulses become so weak that it no longer can be reproduced, assuming ideal storage conditions. I realize tape recording is quite new and you cannot answer me from experience. I would really appreciate any estimate you could give me.—D. K. D., East Paterson, N. J.

A—There is reason to believe that the magnetic pulses will last indefinitely. Tapes made over ten years ago are still as good as new and show no signs of fading. Even on accelerated life tests, the same holds true. Tape recordings of present day sounds have been included in some of the time capsules to be opened a thousand years from now.

Q—I own a Grundig TK-8 tape recorder. Could you please tell me if it is possible to covert it in any way to a stereo type so I may buy the new stereo tapes.—W. J. S., Flushing, N. Y.

A—Any tape recorder may be converted to stereo by using a Steradapter or a kit furnished by the manufacturer of the recorder. Not all manufacturers have the kits available and yours is one which does not. We would suggest that you see the previous issue of Hi-Fi Tape Recording which covered the subject of stereo and how to obtain it.

Q—I own a Pentron tape deck and the matching pre-amplifier. I would like to know if I may disconnect the erase head from the circuit so as to record over a recording? Is this possible? Will this cause any distortion in the original or re-recorded recording?—A. F. S., Forest Hills, N. Y.

A—You may disconnect the erase head without damage but the results of a sound-on-sound recording done by re-recording over the first signal are not too satisfactory. It is difficult to determine the level of the two signals, for one thing and either the first or second recording will suffer considerably. You can try this for yourself by either disconnecting the erase head, as you suggest or by keeping the tape away from it by means of a piece of cardboard, or by removing the head pieces and inserting something so that the tape does not touch the head itself. The only satisfactory method to use is to use two recorders or a recorder that has a separate play head which can be fed back into the recording head together with a signal from a mike or other source fed through a mixer.

Q—In 1953, in Pakistan, I found the heat and high humidity caused my tapes to become extremely brittle. As my future

posts are likely to offer these poor conditions I would like to know if any advances have been made recently in the development of heat and moisture resistant tapes and which companies market them? What about climatic conditions causing stretching of my tapes? Is there any loss in fidelity in using the long play thinner tapes?—J. H. K., Manila, Philippines.

A—With the advent of Mylar base tapes such conditions as you describe can be successfully met without additional storage precautions. The Mylar is impervious to changes in heat and humidity. Regular tapes are best kept under the same conditions as acetate motion picture film and should be run through the recorder in fast forward and rewind before being played. This will aid in reducing the strains set up during storage. The thinner base tapes would, if anything, have better fidelity because of their closer compliance with the head of the recorder. They certainly would not have less fidelity.

Q—I see your magazine regularly and enjoy it very much. Also, I would like to ask you a couple of questions and trust that you may be able to answer them.

1—How are wow and flutter measured? As you know, the figures are given in terms of percent but I have never seen it stated what they are the percent of, nor any description of how the measurement is made or calculated.

2—What is the minimum amount of flutter or wow that can be detected by a sensitive ear?—A. A. W., Ika, Kabul, Afghanistan.

A—The device used to measure wow and flutter is called, appropriately, a "wow meter." It measures the fluctuations in speed of a recorder and expresses the result in percent. The measurement is a percentage of the speed variations as compared to the true speed at which the machine is operating. Begun states that "In practice it is generally held that if the total peak-to-peak wow and flutter is less than 1 percent the result is tolerable, and if the total wow and flutter is less than .1 percent, it is imperceptible." Wow sounds to most ears like a change in frequency whereas flutter usually sounds like roughness. The dividing line between wow and flutter is about 8 cycles per second.

PLASTI-TAK

The amazing plastic adhesive material with many practical and proven tape recording uses. Anchors tape ends. Removes glaze from felt pads and stops squeaks. Removes finger-marks from tape and aids in splicing. Lots of other uses. Send \$1 now for yours, postpaid.

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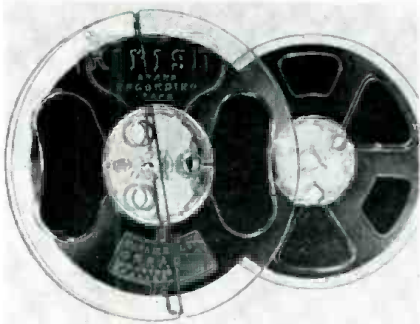
NEW PRODUCTS

NORELCO RECORDER



North American Phillips Co., Inc. has introduced a new three-speed, dual-track, portable tape recorder, called the Continental. This recorder incorporates speeds of 7½, 3¾ and 1⅞ ips; piano-key push-button control; and a built-in loudspeaker of twin-cone wide-range design. It contains a special Philips magnetic head with an air gap of only 0.0002 inches which, according to the manufacturer, makes possible extended high frequency response even at the slower speeds. A detailed specification sheet on the new Norelco tape recorder may be obtained from North American Phillips Co., Inc., High Fidelity Products Division, 230 Duffy Avenue, Hicksville, Long Island, New York.

NEW SIZE TAPE REEL



ORR Radio Industries, Inc., Shamrock Circle, Opelika, Ala. has introduced a new 5¾ inch Irish tape reel which offers many advantages over the standard 5 inch reel. The new reel will carry the same tape footage as the 5 inch reel. The 5¾ inch reel has a professional type hub, 2¼ inch diameter, the same size hub as the 7 inch reel. This equalizes tension on the tape and makes for smoother, more efficient operation of the recorder. This new reel also features 24 square inches of indexing space on the two sides, and the exclusive "No Spill" feature. For additional information and price, contact the manufacturer.

(Continued on next page)

spectacular...new Tape System Components PENTRON

• STEREO • MONAURAL

Select the Tape units to meet your needs

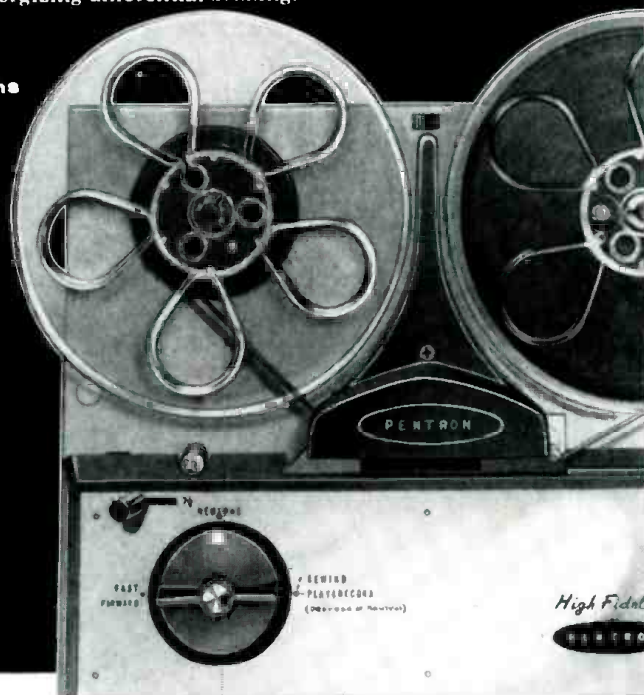
Pentron combines professional features and custom styling with building-block flexibility. You buy what you want and add to your system when you desire—from the simplest monaural system to the all inclusive stereo systems.

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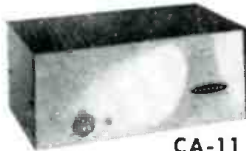
- Precision made and tested professional head assembly with Azmur-X spring loaded screw adjustment.
- Simple single rotary control.
- Four outputs plus two AC convenience outlets.
- Mounts VERTICALLY, horizontally, or at any angle.
- Speed change lever at front panel.
- Removable pole pieces in heads, as easy to change as a phono needle.
- Automatic self-energizing differential braking.

basic specifications TM series mechanisms

COMBINATION HEAD:
Frequency response: 40-14,000 cps with proper equalization. Signal-to-Noise: 55 db with CA units; track width: .093"; gap width: ¼ mil; impedance of record section: 6000 ohms; inductance of erase section: 60 mh • **STACKED HEAD:** track width: .080"; gap width: .15 mil; impedance: 3500 ohms • **FLUTTER:** under 0.4% at 7½ ips; under 1% at 3¾ ips. • **CAPSTAN DRIVE:** icler driven • **MOTOR:** 4 pole induction type, individually balanced • **OUTPUTS:** 4 standard pin jack outputs to accept shielded phono plug • **CONVENIENCE OUTLETS:** two auxiliary AC outlets controlled by mechanism power switch. Supplied with removable mounting brackets with shock mounts.



preamplifiers



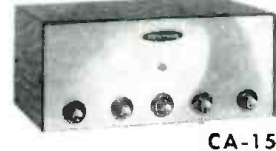
CA-11

Tape Playback only. Response: 20-20,000 cps. Signal-to-Noise: 55 db



CA-13

Tape playback preamp and record amplifier. Response: 20-20,000 cps. Signal-to-Noise: 55 db



CA-15

Stereo dual channel playback. Response: 20-20,000 cps. Signal-to-Noise: 60 db

ALL CA UNITS HAVE SAME PHYSICAL DIMENSIONS AND REQUIRE SAME CUTOUT.

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You don't have to limit to your own living room the pleasure of hearing gorgeous stereophonic sound. Thanks to the easy portability of an Ampro, you can take this unit with you—and enjoy "live performance" sound at the homes of friends, at parties—wherever electric power is available. All you do is connect your Ampro to the phono jack in any AC radio, TV or phonograph. Presto! Stereophonic sound, just like home!

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THREE GREAT AMPRO RECORDERS	
Hi-Fi Tape Recorder.....	\$249.95
Hi-Fi Recorder with AM Tuner.....	284.45
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Prices include federal tax where applicable and are subject to change without notice. Graflex, Inc., Rochester 3, N. Y.

GRAFLEX

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(Continued from page 19)

FILMAGIC CLOTH



The Distributor's Group, Inc., 204 14th Street, N.W., Atlanta 13, Georgia, is marketing a new device for automatic silicone lubrication of recording tapes and motion picture films. It is called the FilMagic Pylon (patents pending), and is a windowed acetate tube filled with silicone-impregnated FilMagic cloth. After activating the filler by means of a silicone fluid, the lubricant is fed in controlled amounts through a sleeve of FilMagic Cloth onto the tape or film. The Pylon is mounted between feed reel and reproducing parts of equipment for continuous performance while the machine is operating. This device comes in kit form, and sells for \$2.95 F.O.B. Atlanta, Ga. Further details may be obtained from the manufacturer.

LOW PRINT-THROUGH TAPE

Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y., is marketing Master Low Print-Through Audiorape. According to the manufacturer print-through on this tape has been reduced 8 db. This reduction means you can use higher recording levels, get better signal-to-noise ratio, and still have the advantage of freedom from harmful print-through effects. This tape is available in 1200 and 2500 foot lengths in two types—on 1½ mil acetate and on 1½ mil Mylar. Write to Audio Devices for prices and additional information.

COMPANY CHANGES NAME

The Craft Recording Corporation, 1650 Broadway, New York (formerly Stere-O-Tone Corporation) has announced that its line of latest stereo tape releases will now be marketed under the Stere-O-Craft brand label. This change was necessitated by a recent legal decision which prevents Craft from using its former name.

TEEN TAPERS

By JERRY HEISLER, National President



In a previous issue we asked for ideas on the type of recorder you teens would like to see manufactured. Presented here is a drawing and features of the type of recorder Robert Hamel, 2321 Sheridan Avenue, Schenectady, N. Y., would like to own. A complimentary subscription to HI-FI TAPE RECORDING goes out to Robert.

Features

- I. Inputs—Each channel, 3 high gain inputs with mixing facilities.
- II. Tape Spindles—hold two reels of tape, permit stereophonic recording in both directions.
- III. Tape Heads and Function Selector Switch—Four heads are involved—2 stacked recording heads (upper and lower tapes) and 2 stacked monitor heads (upper and lower tapes). Function selector switch has four positions. S. Record—records stereophonically in both directions using both tapes. S. Playback—same as above except playback position. S. Tape to Tape Record permits making two stereophonic tapes at once, but only in one direction. S. Tape to Tape Copy—permits copying another tape in stereo sound.
- IV. Monitor—have two watts output each to permit driving a speaker while recording. Speakers are automatically muted when function switch is in the playback position as the monitor heads become playback heads and are connected to the output jacks. No amplification takes place whatsoever and they have to be fed through a preamp.
- V. Volume and Fade Controls and Multiple Purpose VU-Meter—The recording volume and monitor volume is a dual control (no volume adjustment takes place on playback). Fade control selects be-

tween the input and the monitor head for signals to monitor jacks. By turning the mixing control that is being fed into the recorder all the way over and turning the Fade control until a click is heard (a switch is installed on that and all mixing controls) it is possible to preview the incoming program without having it recorded and still be recording something. The double VU-Meter will measure bias and recording level.

- VI. Transport Controls, Motors, and Remote control—The transport controls are entirely electrical except the stop button which controls the momentary magnetic type brakes. Forward and reverse speeds are manually operated except when a little conductive paint is put at each end of the tape. The rewind button will accomplish both rewind and fast forward. To accomplish fast forward the opposite direction button from which you are going is pressed and then the rewind button is pressed. When it has wound ahead enough then the correct direction button is pressed. Another button is used for playback of single reels of tape or when you have recorded in the S. Tape to Tape record or The Tape to Tape Copy positions. The recorder has two, two-speed reversible hysteresis synchronous motors, one for each capstan. The remote has the same functions as the transport controls.

- Value VII. Power Supply—Two power supplies are supplied with the recorder. One unit is for 110 volts. Test voltages are available on both power supplies along with compartments for storage of equipment. The other unit is for connecting to 6-12 volts and saves power because the power only has to be stepped up once instead of twice.

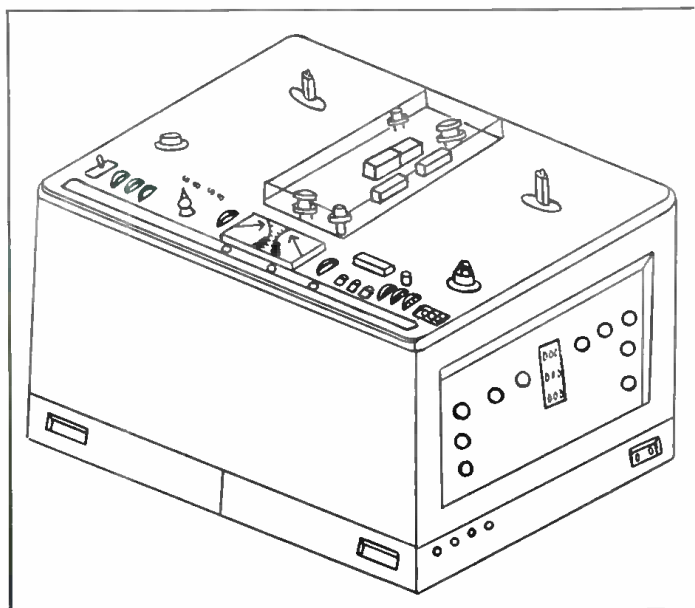


Diagram of Robert's ideal stereo tape recorder. See text for details.

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Loaded with 180 ft. Cousino
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The AUDIO VENDOR will convert your tape recorder into a continuously repeating mechanism. Successfully used to teach, sell, announce, dictate and for sleep learning. Plays from 5 to 10 minutes. Double time with a MOBIUS LOOP. No rewinding necessary. Repeats message or music continuously hour after hour. Send for literature on our longer playing models and accessories. Advise make and model of your recorder.

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TAPE IN EDUCATION

BY JOHN J. GRADY, JR.



THE recent review in LIFE authored by Robert O'Brien—MAGNETIC TAPE REELS OFF CHANGES IN WAY WE LIVE—deserves top rating as a romance in modern business, as a tale of adventure, or as the most interesting of all the Horatio Alger type of yarns. Despite the fact the article is a true recital of the fantastic development of tape recording in these United States during the past ten years, the author's closing words, "Science fiction stuff," could reasonably describe the mental attitude of all the readers of it, who have not become aware that magnetic tape truly has made many beneficial changes in the American Way of Life.

The history of tape recording in America has been an almost unbelievable saga of marvelous accomplishments in communication technique. In some cases, the adaptation of magnetic tape to problems of science and industry is of such an involved technical nature that it is far beyond the comprehension of many of us camp followers, who are ardent fans of the popular uses of tape recording.

However, we, the readers of HI-FI TAPE RECORDING, are fortunate that since the first issue of this magazine, there has been adequate editorial treatment of all new developments in the world of magnetic Audio. TAPE IN EDUCATION confesses to being an admiring fan of the NEW PRODUCTS REPORT department, even to the extent of being a sneaker of advance information on new devices and on new formulas covering usages of magnetic tape.

The LIFE article definitely proves the great versatility of magnetic tape. There can be no further doubt that this ribbon-like product consisting of iron oxide particles in a layer of electronegative resinous compound, on a plastic backing, has revolutionized into abandonment the former well established processes and procedures of the communication arts. Television, especially, has been benefited by its adoption of magnetic tape, and the LIFE article succeeds in developing conviction that the time is near when TV, aided and abetted by magnetic tape, will permit us to hear and to see important events all over the world take place right in our living rooms.

There's regret, though, that the article gave only limited treatment relative to the expanding usage of magnetic tape in Education—from kindergartens through the universities. More extensive discussion of the numerous uses of tape recording in classrooms—especially if presented in a magazine having the huge circulation enjoyed by LIFE—would inspire more school administrators to foster further experiments, with tapes, by inventive instructors. It is such instructors who are responsible for the adoption of the tape

recorder as a modern educational tool. Parents, too, of children attending schools would be impressed by a discussion of the benefits which are available, through the use of tape recorders, in the homes of the nation. TAPE IN EDUCATION is on record with the recommendation that in addition to the entertainment provided by Hi-Fi installations of tape recording, a second portable tape recorder would be of great advantage in all homes where there are children attending schools.

Alert audio-visual instructors recognize that the potential usage of magnetic tape is far beyond the present minor usage. But steady advances are being made toward this potential. During the past school year, many educators expanded their programs of audio instruction. Additional subjects received experimental treatment. More carefully planned installations of tape recording equipment were made. And during this new school year there is certain to be a great increase in the use of taped texts and lectures. During the summer vacation, it is reported that more teachers investigated the advantages—to themselves and to their students—of taping instructive material which will have repetitive use. TAPE IN EDUCATION even considered the advisability of taping—instead of constantly repeating—the prediction, that every classroom in the nation ultimately would be equipped with a tape player, and that every teacher would be the owner of the most efficient teaching tool, a tape recorder.

The article in LIFE certainly corrected a belief held by many people that a tape recorder is merely a musical instrument. Rather, it clearly established the fact that a magnetic tape recorder is an electronic instrument of extreme versatility, but of many types and designs. A tape recorder may be small, or it may be huge and complex. And it is definitely not limited to entertainment purposes. Under a pending excise tax proposal, already passed by the House, all tape recorders for entertainment purposes will be subject to a 10% tax levy. Only three types of tape recorders are exempted: communication, navigation and detection. All others could be subject to the tax, including educational tape recorders. Educators are urged to petition their senators for an amendment or an exemption, which would free educational tape recorders from the 10% levy. The alternative is to complete purchases for school and college magnetic tape installations prior to the action of the Senate, which will take place after Congress is convened in January. Readers of TAPE IN EDUCATION are given the friendly tip to buy their Christmas tape recorders early, as the demand this year is certain to exceed the huge market of last Christmas.

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Good News—Hack is Back!

on a new and startling kind of tape

ADD-THE-MELODY TAPE

(Pat. Pending)

Hack Swain, whose Multee-Track recordings on the Livingston label created a sensation, now accompanies you on the electronic organ as you sing, whistle or play an instrument. For the first time YOU CAN HEAR THE COMBINED RESULT AFTERWARD and you can record your talents as many times as you like without destroying the accompaniment.

These new tapes can be used on any machine that has monaural record and stereo playback. As you listen to Hack's expert-accompaniment played from the lower track you add the melody yourself on the top track by singing, whistling or playing an instrument. Then play both tracks together in stereo fashion and there you are—with professional accompaniment. Synchronism is perfect. Can be recorded on stacked or staggered machines; can be recorded again and again without harm to the accompaniment.



ADD-THE-MELODY TAPE #1

The Yellow Rose of Texas—Let Me Call You Sweetheart—I Want A Girl—Girl of My Dreams—Home on the Range—Shine on Harvest Moon—Put on Your Old Gray Bonnet—Carry Me Back to Old Virginia—When Irish

(over)

TAPE CLUB NEWS

Voicespondence Club member Forney Sprenkle is to be commended for his unselfish friendliness toward his fellow clubbers. Forney has a large and interesting collection of fine phonograph records. He has offered to tape any of these for anyone wanting copies. To provide a ready reference of what he has available, this conscientious fellow undertook to mail out a mimeographed circular describing his plan for copying and listing some of the available material. Forney refers to himself as "the friendly Pennsylvania Dutchman." Those wishing copies need only to send him the proper length tape, give the tape speed required, and the title of the record wanted. He doesn't even require return postage, but does ask that only one record copy at a time be requested.

Tape-Respondents. International member, John L. Ott of Pittsburgh, Pa., has been named chairman of the club's Official Round Robin Committee. The purpose of this committee will be to collect as many voices as possible of different members on one tape. Seven inch reels will be used, and each participating member will be allotted three minutes recording time. While one or more tapes circulate about the United States, another reel will be making the rounds in foreign countries. Eventually, the tapes will be added to the T-R-1 Tape Library for posterity.

William J. Rawle of 12 Glenfield Road, Darlington, County Durham, England, and O. J. Borrowman of North Battleford, Saskatchewan, have been appointed regional directors of the Tape Respondents, International Blind Services Committee for Great Britain and Canada respectively.

Requests for tapes from WTP's World Tapes for Education tape bank have increased to the point that there is now a need to establish branches of the bank in Australia, England, Germany, or Holland, South Africa and New Zealand. These educational taped programs are available to teacher-student club members, or to any member who can supply a group audience, upon request. There is no charge for this fine service other than postage involved. All tapes remain the property of World Tape Pals and must be returned. Tape

donations to the bank are passed upon by local members of the Committee on World Tapes for Education. Those who desire to submit an addition to the tape library are requested to mail it directly to WTP headquarters in Dallas. Only original material should be used. Tapes needed are those descriptive of the geographic locality where they are made, especially containing folk music, as well as clearly spoken, simply-worded tapes in French, Spanish and German.

American Tape Exchange secretary, Stuart Crowner, tells us of a very interesting new club member. His name is Andy Smith and he lives in Durban, South Africa. Fellow members are invited to tape Andy, who has friends all over the world.

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In addition to the Ampex Model A124-U recorder-stereophonic reproducer shown here, there are portables, modular units, and consoles complete with their own AM-FM tuners and record changers.

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Electronic

Hallowe'en Party

BY JEAN COVER

... Successful party ingredients—a group of creative folks with big imaginations, pooled electronic equipment, and some leisure time.

“LET'S do something *different*,” is perhaps the most overly-exercised phrase of today's modern party-givers. Every host or hostess is searching for ideas to make his or her party a well-remembered success, and I am no exception to this timeless rule.

One of my favorite seasonal party days has always been the 31st of October—Hallowe'en. Sometimes referred to as Hallow-Even, this date is known as being the eve or vigil of All Hallows, or All Saints, which falls on November 1. The festival dates from ancient days when a group of individuals known as Druids lighted bonfires to acclaim the Sun God and drive away ghosts and witches. Today we still crack nuts, bob for apples and tell ghost stories just as they did in pagan days, although masking is of more recent origin. Then too, some Hallowe'en gatherings are still held in the open around a huge bonfire. We tried this one year on an unusually perfect fall evening weather-wise. Being outdoors, we took advantage of the space for stunts and games played, and the bonfire seemed to turn out exceptionally delicious sizzling hot dogs. But this particular year we were after a different kind of party and we found it—an electronic Hallowe'en sparkler.

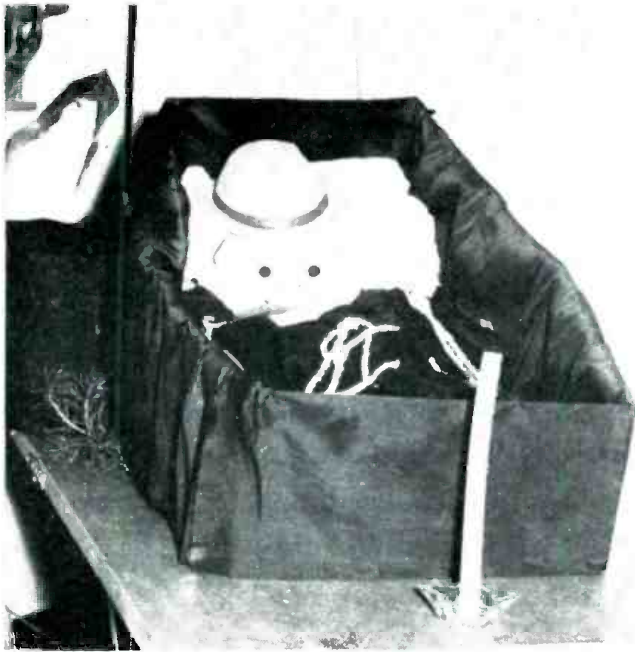
Folks who attend this type of affair are already in a festive mood when they arrive, indeed, even before they arrive, due to this once-a-year occasion when they can forget all their inhibitions and garb themselves in any manner they so desire. This is the only chance available to stroll down the boulevard looking like a kin to a creature from Mars without creating mass hysteria.

When a group of us got together and began discussing how we could utilize a tape recorder, speakers, wires, batteries, and other related equipment, we found that there were far more suggestions than we would ever have time to try, unless we perhaps threw a week-long shindig. After much hemming and even more hawing, we finally developed a program for the evening.

After being led through a dark hallway complete with



"Ah-Hah!" Delighted party-goer peeks under robe of fortune teller dummy at concealed speaker. During this stunt there was complete darkness except for the dummy's nose which was lighted red. Thus no wires, recorder, etc. were visible at the time it was in progress.



Above: This cardboard and crepe paper coffin held a white face mask, with a small 4" speaker hidden under it to give the illusion that the corpse lying there was actually talking. Right: Here is a reproduction of the script read by the make-believe corpus delecti. Below: Shouts of "Hurry—take it—take it," and "Oooooooo, it feels awful," fill the air. Snapped in complete darkness, this shows one of the items used to represent sections of the victim being passed down a row of screaming party participants.

One night long ago in (insert your town),
 Two shots hit me from out of the dark.
 The murderer—not content with his deed,
 Cut me up—oh how I did bleed.
 Ever since then vengeance I swore—
 To find my murderer and settle the score.
 Tonight I am searching for clues,
 And with your help I'll soon spread the news—
 We've found the one who took my life
 And I'll stick him hard with the very knife
 He used on my body so still and cold
 The night he made sure I would never grow old.
 So now please examine for me
 The parts of my body we pass to thee,
 And find for me if you can
 The identity of this heartless man.
 Get set for the first of my restless remains
 I'll make you acquainted at once with my brains.
 And now your shuddering touch will know
 My long black hair has continued to grow.
 I heard well the threats that were told
 It's a powerful ear that now you hold.
 My hand is clammy, cold, and still
 But its quite prepared to make the kill.
 My eyes were small, but very keen
 No kind deeds of earth have they ever seen.
 I talked a lot when I was young
 Now you're feeling of my tongue.
 My murderer was cruel from the start
 You'll now hold my bleeding heart.
 The tendons which helped my strong right arm
 We pass to you. Keep them from harm.
 The meals I ate were coarse and dry
 My teeth were strong. They'll never die.
 You say you can't find the maker of my fate—
 I thought you would help me investigate.
 You've stirred my anger and now above my moans
 You'll hear the rattle of my bones
 Look for me—I'm here about
 I'll pull your hair if you shout.





Party guests examine an Ampex stereo playback and speakers. Those who heard stereo music for the first time at our Hallowe'en party considered it "real hip," and were very inquisitive as to where they could obtain the equipment and taped music.

many of the mysterious melee you find in a carney's Tunnel of Love, such as spider webs (hanging strings), glaring skeletons (luminous paint), king-size crawling insects (just use your imagination), and the like, our guests entered the main party hall, in which the only prevailing light source was from jack-o-lanterns and burning candles. Here they were greeted by a wiry witch doctor who would not let them pass until they spoke their name to the shrunken head held in his hand. Doc's shriveled toy (a former patient no doubt) was actually

a concealed microphone. Each name was recorded on tape by a recorder hidden nearby.

This setup was so we could later play "Tape Roulette." For this we simply throw the recorder rewind and fast forward switches back and forth. The person whose name pops up when the play button is finally pushed is due for a surprise—sometimes good, sometimes bad, but always interesting.

To get a little action, we coaxed everyone to have a seat in a row of chairs we had lined up preparatory to our playing the old favorite—Musical Chairs. Again the recorder's handy pause button would make the taped music for this event easy to start and stop. But before we began we had another surprise in store for our unwary guests. We wound thin wiring around the chairs, which was connected to a hidden battery and coil. When everyone was comfortably seated, we sent a harmless spark along the row of chairs and watched the startled guests rise simultaneously. It looked as though it was a synchronized June Taylor chorus line.

After the funderful exertion of fighting their neighbors for a chair, we persuaded our now leery party-goers to be seated in a semi-circle before a coffin we had designed of boxes and black crepe paper, complete with the white face of a corpse, flowers and burning candles.

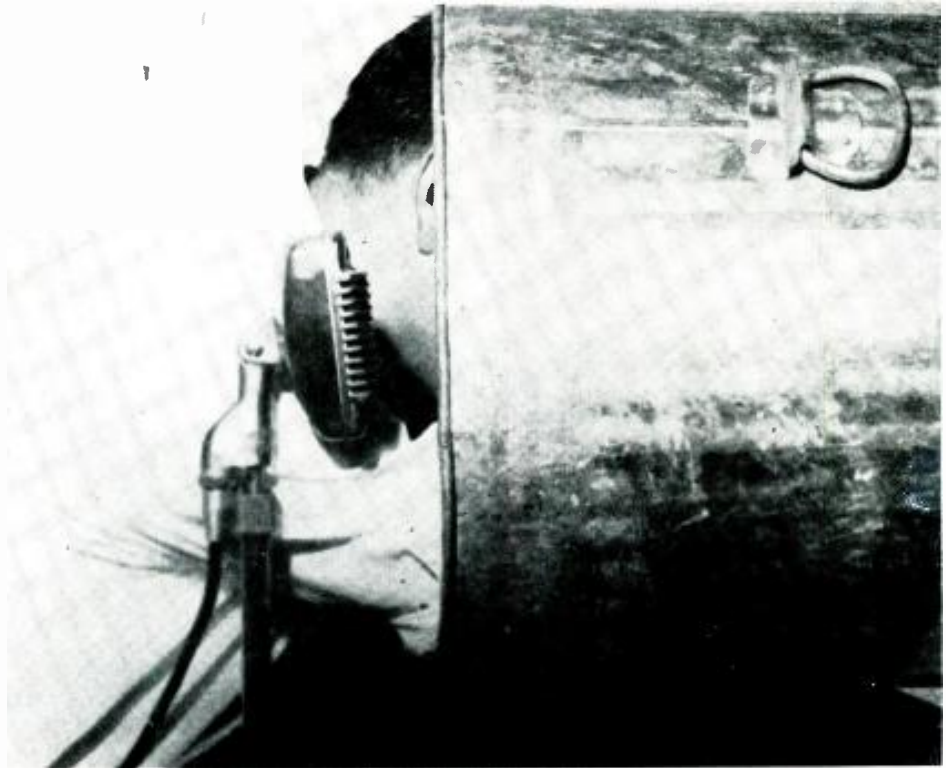
The stunt we had prepared for this portion of the evening was our electronic version of another old spook favorite called "Murder." You will, I am sure, recognize the idea. Its basic precepts are that the unfortunate being whose head rests in the casket was given a hasty heave-ho into eternity by a gun-tottin murderer. His would be assassin, not content with his deed, dismembered the gent's torso and distributed the remains throughout the town (for a touch of humor you use your own home town). Everyone at the party is requested by the victim to help him locate the murdering culprit.

In order to find possible clues the pieces of the corpus delecti are passed individually to each person present for investigation. Our body sections were composed of such things as a peeled plum for a heart, peeled grapes for



Shoes, socks, or just plain bare feet—it makes no difference to these dance-happy youngsters. Taped stereo music fills every nook and cranny of the room, they've got the rhythm and the beat—what more do you need for pure party pleasure.

Preparation of taped party stunts is not always easy, but in most cases is an enjoyable task. Here one of our group reads a ghostly script inside a 20 gallon trash can, with the mike poised at the can edge to obtain the booming sound reflection from the metal. This was done to give the dialogue a "voice from the tomb" effect.



eyes, dried corn for teeth, a piece of meat for a tongue, a glove filled with sand for a hand, etc.—all of which was stored in the refrigerator right up to passing time.

Our gimmick for this stunt was a small 4" speaker hidden in the casket. The corpse comes alive and tell his own gruesome tale of woe. The whole thing was, of course, recorded on tape and the recorder was hidden behind a curtain in back of the coffin. We took advantage of the pause button on the machine to stop the tape while each item was being passed down the line, since there was so much screaming and commenting any sound would have been drowned out.

Sound effects played a great part in our whole party scheme and for this stunt we had recorded first the meow of a cat (even though we did have to pull his tail to get a few catty remarks). This was followed by a piercing scream. To get one scream recorded by two gals involved tear-spilling laughter and a few pieces of aspirin gum, but the final result was good. Then the corpse began his dialogue which was given a booming effect by a fellow party cohort who had recorded the whole thing with his head and shoulders stuck inside a 20 gallon trash can. The mike was placed at the can's edge to get the booming sound reflection from the metal. Needless to say, it was dark in there, so our ghostly voice from the tomb had to use a flashlight to see the script he held. We all had as much fun getting ready for the party as we did at the actual get together.

We had prepared the script with a couple of rhyming lines for each article passed. For example, a few of them went like this: "And now your shuddering touch will know—My long black hair has continued to grow"; "My eyes were small, but very keen—No kind deeds of earth have they ever seen"; "I talked a lot when I was young—Now you're feeling of my tongue." See copy of script.

Just for an added touch, the last two lines of the corpse's story were "Look for me, I'm here about—And I'll pull your hair if you shout." As these lines unfolded and were

followed by a series of moans and bones rattling, two of my fellow party constituents went about the room pulling a few hairs. The whole effect was quite weird.

There are many variations of this possible, such as having a cackling old witch MC the story, or perhaps a low-pitched throaty vampire. You can vary the script to fit any situation, still using the basic plan.

Try this stunt sometime in complete darkness. Leave the rest to imagination and I'll wager that your results will be just as delightfully wild as ours were. As a matter of fact, the yelling was such that a harassed neighbor down the road came dashing up to investigate, and we had to assure the puffing lady outside the door that everything inside was under control.

In order to preserve the memory of our party, we had another recorder spinning while this stunt was progressing. We were able to capture the whole thing, including the screams and comments from our participants.

As mentioned before, sound effects play a great part in any Hallowe'en setup, and just as a suggestion for those of you who may be planning such a gathering, you might acquire a continuous tape playback machine, record an entourage of spooky sounds and let the reel keep repeating itself.

In keeping with the usual vein of Hallowe'en doings, the next part of our program included bobbing for apples. For this we hung the apples on strings rather than use a tub of water. We found that besides being less messy, the strung apples added to the Hallowe'inish decorations.

This was followed by passing an orange along two teams, using no hands, with each member of the winning team receiving some small gift. Again the orange coloring was in keeping with the room decor.

Our next event involved the telling of fortunes. Days before the party we had been polishing up these little gems, using astrology books as references. We wanted an effigy to read off the fortunes, which were taped, so we rigged up a funny face, complete with a lighted red nose,

whose flowing yellow robe covered another speaker.

The next step in readying this was to audition the group of happy characters who got together to plan the party and choose the one most suited to tell the fortunes. Our choice turned out to be the best possible one we could have made. Having had a few years of radio speaking experience, the gentleman took our rather senile fortunes, added his own brand of humor and together with an Italian Lower Slobbovian dialect transformed them into enjoyable listening pleasure.

We numbered each fortune and passed a paper mache pumpkin containing slips with corresponding numbers to all those present. They each drew their own fortune number.

Just to add to the fun, our fortune teller decided to withhold fortune No. 13 aside as his own. We made this just as nasty and uncomplimentary as we possibly could. When our rollicking friend discovered the fortune was his own, he smashed his crystal ball to smithereens. For this bit on the tape we actually smashed a gallon jug and recorded the sound. He then made a note to get another from Montgomery Ward and continued on with the remaining fortunes. Everyone enjoyed these immensely.

No party is complete without dancing, so we also tape recorded a series of records and recorded tapes, arranging them in a regular program. In between the more strenuous dances, we placed a slower-paced one, and every so often something just a bit different, such as a polka or a mambo. Even if everyone couldn't participate in the different selections, they enjoyed watching those who did, or tried it just for the heck of it. Using this sort of program there is no necessity of anyone changing records or becoming tired of a particular dance style.

Our music for dancing also included a new Concertapes recorded stereo tape release called Invitation to Roseland, which we obtained just before the party. We found this particular tape to contain some perfect dance music, and fortunately our available equipment included a stereo

playback system. The result was just like having a dance band (and an excellent one I might add) right there at the party with us. Everyone commented on the realism and presence this reproduction afforded.

When the whole group tired of dancing we simply switched off the recorder for the time being and went on to something else.

We had also recorded two other tapes—one of well-known pop singers and the other of comedians spinning out jokes. It was up to those present to guess as many personalities as possible, with the one guessing the most on each tape receiving a prize. Our tapes took weeks of preparation recording segments from radio, TV, and records, and then editing the various portions to just what we wanted. Besides the fun of guessing, some of the jokes provided laughable entertainment.

Well sir, by this time the clock had ticked away quite a few hours and we decided we had better bring on the refreshments which consisted of doughnuts, Hallowe'en decorated cupcakes, potato chips, pretzels, mixed nuts, apples, candy and cokes. Our electronic Hallowe'en party was one of the most successful we have ever presented and all our efforts were rewarded by the favorable comments of our guests. By the way, we caught their parting remarks all on tape.

Speaker placement can work wonders for a spookier effect, and in a good-size room you can have noises emanating from every direction. For this, you run speaker wires to one or more recorders and simply change the direction of sound by pulling out one jack and plugging another into the external speaker outlet. Any home-made dummy can conceal a speaker, and could be worked so as to make it appear as if it is talking.

Even for an outdoor party you can use outside speakers, and recorders as long as you can reach an outlet. Mix the old favorites in with some of the electronic ideas and you've got it made. Just use your imagination, consider the props at hand, and go ahead and plan. Have fun.

NEW ADHESIVE HAS MANY USES FOR RECORDISTS

New to the tape recording field is a material named Plasti-Tak, a product of Brooks Mfg. Co., 1514 Aster Place, Cincinnati 24, Ohio. Primarily, it is a re-usable adhesive which can be used over and over



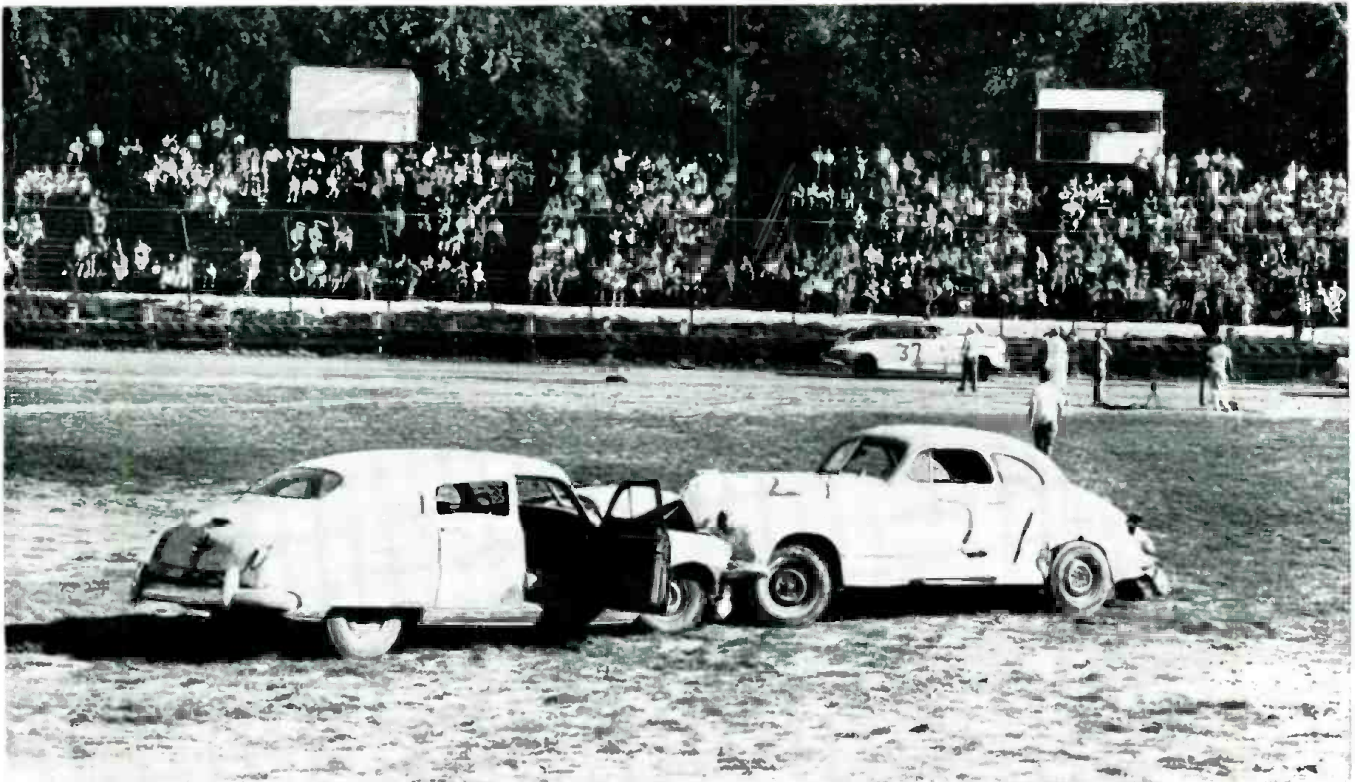
Useful adhesive cleans glaze from felt pressure pads.

indefinitely and doesn't dry out. It has been popular with photo and other hobbyists for several years. More recently it has been found to have countless uses in school classrooms. Due to its unique properties, it can be used in several handy ways in tape recording. The use of Plasti-Tak makes a very simple job out of anchoring the end of tape on completed reels. Troublesome squeaks caused by glazed felt pads can be completely eliminated by simply pressing Plasti-Tak on the glazed pad as this action removes the glaze and restores the pad to complete usefulness without the necessity of replacement. Plasti-Tak can also be used to clean the head area in all recorders of dirt, oxide dust and foreign matter. A small piece of this handy material placed in the slot of any size screw will hold it on the screwdriver and permit one-handed operation in tight, or awkward to get at places. Fingermarks on the oxide surface of tape can be instantly and completely removed with Plasti-Tak and the holding action is indispensable in many splicing operations. It is handy for sticking labels right on the plastic reels and

serves other labeling uses. Plasti-Tak retails for \$1.00, postpaid and is available from the manufacturer.



Handy Plasti-Tak holds tape ends securely to reel.



Sounds don't always recreate the action of an actual occurrence. In such cases, documentation such as connecting narration or background noises can help place the major sound in its proper atmosphere. The recorded sound of the crash of these two cars was disappointing, until added documentation pepped it up.

A Day At The Races

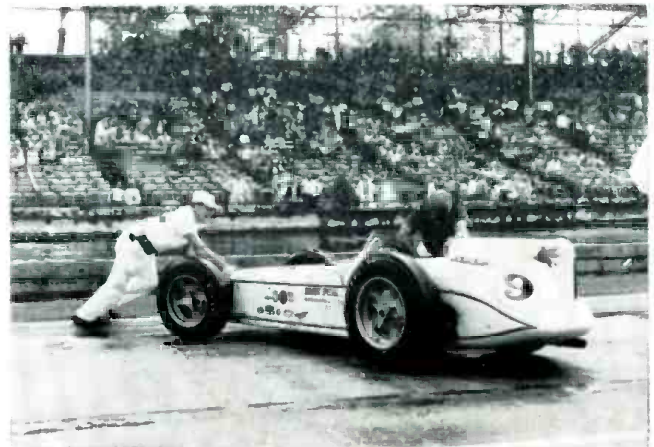
by Robert Oakes Jordan
and James Cunningham

*... documentation lends the added touch
to speedway stereo recordings.*

WHEN you are first new in the art of stereophonic recording you are more than likely to assume that any sound can be recorded in stereo if it moves, is loud, and unusual. While these are important features and partial requirements they are not the complete stereo "picture." If you have read some of our earlier articles you will have an adequate idea of these technical features but let's go on now to the element we call documentation. Documentation can be the connecting narration, local color crowd sounds or background noises that will identify your major sound in its own atmosphere, or as in the case of our recordings of the 500 mile race at Indianapolis, the sports car classic Road America at Elkhart Lake, Wisconsin and various stock car races we employed the interview technique as documentation.

In our first illustration shown above you see a shot we took at the stock car races at Santa Fe Park near Chicago. It shows two cars in head-on collision. What kind of a stereo sound do you think this tremendous crash produced? You would normally contemplate this type of sound as perfect for stereo recording. Just imagine it: two cars approaching each other, one on each channel, at 50 miles an

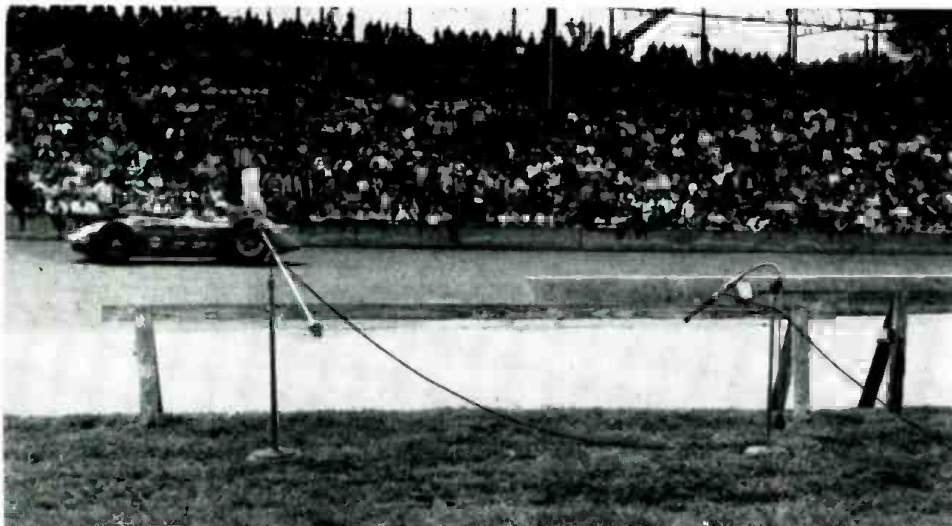
hour, tires spinning, engines roaring and then the crash. When we got the tape back to the laboratory for previewing we could hear the tires spinning and the engines



The 1957 "500" mile winning car is rolled up for recording. Narrating the various driver methods, as well as interviews, can overcome the similarity of recorded engine sounds.



Mr. James Kimberly, President of The Sports Car Club of America "revs" up the engine of his sports car in front of a stereo mike setup. Almost every sports car has its own unique sound, and their owners are equally unique. The authors were fortunate in getting the sound of the more prominent cars as they were started and "gunned" by their famous drivers.



On a speedway, combined sounds from the cars and the crowd will help document your tape recording. "Braking down," acceleration, and backfires at turns were some of the sounds captured on tape.



On the spot note taking helps to recall the action of the moment. These notes help to recreate the missing visual action when the tape is documented by narration. Here the author takes notes at the "500" mile speedway.

roaring but the crash was disappointing. It was just a short duration dull thud.

It took us awhile to realize what was missing. We were sure that the crash was exactly between the two microphones and "on mike" yet it didn't record well. The first thing missing was the reverberation which might have prolonged the sound and given it some life. Second we had been conditioned by the staged monaural auto crash so often heard on radio. This type of sound most always is contrived from special mechanical gadgets that never have been near a highway or a race track. When the crash occurred at the track and we were watching the action our vision and hearing combined the spectacle to produce the thrill of the moment. Back at the lab we were able to remember the crash so our mind's eye helped recall the visuals; however, those who heard the sound from the tape but had not seen the crash were somewhat less than impressed. Other factors missing might have been the sound of glass breaking, hub caps and light rims clattering on the pavement or any noise in the higher frequency ranges. Previous experience with recording a car crash, on the spot documentation through interviews with the drivers, additional

crowd sounds, and more accurate note taking at the track concerning facts now forgotten could have helped us recreate the missing visuals.

Later that month while recording the famous 500 mile race at Indianapolis we put to use several of our documentation techniques. We took notes to accompany each reel of tape recorded. We were fortunate to record the sounds of some of the more prominent cars as they were started and "gunned" by their equally famous drivers. Our recording of the winning car as shown in the picture reel is a real stereo sound prize. The long duration of the 500 mile race gave us ample time to experiment with microphone placement. It was most difficult to record any significant differences in the many similar engines so we had to concentrate on documentation, for example: the difference in engine sounds due to various driver methods, "braking down," acceleration, and backfires at the turns; an excerpt from an interview with a driver where he remarks about his top speed combined with the sound of his car passing at that speed, or a driver's remark about the turns (cornering as they call it) and the sound of a car skidding or "working" through the turn. One exciting sound we got



Mr. Kimberly is interviewed by Robert Oakes Jordan at the Road America Race. Interviews should consist of specific questions, in order to obtain short definite statements which can be inserted in your final tape. All topics should be of general interest, rather than of a technical nature.

was a driver's comment about danger and hitting the wall combined later with the actual sound of a car bouncing off the wall at one of the back turns. These sounds would be boring and insignificant without the interview documentation. So with the aid of other on the spot recordings and copious notes we were able to do a good job of reconstructing the feeling of the Indianapolis 500 Mile Race.

In recording the sounds at the Road America Race held at Elkhart Lake, Wisconsin; we had an easier job. Almost every sports car has a unique sound and their owners are equally unique. The Road America course is interesting to record because it is not the usual type of oval track. In this leading sports car track the driver finds every type of turn and hill he might find in normal road driving, with the exception that he has to negotiate this special road at speeds up to 130 miles per hour.

The job of documentation involved the taking of both interviews and notes. The sounds themselves were more exciting than those at the 500 because of the various engines and the many different recording locations. We did find, however, that recordings made on very short radius turns were hardest to get a real stereo effect. The microphones on either end of the inside of the curve if too close together would add confusion to the sound as the time distances became essentially the same for any one car as it approached or left the turn. Again by experimentation during the many races we were able to find the correct microphone placement.

Interviewing the people connected with any enterprise you may be recording should be conducted along the lines of specific questions rather than conversational lines. In this way you can get short definite statements which can be inserted in your final tape. The questions should be slanted toward topics of general interest rather than the extremely technical aspects of the project. Always ask the name of the person being interviewed and as a form of release and record simply ask his permission to interview him. In this way you have cleared yourself of any responsibility. A written release of course is better. If you assume a free and easy attitude in these interviews and simply ask questions the person being interviewed will make it interesting. Try to keep as much of your own personality out of the tape as possible.

Note taking can be done either on the tape box or on separate sheets of paper. If you are in the habit of having a running check on the tape time it is an easy method of correlating tape and notes. Some of the more important facts in your notes should be concerned with the date of the recording, time of day, even temperature and humidity (these facts can give you a running scientific log of recording sessions), the relationship of event and tape on the machine, the nature of the events of the moment, the equipment and people involved. In your log you should have a complete record of your own equipment used on the recording session. All in all stereophonic recording involves a complete program of well thought out actions put into action before, during, and after your tape recorder is rolling.



James Cunningham uses car radio telephone to keep in touch with the race activities man, so that upcoming race actions will not be missed. All stereo recording demands a well thought out plan of programming before the machine is actually rolling.

The *Flying*

... don't miss
a favorite event



WHAT happens when you reach the end of your tape while recording from radio or TV? If you have two recorders, there is no problem, of course, but most people have to stop recording briefly while they change the reel and thread in a new tape. More often than not, this gap in the program comes just at the wrong time, and an important part of the program is lost. However, there *is* a way to get around this difficulty.

By using a simple trick, you can make *complete* recordings of long dramatic programs, or sports events, or political programs, or even whole operas without missing a word or a note of music. I call it the Flying Splice Method, and the object is to attach a fresh tape to the one that is running out without interrupting the recording. This technique even

Left, top: Continue recording, but quickly unreel the final two minutes of tape supply to allow enough time for the flying splice. Cover is removed from recording head for entire procedure. Left, center: Loose tape on floor usually stays unspooled, but a watchful assistant is good insurance. With practice, you can unreel the two minutes of tape in 20 to 30 seconds.

Left, bottom: Flying splice is complete. New reel on right is joined to exhausted tape. If tape is twisted, rotate the reel by hand, fast enough to supply the recording head with tape, while you study which way to turn the reel to remove the twist.

Right: Twenty-five extra minutes and still going strong on the same program. Tape protrudes beyond flanges, but the tension on it holds it in place.



Splice

by Richard T. Berg

a complete recording of
due to tape running out.

has an application to shorter recordings. It will permit you to record a second (or third) selection on a tape even though there is a danger of running overtime. Thus you will be able to get more value out of the tape you buy.

We are not going to discuss hi-fi, but my remarks will probably give me away; so I will confess right now that, in the Realm of Cycles per Second, I am strictly a commoner. Except for an occasional flight into the higher regions of Fi, I am fairly well satisfied with the recordings I get at $3\frac{3}{4}$ ips., either on the 1200 ft. or 1800 ft. reels. Every man to his own taste, but the end of the tape presents the same problem to all, and, in most cases this method will be a solution. (NOTE: It *will* work at $7\frac{1}{2}$ ips., but the additional speed makes it a little more difficult.)

Let's take an opera as one example of how it works out on a long recording. If you are taking it from a live broadcast, you will eliminate all the announcements and intermission features, of course, but that will still leave a couple of hours or more of recording. Even with an 1800 ft. tape and slow-speed operation, you have only 96 minutes, so the tape *will* run out. In order to use the Flying Splice Method, you have to swing into action about two minutes before the end of the tape, so you should keep a close watch on your counter or marker as the supply dwindles down to that point. (You will need about twice as much time for $7\frac{1}{2}$ ips.) Then you start working.

The first step sounds a little weird: we're going to reel off those two minutes right onto the floor. It's not difficult, though. The supply spindle on most machines is in free wheeling while recording, so you can spin it faster than normal with your finger in one of the holes in the hub. At the same time you'll have to use a pencil or similar pointer to guide the loop you are making over the side of the machine. Be very careful not to yank on the portion of tape going past the recording head, since that would cause a distortion. As soon as it is dropping freely to the floor it will usually guide itself, and you can concentrate on spinning off the rest of it as quickly as possible.

Thirty-five to forty feet of tape makes a rather unattractive pile on the floor, but you can let it fall in an uncluttered area where it won't get snarled, snagged or stepped on. It usually works out okay, but, if you can manage to have an assistant watching it for you, your success is much more certain.

The next step is to replace the empty spool with a new one and hastily splice it to the end of the tape you have just unreeled. There's no time for dainty work and careful trimming, but that isn't important at the moment. The main objective is to get the two pieces fairly well lined up and stuck together somehow so that the old tape will pull the new one through the machine without your having to stop and re-thread. (If you do not use one of the patented splicing devices, it will save time at this critical point to have your splice set up in advance—ends trimmed and a piece of splicing tape already cut to size and fastened to the end of the new reel.) Re-set your counter to zero as the splice goes through the recording head. Later on you will want to locate it quickly, and this will be a help.

At this point a note of caution is in order. Before all the slack is taken up, make sure that the tape is not twisted—a common problem. Simply rotate the supply spool fast enough to maintain a generous loop until you are sure it is okay. If there is a twist, you can eliminate it by lifting off the spool and turning it over, but be sure to get it back on the spindle before you run out of slack.

Once all this is done, you have an alarming sight in front

Left: Emergency procedure when a long program continues without a break. Overloaded take-up reel is removed to make way for an empty one, and tape is cut to provide a new end.

Right: New take-up reel rotates fast enough to reel in loose tape on floor. In the sample "emergency" illustrated here, the take-up reel had over 40 extra minutes of tape.



of you. Your machine is operating with a full reel on each spindle. Obviously, you can't get two lengths of tape on one spool, but it is surprising how much additional tape it will hold. Using the LP tape at $3\frac{3}{4}$ ips., you can add 15 minutes and still be inside the seven-inch diameter. At 25 minutes the tape sticks out into the air a little bit, but the tension on it will hold it in place as long as you are recording.

If your luck is any good at all, you should hit a break in the program by this time. If necessary, though, you can keep on recording this way until you run out of clearance around the take-up reel. My machine, a Revere T-700D, has $\frac{3}{8}$ of an inch of clearance when I remove the cover from the recording head. This would let me continue for about an hour into the second reel, but I hope I never have to go to that extreme. It gets rather awkward for rewinding.

For normal operation, you will hope to reach the full break at the end of a symphony or the end of an act in an opera within 15 to 20 minutes after your splice. The system will still work, even if this fails to happen, but, just for the moment, let's assume that your first attempt goes according to plan. You will have plenty of time during the intermission to get things straightened out and back to normal. We won't try to do a proper job of editing right now, but we do want to separate the two tapes before we start recording again.

After making a note of the position you have reached in your recording, rewind the tape back to the zero point and un-do the flying splice you made earlier. Then attach a foot or two of fresh tape to the ends to act as leaders. Remember, you have recorded right across the ends and you'll want to protect them from kinks and breaks. Next, replace the full take-up reel with an empty spool and thread it with the tape you are still working on. Now you are ready to go back to the point where the intermission started and get set to record the next act, or the next symphony, or the next whatever.

Since this method involves a certain amount of dexterity and a definite sequence, it would be a good idea to practice it a few times before trying it out on a program you would hate to spoil. It's really not a difficult technique, but you should have it well in mind in order to avoid becoming flustered when you are performing it "for keeps." Here is a summary of the steps:

(Set up your splice in advance.)

Two minutes before the end of the old reel, start spinning off the remaining tape.

Replace the empty reel with a new one and hastily splice the end of the old tape to the start of the new one.

Reset the counter at zero when the splice goes through. Wait for a break in the program.

Make a note of the position reached at the break.

Rewind to zero.

Separate the two tapes.

Fasten leaders.

Install an empty take-up reel and wind forward to the point where the recording stopped.

I mentioned earlier that things might *not* go exactly according to plan. If the break in the program refuses to come along soon enough, you will have to alter the procedure accordingly. Wait for the break as long as you can, but, if you are just about to run out of clearance, there is only one thing you can do. You have to cut the tape and start the new end on an empty take-up spool. The important thing is to continue with the recording, so you make your cut on the outlet side of the recording head. This will not

interfere with the program at all, either during the recording or later, when you have patched it up. Make a diagonal snip with a sharp pair of scissors, and you will be able to splice the two ends back together without losing a thing.

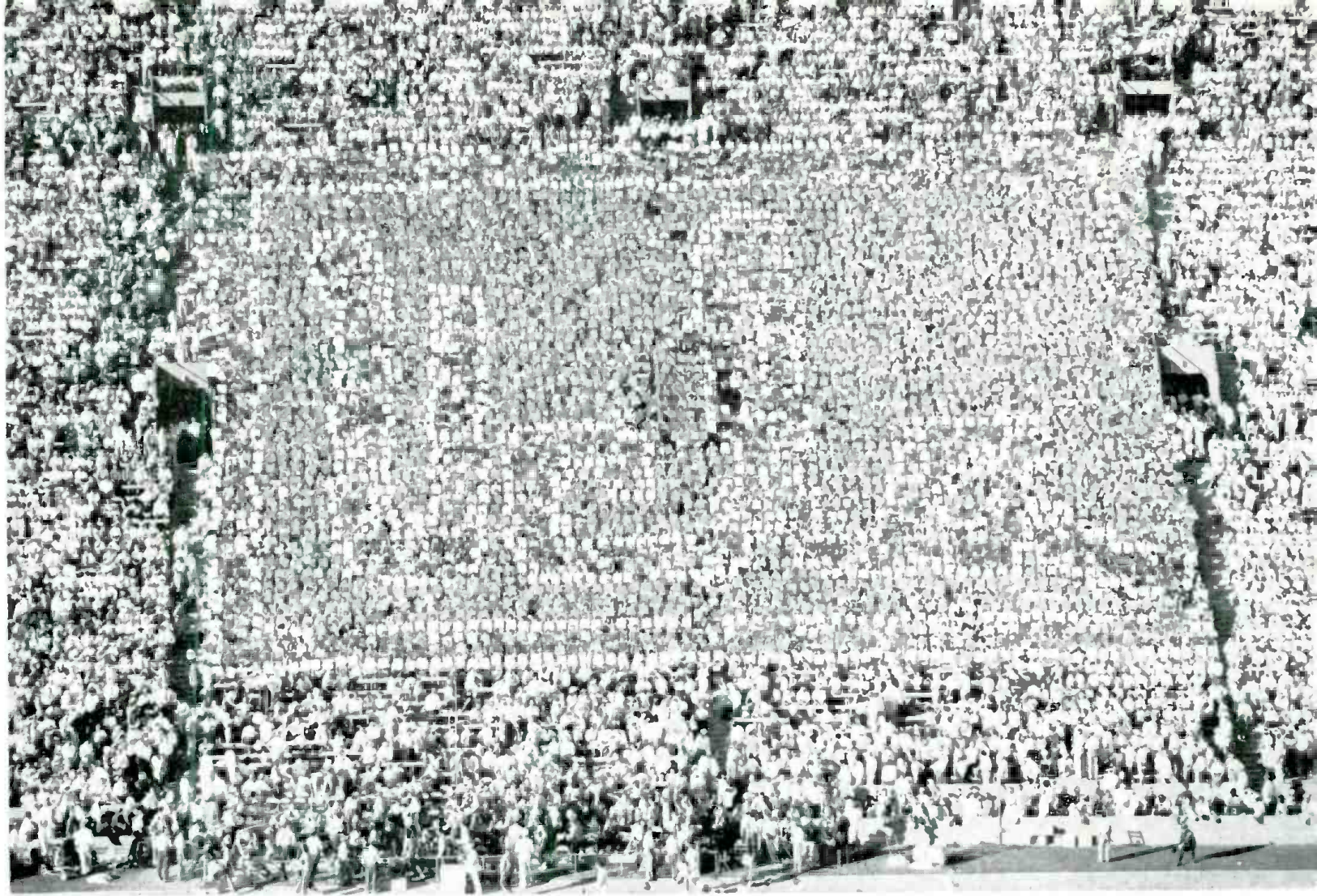
Before doing this cutting, though, you should give yourself some slack so you will have plenty of working room. On most machines, you can lift the take-up reel off the spindle without getting into any trouble. Place it on a flat surface so it will stay neatly wound up, even though overloaded, and allow the loop of tape from the head to start working its way down toward the floor. Have an empty spool close at hand, too.

Once you have snipped, attach the new end to the empty spool as quickly as possible. While you are doing this, the tape will be coming out of the recording head faster than you can handle it, but don't get panicky. Just make sure it keeps coming and doesn't get snarled up in the works. If you have it falling freely all the way to the floor, its own weight will keep it moving smoothly, but, once again, an assistant can be very helpful. Finally, place the empty spool on the take-up spindle. Its normal speed will reel in the loose tape in short order. All you have to do is guide it a little bit and watch for snarls. As with the normal procedure, you can go back over the program later and decide where to make the final separation between the two reels.

Editing is largely a personal matter. You may not care to do any more than just separate the two tapes at the flying splice and put a leader on each end. On the other hand, if you really want to work at it, you can probably find a much more suitable spot for the separation. A seven-inch reel will easily carry five to ten extra minutes of the LP tape without becoming awkward or tending to spill. Therefore you have a period of 10 to 20 minutes in which to find the place where you would most like to change reels during future playbacks. If a major pause occurs during this time—something like the interval between movements in a symphony—your choice is an obvious one. If that is not the case, you'll just have to pick the spot that suits you best. However, this freedom to pick the dividing point applies *only* to the first side. When you record on side #2, you have to be satisfied with the division that is already established. And here's another thing to remember about the second side: remove the leaders before you start recording, or you will record right over them and have to attach additional leaders.

So far we have talked only about the very long recordings. However, this method can also be used for the shorter ones. As an example, suppose you have a partly-used tape that still has a half-hour of empty space on it. You would like to use it for a symphony, but you don't know how long the symphony is. Most of them last about a half-hour, but it might be more, or it might be less. Using this technique, you can go ahead and record it, standing by with an extra reel of tape in case it runs over. Even if it keeps on running for an additional five minutes or so, you can snip the tape at the end and keep the whole thing on one reel (on side #1). If it lasts a good deal longer than that, it would probably be best to separate it into two parts.

This system is not completely without disadvantages, of course, and the worst one is that, occasionally, you will have to pull out two reels in order to listen to a certain selection. But, on the other hand, you will be able to make complete recordings of even the longest programs, and you will be able to get full value out of your tape, the two main benefits of the Flying Splice Method.



Tape recorded skits are now presented between halves at UCLA football games with narration and music recorded on magnetic tape. Action in the skit is provided by block pictures formed by students. For these "card stunts" the students are holding up various colored cards. Here the school's name is being formed at an afternoon game.

UCLA Tapes Gridiron Skits

by Al Blower

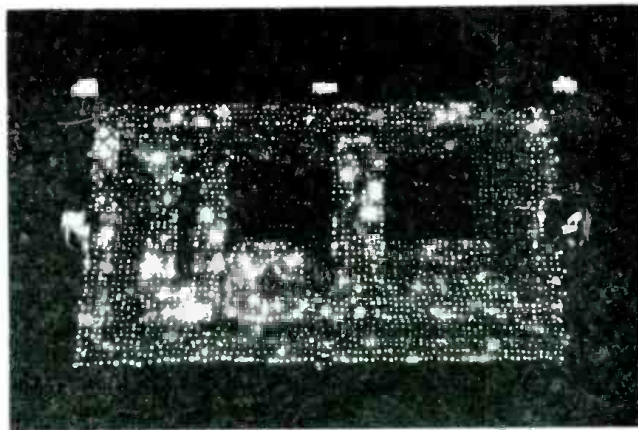
.... between halves performances give fans a theatrical treat.

"DRAMA on the gridiron" is no mere figure of speech when UCLA's football team takes the field at the Los Angeles Coliseum. They really put on a show.

Besides seeing "rock-em, sock-em" football, however, the fans get a theatrical treat—and it's done with tape recording.

For years UCLA's home games have been famous for the colorful "card stunts" performed between halves. Equipped with colored squares of cardboard, the students in the UCLA rooting section hold them up, forming massive pictures and patterns, providing a spectacular view for the fans across the field.

The advent of night football threatened the card stunts, but not for long. UCLA put holes in the cardboard squares, covered them with colored cellophane, and had the students shine flashlights through them. This made the night spectacle even more colorful than during daytime games.



Night stunts are called "light stunts." Here the students again form the school name, but this time they are holding flashlights which shine through holes in the cards. The holes are covered with colored cellophane.



Here Richard Tumin supervises playback of tape during half-time activities. Second tape recorder is used to record play-by-play commentary of the game.

Now UCLA has gone a step further. Latest embellishment is a between-halves skit complete with sound recorded on magnetic tape. And thanks to tape's high fidelity, the sound that booms out over the coliseum's loudspeakers is the best.

Before each game a special skit lasting 10 to 15 minutes is developed. It has a plot, a hero and all. Scenes from the playlet are shown in pictures—pictures formed in colored light as the students hold up their cardboard squares and flashlights.

As the drama progresses, the card stunts or "light stunts"



Dialogue, narration and music for the half-time skits is recorded in advance in studios of UCLA theater arts department.

as they are called at night, change to illustrate each scene. And instead of being in pantomime, the words, music and sound effects come off the magnetic tape.

UCLA first tried the tape recorded skits in 1954, liked it so well that they gave it a second test last year, and this year are really going all out.

A typical example involved a UCLA-Maryland night game when the UCLA rally committee directed the production of a humorous half-time playlet entitled "Turtle Neck" about the Maryland terrapin who came to Hollywood.

According to the continuity sheet, "Tonight's 'heavy drama' unfolds as a tribute paid to our Mason-Dixon 'neighbors' from Maryland. The production, entitled 'Turtle Neck', finds Colonel Jefferson D. Terrapin bemoaning his lack of feminine companionship.

"Deciding that 'Go west, young man' is the solution for his problems, he departs for points left of north. Arriving in the glamour of Hollywood, he is delighted with the discovery of Southern California's glamorous starlet, Tallulah Tortoise!

"Following a whirlwind courtship, jealousy is kindled by the presence of Joe Bruin, who is seen with the Colonel's gal. Two-faced Tallulah, exposed by Joe Bruin. Sleuth, is none other than Vampiria in disguise. Shocked, Colonel Terrapin is reconciled and dated by Joe with a UCLA coed. The final ending is to be decided by you. Mr. and Mrs. Firstnighter."

The production at the Maryland game was accomplished by the UCLA Rally Committee. Sound recording is done by the Radio Division of the Theater Arts Department of UCLA, under the supervision of Richard Tumin and the recording engineer is Charles Hemmings.

Putting on such a performance in Los Angeles Coliseum at night necessitates the use of a detailed script, 3,200 flashlights and cards and 12 minutes of tape recorded narration, dialogue, music, and sound effects for the 26 scenes used. All recordings are made on Magnecord recorders using "Scotch" No. 111 magnetic tape.

Audience reaction, however, indicates that the technique is well worth the results, and UCLA plans to continue using sound in its presentations permanently.



Closeup of students in "Bruin" rooting section shows cardboard squares with multi-colored filters through which flashlights shine.

Build A Bulk Eraser

by Roy M. Driscoll

. . . bulk erasing is quick and reduces the noise level below that of machine erasing.

BULK erasure is recognized as having several advantages. When properly used, the noise level is lower than when using a conventional erase head. The greatest advantage, however, is to those of us who use the home type recorders. Many of our recorders have inadequate erase power to completely remove a heavily recorded signal. There are also several amateur recorders which use D.C. erase or a permanent magnet erasure. These invariably leave a lot of hiss on the tape. Some of the home type recorders are now using heads which will play back flat to 15 KC or better. The noise becomes oppressive. The answer, of course, is to sell the "old clunker" and buy a professional recorder. Or as a second best, buy a bulk eraser and disable any permanent magnet or D.C. erase heads on the machine.

That is all well and good, you say, but what about a poor guy like me, who cannot afford a bulk eraser, let alone the professional machine.

If that is the case, then this article is for you. The answer is simple. just build your own bulk eraser. That sounds like a tough job, but it is very simple. Remember back when you were a kid how you loved to tear things apart? Well, let's go back a few years and have a good time in our

"second childhood" for an hour or two. Tearing up is about all this job amounts to.

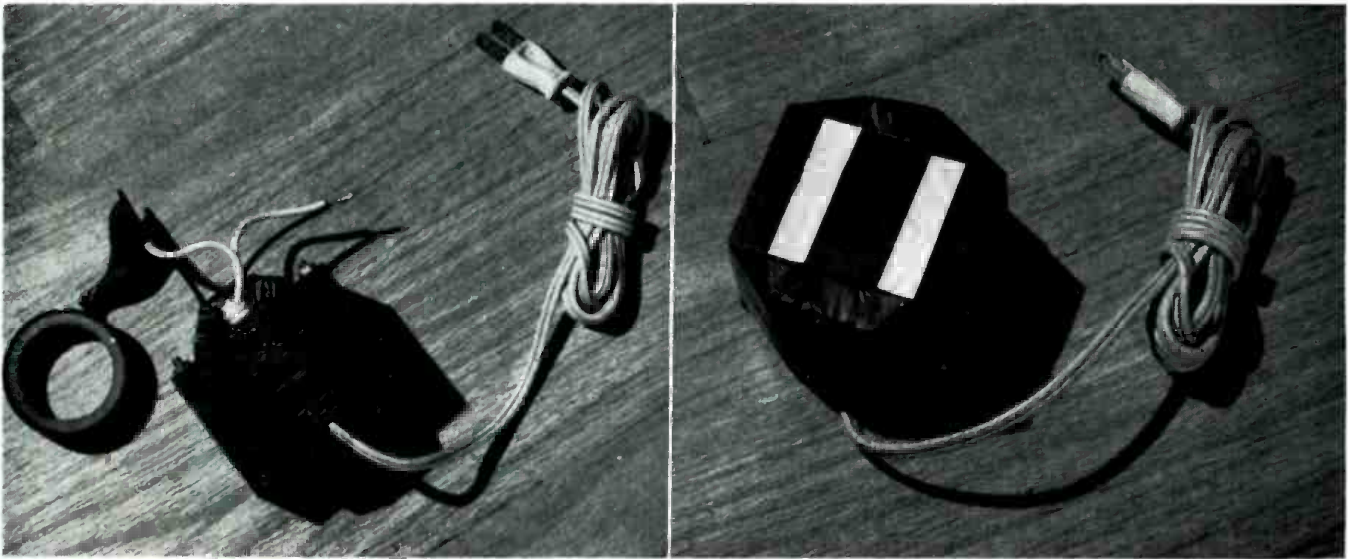
The first thing to do is obtain an old power transformer. Get a good sized one, 1 $\frac{3}{4}$ " x 3" stack as measured on the long side of the laminations is excellent; but the larger the better. If you do not have one in the junk box, inquire at the local radio-TV service shop. They usually have an old one with a burned out secondary laying around. All we really need is a good primary winding. The primary leads are usually black, or one of them may be brown. Offer them 50¢ or a dollar for it; but they will probably give it to you and be glad to get rid of it.

Remove the shells, usually a screwdriver is all that is needed to loosen the bolts. Get out the old trusty hammer and start beating on the laminations. Try not to bend them too much as some of them will be reused. It usually takes a lot of beating to break the varnish that holds them together. A screwdriver or knife may also be used to pry the laminations apart. Remove all the laminations and separate the "E" irons from the straight pieces.

The leads from the secondary windings of the transformer are of no value to us, so clip them off as close to the coil as possible. Do not cut the primary leads. Using black plastic electrical tape, wrap the ends of the coil as



All you need to get started on making a bulk eraser for tape is an old power transformer which can be obtained from your own junk box or from a radio or TV dealer. The primary winding must still be in good condition, the secondary does not matter. Take it apart as explained in the text and save the coil and the "E" laminations (upper left of photo).



Reassemble the E laminations and slip the coil back over them again. The laminations must be tight. Use the original bolts or shim up with small pieces of wood until they are. Attach a line cord 4 to 6 feet long to the primary leads and solder. Tape all connections well. The photo at right shows the area of greatest magnetic force and this is the area (marked in white) over which the tape should be turned.

shown, so the ends of the wire are covered to prevent a shock hazard.

Replace the "E" laminations in the core. Put all of them in from one side leaving one side of the coil exposed as shown in the photographs. (There may be two extra long "E's," do not use them). If the laminations do not fit tightly, force a piece of paper or wood in the end until they do. Put two of the bolts back in the laminations to help hold them together.

Next obtain a line cord 4 to 6 ft. long with a plug on one end. Insert the wires through the hole in the center of the "E" laminations as shown. The end should be on the same side as the transformer's primary leads. Tie a knot in the cord leaving about 2 or 3 inches extended. If there is no hole in the center of the laminations, the line cord can be anchored by means of a cord clamp secured by one of the transformer bolts.

Strip the ends of the line cord and the ends of the primary leads. Twist each primary lead with one of the line cord leads. Solder them together for maximum security. Wrap the exposed ends with the plastic electrical tape.

Wrap several turns of the plastic tape around the transformer to hold the leads down.

That is all there is to it. You now have a good bulk eraser. Of course, you may want to add a few refinements, such as a stud for the reel to pivot (or rotate) on, or you may even want to build a box to mount the bulk eraser in. The top of the box should be made flush with the transformer. A thin sheet of plastic, aluminum, paper, or brass may also be used to cover the transformer and box. This would make it easier to turn the reel. Clear plastic would be best. This would allow visibility to make sure the tape being erased was passing over the most active area. All the tape should pass over the area between the ends of the laminations. This is shown white in the photo.

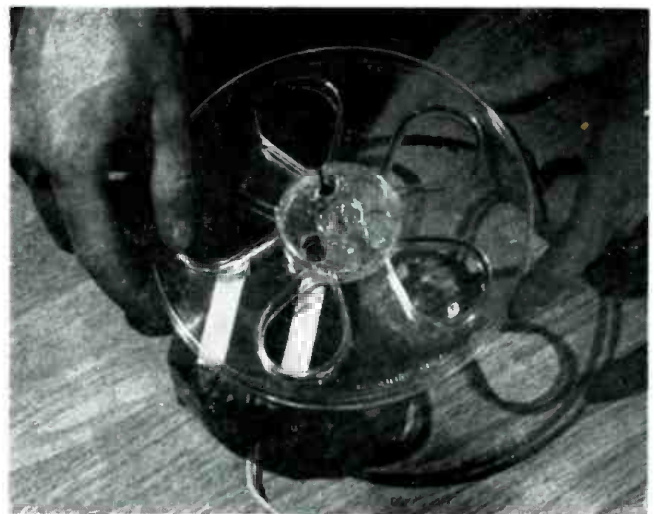
Using The Bulk Eraser

This is the most important part to be understood. Our new bulk eraser must be used properly. The last photo shows a reel in proper position for erasing. An empty reel

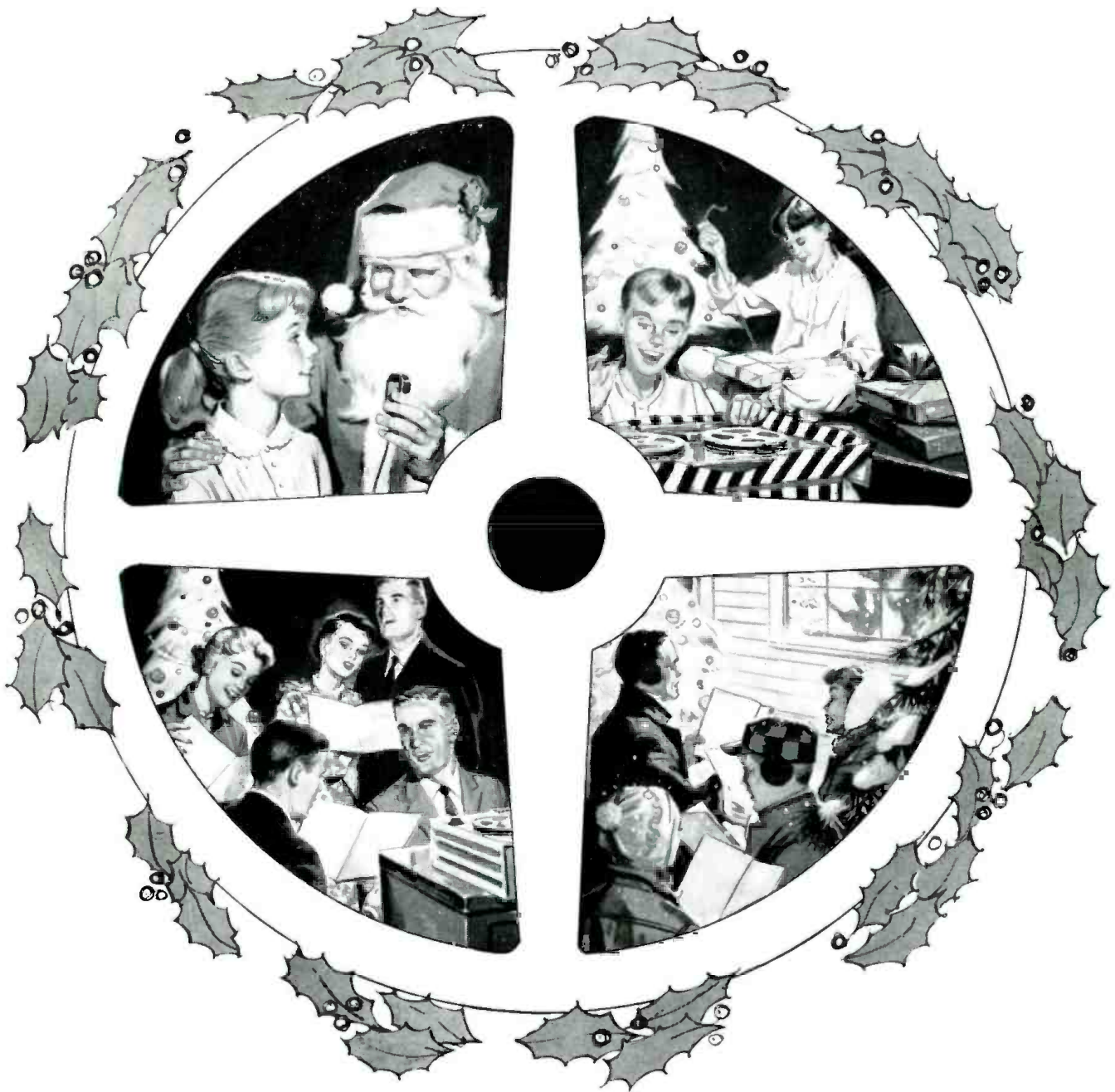
was used for better visibility. It is important that the tape reel be rotated slowly. The maximum speed at the outside edge of the tape should be approximately one inch per second. You should, therefore, take about 20 seconds to rotate a 7" reel of tape one revolution for the lowest noise level.

After rotating the reel at least 360°, pull up on one edge very slowly, the tape should be at least 2 ft. from the eraser before turning it off.

Note: This bulk eraser is now operating at probably 10 times its originally designed power. Therefore, do not leave it on, or it will burn up in a few minutes. It should be good for erasing 2 or 3 reels of tape at one time. This is usually more than adequate for the home recordist. After cooling for 20 or 30 minutes, it is ready to go again. This eraser has so much power that turning the reel over to erase both sides is unnecessary. It gets it all in one "whack."



The full reel of tape should be held over the eraser in the position shown. An empty reel was used for the purposes of illustration. The eraser may be mounted in a box and a center post attached to aid in positioning the reel. The unit should not be used more than a few minutes at a time or it may burn out the coil. The tape need not be turned over, the unit is powerful enough to get it all in one position.



Record this Christmas forever

on tapes made with MYLAR®

This Christmas, when you record the kids' voices, family gatherings, or those "once in a lifetime" songfests, you'll want to make sure they last and last for years to come. By recording on tapes made with "Mylar"® polyester film, you assure yourself of the ultimate in long-lasting fidelity. Here's why:

NO STRETCHING PROBLEM—Under normal operating conditions, tapes made with "Mylar" will not stretch or break. There's an extra margin of safety against stretching offered in no other tape.

EXTRA PLAYING TIME—Tape made with "Mylar" offers far better performance *plus*

50% or more extra playing time per reel . . . fewer reel changes necessary; less storage space is needed.

NO STORAGE PROBLEM—Tapes made with "Mylar" can't dry out or become brittle with age . . . no special storage facilities needed to protect tapes against changes in temperature and humidity.

So this Christmas, make all your recordings on the new high-quality tapes made with "Mylar". Ask your dealer for an extra reel . . . make it two reels . . . of your favorite brand of tape—now made with "Mylar".

**Du Pont manufactures the base material "Mylar" —not finished recording tape. "Mylar" is Du Pont's registered trademark for its brand of polyester film.*

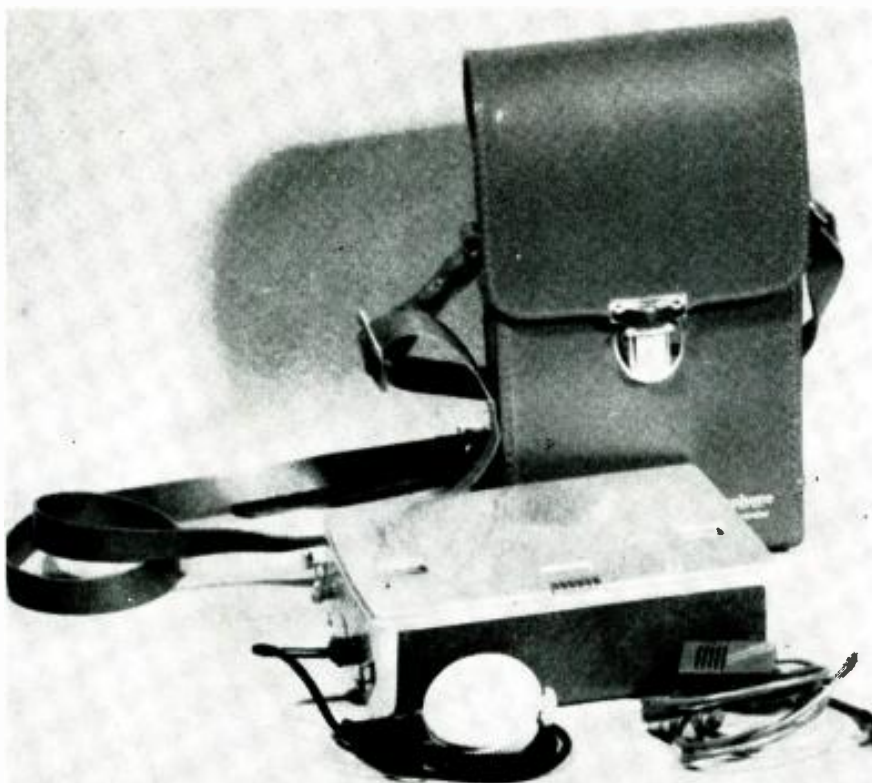


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BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY



LOOK FOR THE NAME MYLAR® ON THE BOX!

NEW PRODUCT REPORT



DICTET PORTABLE RECORDER

*. . . completely self-powered—weighs only 2 pounds, 11 ounces.
Uses tape in magazine.*

THE Dictet will be of greatest use to the executive on the go who would like to use it in car, plane, boat or bus. Completely self-contained and weighing only 2 pounds, 11 ounces, the unit is convenient to carry and operate.

Its small physical size, 2" x 4½" x 6-5/16" make it small enough to slip in a large pocket of an overcoat although we feel that the case would be a good investment. The price quoted above includes the recorder, a magazine of tape and the microphone.

Lightness in weight has been gained by using magnesium metal for the case and magazine. Stainless steel has been used for the baseplate and for machine components.

Small size has been attained through the use of a transistorized amplifier and mercury cell batteries. Wiring is by means of a printed circuit.

The tape magazine is reversible, providing dual track recording on regular 1½ inch Mylar base tape. The spindles adjust automatically and the magazine has an automatic stop at the end of the reel. It holds approximately 400 feet of tape giving a playing time of 60 minutes per magazine at the tape speed of 2½ inches per second. There is a full power rewind with a 10 to 1 speed ratio and it takes 2½ minutes to rewind the tape in the magazine. Of course, when both tracks are used there is no need for rewinding.

The microphone serves both as a

STAFKSTED

*Product: Dictet Battery
Powered Recorder*

*Price: With push-button mike
\$294. Accessories extra*

*Manufacturer: Dictaphone
Corporation, 420 Lexington
Ave., New York, N. Y.*

mike for recording and as a loud-speaker for immediate playback, if desired. Transcription of the recorded material is done on another machine, the Dictet Typewriter. The tape magazines are sturdy and compact and may be mailed back to the office by someone on the road or in the field.

As a safety feature, the motor will not run unless the microphone has been plugged in.

The amplifier for recording and playback is a four transistor unit mounted on a printed circuit panel. The frequency response of the Dictet is from 200 to 4,000 cycles hence is not suitable for recording music but is more than adequate for the voice range. Our recording and playback tests showed it to be clean and crisp and no one should have any difficulty in transcribing the tapes.

The erase head on the Dictet is a two step permanent magnet which swings into operation when the machine is in the record position. The motor is a



The battery end of the recorder. Three mercury cells provide the power. An extra set is carried in the bottom of the case.

3200 rpm, battery driven unit with an electrical governor to maintain constant speed.

The power supply is two 6 volt mercury cells for the motor drive and a single 6 volt cell for the transistor amplifier. Approximately 20 hours of use can be had from the motor batteries and 40 hours from the amplifier battery before replacement is necessary. A test button on the outside of the case gives visual indication of battery condition and shows when batteries must be changed.

The batteries are inserted in the end of the recorder by removing a single screw. Extra batteries are kept in the bottom of the carrying case in what almost might be termed a "secret compartment." The motor batteries cost \$2.60 each and the amplifier battery \$1.85.

The controls for the recorder are grouped conveniently on one end of the case. These include an on-off switch, volume controls for record and playback, battery test buttons and the rewind-record-playback control. The input for the microphone is also grouped with the controls.

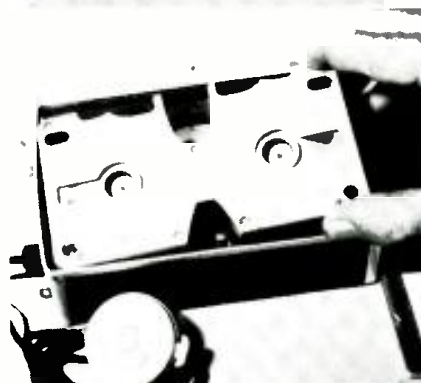
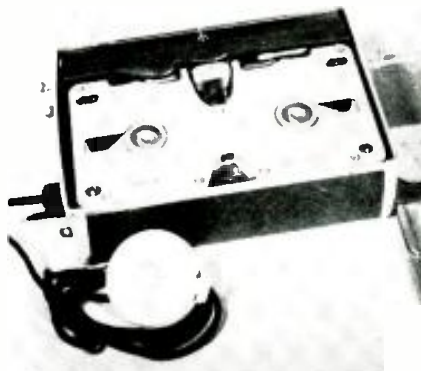
To record the microphone is plugged in and the switch turned to the "on" position. The control lever is then placed in the "record" position. If the plain lapel mike is used, recording will start immediately; if the push button mike is employed, the button must be depressed on the mike. As the unit employs transistors there is no warm-up time. It is ready to record as soon as the switch is thrown.

The tape magazine is removed and replaced by removing the cover of the recorder. A finger lift catch locks it in place. The cover slips off easily and the recorder should be in the "off" and "reproduce" position before the magazine is lifted from the case. If one side of the tape has been recorded it is only necessary to turn the magazine over and replace it in the case to continue recording.

Recording volume is controlled by a knob on the end of the case. When set



Controls are conveniently grouped on one end of the machine. Once set, the operation may be controlled from the push button mike,



The tape magazine holds approximately 400 feet of Mylar base tape which gives a recording time of 60 minutes when both tracks are used. The magazine is reached by removing the cover and may easily be removed and replaced. For recording on the second track it is turned over.

for average recording a red dot will be visible. When set for distant recording a white dot will show on the knob. In noisy locations, such as verbal note taking in a factory or other noisy place, the best method is to hold the microphone close to the mouth and reduce the recording volume.

We found the unit to be well made, sturdy and practical as a voice recording unit. Mechanically it is excellent and should find a great many uses in the field.

The companion Dictet Typer has one new feature and that is a speed control so that a fast typist can speed up the speech or a slow one, slow it down.

There are numerous accessories available especially for the transcriber. Care should be taken not to drive the recording level too high or clarity may be impaired.

As mentioned above, this recorder is adequate for recording the human voice. It is not suitable for music. We were pleasantly surprised at the low wow and flutter in a small instrument of this type.

The unit is adequate for the uses for which it was designed and is well made.

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TURNER CRYSTAL MODEL 141

Highest output small microphone on the market. Adaptable to hand, stand or lavalier. Use for P. A., intercom, tape or demonstration work.

SPECIFICATIONS:

Output level; -52db. Response: 60-10,000 cps. 6-ft. single conductor shielded cable. Length: 3-3/4". List Price \$13.50



TURNER DYNAMIC MODEL 142

1st lavalier dynamic in its field priced under \$50. Tops in economy and performance.

SPECIFICATIONS:

Output Level; -59db. Response: 70-12,000 cps. Impedance, 2 models; high and 50/200 ohm. List Price \$45.00 No. G-14 matching stand, list price \$5.75



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89 Broad St., New York 4, N. Y.

SHOP OR SWAP

Advertising in this section is open to both amateur and commercial ads. TAPE RECORDING does not guarantee any offer advertised in this column and all swaps, etc., are strictly between individuals.

RATES: Commercial ads, \$3.00 per word. Individual ads, non-commercial, \$.05 a word.

Remittances in full should accompany copy. Ads will be inserted in next available issue. Please print or type your copy to avoid error. Address ad to: Shop or Swap, Hi-Fi Tape Recording Magazine, Severna Park, Md.

STEREOPHONIC TAPES for Inline Heads for sale. Will also swap. William Van Laube, 50 Church St., Chatham, N. Y.

BUILD YOUR OWN automatic shutoff, 101.2" reel adapter and tape player. Kits and prints. Le Roi Engineering, Box 251, Elmhurst, Illinois.

LEARN WHILE ASLEEP with your recorder. Amazing book gives full instructions, \$2.00. Guaranteed. Research Association, Box 610-TR, Omaha.

INTRODUCTORY OFFER — Famous Branded Recording Tape—A-1 Quality. Fresh, New Stock—1800' 1 Mil Acetate—\$1.79. 1200' 1 1/2 Mil Acetate—\$1.43. Boxed—on 7" Reels. Include 20¢ Per Reel Postage. Flornian & Babb, Inc., 68 W. 45th Street, New York 36, N. Y.

EXCHANGE your unwanted stereo tapes for the ones you want for only \$1.35 per reel. See our ad page 15 for full details. Stereo Tape Exchange, 344 Main Street, Paterson, N. J.

LEARN HYPNOTISM, SELF-HYPNOSIS from tape! Other helpful recordings! Free Information. Drawer TR11-697, Ruidoso, New Mexico.

SYNCHRONIZER HOOKUP: Make sound movies with your tape recorder, \$10.00. Anderson, 242 1/2 Phelps Street, Stockton, Calif.

OF SOUND AND LIGHT—Stereophonic tape demonstrating dynamic sound effects—the human voice from speech to choir. Entertainment for the entire family. 1/2 hour—\$4.95. Check or COD. Free catalog. John Paul Jones, 655 Main St., Lafayette, Indiana.

LATEST MODEL DeJur tape recorder used about twenty times. Require smaller machine so will sell at \$280, nets at \$400. Robert Nathe, DCS&S, 540 Fifth Avenue, New York 36, N. Y.

READ BRITISH TAPE RECORDING Magazine. Send \$5 for 12 monthly issues to Farquhar, P.O. Box 1290, Grand Central Station, New York.

\$100.00 WEEKLY Spare Time with a Tape Recorder! Fabulous new business. Entire country wide open! Record weddings, parties, sports events, stereophonic sound, sound-on-sound multiple recordings. Make radio commercials, sound effects. Have fun and make big money in the glamorous business of tape recording. Moneymaking facts free! Dixieland Publishers, Asheboro 18, N. Y.

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WISH TO WRITE or respond with fans of Lillian Roth. M. L. Gambal, Box 51, No. Ridgeville, Ohio.

AMPEX, Tandberg, Bell, and many other leading makes of stereo recorders in stock. A few demonstrators in used models. First come first served. Trade in your present equipment at top dollar. See our ad page 15. Magnetic Recording Co., 344 Main Street, Paterson, N. J.

STEREO MAGNRECORDER—Like new, PT-6-BA2HZ deck, two-speed hysteresis motor, PT-6-BN amplifier, carrying case, \$595. D. Bonvallet, 742 Bellevue, Milford, Michigan.

HAVE YOU SEEN the Edal 100? See Page 18.

FOR SALE—3 speed professional tape recorder with built-in hi-fi amplifier, assorted mikes and mixer. Several home recorders like new. 8 hour background music system complete. Bargain. L. M. Stone, Rt. 1, Arab, Alabama.

MAGNRECORDER—14" reels, self-reversing, 2 1/2 hour play, dual 3/4 and 7 1/2 speed. All in top, working condition. List \$789. Used, will sacrifice 5¢ at \$250 each. 2531 F St., Bakersfield, Calif.

WANTED — Traditional Jazz Tapes, Records. Claude Marx, 83-43 118th Street, Kew Gardens, N. Y.

TAPE TRANSCRIPTIONS typed — established service—reasonable rates. Write for brochure. Thomas Secretarial Service, 1507 M Street, N.W., Washington 5, D. C.

TALKING BOOKS on tape to become available soon. Be one of the first to enjoy them. Covers such subjects as salesmanship, personality improvement, leadership development, health, etc. First production limited. Write for further information. Magnetic Recording Company, 344 Main Street, Paterson, N. J.

WILL BUY: Radio Transcriptions, Dance, Light Concert, and South American. Sam Kiamie, 930 Grant Avenue, Pelham Manor, N. Y.

TAPE RECORDINGS, disc recordings duplicated to tape inexpensively. Jamescraft Laboratories, Dept. H-9, 2920 Oakwood Blvd., Melvindale, Mich.

FOR SALE: RCA portable tape recorder, Model 7-TR-3, used only four months. First \$150 takes it. Write R. Bohinski, 130 North St., Auburn, New York.



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WANT TO START TAPE Club For Blind. All interested in joining or contributing ideas please write or tape (immediate answer guaranteed). Mike Klein, 492 Monroe St., Glencoe, Illinois.

38 MINT CONDITION COPIES Tape Recording Magazine. Complete file to January 1957. Four copies first issue. All \$50. A. C. Cooper, 193 W. Hazeltine Ave., Buffalo 17, N. Y.

HIGH-FIDELITY RECORDING TAPE Made directly for us by one of America's leading manufacturers. Guaranteed new and splice-free. Low prices! Smartly boxed. 7" reels, 1200' 1 1/2 mil acetate, \$1.40 or 3 for \$4.90; 1800' 1 mil acetate, \$2.00; 1800' 1 mil Mylar, \$2.70; 2400' 1/2 mil Mylar, \$3.25. Postage and handling 20¢ per single reel, 50¢ per order of 3. Write for complete price list. Tape Company of America, Dept. A-4, P.O. Box 50, Jersey City 3, N. J.

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RENT STEREO tapes a full month for only \$1.45. See our ad page 15. Stereo Tape Exchange, 344 Main Street, Paterson, N. J.

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YOUR PURCHASE INQUIRIES on tape recorders and supplies are invited. Prompt replies, efficient service, and reasonable prices always. Tape Recorder Sales, 433 South Wabash, Chicago.

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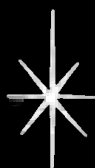
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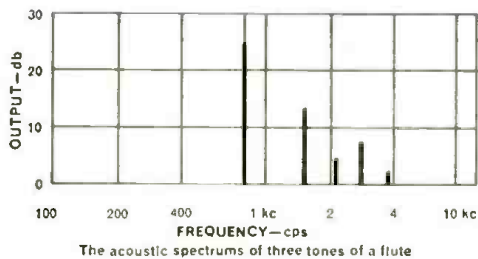
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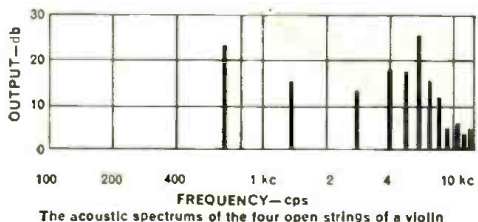
CAUTION!



Before fiddles start sounding like flutes...
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Acoustic spectrums of a flute tone (above) and fiddle tone (below), reproduced by a worn magnetic head, would look almost identical if the violin's high frequencies (shaded area) were lost by the worn head. Result is a lack of instrumental definition.



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