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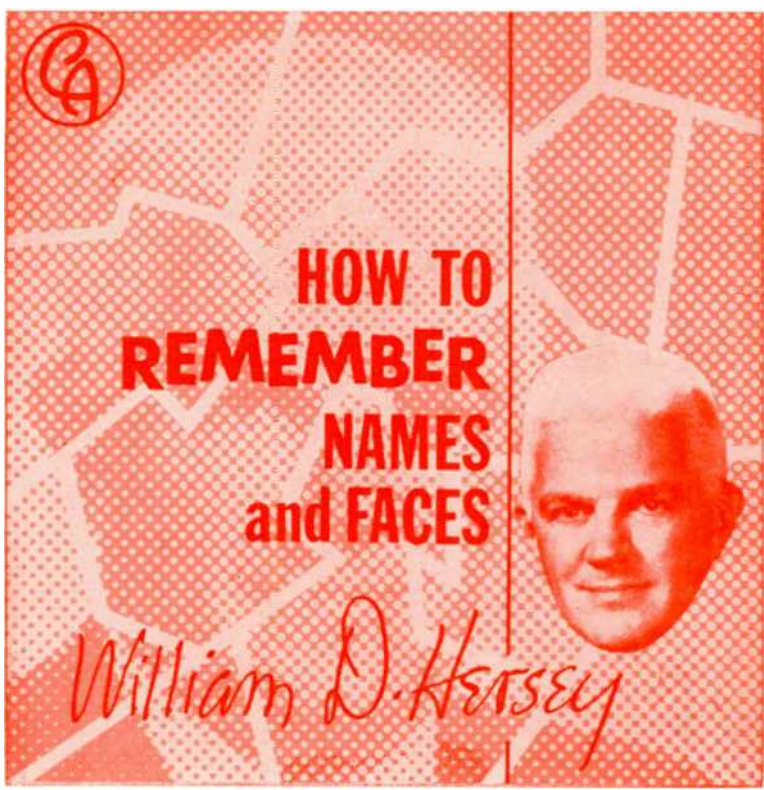
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TAPE RECORDING

VOL. 10 NO. 8-9

JULY-AUGUST, 1963

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SPECIAL NOTICE

In order to make our newsstand dating current and to avoid possible delays should a railroad strike occur we are combining our July and August issues into one. This will have no effect on your subscription as all subscriptions will be extended by one issue so that the same number of copies will be received.

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CL-3 Brahms: Academic Festival Overture; Schubert: Symphony No. 8 (Unfinished); Schumann: Manfred Overture; Pfitzner: Little Symphony; Opus 44.

Anyone from the person new to the classics to the classical connoisseur will find hours of listening enjoyment from these excellent tapes performed by The Florence May Festival Orchestra, conducted by Vittorio Gui-
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PD-2 Sentimental Favorites.

Lenny Herman: Miss You; Skip A Lou; Avalon; London Derry Air; Margie; Who; Believe Me If All Those Endearing Young Charms; Humoresque; Beautiful Dreamer; I'll See You in My Dreams; Lo Cinquantaine.

PD-3 Muscial Trip Around The World.

Lenny Herman: Andalucia; Baia, Tzena-Tzena; Chique; Cruiskeen Lawn; Misirlou; Autumn Leaves; Frasquita; Serenade; Roman Guitars; Estrellita.

PD-4 The Quintet Plus.

Lenny Herman: Will You Take A Walk With Me; I'll Take You Home Again Kathleen; Glowworm; Ma He's Makin Eyes At Me; Canadian Capers; I Found A Lucky Penny; The World Is Waiting For the Sunrise; Sleep; Martha Polka; Tales of the Vienna Woods.

Lenny Herman and "The Mightiest Little Band in the Land" with Lenny Herman on the accordion; Allan Shurr on sax and Clarinet; Lee Friswold on bass; Ston Scott on drums and Charles Shaw on piano. Regularly heard on C.B.S. network with some of the most danceable music of the times. A vocal group accompanies on PD-4.

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JZ-2 Bob Mielke and His Bear Cats. Creole Sang; Blue Guaiac Blues; Ice Cream; My Lovin' Imogene; Egyptian Fantasy; Bogalusa Strut; Yes, We Have No Bananas. Pet Stanton, trumpet; Bunky Coleman, clarinet; Bob Mielke, trombone; Dick Oxgrot, banjo; Peter Allen, bass; Don Fay, drums.

JZ-3 Red Onion Jazz Band—Bob Thompson:

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SH-2 Songs from Rodgers & Hammerstein: The Flower Drum Song: Overture; You Are Beautiful; 100 Million Miracles; I Enjoy Being A Girl; I Am Going Ta Like It Here; Like A God; Chop Suey; Don't Marry Me; Grant Avenue; Love Look Away; The Other Generation; Sunday; Finole.

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OR-1 Rhythm Reel.

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OR-2 Hack Swain at the Organ I:

Two Guitars; Dancing Tambourine; La Comparsa; On the Isle of May; From the Land of Sky Blue Waters; La Petite Valse; Gold and Silver Waltz; Lady of the Evening.

OR-3 Hack Swain at the Organ II: Selections from Student Prince; Fiddle Faddle; Crossroads; Same Silver Moon; You'd Be Nice To Come Home To; Hungarian Dance #5; Hungarian Dance #2; Our Love; Orchids in the Moonlight; Trade Winds.

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"NOTTURNO"

I Solisti di Zagreb conducted by Antonio Janigro

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

VANGUARD VTC 1663

4 track, 7½ ips, 57 min., \$7.95

The instrumental ensemble I Solisti di Zagreb under the direction of Antonio Janigro shows its versatility on this tape by performing a wide range of music from the baroque to the modern. Included are the *Suite No. 3 of Ancient Airs and Dances for the Lute* of Respighi, Mozart's *Eine Kleine Nachtmusik*, K. 525, Pergolesi's *Concertino in G*, Valse *Triste* of Sibelius, Barber's *Adagio for Strings* and the *Fantasia on Greensleeves* of Vaughan Williams with flutist Julius Baker and harpist Hubert Jelinek assisting in the latter.

Throughout the playing is of the highest standard, but the Sibelius and Barber works must have the sound of a larger orchestra to have their maximum effect. However the remainder of the tape more than compensates for this, and we have the usual high quality reproduction from Vanguard.

"BALLET HIGHLIGHTS FROM FRENCH OPERA"

Detroit Symphony Orchestra conducted by Paul Paray

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

MERCURY ST 90318

4 track, 7½ ips, 52 min., \$7.95

This tape contains ballet music from Gounod's "Faust," the *Bacchanale* from "Samson and Delilah" by Saint-Saëns, the *Gypsy Dance* from Bizet's "Carmen," the *Gavotte* from "Mignon" of Thomas, the waltz from Gounod's "Faust," Massenet's "Phedre" overture and the *Royal Hunt and Storm* from "The Trojans" by Berlioz, although the latter two are not ballet sequences, and the "Phedre" overture was not even written for an opera.

Regardless, this is a collection of pleasant music, very well played and superbly recorded. Mercury's recording of the Detroit Symphony varies greatly, and this new tape is technically one of the finest they have ever accomplished, with great clarity and wide dynamic range, but, more important, a full, rich sound not often captured, making this one of the best tapes in the Mercury catalog.

"FAVORITE CONCERT OVERTURES"

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

MERCURY ST 90323

4 track, 7½ ips, 52 min., \$7.95

This new release is the tape version of

one of Mercury's disc series entitled "Curtain Up!" Included are six well-known overtures some of which were issued on records at least several years ago.

Although the tape box cover lists the performers, nowhere is it indicated who plays what, which is rather inexcusable in the packaging. Paul Paray and the Detroit Symphony play the *Roman Carnival Overture* of Berlioz and Schumann's *Manfred Overture*. Antal Dorati conducts the Minneapolis Symphony Orchestra in Rossini's *Barber of Seville Overture* and Smetana's *Bartered Bride Overture*. All four are prime examples of Mercury's dry, hard, unresonant sound of several years ago. The tape also includes Dorati conducting the London Symphony Orchestra in Dvorak's *Carnival Overture* and Mendelssohn's *Fingal's Cave Overture*, both of better quality technically, but these cannot compensate for the inferior sound on the rest of the tape. When Mercury has so many fine recordings in their catalog, one wonders why they bother to preserve on tape some of their less successful ventures.

LEHAR: The Merry Widow

Lisa Della Casa (Hanna); John Reardon (Count Danilo); Laurel Hurley (Valencienne); Paul Franke (Baron Mirko); Charles K. L. Davis (Camille) and others with the American Opera Society Orchestra and Chorus conducted by Franz Allers

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

COLUMBIA OQ 517

4 track, 7½ ips, 57 min., \$9.95

This new Columbia tape should attract a wide following, containing as it does all of the best-known highlights from this ever-popular operetta in a new English translation. The performance is fine, with a top-notch cast and big, full sound from Columbia, although some listeners may feel the voices are recorded too close-up. The tape box includes a pamphlet with the libretto for the excerpts on the tape.

London's recording of the complete operetta with Hilde Gueden is not entirely successful in either performance or recording, and those who want *The Merry Widow* complete might want to wait for the announced tape edition of Angel's new recording with Elisabeth Schwarzkopf.

SCHUMANN: Carnaval, Op. 9 Fantasie-stucke, Op. 12

Artur Rubinstein, pianist

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

RCA VICTOR FTC 2150

4 track, 7½ ips, 58 min., \$8.95

Here are two of the most important works in the Romantic piano repertory, in magnificent performances by Artur Rubinstein. The reproduction of the piano would have benefited from a warmer hall sound

which might have avoided the clanging quality in some of the loud passages. As the tape is excellently processed and has a playing time of almost one hour, this is one of the best buys in RCA stereo tapes.

BACH-VIVALDI: Four Organ Concertos

Anton Heiller, organist

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

VANGUARD VTC 1664

4 track, 7½ ips, 47 min., \$7.95

Johann Sebastian Bach had great admiration for his contemporary, Antonio Vivaldi, and made transcriptions of many of his works. This new Vanguard stereo tape contains four concertos by Vivaldi transcribed for organ. The concertos in A minor and D minor are from Vivaldi's "Violin Concertos, Op. 3," and the concerto in C is from Vivaldi's "Violin Concertos, Op. 7" but the concerto in G minor is after a concerto by Prince Johann Ernest, although at one time this was attributed to Vivaldi.

Anton Heiller's stylish performances are played on the organ at the St. Mary Church at Halsinborg, Sweden, and Vanguard's recorded sound is unique in its naturalness, clarity and stereo quality. Without question, this is one of the finest organ recordings currently available on 4 track tape.

SIBELIUS: Symphony No. 2 in D, Op. 43

Philadelphia Orchestra conducted by Eugene Ormandy

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

COLUMBIA MQ 520

4 track, 7½ ips, 45 min., \$7.95

This music is one of the big showpieces of the Philadelphia Orchestra. This same recording, made some time ago, is also available on a two-track tape (NMB 12, \$13.95). The two-track version was marred by an extraordinary amount of tape hiss, which is completely absent from this new four-track edition. Ormandy's conception of the score is full-blown and romantic, and the strings of the orchestra are positively glorious. This is unquestionably one of the finest recordings ever made of the Philadelphia Orchestra.

STRAVINSKY: Petrushka

GLINKA: Russlan and Ludmilla Overture

Israel Philharmonic Orchestra conducted by Lorin Maazel

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

LONDON LCL 80118

4 track, 7½ ips, 38 min., \$7.95

This is a stunning performance of Petrushka, with the accent on orchestral virtuosity. Maazel tends toward faster tempi for this music than most other conductors, but

his interpretation is not without sentiment at appropriate moments. The familiar Glinka overture is also a tour de force for the splendid orchestra. London's sound is rather diffuse and indefinite in the low bass, with not quite enough whack in the timpani and bass drum, but it is effective in its own way, and some listeners might prefer this type of sound.

POPULAR

30 HITS OF THE TUNEFUL '20s

FRANKIE CARLE

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

Medley of 30 tunes: If I had You, Yes We Have No Bananas, Diane, Sweet Sue, Linger Awhile, I Love My Baby, Alabama Bound, and others.

RCA VICTOR FTP 1159

4 track, 7 1/2 ips, 26 mins., \$7.95

Frankie Carle never seems to make a bad album, and this release is no exception. Although he hasn't developed any phenomenal style, his ivory-tickling on this tape is about as pleasing and satisfactory, without being show-off and spectacular, as it is possible to be. Aided by a small orchestra, he plays medleys of tunes that were big hits back in the Roarin' 20's, and presents them in a smooth manner that will bring back many pleasant memories of that era.

RCA has processed this tape in sparkling fidelity and stereo effect.

MORE MUSIC OF THE STRIPPER

David Rose and his Orchestra

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

Side 1: The Runway, St. Louis Blues, Lullaby of Birdland, A Pretty Girl Is Like a Melody, Walk On the Wild Side, Some of These Days.

Side 2: What Did I Do?, Love For Sale, Sunset Strip, Blues In the Night, Lady of the Evening.

MGM STC 4099

4 track, 7 1/2 ips, 28:30 mins., \$7.95

David Rose's album "The Stripper," (reviewed here Feb. 1963) was such a thumping hit that it was only natural for him to issue a sequel called "More Music of the Stripper," and this one is exactly that—more of everything contained in the first release.

The same choice of numbers, the arrangements, the driving beat, and the incomparable David Rose touch have been combined with a realistic elegance that leaves you wanting in only one respect—to see a live performance of the strippers, instead of the cautious photos on the cover. A good swinging band belts out the nostalgic tunes in bright stereo sound.

BIG BAND /ACCENT ON PERCUSSION

Kent Edelhagen and his Orchestra

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

Side 1: You Stepped Out Of A Dream, Try A Little Tenderness, Down By The

Riverside, On Green Dolphin Street, It Happened In Monterey, Chlo-e, Again. Side 1: The Trolley Song, Lullaby for Trombone, A Kiss To Build A Dream On, I'll Never Be The Same, I'll See You In My Dreams.

MGM STC 4083

4 track, 7 1/2 ips, 34:30 mins., \$7.95

There is no doubt about the ability of 21 Channel Sound to emphasize the instrumental solo work of almost all of the musicians in a band, due of course to the multiple microphone placement.

This release offers a big band that plays with the proper beat, and allows each instrument an opportunity to show off throughout the well arranged variety of numbers. As the title implies, percussion is used merely to accent, rather than dominate the music. It is listenable, danceable and beautifully recorded, with good stereo effect from start to finish.

RIVIERA FESTIVAL—21 CHANNEL SOUND

Monte Carlo Light Symphony Orchestra

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

Side 1: One Night In Monte Carlo, Funiculi Funicula, I Love Paris, True Love, Tango Roulette, El Relicario.

Side 2: Dancing Violetta, April in Portugal, La Vie En Rose, Donkey-Tarantella, La Mer, Czardas.

MGM STC 4086

4 track, 7 1/2 ips, 43:45 mins., \$7.95

Symphonic arrangements of popular and semi-classical selections, brilliantly played by the Monte Carlo Light Symphony Orchestra, and superbly recorded in MGM's 21 Channel Sound, make this tape a real treat for the ears.

This is a full, clean, big orchestra sound, in which the 21 Channel process brings a realism in music reproduction that is more than welcome to the discriminating listener.

Although the entire orchestra is evenly balanced, solo work by the various artists is easily identified. Impeccable clarity, extremely wide dynamic range, and broad stereo effect, are all combined to produce a highly recommended tape.

STRINGS AFIRE IN SPAIN

The Clebanoff Strings

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

Track A: Malaguena, Besame Mucho, Ritual Fire Dance, The Flea, La Paloma, Souvenir of Mexico.

Track B: Latin Fire, Jalousie, Ay Ay Ay, Miserlou, Samba de la Cumparsita, El Torero.

MERCURY ST 6032

4 track, 7 1/2 ips, 34 mins., \$7.95

This new release is a sequel to Clebanoff's *Strings Afire* album ST 6019, and was recorded with Mercury's new f:35d Perfect Presence Sound process. This revolutionary technique has produced in *Strings Afire in Spain* a tape that is flawlessly and impeccably recorded, with the utmost in dynamic range, the absolute tops in clarity, and a complete absence of noise or hiss. It all

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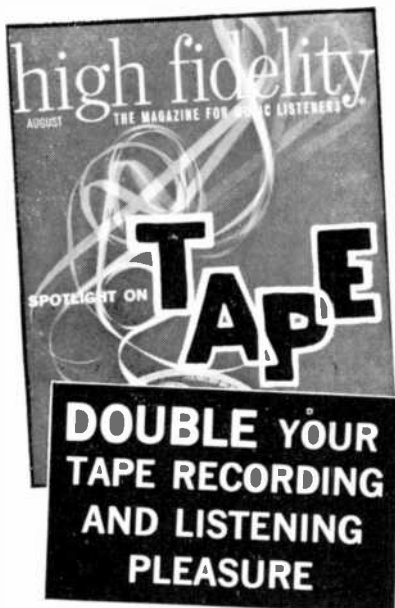
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- **TAPING FM STEREO** by Edward Tatnall Canby. What to check and double check before you press that button to insure finest results.
- **TAPES FROM THE PROFESSIONALS** by R. D. Darrell. A report on prerecorded tapes that provide unusual listening treats for musical and sonic connoisseurs.

AND EVERY MONTH a whole section, **THE TAPE DECK**, brings you R. D. Darrell's reviews of the newest 7.5 ips stereo tapes in reel form to help you build an outstanding tape collection.

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adds up to a superb demonstration of what can be done if the time, effort and know-how are directed to that end.

So much for the technical excellence—the same can be said for the arrangements, as well as the outstanding performances of all of Clebanoff's artists as they present a thrilling program of familiar Spanish melodies. The presence is so remarkable that this orchestra seems to step right off the tape and into your music room. For the best in listening, try this one.

MR. PRESIDENT

Perry Como and Company

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

Sequence A: Opening, It Gets Lonely in the White House, The First Lady, In Our Hide-Away, The Secret Service, Pigtails and Freckles, Is He The Only Man in the World, Is She The Only Girl in the World. Sequence B: They Love Me, I'm Gonna Get Him, Glad to be Home, Song for Belly Dancer, Empty Pockets Filled with Love, This is a Great Country.

RCA VICTOR FTP 1174

4 track, 7 1/2 ips, 36:30 mins., \$7.95

Also RCA Cartridge KPS4045, \$5.95

Irving Berlin makes his return to the Broadway scene with a score that is most timely and appropriate in an era when the First Family, in addition to its real function and responsibility, becomes a subject for entertainment.

While *Mr. President* may not be his greatest work, the tunes are gay, tuneful and bright, with clever and witty lyrics. Regardless of the critics' mixed opinions of the Broadway production, it is a real treat to hear Perry Como, Kaye Ballard, Sandy Stewart, the Ray Charles Singers and Mitchell Ayres Orchestra give their interpretations of the best of the tunes in the show.

Benefiting from excellent arrangements, RCA's tape is well recorded and pleasant to listen to. We liked it.

STARLIGHT CHORALE

Roger Wagner Conducting the Hollywood Bowl Symphony Orchestra and Chorale.

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

Side 1: Verdi, Anvil Chorus from "Il Trovatore," Wagner, Wedding March from "Lohengrin," Gounod, Waltz & Chorus from "Faust," Puccini, Humming Chorus from "Madame Butterfly," Gounod, Soldier's Chorus from "Faust."

Side 2: Bizet, March & Chorus from "Carmen," Wagner, Pilgrims' Chorus from "Tannhauser," Verdi, Triumphal Chorus from "Aida."

CAPITOL ZP 8390

4 track, 7 1/2 ips, 32 mins., \$7.98

Roger Wagner conducts the Hollywood Bowl Symphony Orchestra and his own Chorale in a fine grouping of well known opera choruses presented apart from the entire opera.

Standing on their own as separate musical selections gives these "standards" a different effective and pleasant flavor.

Presented in brilliant, full stereo, the performance of the Orchestra and Chorale is melodic, stirring and beautifully created. This tape is a must for those with musical tastes for the high spots in operatic music.

JAZZ

WEST SIDE STORY

OSCAR PETERSON TRIO

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

Side 1: Something's Coming; Somewhere; Jet Song.

Side 2: Tonight; Maria; I Feel Pretty; Reprise.

VERVE VSTC 268

4 track, 7 1/2 ips, 34:37 mins., \$7.95

The Leonard Bernstein West Side Story musical score presented in the jazz style of the Oscar Peterson Trio. Peterson, Ray Brown, and Ed Thigpen have been playing together for many, many years and the oneness of thought, jazz interpretation, and execution are well exemplified in this recording.

The treatment afforded the tunes by these top notch artists makes for a pleasant, relaxed listening session.

It is recognized that the trio works best when playing to a live audience. Though this album is studio recorded, it reflects the qualities of a live performance.

BURSTING OUT

The Oscar Peterson Trio With The All Star Big Band

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

Side One: Blues For Big Scotia; West Coast Blues; Here's That Rainy Day; I Love You; Daahoud.

Side Two: Tricotism; I'm Old Fashioned; Young And Foolish; Manteca.

VERVE VSTC 285

4 track, 7 1/2 ips, 36:55 mins., \$7.95

The Oscar Peterson Trio (Oscar Peterson, piano; Ray Brown, bass; Ed Thigpen, drums) is presented integrated with and backed by an all star band playing the arrangements of Ernie Wilkins, another great in the jazz field. Peterson turns in an excellent performance. However, he works much better in the environment of the trio.

On the review tape the stereo effect was more pronounced on side two. Overall recording quality is about average. Fans who are interested in the rarity of catching the trio with a big band composed of top jazzmen should have this album.

RENT

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CAPSULE REVIEWS

MGM STC 4097, JUMBO. Ornel and the Starlight Symphony Orchestra. 4 track, 7½ ips, 35 mins., \$7.95. These are the songs featured in Billy Rose's "Jumbo," MGM's film story of life under the big top. Ornel and his Starlight Symphony give their usual fine performance on the lovely Rodgers and Hart melodies, and the considerable care given to the arrangements make for top stereo. A moderately brilliant tape, that shows off the orchestra in grand style.

MGM DTC 4095, LOVE SONG FROM MUTINY ON THE BOUNTY, and Other Songs of the Islands. Manuel, his Orchestra and Chorus. 4 track, 7½ ips, 41:25 mins., \$7.95. Manuel and his Orchestra have concocted a colorful American version of the music of the Islands, and occasionally sound like authentic native musicians. Only three of the songs from the film are used, however, the rest of the instrumental and vocal offerings are equally rich in romantic mood and feeling. The music is smooth, soothing and relaxing. Sound is recorded with good balance, fidelity and due regard for stereo effect.

LONDON LPM 70060. I WISH YOU LOVE. Caterina Valente and Stanley Black. 4 track, 7½ ips, 37:30 mins., \$6.95. Caterina Valente had established herself as a promising vocalist a few years ago when we heard her on monaural records. Now on this new stereo release, she is teamed with the talented Stanley Black, always a prime favorite of ours for many years. The result of this happy union is obvious from the first number. Caterina sings a group of European flavored love songs in her own distinct style. Stanley Black arranges and conducts the orchestra with occasional bits of his unique piano magic creeping in. London's sound is faultless.

WARNER BROS. WSTC 1482. BING CROSBY ON THE HAPPY SIDE. 4 track, 7½ ips, 37:30 mins., \$7.95. Bing Crosby keeps right on doing it. Ageless, especially in voice, this crooner, who for more than three decades has been a headliner, can still beat out a happy tune. An unidentified group of male singers sing-a-long with Bing and add immeasurably to the atmosphere of this song fest. Nineteen tunes, many of which you haven't heard for years, are treated as only Bing can treat them. All real favorites like Cecelia, Darktown Strutter's Ball, Five Foot Two, and Little Grass Shack, bring back many memories. While this is more of a sing-a-long, rather than strictly Crosby solos, it is happy music, and you will like it.

LONDON LPM 70061. GEORGIA BROWN SINGS KURT WEILL, Orchestra conducted by Ian Fraser. 4 track, 7½ ips, 36 mins., \$6.95. Since Georgia Brown received rave notices in the current Broadway hit "Oliver," it is only natural that she would record her own album. The choice of the late Kurt Weill's songs was a wise one, for his music has an appeal that is unique in itself. Both popular and little

known songs of this fine German composer are polished and delivered by Georgia Brown in her unusual voice that can best be described as vibrant. Of course, Weill's old favorite, "September Song" is used at the start and finish of this album. Arrangements and accompaniment are skillfully done. Recording is top notch.

RCA VICTOR FTP 1186. TRAVELIN' Chet Atkins. 4 track, 7½ ips, 29:35 mins., \$7.95. Billed as a virtuoso, Chet Atkins sounds a little less than that, but all in all he plays "homey" music with a nice, pleasant, easy-to-listen-to beat. On this tape he offers a group of numbers he popularized on a recent South African jaunt, using rhythm and piano accompaniment. Recording is clearly done with proper regard for stereo. Good background music.

RCA VICTOR FTP 1198. FLAMENCO ANTIGUO Carlos Montoya. 4 track, 7½ ips, 35:31 mins., \$7.95. This album of pure, authentic Flamenco music performed by a master of the guitar, Carlos Montoya, shows the versatility and amazing technique of this artist. To appreciate the music you must, first of all, understand and like Flamenco, as it is somewhat limited in audience appeal at times. If this is your kind of music, you will be thrilled. Recorded with remarkable fidelity and presence.

MGM STC 4102, CONNIE FRANCIS SINGS MODERN ITALIAN HITS. 4 track, 7½ ips., 36 mins., \$7.95. Connie Francis imparts a true native flavor to this album of modern Italian favorites, a few of which are sung in English. Arrangements and accompaniment are properly tailored to her style, and close-miked recording adds much to the illusion of presence. A good voice with a personality makes this one you will like.

RCA CAMDEN CTR-688, SUNRISE SERENADE. Living Strings, 4 track, 7½ ips., 31 mins., \$4.95. The Living Strings are capable of interpretations of great variety, but this rendition of Glenn Miller favorites lacks the tone, rhythm and enthusiasm that made his music so distinctive. The tape lacks real quality, with hiss, skips and generally inferior recording quite noticeable. Most of the recent Living Strings on the RCA Camden label have been far superior to this one.

KAPP KT 41051, THE GREAT HITS OF BRAZIL. Paulo Alencar and his Orchestra. 4 track 7½ ips., 30:45 mins., \$7.95. This collection of prize winning Brazilian melodies, though little known in this country, will be particularly pleasing to devotees of South American music. Catchy, sophisticated rhythms are authentically played by Paulo Alencar and his Orchestra, who know what to do with their native music. Recorded in Rio de Janeiro, the tape is well balanced, with wide spread dynamic range, and outstanding presence. Surface noise is at a minimum, and stereo effect is good.

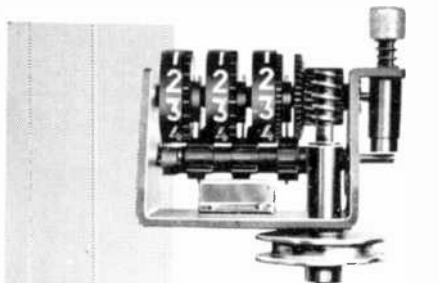


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At last! A professional quality bulk eraser for the amateur recordist. The ME-77 completely removes recorded and unwanted signals from reels of tape up to ¼" wide and 7" in diameter. Seconds after you switch it on—you have a fresh—sound-free and noise-free tape ready for recording. And since the ME-77 reduces background noise 2 to 4 db below normal erase head levels, future recordings will be as clear as the original. Easy to use, the compact ME-77 comes in a durable bakelite housing. Only \$24.50

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(Resetting by Push Button)



E-401
Electromagnetic Counter

Tamura Electric Works Ltd.

364, Shimomoguro-2, Meguro-ku, Tokyo, Japan
Cable Address: TAMURAELEC TOKYO
Tel: Tokyo (491) 7101

CROSSTALK

from the Editors

FOR YEARS WE have waged a losing battle against the prefix "pre". According to Mr. Webster's estimable dictionary, "pre" denotes precedence in time, place or rank.

* * * * *

OUR PARTICULAR GRIPE was with pre-recorded tape. It just didn't seem to make sense. A tape was either recorded or it was blank. Who has ever heard of a pre-recorded disc, yet the situation is exactly the same for the owner of a record cutting machine buys blank discs just as the owner of a tape recorder buys blank tape.

* * * * *

BUT WHEN THE owner of a phonograph goes into a music shop he doesn't ask for a pre-recorded disc. He asks for a "record" or a "phonograph record". Why not a "tape record" instead of pre-recorded tape?

* * * * *

OUR LITTLE ENEMY, the prefix "pre" is becoming so common in use that it is beginning to go the way of "high fidelity" which the Federal Trade Commission is now trying to define after it has died. Once it stood for an accurate reproduction of music but now we have high fidelity lipsticks and a host of other products having nothing to do with the audio field.

* * * * *

JUST THE OTHER day we came across a shot of a helicopter lowering a phone pole into a hole. Know what kind of hole it was, according to the caption under the picture? Of course, it was a pre-dug hole.

* * * * *

THEN WE CAME across a statement which went "pre-state its reasons beforehand." Now if that isn't carrying coals to Newcastle we never pre-heard of any. In the store you can buy pre-packaged meats, but all the meat in store is pre-packaged, even if its still on the quarter before the butcher cuts it. This, we suppose, would be pre-cut meat, that came from a pre-slaughtered animal fed on pre-grown hay which was pre-planted, etc.

* * * * *

THE USE OF the formerly innocuous prefix on almost everything is beginning to assume epidemic proportions. If you don't believe it, just start noticing the increasing, and in many times, unjustified use of the "pre."

* * * * *

THIS MAGAZINE IS no place for lessons on semantics but we sure don't want to see tape caught in the same trap that the term "high fidelity" was . . . and the quicker the "pre" is dropped, the better. Let's just have a blank tape or use the past tense and have "recorded" tape, or even "tape records" which might be more self-explanatory insofar as the general tape buying public is concerned.

* * * * *

THIS IS THE last blast we are going to blow on the subject. Maybe we know when we're licked. We, perhaps, are guilty of having a pre-conceived idea which we have now pre-written down for you to read on this pre-printed page—anyhow, you get the idea.

TAPE CLUB NEWS

Club Members Help Each Other

Round robin tapes provide a special pleasure to voicespondents because they enable a person to talk to and hear from a number of other people in other parts of the world by means of a single tape and in a limited time. The Voicespondence Club devotes a special department in its Club magazine to round robins and to helping various VS members get together in such groups of mutual interest. Among the round robin tapes now in circulation are a music appreciation robin, including VS-er Ray Thurston of St. Louis, a hillbilly music robin from Paul Harlow, Bridgewater, Mass., a barbershop quartet robin from Charles Fraass, Flemington, N. J., and a truck driver robin from Carl LeMier of Sunnyvale, Cal. On the latter various truck driver members of the Club will give their experiences and hints on safety on the highways which they have learned through hard experience.

Carl LeMier of the truck driver robin and his wife, Polly have done a good many other interesting things with their recorder and by voicesponding. For instance, voicespondents of the LeMiers' living in Omaha sent material for dresses for their two daughters along with color photos and measurements of the girls. From the pictures and measurements, and aided no doubt by the word pictures on their frequent tapes, Polly made the two Christmas dresses and sent them off. They fitted perfectly!

Voicespondent member Lewis Bray of

Everett, Mass., has long been entertaining his tape friends with samples of his organ playing. Recently he convinced fellow VS-er Ed Hudson of North Bellmore, N. Y., that he too should learn to play the organ. Since then Lew has been giving Ed organ lessons by tape, and they are promising their other voicespondents that they will soon be able to play a duet on tape—with each side of the duet originating from a separate location!

Contest in Full Swing

The 1963 Creative Recording Contest promoted by the Magneto-Vox Club is now rolling along. The club reminds us—what is amateur recording? Amateur recording is creative recording. And what is creative recording? That's what your microphone records, when you place it in the right place. Not near the radio receiver or the record player, because the invention in this kind of recording comes from the other end—the radio station or the recording studio. This recording from radio or record player needs more care and attention which is an important quality. If you are doing good quality recordings like this, you already have the best qualification for making creative recordings that would be more successful. All you need now is a place to put your microphone. Look around yourself, listen to the beautiful sounds. Now, record them on tape and listen again and discover how amazing and fascinating sound hunting is.



RECORDING TAPES

"MASTER MAGNETIC" tapes are top quality, have high sensitivity and higher frequency response of 15 KC than others.

Selected for FM recordings and theatrical sound cues and effects. All 7" reels are guaranteed splice free with 15 day money back guarantee.

1200'	7"	Acetate	.....	3-11	12-23	24+
1800'	7"	Acetate	.....	1.23	1.21	1.19
1200'	7"	Mylar regular	.....	1.59	1.57	1.55
1800'	7"	Mylar tensilized	.....	1.47	1.45	1.43
2400'	7"	Mylar tensilized	.....	1.79	1.77	1.75
				2.89	2.86	2.83

Other sizes—3" to 14" reels and cassettes upon request. Can be assorted. Add .15 postage per reel, .10 for 24" lots.

Dictating machine tape and reels available.

Speed winders, any size reel 3" to 14" combination standard spindle or NARTB hub. \$69.50 each. Aluminum construction.

R. S. DECH, R. No. 1, Allentown, Pa.

IRC Members Invited

Dr. E. B. Norris, Indiana Recording Club member has invited any or all fellow members for a weekend, June 29 & 30, to his farm on the east shore of beautiful Lake Maxinkuckee, in northern Indiana.

Some cottages are available on the farm, and there are plenty of motels in the vicinity. Lots of camping sites are also in the area. Bring portable grills, food, recorders, cameras, and suntan lotion.

Dox has promised to take the group out in one of his boats for a night recording session, and he has promised a loon will sing. Swim, hike, talk, tape the Sunday carillon concert at nearby Culver Military Academy, visit the fish hatchery, or take a trip down the Tippencanoe River.

While this notice appeared in the Indiana Recording Club bulletin in plenty of time for all plans to be made, we mention it here again because this kind of fellowship among club members is the sort of spirit which makes a club prosper.

JOIN A CLUB

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

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

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

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

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

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

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

INDIANA RECORDING CLUB
Rosemauri Brickens, Secretary
R.R. 4, Box 384
Indianapolis 27, Indiana

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

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

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

STEREO INTERNATIONAL
Jere A. Pankhurst, U. S. Director
37 East Avenue
Cortland, N. Y.

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

THE VOICESPONDENCE CLUB
Charles Owen, Secretary
Noel, Virginia

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

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

WORLD TAPES FOR EDUCATION, INC.
(Sponsors of World Tape Pals)
Dallas 15, Texas

OVERSEAS

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

ENGLISH SPEAKING TAPE RESPONDENTS' ASSOCIATION
Robert Ellis, Secretary and Treasurer
Schoolhouse, Whitsons Bay
Berwickshire, Scotland

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

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

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

WORLDWIDE TAPETALK
Charles L. Towers, Secretary
35 The Gardens, Harrow
Middlesex, England

PLANNING A PARTY??

Here's the answer to the old-time question of what can we do that's different?



SEND FOR A TAPE FUN KIT

The Tape Fun Kit is composed of whimsical, hilarity provoking, laugh-filled skits, all of which are designed primarily for fun—and lots of it. Each skit is short and each has a script for every character called for.

10 SCRIPTS INCLUDED

Kit No. 1 contains ten scripts—all different—all amusing. These skits are excellent for affairs where a goodly number of party-goers are present. Everyone has something to say and he or she can say it as his imagination interprets it. The ten scripts encompass 26 different characters, 14 male and 12 female.

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Please send me Tape Fun Kit No. 1. I enclose \$2.00. Send First Class. I enclose additional.)

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NEW PRODUCTS

Heavy Duty Tape Eraser



Amplifier Corporation of America, 398 Broadway, New York 13, N. Y., has introduced a new Heavy-Duty Bulk Tape Eraser, the "Magneraser Senior." The unit is powerful enough to completely erase tape on a reel with a once around revolution of the reel. It is designed for use with audio, computer, telemeter and machine control tapes as well as with 8, 16 and 35mm soundstrips. It completely erases the most severely overloaded tapes and lowers background noise levels to 3-6 db below some new tapes. The single spindle position accommodates 3, 5, 7 and 10½-inch reels. It has an automatic on-off rocker switch which cannot be left on accidentally. The frame is hard aluminum with bakelite top and bottom plates. The unit is 7" in diameter, is 3¾" high and weighs 10 pounds. It is available in 110 and 220-volt models. For further details write the manufacturer.

New Freeman Robot



Freeman Electronics, 729 N. Highland Avenue, Los Angeles 38, Cal., is announcing its "200 Robot" stereo tape recorder. It is fully transistorized and is completely automatic, offering automatic reverse or automatic continuous play in both directions. The unit is also capable of sound-with-sound, sound-over-sound, echo chamber ef-

fects, four heads, off-the-tape monitoring while recording, four-channel mixer with four input level controls, 30-watt stereo power output, wavetraps for multiplex recording, hysteresis synchronous capstan motor plus two variable speed induction motors. It has two five-pound roller-bearing dynamically balanced flutter filters and a 10-pound flywheel. Function selection is by push button. It will take up to 7" reels and has speeds of 3¾, 7½ and 15 ips. Wow and flutter specs are .12% or better at 7½ ips. Price is \$995. Literature is available from the company.

Sub-miniature Phone Pick Up



The Fargo Company, 1162A Bryant Street, San Francisco 3, Cal., has announced a new sub-miniature telephone pickup coil designed for transistorized recorders, amplifiers and transmitters. It has low impedance and will pick up from within ten inches of the phone. The Type F-105 Pickup Coil measures only ⅝" x ⅜" x ⅜" and may be held in place with pressure sensitive tape. It can operate with a remote pickup cable of up to 100 feet in length. Complete information and price is available from the company.

Terado Inverter



The Terado Corporation, St. Paul 8, Minn., announces its transistorized power converter to provide 60-cycle, 110 volts AC from 12-volt car or truck batteries. The frequency is maintained with a vibrating reed and is accurate to within ½-cycle. It delivers 300 watts. Write company for full details.

TAPESPONDENTS WANTED

This listing is for those seeking tape correspondents, looking for swaps of tapes, etc. and it is a free service for our readers. If you wish your name listed send us the following information on a post card: 1-Name, 2-Mailing Address, 3-Kind of recorder, speed and number of tracks. 4-Subjects on which you want to tapespond or items for which you are looking. 5-Indicate whether you are an adult or teenager. Listing will run two months and then be dropped to make way for new listings. Address your postcard to: TAPESPONDENTS WANTED, Tape Recording Magazine, 101 Baltimore-Annapolis Blvd., Severna Park, Md.

Tape Recording magazine assumes no responsibility for any inquiries between people listed in this column which are not answered.

Jim Oser, 5 Young Path, Newton Center, Mass.; Recorder: Realistic 999, mono record, stereo playback, 1 $\frac{7}{8}$, 3 $\frac{3}{4}$, and 7 $\frac{1}{2}$ ips; Interests: Music, R & R, Coins, Social Science, Politics, Sports (I have recordings of some professional basketball games and some world series game); Teenager.

Charles Torre, 1552 Rake Court, San Leandro, Calif.; Recorder: Airline 3801 two and four monaural track record, two and four track stereo playback; Interests: All kinds of music, especially Latin, organ, and special recordings of electronic music. Have rather an extensive library of records of all kinds, will record the type of music wanted (if available) on any tapes sent. Like playing the organ, have a Baldwin spinet with percussion. Looking for recordings of the Hammond Sideman, and of home organists; Teenager (16).

Herman Berliss, 61 North Ridgewood Road, South Orange, New Jersey; Recorder: Norelco 300, speeds of 1 $\frac{7}{8}$, 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips, 4 track; Interests: Photography, tape recording, tennis, mathematics, humorous sketches, and candid conversations. I will answer all tapes sent to me; Teenager (15).

Howard G. Mayer, 263 Biltmore Ave., Elmont, L. I., N. Y.; Recorder: Lafayette, 4 tracks; Interest: Want tapespondence with collectors of Bing Crosby and other personalities. Lots of material. Send tape or write; Adult (58).

Liza Paszament, 43 Harrison Ave., Highland Park, N. J.; Recorder: Concertone, 2 track, monaural, 7 $\frac{1}{2}$ ips; Interests: Music, sports, movies, arts and crafts, Girl Scouting; Age 9, 4th grade.

L. Kennedy, 89, Ashville Avenue, Birmingham 34, England; Recorder: 3 speed on which I can "multi" record, this being my big interest in recording, and I would like to tapespond with someone similarly interested.

Dino de Vries, Seranostreet 26, Willemstad, Curacao, Netherlands Antilles; Recorder: Uher Stereo-Record III, 2 and 4 track, stereo and mono recording and playback abilities with speeds of 1 $\frac{7}{8}$, 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips; Interests: Looking for strange and unusual tapes, sound effects, taped scripts for plays (møllerdramas), music and original soundtracks from great movies and popular music (Dixieland, Jazz), meeting opposite sex, short stories (all tapes promptly answered); Adult (20).

Jeffrey Kurland, 23 Terri Road, Framingham, Mass.; Recorder: NEC-RM70LB, 2 track mono, 3 $\frac{3}{4}$ & 7 $\frac{1}{2}$ ips; Interests: All phases of electronics, radio, etc., general talk with anyone, pop music, especially twist and R-n-R, Jazz, tapesponding, will help people in training for first class F.C.C. phone license, will talk to anyone, anywhere, and would like to make friends in foreign countries and all over the U. S., but I can only speak English. No need to write, will answer all tapes; Teenager (15).

Richard J. Arthur, 2217 Winterwood La., Topeka, Kansas; Recorder: Wollensak T-1515, 3 $\frac{3}{4}$, 7 $\frac{1}{2}$ ips, 2 track, monaural or stereo; Interests: Square dances with calls. We are forming a 10 member (10 different states) round robin tape club. Each month you send one singing and one patter call (of professional or good local called) to one person. You should receive nine tapes, to be copied and sent on to the next person. If interested, send tape with information about yourself followed by one tape of dances, strictly non-commercial; Adult.

Dermot A. Connelly, 3 Westley Avenue, Ivanhoe, Victoria, Australia; Recorders: 2 Japanese National, 2 or 4 track, speeds of 1 $\frac{7}{8}$, 3 $\frac{3}{4}$ 7 7 $\frac{1}{2}$ ips; Interests: Business, home life, humor, movies, music (most types), pets, theatrical photography, color photography and slides, public affairs, Rotary International, amateur radio, stereo and stereo records, science taping, T.V., travel, world affairs, receiving and answering tapes, English only spoken; Adult, wife, Bee; daughters, Julie (21), Sue (20).

Aaron Kaback, 1162 Riderwood, La Puente, Calif.; Recorder: V-M 720, 4 tracks, speeds of 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips; Interests: Very, very interested in sightings of flying saucers or other information in this field. Interested in tapesponding with women and men my age, 19-25, on any subject that you are very interested in. Also interested in things that can't be explained, the supernatural or ghost stories that you have heard or witnessed. People with bowling problems that can't make that easy spare or other bowling troubles; Age 20, single—every tape answered promptly.

Mike Berman, 13 Pickwick Rd., DeWitt 14, N. Y.; Recorder: Wollensak T-1500, 2-track mono., Speeds 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips; Interests: Natural Science, science in general, science fiction, sound effects, 35mm photography, optics, music of all kinds in-

cluding jazz, especially D. Brubeck, A. Previn and H. Mancini, T.V. recordings especially of important news events (also radio), general conversation; Can speak Spanish fairly well; will answer all tapes; Teenager (15).

David Ross, P. O. Box 225, Pomeroy, Ohio; Recorder: Lafayette 4-track, RK-137, 3 $\frac{3}{4}$ and 7 $\frac{1}{2}$ ips; Interests: Popular & classical music; would like to meet someone who plays piano or organ using the chord method, dancing, new steps, photography, sound effects; would like to tapespond on any and all subjects; will promptly answer all tapes; Confirmed bachelor; (27).

David Howell, 18930 Ringling, Tarzana, Calif.; Recorder: Wollensak T-1500, monaural, 2 track 7 $\frac{1}{2}$, 3 $\frac{3}{4}$, access to various other machines for copying, etc.; Interests: Politics, Sociology, Philosophy, opera, symphonic & contemporary music, foreign affairs, religion, science fiction, French & Russian, comedy, collectors vocals (78s and cylinders, 1895-1935); enjoy controversy and argument; Teenager (16).

H. B. Behrendt, 431 Steves Ave., San Antonio 10, Texas; Ampexes, portables battery operated. Any speed and tracks according to need including professional; Interests: Creativity, novel ideas and information exchange; unusually good materials of all kinds—music, sounds, education, historical, documentaries, business and industrial; make tape recording best medium for spreading the world's outstanding knowledge and entertainment, including the German and Spanish languages; Adult, but anyone is welcome.

Betty Kerr (Miss), 1162 Riderwood, La Puente, Calif.; Recorder: Voice of Music Model 720 7 $\frac{1}{2}$ ips and 3 $\frac{3}{4}$ ips, 4 tracks; Interests: people with a vast knowledge on human nature, evolution, any subject that interests you also interests me, psychology, would also like to tapespond with someone who can prove that men are not all alike, also interested in E.S.P. Wishes tape-contact with single men and/or women between ages of 25-38; Adult (23).

William D. Wallace, 11 Air Postal Sq. AF12970953, APO 239, San Francisco, Calif.; Recorder: AKA I Longplaying stereo, 1 $\frac{7}{8}$, 3 $\frac{3}{4}$, 7 $\frac{1}{2}$ ips 4 track; Interests: Amateur radio, documentaries, bagpipe & organ music and any subjects of general interest; Adult (24), Single.

Derek Craig, 6 Gordon Dr., Woodview Pk., Brampton, Ontario, Canada; Recorders: Robuk, R.C.A., Phillips, Petron, 1 $\frac{7}{8}$ and 3 $\frac{3}{4}$ ips; 7 $\frac{1}{2}$ ips, Mono, 2 track & 4 track, playback Stereo (4 & 2); Interests: Like to converse on anything of a general nature; Like all kinds of music; Have over 56 tap pals throughout the world; By all means send tape first; Personal answer guaranteed by return mail; Member of W.T.P. & A.T.E.A.; Have own studio; Adult (19).

"WHY MY RECORDER IS IMPORTANT TO ME" CONTEST

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

Gentlemen:

I am a voice major in college. Before last year when I got my tape recorder, I had to practice my songs either with my accompanist or by myself, and I don't play piano very well. When I would practice by myself, I would sit in a practice room for hours trying my best to learn the accompaniment, and that was only when I could get a practice room! It would take me forever to learn the song this way because I would have to concentrate so much on my piano playing. So only after I had conquered the piano accompaniment could I begin to really learn the song. But last year I got a tape recorder, a portable. Now I have a new method that saves me tedious practicing and piano playing. A week or so before a performance, my accompanist and I get together and tape the accompaniment to the song which I will have to perform. So, instead of practicing with him or by myself, I practice with the tape. In this way, I have the accompaniment two or three weeks before I have to perform, and neither my accompanist nor myself has to put in so much time. With this "portable accompaniment," I practice anywhere I want and I don't have to worry about finding a piano or practice room or try to play the piano myself. This way when I'm practicing, all I have to do if I make a mistake is turn the tape back a few feet. It is almost like a scientific learning process! Now my accompanist and I only get together once before the performance to put the song together and tape the accompaniment to the next performance. Tape recorders truly deserve their place in music.—*Ronald V. Tancredi, Cedarhurst, L. I., N. Y.*

Gentlemen:

My recorders are important to me because they provide a way in which my wife can ready sermons and sermon material that I may have them available as I prepare my sermons. You see I am blind.—*S. Frank Paine, Helena, Okla.*

Gentlemen:

My recorders are important to me for many reasons.

First, I am very much interested in keeping myself informed as much as possible, but, being partially sighted, I can't read newspapers and magazines as much as I'd like to; therefore, my recorders are a great help. I tune in at least two news and comment broadcasts and, since I can't always be at the radio every time, I record the daily programs, then re-record the portions that seem most vital to my education. So they are time-savers as well as eye-savers.

I also save, from these programs, travel-

ogues, personality pieces, especially of people I admire, discussions of moral and social problems, political problems, national and international. Now, I am gradually organizing all this material into their respective categories, on separate reels. Trouble is I'm getting so I don't know when to stop, it's so interesting. I have interviews of interesting personalities from Don MacNiell's Breakfast Club, and a small collection of really good news stories as exciting as fiction.

On Sunday there are four or five good sermons to record and keep me on an even keel during the week.

But my real pleasure is in recording music, birdsongs, other sounds of nature and environment. I was told that a cat's purr can't be recorded. 'Tain't so. I think I've got a good one. I recorded the strike of our Seth Thomas clock at 7½ ips and played it back at 1⅞ ips. It sounds a lot like Big Ben.

I'm now looking to the future when I establish my Doll Hospital and take the recorders with me for background music, stories for the kids, etc. And the end is not in sight for me so I'd better quit, except to say that I have enjoyed the letters of the other contestants tremendously. Happy recording, everybody!—*Miss Fay Kamphuis, Grand Haven, Mich.*

Gentlemen:

When I first bought my recorder (a Sony CS-300), I was motivated primarily by the clearer reproduction afforded by tape. Since then, however, the versatility of this machine has continued to amaze me. At present, I am preparing for a career in teaching, and I am sincerely beginning to believe that a tape recorder is indispensable in teaching. I have found that taping classroom lectures (despite the fact that doing so means I must haul 51 pounds of machinery around campus with me) and then reviewing my notes and my tapes at the same time has improved my grades. Taping also gives me a means of retaining important lectures on something more substantial (and less easily lost) than binder paper.

But the value of the tape recorder goes far beyond this. Taping also affords me an easy method of accumulating a library of such things as Shakespearean plays. By recording on 2400-foot reels, using all four tracks monaurally, I can save about 90% over the cost of the records, and can save a proportionate amount of storage space. Any of the literary treasures that I thus obtain, I can use later as teaching aids.

But the recorder can be used in another (probably more effective) way as a teaching

aid. Assigning each student a part in a play like *King Lear*, and then allowing the class to hear (on tape) their own reading of scenes from the play can develop in the students much more of an interest than merely assigning the play to them could ever hope to achieve.

In preparing speeches and the like, the recorder is equally invaluable. By using earphones, I can listen to a speech as I deliver it as well as when I play it back. This allows me to correct errors more rapidly than I might otherwise.

And, at night, it is still extremely relaxing to come home and listen to that clearer reproduction that originally led me to the tape recorder.—*James P. Martin, San Mateo, Calif.*

Gentlemen:

Though my husband is the real "tape bug" in our family, I have always enjoyed our recorder.

My greatest enjoyment from our recorder has always come from being able to exchange tapes with my husband when we are apart. He is in the Navy and is sometimes gone for six months at a time. During these times the children and I look forward to receiving his tapes as eagerly as a child expecting Santa Claus. And thanks to tapes, he hasn't had to miss hearing the children learn to talk or the excited squeals and chatter on a Christmas morning when he was away. This has been and always will be the most wonderful part of having a recorder, as far as I'm concerned, but recently my husband came up with a use for our recorder that amazes everyone.

I have to wear a hearing-aid and one morning I woke up and found it wasn't working right. I had to leave it to be repaired for a week or so, and by the time my husband got home the following day I was a nervous wreck, having to keep the children in almost constant sight to be sure that they were all right, having to depend on my five-year-old to tell me if the phone or doorbell rang, fearing someone would come to visit, and so many other things that only one who has lived in a world of near silence could understand. After my husband had been home long enough for me to calm down and relax, I said "You do so many things with the recorder. If only you could turn it into a hearing-aid for me." And that is exactly what he has done!!!

He took a set of headphones, put a long extension on them, plugged them into the recorder, put them on me, plugged in the mike, turned the recorder on, and said, "Testing, 1, 2, 3, 4." And I heard him loud and clear! So now I can go all over the downstairs with my headphones on, work around, have company, and do most everything just as I always did. Of course, it startles people a bit to have me answer the door with a set of headphones on and a microphone in my hand, but once they find out what is going on they are amazed.

My "hearing-aid recorder" has saved me from a week of misery and saved my family from the terrible temper that my jangled nerves would be causing. A tape recorder is a great source of enjoyment to anybody who owns one, but to me it is far more than that . . . it is my temporary source of hearing.—*Mrs. Joanne Bearce, Brunswick, Me.*

INDUSTRY NEWS

MAGNETIC RECORDING INDUSTRY ASSOCIATION has elected W. G. Paradis, vice president and general manager of the Warwick Manufacturing Company, as its president. He succeeds William P. Gallagher, vice president of marketing for Columbia Records, as president of the association.

Other officers are: E. O. Welker, RCA Victor Records, vice president; Herman Kornbrodt, Audio Devices, secretary, and Jack Latter, Ampex Corporation, treasurer. Board members are Bernard Cousino, Cousino Electronics Corp.; Herman D. Post, Robins Industries Corp.; Daniel E. Denham, Minnesota Mining and Manufacturing Co.; Leonard Kronfeld, The Nortronics Company; Myron L. Kerney, Eastman Kodak Co., and retiring president Gallagher.

Forty-one companies are now members of the industry association. "If we are to feel the growth that is developing within our industry and keep pace with it we must encourage companies not now with us to join the organization," Mr. Paradis said. He also plans to develop closer liaison with other organizations, publish an association directory, schedule more MRIA technical meetings and update the booklet that was published jointly by MRIA and the National Better Business Bureau.

"It is possible we might develop a MRIA Service Certification that would set minimum requirements for servicing equipment," Paradis said. "It would be a stamp of approval that would give the consumer confidence that his recorder had been properly serviced and tested."

TELCAN, LTD., Main Street, East Bridgford, Nottinghamshire, England, has announced that it has developed low-cost equipment for home taping of TV programs which will be on the market before the end of the year.

Called "Telcan," it records both the sight and sound on standard 1/4-inch tape. Both recording and replay are similar to regular audio recording.

The recorder is expected to cost about as much as a sound only model and can be used as a separate unit or as a unit that can be built into a TV receiver. The equipment will record a program the viewer is watching or one on a channel other than the one he is viewing. According to the firm, using a domestic TV camera, a family could make its own TV films, on tape feeding the signals into the tape recorder. The unit weighs 15 pounds and is 17" long, 9" wide and 2" deep with a 4" protrusion for the motor housing. Playing time is 40 minutes and the maximum reel size is 11". Resolution is said to be 300 lines, peak white with a signal to noise ratio on the video of 28 db and on the audio of 40 db. The signal is taken from the TV set detector, the unit amplifies and assembles it in a form that can be recorded on the magnetic tape by the special transducer mechanism. The same transducer, which has no moving parts, reconverts the signal on the tape on replay into electrical impulses to operate the TV set.

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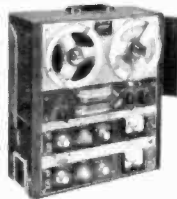
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LETTERS

Excerpts from readers' letters, including questions and answers, will be used in this column. Address all correspondence to: The Editor: TAPE RECORDING, Severna Park, Maryland

To the Editor:

First let me say that I find much of value in "Tape Recording."

One of the first things I read are the tape reviews, but I feel that one essential is missing here. One of the advantages of tape is the length which permits undisturbed renditions of the longer works. Unfortunately, too often the manufacturers completely disregard this value and put part of a piece on Side 2. In reviewing the tapes, then, I'm sure many readers would appreciate knowing when a piece is complete on one side and when it is broken up. For myself, I'd rather buy a quality recording than tape it off the air, BUT I'd rather tape it than spend good money for a split version.

One other suggestion. Most people who have a recorder, also have a tuner, speakers, and other hi fi equipment. How about at least occasional articles on these other aspects of hi fi.

Looks like I've room for one more request—some articles on the creative use of the tape recorder.—*Edwin H. Hess, Richmond Hill, N. Y.*

To the Editor:

One puzzling thing, your announcement and appraisal of values of new tapes released, is ONLY that.

Those studios putting tapes out, WHY don't they sign their distributor's name, address? Making NO effort to aid in SALES of their product?

Why not a *Distributor*, a clearing house, for ALL tapes, old and newest. Why not?

Or is the tape industry so "under the thumb" of the platter makers that tape cannot be pushed?

You can get a platter with a can of gasoline, or cat & dog grub, or what not? How Cheap. — *John Kadletz, Chatfield, Minn.*

There once was a one-stop source for all tapes but the firm went bankrupt. The only thing approaching it now is United Stereo Tapes which handles about twenty labels. The other tapes, from the major companies, should be available through the same people who distribute their records in your area.

To the Editor:

Just a small note to tell you how pleased I am with TAPE RECORDING. I read my first issue in May and decided then and there to become a subscriber.

I find particularly interesting your monthly articles and helpful hints for better recordings.

I have taken advantage of several of your advertisements and, since receiving your magazine, have acquired two tape-spondents, conversing with whom I find most enjoyable.

Many thanks for a truly great magazine and keep up the good work. — *Kail J. Malley, Aurora, Ill.*

To the Editor:

Having been a subscriber to your magazine for some years, I am taking this opportunity to answer the lament of Mr. Lcw Drill of Florida, regarding the lack of pre-recorded monaural tapes.

First I can't imagine anyone who owns one of the old Berlant recorders (a very good machine) buying pre-recorded monaural tape when the very best of material is available over the numerous F.M. stations all over the country and can be recorded off the air for the cost of the blank tape. Also discs can be borrowed from the public library and can be dubbed to tape. You can build a tape library of the selections of your choice by off the air and disc dubbing. Why buy pre-recorded monaural tape?

If you still insist on pre-recorded mono tape, contact Anthony Tapethon of Inglewood, California. They have millions of feet of pre-recorded half-track mono tape of all kinds. If there is such a great demand for mono tape, there is a business opportunity for you, make a deal for the rights to the masters and have them duplicated in mono and make yourself some money selling them; don't quit your present job though, until you see how you make out. Last but not least, put a stereo playback head on your Berlant, it will also play monaural, and your troubles will be over.—*Rod Quisenberry, Maywood, Cal.*

To the Editor:

I always wait with eagerness for each issue of TAPE RECORDING. With the March issue I was overjoyed to find two articles in the mag. that I was very much interested in. I sure want to thank Tommy Thomas for his article on TAPE CONTROL YOUR SLIDES FOR \$6.00 and you for publishing it. I felt the same way. I didn't want to put out that much money for one. I followed his instruction to the letter and I find that it works like a charm. I like one feature that the commercial ones didn't have. Thanks again to both of you, it was well worth waiting for. But where can you buy a parabolic reflector? Thanks again to you both.—*Hugh Moad, Kansas City, Mo.*

Suggest you write to C. W. Torngren Co., 236 Pearl St., Somerville 45, Mass., regarding parabolic reflectors.

To the Editor:

For its "Why my recorder is important to me" contest the Tape Recorder Magazine is to be commended. It not only is offering another contest and securing good publicity for the tape recorder industry, but also is compiling an important reference list of original ideas which is important to science and education.

As a speech therapist I read the entry of Mr. David Robinson with great interest. By the tone of his writing I must assume that his boy's speech was better

after removal of the adenoids and tonsils.

Before other well intended parents use their recorders in the same prescribed manner, however, a word of caution must be loudly sounded . . . not all children talk better after a T. & A.

Ever since reading Mr. Robinson's contest entry I keep worrying. What would have been the psychological consequences had his boy's voice not improved, or had it become worse?

Several reasons here are explained why some children's voices do not improve after a T. & A. and some actually sound worse. They will be explained by way of describing several actual cases.

Case #1: Eight year old Freida was brought to me about eight months after her T.&A. She spoke as a child who had been born with a cleft palate with air emitting from her nose each time she made certain consonants in her talking. She had this kind of speech from the time she returned from the hospital, but her parents were told this would be only a temporary effect . . . and often it is.

What caused her voice to sound this way after a T.&A.? Prior to her operation Freida had adenoids so large that they completely prevented the passage of air through her nose. When air could not pass through the nose the muscles controlling the rear opening of the nasal passage then became functionally lazy. Then later on when the nose was opened widely by removal of the adenoids air rushed through wildly and could not be controlled by her dysfunctional muscles. This in turn caused her speech to sound as though she had been born with a cleft palate.

Case #2: Eleven year old Charlie was brought to me some six years after his T.&A. with a hoarse and throaty voice quality. His voice also was lower in pitch than was appropriate for his age. His voice had taken on this characteristic right after his T.&A. and then stayed that way right up to the time I met him.

It is not unusual for children to have hoarse, tense, and throaty voice qualities after a T.&A. Usually, however, their voices become clearer in several months. When youngsters' voices persist in being hoarse, and tense for more than six months after a T.&A. it is wise to ask their pediatricians to refer them for speech therapy.

Case #3: Jo Anne was seven years old when she was brought in. Her parents and teacher complained of the way she pronounced the 's' sound. While she passed the standard pure-tone hearing test she demonstrated difficulty in discriminating between all sounds resembling the 's' sound. She also had trouble knowing when other people pronounced the 's' sound correctly.

History showed that until she was four years old she had suffered greatly with colds, sore throats, ear infections, hearing loss, and similar illnesses. Up until she had her T.&A. at four years old her speech developed very poorly. When she was four years old she had a T.&A. and after that, blossomed out beautifully with better health, speech, and everything . . . that is, everything except her 's' sounds.

Why didn't her 's' sounds develop clearly? During those critical years before

her T.&A. when children usually are developing 'an ear' for speech she was denied the opportunity of properly hearing speech. Because the 's' sound is one of the hardest to learn she found difficulty in adequately picking it up after the T.&A. operation. As a matter of fact she did a pretty good job picking up all of the other hard speech sounds.

To be sure all three of these children improved with speech therapy, and so all three stories finished with happy endings.

The point I hope these three case reviews demonstrate is that Mr. Robinson's particular use of the tape recorder could create rather than solve problems relative to the psychological preparation of children for T.&A.'s.

I must say, however, that I am very happy that Mr. Robinson's procedure did work for his own son.—James M. Laing, *Speech Therapist, Baltimore, Md.*

To the Editor:

I noticed that there is a commercial product on the market that is designed for cleaning the heads of the tape recorder. It is a reel of ribbon that contains certain ingredients which will clean the heads. You wind and rewind it on your machine as you do a reel of magnetic tape. By winding it back and forth, it moves across the heads and supposedly cleans them.

Kindly advise me whether or not you have had any experience with this product and please state whether or not you will recommend it.—Edward Drayton, *Brooklyn, N. Y.*

While we have not tested this ourselves we know of no reason why it should not work. Since many recorders have heads which are hard to reach, the ribbon solves the problem.

To the Editor:

I use this opportunity for writing you about a difficulty which is, I believe, encountered by many tape buffs, and while I have been unable to solve the problem completely, my suggestions based on my own experience may be of value to others. It concerns only those who, like myself, use their recorder mainly for constituting a library of classical or operatic recordings.

In this activity one soon acquires a friend or two who are similarly minded, and then the problem soon arises of making a copy of some particularly good recording. Most of us have 2 recorders, so that a copy can be made—but in most cases the first machine acquired will not be as good as the second one (I am generalizing from my own case). By putting a better head on the old machine, converting it simultaneously from 1/2 to 1/4 track for stereo, I was able to bring its frequency response pretty much to par with the new and better recorder. However, I soon discovered another problem—the speeds. Since speeds of amateur tape recorders run with a $\pm 5\%$ tolerance from the theoretical 7 1/2 IPS speed, the difference in actual speed between 2 machines can be quite considerable. If two such machines are used for making a copy of a tape, which later is to be played back on

a machine other than the one that recorded it, the copy will not be any good, because the speed difference can be magnified to such an extent that the music will be off pitch. For example, if, to make the copy, recorder A (running 3% fast) is used for playback, and recorder B (running 4% slow) is used for re-recording, and the copy produced in this manner is then again played back on the better machine A, the music will be played back 10% fast, which may be good for rock-and-roll, but intolerable for any serious music.

The first problem will now be to find by how much each machine is off the speed and in what direction. Since the strobe tapes available on the market do not permit any accurate measurements (among many other disadvantages, they are so much thicker than regular recording tape that they do not run at the same speed anyway) I had to find a method for making accurate and reproducible speed measurements. This can be done very easily: measure the exact distance between the two posts at left and right of your head assembly. Measure out exactly 300 inches of recording tape + the post-to-post distance previously found—lets assume it was 5"—then you will have a piece of tape exactly 305 inches long. Put a leader tape on each end by splicing, and you are in business, if you have a stop-watch.

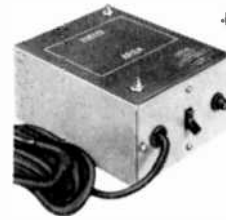
All that remains to be done now, is to place the tape, after reeling it up, on the recorder in such a manner that the tape/leader splice lies exactly on the right post towards the take-up reel. Press play-back button and stop-watch simultaneously and let it run. Press stop-watch again exactly at the moment when tape/leader splice on the other hand faces the post at the left of head assembly. Exactly 300" of tape have now run through the machine and the stop-watch should have recorded exactly 40 seconds (40 times 7 1/2 inches). Actually, the tape will have run through in less than 40 seconds if machine is fast, or in more than 40 seconds if machine is slow, and it is very easy to calculate percentage slow or fast from this time difference. The measurements are reproducible within 1/5 of a second anytime, and therefore accurate and reliable.

The second, more arduous problem is how to synchronize the speeds of both recorders sufficiently to make usable copies. If anybody knows an ideal solution, I would like to hear about it. All the remedies I can offer are:

- 1) electrical—connect the less good machine (its motor will probably be influenced more by voltage variations) by means of a powerstat, and try to correct the speed by varying the voltage.
- 2) mechanical—changing spring tension which presses the pressure roller against the capstan may permit minor speed adjustments.

Above means have enabled me to make near perfect copies for my friends, or for myself from their tapes, so I hope others may be able to profit from the above.—P. Hardt, *Sunnyside, N. Y.*

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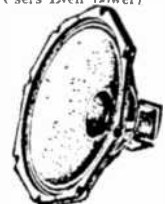
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Build this



by
Tommy Thomas

OF all the many devices I've made up for my recorders in the past fifteen years, this simple extension volume control unit is my favorite. My greatest delight, bar none! In fact, I use this little step-saving accessory more often than all the rest put together. Now, though the assembling and the wiring of this auxiliary attachment is very simple, I soon discovered that adding an "extra" volume control into a recorder's circuit CAN be an exasperating business. The main problem, which had me bothered for quite some time, is in discovering a control that can be added without materially "coloring" the sound. Some controls actually seem to *muffle* the speaker sound a bit, while others emphasize the bass or the treble unduly. Enough so that I was never quite happy and fully satisfied until I finally came across just the perfect little L-Pad attenuator that didn't upset the original sound one little bit (that I could notice). But more about this unit in a moment; first let's investigate why a remote volume control for a recorder might even be necessary. (And by the way, I'm talking about controlling the PLAYBACK volume only, and not the recording volume.)

Personally, I especially enjoy making candid recordings. I don't hide the mike—it's out where everyone can see it—but I often record by the hour when friends are visiting, and then afterwards I edit the "choice" material down to an interesting 20 minutes or so. But the big problem, when playing this edited tape back to my friends later, is that the playback volume usually varies most annoyingly. I

found myself constantly jumping up and crossing the room to my recorder to boost the volume for one part, then cutting it down hastily for another, etc. But now, with the volume control in my hand, I can put on a far neater "show." It's a feature much like the remote *focusing* control that some of the more advanced 35mm color slide projectors boast nowadays. Without moving from your easy chair, you can "sharpen up" any slide that needs it to everyone's greater pleasure. And the same with recordings.

But that's not the best part! Or its greatest use! My favorite way of editing recordings (or in fact, doing any tape listening at all) is with my eyes closed and with me stretched out flat on my back on our den couch, with the recorder on the other side of the room . . . and with the little remote volume control unit resting handily on my chest. If my wife sticks her head in the door or calls out from the kitchen, I can quickly and easily turn the volume down while we talk. Or conversely, if my two rather rambunctious boys are making so much noise that even closing the den door with a well-aimed pillow doesn't help, I just boost the volume until I drown them out.

Finally, this useful control is also a big help when I copy tapes. Normally, when I hook up two of my recorders together so I can copy from one tape to another, *the monitor playback volume is a bit too loud for comfortable listening.* This is especially true when someone else in the family is nearby, working on something else. So now part of my re-recording technique includes plugging in the extra volume control for the playback recorder's speaker, to tune it down a bit (for superior family relations, I might add).

The accompanying photos and diagrams tell most of the construction story, though I'd like to emphasize a few points along the way. Quite likely those of you living in large cities can locate the following parts at local hi-fi or electronics supply stores, but I've listed a mailorder source for the rest:

"A"—This CENTRALAB Model "WL" L-PAD came from Burstein-Applebee Co., 1012 McGee St., Kansas City 6, Missouri. It comes complete with black knob and instruction sheet, and is their Stock No. 14A221 for \$2.97 plus postage on 6 oz. *Important!* When ordering this L-Pad, be sure to specify the OHMAGE you'll need to most nearly match the amplifier output of your recorder. My Knight recorder here, for example, has 3.2 ohm speakers so I ordered the 4-ohm control (as being nearest out of a choice of 4, 8 or 16 ohms). You should be able to locate the ohmage value of your own recorder's speaker system either in the instruction booklet that came with the machine or you can check with your dealer. If still in doubt, it's very likely that a four (4) ohm L-Pad will do you fine. And note that the control's *shaft* was CAREFULLY shortened (with a hacksaw) by about a full inch.

"B"—This represents eighteen feet of BELDEN Type 8454 four-conductor CABLE. If not locally, you can obtain it from the Burstein-Applebee Company for 11¢ per foot by ordering their Stock No. 2A112. The individual wires are #18 gauge (same as regular lamp cord), so you can use as much as 25 feet of this non-shielded cable without any trouble. Keep in mind that since you are actually using two of the wires to lead OUT to the L-Pad and two of the wires to RETURN to the recorder, 25 feet of 4-conductor cable really represents 50 feet of double wires added in between the recorder's amplifier and speaker system. So if you need to go further than 25 feet away, you'd better locate and use wires of #16 or larger gauge.

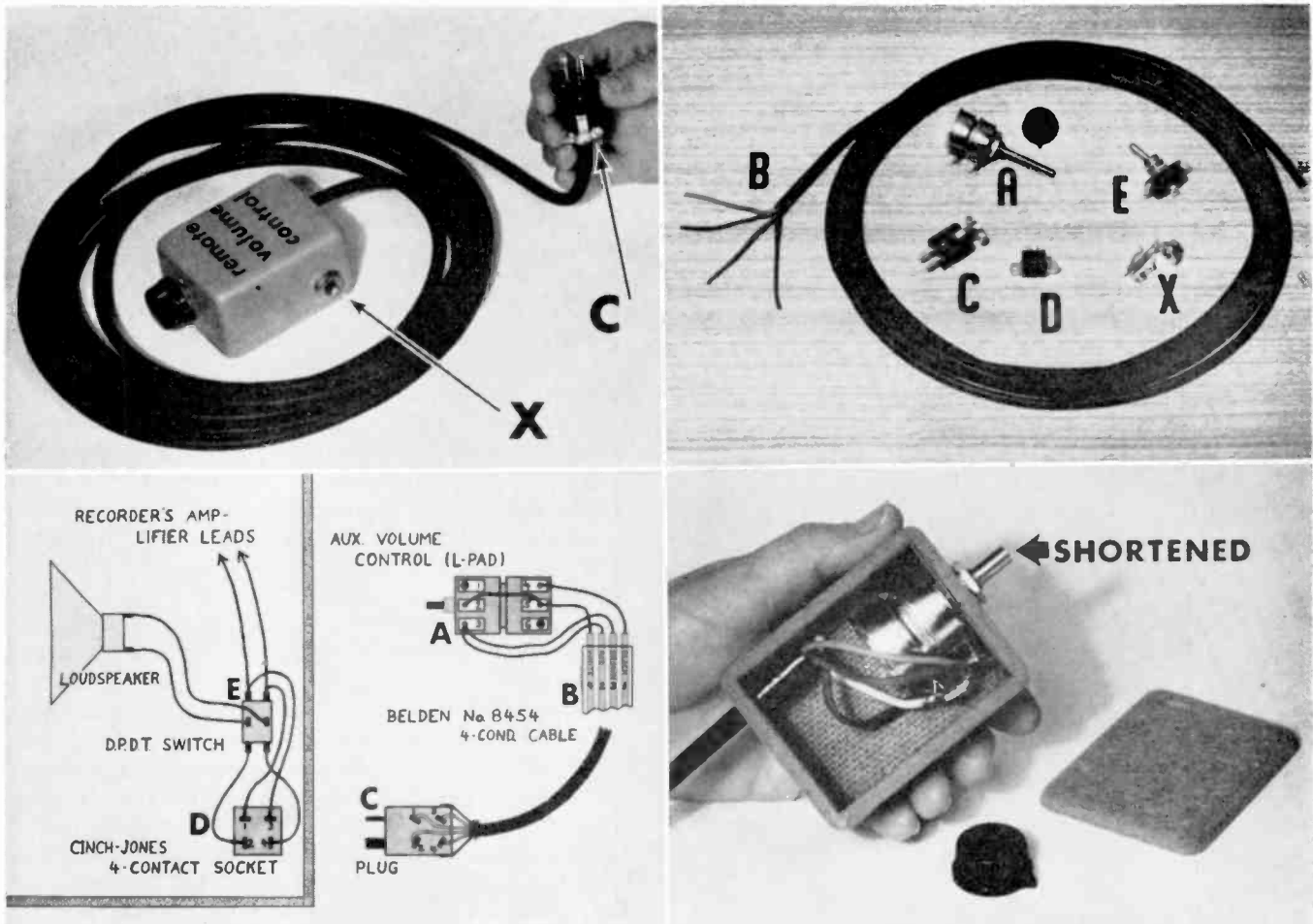


Fig. 2, upper left: The knob-controlled L-Pad housed in its little case connects to up to twenty-five feet of 4-conductor cable ending in a Cinch-Jones 4-conductor plug "C." Optionally, you can also wire in a phone jack "X" that automatically disconnects the recorder's speaker when you plug in a remote loudspeaker or set of headphones. Fig. 3, upper right: As you can see, only a few parts are needed for this simple hookup. "A," "B" and "C" (and "X" optionally) are used to make up the complete unit shown in Fig. 1. Female socket "D" and DPDT toggle switch "E" are mounted right on the recorder case itself, and wired into its circuit via the two wires going to the speaker. Fig. 4, lower left: Normally an L-Pad is mounted very close to the speaker it controls. All that we are doing here is wiring the L-Pad into the speaker circuit in such a way that it can be used from 15 to 25 feet away. Flip the toggle switch one way and your recorder works normally, flip the other way and the L-Pad can plug in and take over. Fig. 5, lower right: The housing was made from $\frac{1}{4}$ " Masonite pieces glued together as shown. Height is 3", width is $2\frac{1}{4}$ ", depth is $1\frac{3}{4}$ ". This was a very convenient size to hold comfortably in my hand but note that space was left for the phone jack "X." If you won't be needing this optional part, then of course the housing may be made smaller.

"C"—A CINCH-JONES 4-conductor Type No. P304CCT PLUG is put on the opposite end of the cable from the L-Pad. Burstein-Applebee Stock No. 12A179 for 53¢, sh. wt. 4 oz. When ordering, be sure to state the Cinch-Jones *type number* as well as the B-A stock number. Unlike the L-Pad, this part (and the matching socket) have numbers stamped right on the plug itself so it's easy to follow the diagrams. To further simplify wiring, I've "coded" these numbers to the four colors of the Belden cable as noted in Fig. 10. *Note!* This plug comes with a handy cable clamp for relieving the strain of the cable pulling on the plug. For a tight grip, first wrap a few layers of plastic tape around the cable underneath the plug clamp.

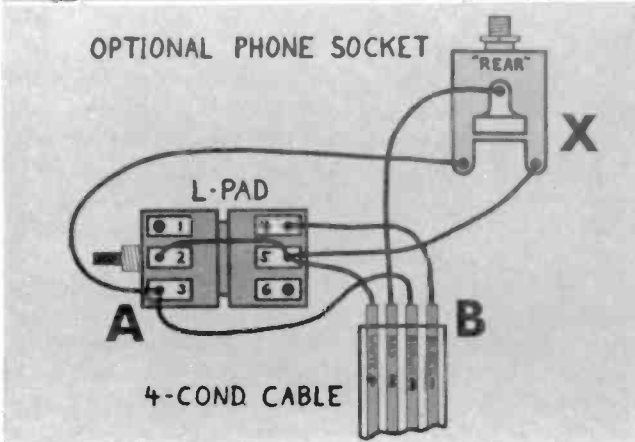
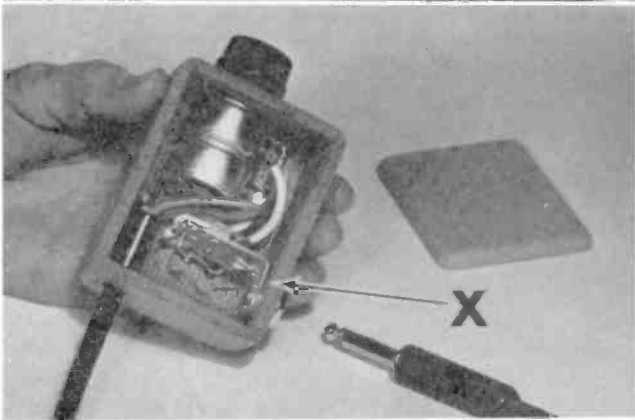
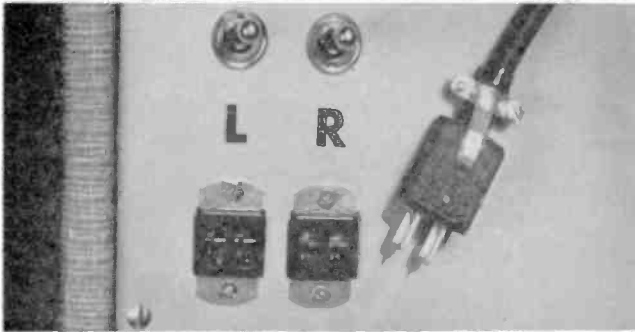
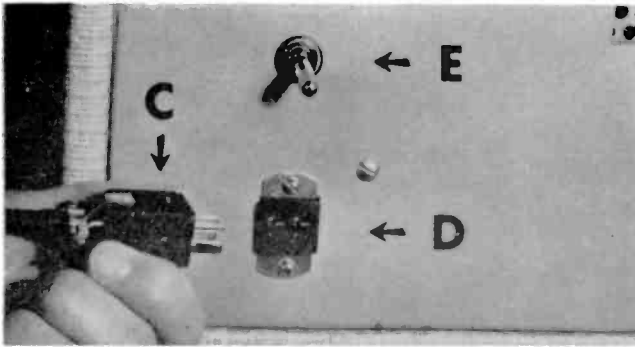
"D"—A CINCH-JONES 4-conductor Type No. S304AB SOCKET. Burstein-Applebee Stock No. 12A180 for 29¢, sh. wt. 4 oz. Again, be sure to include the Cinch-Jones *type number* when ordering. And, if your recorder is a stereo model with two speakers, you'll need two sockets.

"E"—Any good quality AC-DC type DPDT toggle switch is fine. The one used here (or two for stereo) is an especially dependable and smooth-working CARLING TOGGLE SWITCH, Carling Type 316-73 and Burstein-

Applebee Stock No. 12A650 at 78¢ each, 4 oz. sh. wt. each.

"X"—This is a midget phone jack that will take standard $\frac{1}{4}$ " phone plugs. With this jack hooked into the L-Pad circuit as shown in Figs. 9 and 10, you can easily plug in a remote set of headphones or a remote loudspeaker any time the occasion arises. It's a MALLORY Type A2A MIDGET PHONE JACK (closed circuit type) for 57¢ from the Newark Electronics Corp., 223 W. Madison St., Chicago 6, Illinois. Ask for their Stock No. 39F739, sh. wt. 4 oz.

The small HOUSING CASE (Fig. 1) that holds the L-Pad and its wiring was made from Masonite, but most any material will work as well. If you won't be needing the phone jack, an especially easy-to-assemble case may be made from a small food can, such as a Libby's 4-oz. can of Vienna Sausage. Remove both the metal top and the bottom and replace with glued-in circles of Masonite or some other thin wood or plastic material. Glue the top in place, wire and then fasten the L-Pad to the top and give it a final test before permanently gluing in the bottom piece. And be sure to wind quite a few layers of plastic tape around the 4-conductor cable *just inside* the case (see Fig. 9) to keep it from pulling out and exerting



undue strain on the inner wiring.

When wiring inside your RECORDER (Fig. 4), first cut the two wires going to the speaker, to give you a set of speaker wires and a set of amplifier wires. For a stereo set, duplicate this wiring for each speaker. If instead of two wires going to each speaker your set has *three* wires dividing between both speakers, then note which of these three wires is the "common" one (that is, goes to both speakers) and do the same with your own wiring. Wire the common wire to each of the toggle switch connections. Now you're all set up for MONO control of whichever speaker you've plugged the L-Pad into.

For those of you who would like to make this a complete STEREO control unit, you'll need *two* L-Pads hooked up side by side. Though it's not shown here, I have such a control myself and it's a terrific way to "fine-tune" *balance* your stereo listening from across the room and I can highly recommend it. Make your little hand-held case large enough to hold both of the L-Pads and use BELDEN Type 8418 eight-conductor CABLE. It's Burstein-Applebee Stock No. 2B195 and costs 22¢ per foot. But since the individual wires are a smaller (#20) gauge, I don't recommend using a total length of over 18 feet or so. On the other end of the cable you can use 8-conductor Cinch-Jones plugs and sockets but I think you'll find the 4-conductor plug and socket wiring (a double set, of course) easier to follow.

IMPORTANT! In order to keep the wiring as simple as possible, a *load resistor* was not included in the amplifier/speaker circuit inside the recorder. Therefore, be careful not to switch the toggle switch(es) from normal operation to remote operation until *after* the L-Pad is plugged in. Conversely, don't pull the plug out until you have switched the toggle switch(es) back to normal operation. This way, there's no danger (even though it's likely a remote one) that your amplifier will be damaged because of lack of "something" to absorb the power output. Finally, should you note that *rapidly* twirling the L-Pad control knob causes a scratchy sound to come out of the speaker, don't be especially dismayed. This seems to be inherent with L-Pads so don't think yours is defective. Just turn the knob slowly when making volume changes and it'll sound smooth as silk—and within a month you'll wonder how you ever got along without this wonderfully convenient little device.

Fig. 6, top: With the remote unit finished, your next job will be to find a place on the side or rear (as here) of your recorder case for the location of socket "D" and toggle switch "E." Aim for convenience of wiring to the speaker (keeping in mind that wire lengths are not at all critical) as well as plug-in convenience from outside. Fig. 7, upper center: If you have a stereo recorder with two speakers, then make exactly the same (though individually separate) wiring to each speaker. Then, for mono listening from either speaker, plug the remote volume control into the socket controlling the speaker you will be listening to. For stereo control, use a DOUBLE L-Pad setup. Fig. 8, center: When using the remote attachment, remember that this auxiliary control can only REDUCE the volume that comes from the amplifier; it can't go a bit higher. So set the recorder's volume control somewhat OVER what you'll want to listen to . . . and make note of this setting (mine is 2 o'clock) for all your remote usage. Fig. 9, lower center: Not everyone needs this optional feature (which always can be wired in later, of course, if you leave room for it in the little case) but for just a few cents more and with hardly much more wiring, you can install a convenient phone jack for remote speaker/phones use. Personally, I find it handy to have available. Fig. 10, bottom: Please note that the numbers on the L-Pad are not actually printed on the actual unit but correspond with the numbers on the diagrammed cable (Black, 1—Red, 2—Brown, 3—White, 4) are color-coded to simplify wiring when following down to the numbered 4-cond. plug.



Children enjoy making school tapes for exchange with classes in other parts of the country or overseas. To assure correct distance from the microphone (and the immediate availability of each actor), a circle was drawn on a sheet of paper, and placed on the floor, the pupils standing with their toes touching this circle. One girl holds the microphone in the center of the circle. The "producer" points to each speaker in an effort to keep the pace lively. Pupils are reading from a script prepared from material which they submit, in assignment, and often their exact words are used. Left to right: Vanessa Coombs, Lary Pistell, Marilyn Preston and Elana Wheaton of Grade IV, Royal Elementary School, Victoria, B. C., Canada.

MAKING A SCHOOL TAPE

by Ed Arrol

... Interschool correspondence by tape broadens students' knowledge of the world.

BEFORE I became a school teacher I worked as an advertising writer in a radio station. I was surprised at what I saw as I moved into an announce booth, one day, and discovered that one of my favorite announcers was actually *reading* what sounded like casual off-the-cuff repartee.

One of my first lessons, as a radio writer, was to check everything I had written for its sound. All around me, in the continuity department, other writers were cupping

their ears and reading their spot announcements to themselves to check if what they had written sounded like natural speech. (There is a great difference between the written and the spoken word, on paper. As a check, catch the conversation of a friend, on tape, and transcribe it word for word. Then compare this with formal writing.)

Hidden behind the smooth presentation of a radio script—or a school script—is something more: the hard work of research. Yet I refuse to believe that teachers (and other

tape recording enthusiasts) are incurably lazy, without a good reason, when it comes to making their tapes. If more of them could experience the satisfaction that comes from producing a good school tape I am sure they would count the extra work as part of the fun.

But the "how to" baffles owners of tape recording machines and it may be the reason why so many school tape recorders are found collecting dust in obscure cupboards at school and in teacher's closets at home. Although there is a surfeit of booklets listing the uses to which you can put your tape recorder, none that I have seen explain *how* to make a tape recording in the classroom, a tape you as a teacher could exchange with pride with another school.

The first step, of course, is to survey your materials at hand, and no two schools should produce identical tapes. Even if your tape recorder teaches you and your class one thing, to *listen* to life around you, then this marvellous electronic device will have done its duty nobly. In my class (39 Grade IV's) my pupils all play flutophones and you'd be surprised how often a flutophone, used singly or en masse, is worked into a sound effect.

One of the best ways to survey your material is to employ every child in the room to help you harvest it. If you make this a homework exercise for the weekend, or longer, you'll get the parents and grandparents in on the act, racking their brains to remember what the country was like fifty, or even one hundred years ago.

When the assigned paragraphs come back your work as a teacher begins. You survey the mass of material, taking ideas from it all, saving the best or portions of the best. Quite likely you'll have more than enough material for a documentary type tape that can be dramatized in parts, the "story line" or linking scenes being told by narrators. Adopt the form of the modern short story which has five main scenes. Make each of your five rows in the classroom responsible for a scene and have the best speakers link the presentation together.

The easiest type of exchange tape will be a general one. We decided to send a tape to a school in Saskatchewan, after hearing about that province's unique tape exchange. The overseas tape exchange was started in 1959 by Miss M. Gertrude Murray, Supervisor of the department's school broadcasts division, and exchanges have been made with teachers and classes in Australia, New Zealand, Rhodesia, Nigeria, England, Scotland, Borneo, Japan, Germany, Holland, Sweden, North West Territories (Canada), Thailand, United States and Wales.

All tapes in or out of the province go through the school broadcasts branch and this keeps the standard high. Mrs. Agnes Crouse, Script Assistant, explained Saskatchewan's system:

"About 25 tapes are prepared, recorded and mailed overseas each year and as many overseas replies are received and distributed to our schools. This involves considerable time and effort on the part of teacher and class who must prepare scripts and record the programs as well as considerable correspondence at School Broadcasts Branch. We set up all contacts in the province and overseas, edit the programs coming in and going out of the province and mail them.

"It is our wish that tapes have a personal and friendly tone rather than have students read informational items about school, home, town, and province, etc. We feel a fifteen minute program is long enough for children to listen to

and record. Music and songs, choral reading and short plays add variety and we suggest that classes ask questions on their taped programs. One Australian boy asked if we could speak the language and talk to red Indians.

"We believe the overseas exchanges are wonderful contacts for our Saskatchewan classes. We feel there is no better way to create bonds of friendship and understanding among classes whose opinions and attitudes will one day determine the climate of international relations."

The very word "Saskatchewan" baffled some pupils of my class who have spent their entire lives on Canada's west coast and know nothing but the sea, mountains, fish and trees. *STEP ONE:* Sheets of paper were passed out and the impressive title, "What Saskatchewan Means to Me" was dutifully written as a heading. To prime the creative pump I took a few answers from the pupils and listed these on the chalkboard:

Snow
Hot Summers
Golden wheat
Gophers

"What if we haven't been to Saskatchewan?" Tom Plasterer, the boy from Germany wanted to know.

"That's fine," I told Tom. "Tell them what Saskatchewan means to you and they'll soon correct you when their tape comes back. Perhaps the pupils from Saskatchewan will tell us what British Columbia means to them, and won't we have fun correcting them!" Tom saw the point and set to work with a will.

STEP TWO: After the pupils' work is done you'll take their rough, written reports and, looking beyond the spelling and grammar mistakes, beyond the incomplete sentences and other faulty grammar you will search for ideas, marking such in the papers (which will not be returned) with a line along the side, or underlining, or circling the specific idea in each case.

It is easier, at this point, to use a few of the basic radio writer's terms. One or two I'll discuss here; reason for the rest will be self-evident from glancing at a script. All script directions, for instance, are typed in capital letters; in other words, the usual typescript, only, is spoken.

Directions for Music and Sound are also underlined to further separate those from the lines to be read. Sometimes Music will begin and continue as background for conversation, for instance, then be brought up again. So, we have the terms FADE or FADE UNDER; and, later, MUSIC UP, perhaps even TO TIME if you want the music to fill the remaining seconds.

People (the actors) are usually given their common name. I have just finished a school broadcast script for elementary grades on bees, and this required a NARRATOR (use NARR. for short) which the department called a STORY LADY. Please note that every speech or sound effect is numbered (it is a good idea, also, to list the actors and all sound effects and music required on a separate sheet at the beginning of your script.) The reason for numbering is, that it's easier to say, "Go back to number 22" than to explain who says what and on what page. One more hint before parts of the script are examined and commented upon: it is advisable to type the script triple space between the numbers, and double space within each numbered section.

1. MUSIC: PLAY MIDDLE "C" ON FLUTES
2. LARRY: The *time* is March the fifteenth, nineteen sixty-three.
3. MUSIC: FLUTES PLAY "E"
4. STAFFORD: The *place* is View Royal Elementary School, at Victoria, British Columbia.
5. MUSIC: FLUTES PLAY "G"
6. FRANCES: The occasion, or the reason why, is an invitation to send a tape recording to Saskatchewan.
7. MUSIC: FLUTES PLAY "C-E-G-C" IN UNISON.
8. PUPILS: Hello, Saskatchewan!
9. STAFFORD: Here in Victoria we are entirely surrounded by water. We wonder what it's like to be entirely surrounded by land! Perhaps you will tell us in *your* tape recording.

Most of the vital statistics are contained in this introduction, excepting the number of pupils in my class. Here's how that was handled:

13. LARRY: Stafford! There's a hand up over here. And another one over there. In fact, I can see—goodness gracious! Ten, twenty, thirty-eight, thirty-nine hands are up including yours and mine!

Telling what they think of Saskatchewan (their own words, condensed, in some cases, from their original paragraphs) came out like this:

17. LARRY: Next, Thomas Plasterer. Tom is from Germany and his parents own a large motel here. In fact, his father is building a replica of old Fort Victoria at his Canadian Crest Motel.
18. TOM: I have never been in Saskatchewan but it seems to be very nice because I have read many stories about that province. It must be fun to watch the prairie dogs play. What is it *really* like in Saskatchewan?
19. ADELE ELIAS: I don't know anything at all about Saskatchewan but I think it might be a little bit like B.C.
20. GERRY GALVIN: One thing—I think the plains are nice farming places.

How do you introduce new voices? Have them speak, first, then tell who they were, is one way of doing it.

21. LARRY: Adele Elias spoke first and then Gerald Galvin . . . Frances Roberts—come over here and ask your question before the whole class talks about something from B.C.—tug boats.

(This last remark foreshadows what's to come.)

22. FRANCES: You must have many elevators. Also, do you catch many gophers in Saskatchewan?
23. PUPILS: CHORAL READING. THE HARBOR, BY KATHERINE KEELOR.
24. STAFFORD: Brenda Cannon is true to her name. She's sure to get a rise out of you whether your home's in Saskatchewan or British Columbia. Fire away, Brenda.

When people speak they use contractions, such as "she's" and "home's". Another point here, it's good to have controversy and Brenda's remarks are sure to get a rise out of the Saskatchewan class.

25. BRENDA: I don't like Saskatchewan. I know some of you wouldn't like it here. I don't like British Columbia, either. I like Manitoba. I like Manitoba because I was born there. I always thought Saskatchewan had snow all the time. How did Saskatchewan get its name?
26. LARRY: How *did* Saskatchewan get its name? And speaking of questions, here are a few more . . .
32. MUSIC: CLAPPING SONG. CLAP FIRST LINE ONLY.

By having the pupils clap the beat of a song they will play, later, on their flutophones an interesting rhythm has been injected to make a break in too much talk. Again, hearing is believing!

33. LARRY: Well, Stafford, our Clapping Song has started so we'd better move on . . . Say—when Mr. Arrol had us write our ideas about Saskatchewan what did you say?
 34. STAFFORD: Let's see, Larry. I said that Saskatchewan makes me think of golden wheat fields, grain elevators and livestock farms. I visited there once, Larry.
 35. LARRY: Lucky you! Tell us about it, Staff.
 36. STAFFORD: My cousin and I went for a hike on his father's fields. We walked at least four miles. When we came back we were covered with grasshoppers.
 38. STAFFORD: Speaking of wheat, Bruce Winfield has a good question. Speak up, Bruce.
 39. BRUCE: Can somebody tell me how much wheat a farmer gets out of a good crop?
 41. STAFFORD: Fay Hutchinson says that when she used to live in Saskatchewan she became used to the thunder, the lightning and the snow storms.
 42. FAY: During the winter the snow storms are real dandies. The snow goes over some people's heads . . .
 43. PUPILS (ALL TOGETHER) Wowie! Whew!
- This is pure corn but it gives depth to the sound, and it keeps the pupils alert. Their interest begins to flag at this point.
44. FAY: And when it gets that deep people can't go outside.
 45. STAFFORD: I should think not, Fay.
 46. WENDY: In the winter the snow is heavily falling down and you must dress very warmly or else you'll get bitten by old Jack Frost.
 47. LARRY: Wendy Sturrock. Let her speak (as in 46) then introduce her name.
 48. WENDY: The cows get ice on their hair and they drink a kind of sap and get it all over their faces.

(Continued on page 33)

Beat The Horses

by Al Stone and Don MacRae

(Photos by the authors)

... this tape game is perfect for parties or an enjoyable evening at home.



ALL BETS IN—

YES, you *can* beat the horses with your tape recorder—or at least some of your friends can. No, this is not a "system" guaranteed to make you a fortune over night. However, you'll reap a fortune in fun with this recorded parlor game, especially if friends drop by and the ice box is empty. You need no tails to pin on donkeys. You don't even need the donkey—he couldn't run in this class. This exciting game has all the thrills of the "Sport of Kings" and is as difficult to beat as the "hay-burners" themselves. Here's the way to make and play it.

One person in the crowd is appointed the "bookie" (the normal hazards of his profession are eliminated in *this* game). He may also have an "operator" assistant, preferably a non-player, to run the tape recorder for him. The duties of the "bookie" are many and the "operator" will relieve him of the extra trouble of running the recorder and thereby speed up the game. "Bookies" may be changed after a certain number of races, after a definite elapsed time, or at any other predetermined interval during the game.

The medium of exchange used is optional. You may wager buttons, matchsticks or wampum. WE much prefer jelly beans. In games of this kind, the odds are always in favor of the "bookie"—though they have been known to be upset. This is the reason for the medium of exchange that WE choose—our "bookie" doesn't like jelly beans!

You can record any number of "races" on a tape but the more the better. The more races you have on the tape, the more difficult and interesting the game becomes. Starting odds of all horses are recorded first. Following this is the actual race and then the finishing odds. The number of horses used in a race is also optional but should be consistent throughout the tape. Use the same names for the horses and always state their odds in the same order. In this way the "operator" can listen for the horse he knows will be named last in the starting odds and turn off the recorder. There's a reason for turning off the recorder at this point. Time will be saved if sheets of paper are prepared in advance listing the horses in the order given on



THEY'RE OFF!

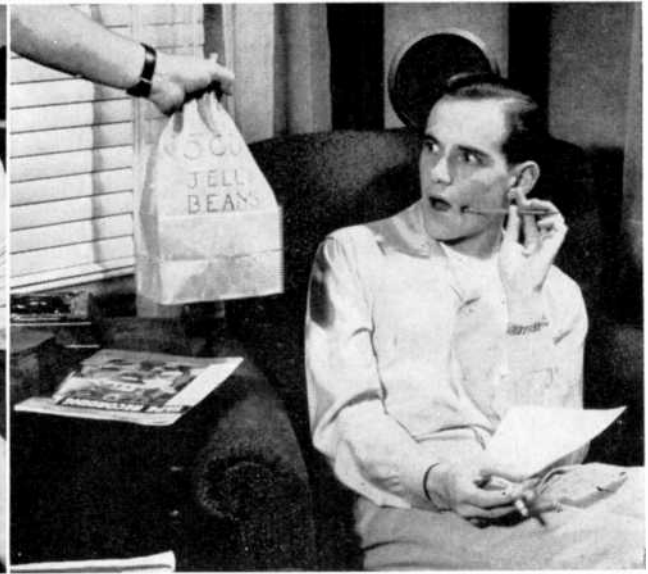


GUESS WHO WON . . .

the tape. When the "starting odds" are announced, each player can write the odds beside the proper name on his sheet. After the odds are given for the last horse, the recorder is stopped and the players are allowed time to study the odds of all the entries and write their betting slip. The players then make their bets with the "bookie." Right here is where you part company with some of your cherished jelly beans . . .

Any confirmed horse player will consider this next paragraph entirely superfluous. Read on—or not—depending upon your qualifications. Bets are placed on individual slips of paper. At the top of the slip, the player writes the name of the horse he wishes to bet on. Directly under this, he writes his own name. Under his name he writes the amount of his bet and the positions he is betting the horse to finish. This is done in the usual familiar code. For example, if the player wishes to bet two jelly beans that the horse will "place" (come in first or second), he writes his bet thusly: 0-2-0. The first figure shows the amount bet to win; the second figure, the amount bet to "place"; the third figure, the amount bet to "show" (finish in the first three places). If a player wishes to bet a horse on all three places, he writes his bet thusly: 1-1-1. This is known as betting "across the board." If the horse wins, he pays on all three places. A "straight" (or "win") bet is paid only if the horse finishes first. A "place" bet is paid if the horse comes in either first or second. A "show" bet is paid if the horse finishes in any of the first three places. Naturally the odds are higher to win than to place and higher (as a rule) to "place" than to "show." Odds must be stated at the end of each race for the first three horses. The winner's odds are announced for "straight," "place" and "show." The second horse's odds are given to "place" and "show." The third horse has only "show" odds. The player's original bet is returned to him plus his winnings. At this stage of the game, the "bookie" collects the betting slips (and the jelly beans) and the race is on!

Right here you have a chance to show a little ingenuity. You, as the announcer, must record numerous "races" (using the same horses) without revealing the winner to persons who have heard the race before! After the running description of the race, the "finish" odds are announced. The odds quoted for "straight" position at the finish *must*

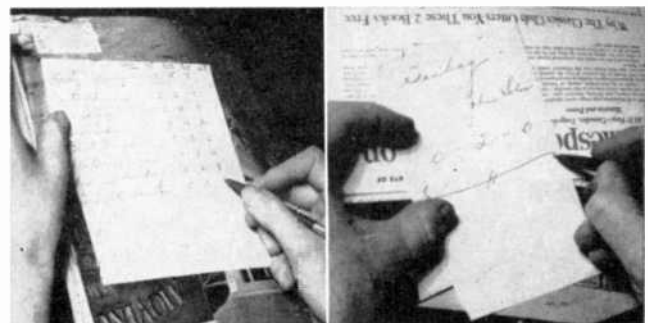


THE PAY-OFF!

be the same as those quoted for the same horse as "starting" odds. His "place" and "show" odds should be in proportion. The same is true of the horses who finish second and third. These should be worked out mathematically before making the recording to give the "bookie" a slight percentage advantage. "ODDS" bodkins! Take heart. It's really not as complicated as it sounds.

The "bookie" takes down the names and positions of the three winners and the odds they pay for each place. He pays off the lucky players and the rest of you sit around and watch the winners eat *your* jelly beans! Another race is selected and the entire thing repeated. Some sort of signal should be placed on the tape between races. In this way, the operator can easily identify the beginning of the race and by using his fast-forward and reverse controls, or "flipping" the tape, the races can be scrambled to prevent memorizing. For the same reason, voicing of the starting odds should be monotonously similar from race to race.

It might be a good idea to listen to a few races as broadcast over the radio or TV to get the swing of the announcers voice and the methods of calling a race. Then you can imitate his delivery when you make your own tapes. In general, the calling of a horse race is done in a rather "sing-song" fashion with about equal emphasis placed on each statement. The tempo can be increased as the horses come down to the wire by adding more excitement to your voice. Don't be afraid to "let yourself go" when making the recording—remember all those jelly beans will be at stake.



Left: Starting odds are written down for advance study. Right: Betting slips are prepared in the usual familiar code.

PRINT-THROUGH

—Fact or Fable?

. . . here are authentic facts on a much discussed subject. Does print through affect your recordings?

THERE is no single topic in the field of magnetic recording about which so much unfounded information exists as magnetic tape print-through. Only dribbles of sketchy information have been released from time to time concerning this magnetic phenomenon. Just recently has the magnetic recording industry been willing to discuss with frankness and candor magnetic tape print-through.

An inherent characteristic of the magnetic recording medium, print-through is a transfer of a recorded signal from one tape layer to adjoining layers when wound on a reel. Most frequently print-through is sufficiently below the sound level of the tape as to cause no trouble. In home type tape recorders the noise level of the reproducing amplifier and playback head alone is substantially in excess of the print level. Even on the most expensive professional studio recorders, using superior amplifiers with little background noise, print-through is rarely a problem.

It is not surprising an entire body of myth and folklore exists regarding magnetic tape print-through. Only in a vacuum and a nearly total blackout of factual information could the present print-through myths abound.

In research laboratories throughout the world a considerable storehouse of information has been built up during the past several years regarding the print-through phenomenon. While scientists still have not discovered the exact nature of magnetic tape print-through, enough information is now known to refute many unsubstantiated myths which abound in the recording industry.

Here, then is a collection of the most common print-through fables. When brought out into the light of day and confronted with the most recent scientific findings, it is only natural these myths will wither away like old wives' tales.

Print-through is a serious limitation of the magnetic recording medium. False. Providing a reasonable caution is exercised, print-through is not a significant problem. Under normal conditions, print-through should not be noticeable. On home type recorders with average amplifier and playback head noise, the print level is substantially below the machine noise level. Even on expensive studio equipment with exceedingly low noise amplifiers, print-through is not a problem.

Print-through is an inherent characteristic of magnetic tape. While not desirable, print-through does not pose a serious problem. In general, we live in an imperfect world in which every man-made object has its advantages and limitations. It is not realistic to single out magnetic tape print-through as a significant shortcoming. Magnetic tape has obsoleted older recording methods since it conclusively offers more advantages. For example, magnetic tape print-

through pales into relative insignificance when compared to disc surface noise problems, record wear, and equalization difficulties with a changing rate of velocity.

The cause of print-through is unknown. False. Admittedly there is much disagreement among theoretical physicists regarding the finer points of print-through origin. Many blanks remain to be filled in. However, most authorities are now agreed that print-through occurs through sensitization of magnetic particles in the tape's oxide coating by the A-C bias field.

A-C bias is used to make the tape linear in order to record. Since magnetic tape is non-linear, without linearization intolerable distortion would result. In front of the record head the strength of the A-C bias field is about ten times that used in the record process. Sensitized by the A-C bias, a remnant magnetization is induced from the recorded signal on one layer of tape to the next adjoining unrecorded tape layers when wound on a reel. Pre-print is when the signal transfer is ahead of the recording and post-print is when the signal transfer is heard behind.

Print-through is progressive when tape is stored for long periods of time. False. Magnetic recording tape is an ideal medium for storage of recorded information. Magnetic tape recordings are being sealed in time capsules containing a complete record of our civilization. Hundreds of years hence, when the capsules are opened, the magnetic tape should have a fidelity as good as the day it was first stored.

Most print-through occurs immediately after recording. The magnetic particles on adjacent tape layers, which have been sensitized by A-C bias, are indirectly more susceptible to signal transfer. As time passes, the magnetic particles become less and less susceptible to print-through so the rate of print becomes progressively less. Technically, print is occurring at a constant rate exponentially or is increasing at a log rate with log time. In simpler terms, this means that time is divided by equal increments logarithmically: 1 minute, 10 minutes, 100 minutes, 1,000 minutes, 10,000 minutes. Let us assume the print will increase 6 db from the end of the first day to the end of the 10th day. By the end of the 100th day an additional 6 db print will occur and by the end of the 10,000th day another 6 db.

If one were to make a recording, then play it back in a matter of several seconds after it was recorded, we might typically assume a 50 db signal-to-print ratio would be noted. However, if five minutes were allowed to lapse before playing the tape, a 48 db signal-to-print ratio would be present. If one were to wait an hour, the signal-to-print ratio would be 47 db and, after 5 hours, 46 db. Following 8 hours, very little more happens to the signal-to-print ratio. Typically, it would settle down to a value of approximately 45 db and never become worse.

Nothing can be done to control print-through. False. Several simple, straight-forward precautions, if conscientiously followed, should guard against audible print-through.

The worst possible condition for print-through is to store tape on its take-up reel without rewinding. By rewinding the layers of tape, the position of the oxide particles are, of course, changed and a double printing effect takes place, substantially less than if the tape had been left on the take-up reel.

Fortunately, nearly all recordists automatically rewind magnetic tape after recording for replay. In the case of dual track recordings, when the second track has been recorded,

the first track is in the "play" position. Time should be taken to run the tape backwards and forwards through the machine in the case of dual track recordings.

Excessive heat accentuates print-through, particularly during the first few hours after recording. Tape, under no conditions, should be stored in hot attics, closed automobiles in direct sunlight during summer or in winter on top of radiators or near heating ducts.

Avoid magnetic fields of all types. Keep newly recorded tapes away from all magnetic fields. The field need not have sufficient tendency to erase the tape but it can and does adversely affect the print-through level.

Print-through is most pronounced at high frequencies. False. Print-through does have definite frequency response characteristics. Print-through is most common in the middle frequencies. Print has a tendency to decrease at both the high frequencies and the low frequencies. Print-through decreases most rapidly as the frequency is raised. The reason for this is that high frequencies, recorded on magnetic tape, have short wave lengths. The recorded signal from north pole to south pole to north pole is spaced close together, making it more difficult for flux to extend into the next adjacent layer of tape.

In the lower frequencies, the ear is less able to detect sounds. Ordinarily objectionable recorder noises such as hum and ripple are generally undetected at the lower frequencies. Therefore, print-through is no problem in the low frequencies.

Print-through is most pronounced in tapes with thin, extra play backings. False. It is commonly thought that the thicker the tape backing, the less the print-through; the thinner the backing, the greater the print-through. Actually, such is not the case. In the low frequencies, there is no change in print level irrespective of backing thickness. In the high frequencies there is a slight increase in print-through in the case of thin backed tapes. However, because of short wave lengths at high frequencies, this differential is only slight.

As time goes on, the accumulated knowledge of print-through will grow. However, once understood, print-through

HOW WOULD YOU ANSWER?

Print-through is a serious limitation of the magnetic recording medium. TRUE FALSE

The cause of print-through is unknown. TRUE FALSE

Print-through is progressive when tape is stored for long periods of time. TRUE FALSE

Nothing can be done to control print-through. TRUE FALSE

Print-through is most pronounced at high frequencies. TRUE FALSE

Print-through is most pronounced in tapes with thin, extra play backings. TRUE FALSE

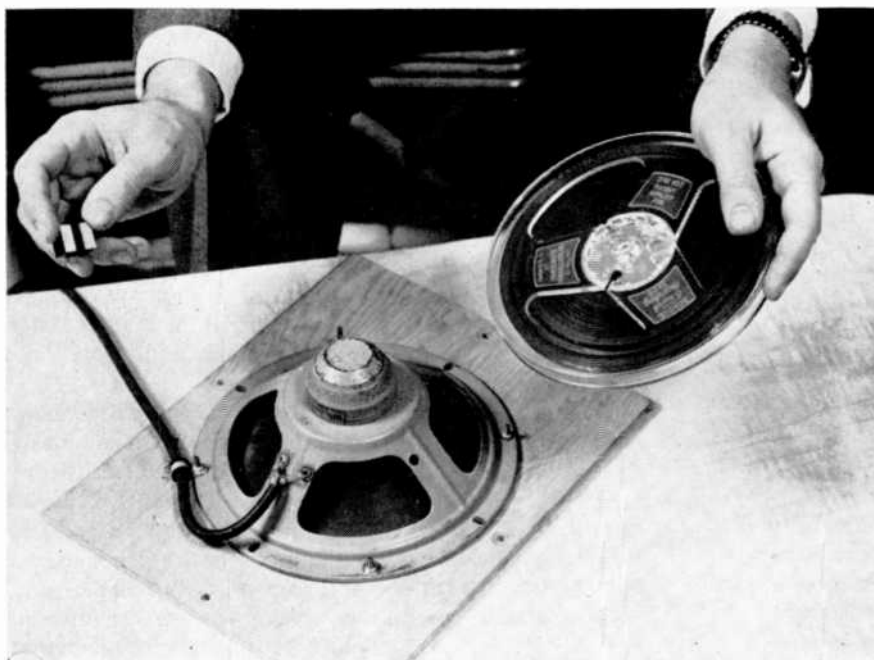
Print-through is clearly recognizable and cannot be confused with any other type of recording problem. TRUE FALSE

need not be feared by any recordist, amateur or professional.

Print-through is clearly recognizable and cannot be confused with any other type of recording problem. False. Print-through sound enthusiasts, who report repeated print-through difficulties, should immediately check their erase head for correct alignment. All too frequently, many cases of alleged print-through have been traced to the improperly aligned erase head.

Adjusting the alignment of the erase head of a recorder is generally not a precision job, but cannot be easily accomplished by any home amateur.

Even though, as we have mentioned, print-through is practically a non-existent problem with standard tapes, several companies make "Low Print" or mastering tapes that resist the effects of print-through even more strongly. These are used principally where absolute perfection is necessary.



Avoid magnetic fields of all types. Keep newly recorded tape away from all magnetic fields. The field need not have sufficient strength to erase the tape but it can, and does, adversely affect the print-through level.



TAPE AUTOMATED TOUR GUIDE

... tape takes over in conducting tours through art museums or other types of exhibits.

3M Company Photos

Two students are listening to an authoritative commentary while examining the Mathematics exhibit at the California Museum of Science and Industry. The tape recorded commentary is being played by the "Acoustiguide"—a lightweight recording tape playback unit which they are carrying slung over their shoulders.

THE tour guide, too often harassed, hurried and unintelligible, is being automated.

He is being replaced by a self-contained, lightweight, compact device which reproduces a tour lecture pre-recorded on a narrow strip of magnetic sound recording tape.

The automated guide—unlike the live one—always speaks with authority, because the tour lecture is prepared by one. It also speaks intelligibly, because the lecture is recorded by a professional narrator. It never tires, for it is a near foolproof electronic device. It is a personal guide, which can be accommodated to each individual's pace.

The device, tradenamed "Acoustiguide," was developed by a former Hollywood Oscar-winning screen writer who was frustrated by the inadequacy of art gallery guides during a tour of Europe.

Nearly four years of experimentation by the unhappy tourist, Val Burton, led to the development and production of a magnetic tape device to play professionally-prepared tour lectures.

It already has been introduced in several art and science museums, and can be adapted for scenic motor tours.

Burton, founder and president of Autolecture, Inc., 825

South Barrington, Los Angeles, producer of the device, also envisions the device as an educational tool for apprentice training and for supplemental study of the arts and sciences. It would relieve the teacher of personally instructing students in shop work and on museum tours.

However, Burton predicts its greatest use will be for personalized tours of art and natural history museums, zoos, botanical gardens, industrial plants, scenic areas, and all other attractions where guides are needed.

The Acoustiguide has been employed at the Baltimore, Chicago, Los Angeles, Phoenix and Seattle museums. A dramatized tour lecture is being prepared for Williamsburg, Va. Honolulu sightseeing tour lectures also have been developed for the Hertz car rental system.

The device is a "highly effective teaching tool for major exhibitions and one that our visitors appreciate and anticipate," Edward B. Thomas, educational director of the Seattle, Wash., Art Museum, has reported. "It has two distinct advantages. Privacy and pace. The ability to start and stop the machine at will makes it possible for the visitor to pace his tour in accordance with his own needs and pleasure."

The portable playback machine used for the museum tours is capable of providing 50 minutes of highly in-

An automated tour guide is a compact, lightweight recording tape playback unit which is being used in a number of American art and science museums. The "Acoustiguide" also can be adapted to provide commentaries for scenic motor tours.



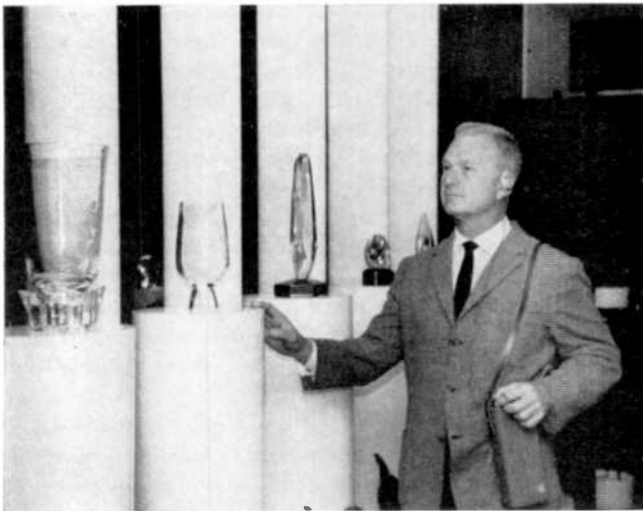
telligible information, while the unit designed for the Hertz Hawaiian sightseeing tours has a considerably greater capacity.

The Acoustiguide is versatile. It can pinpoint a single exhibit, or it can discuss a group of related materials. Tapes can be changed as exhibits are switched. Tapes can be prepared in any language to accommodate foreign visitors.

It is authoritative. Scripts are prepared by the museum, or tour director, and are recorded by professional narrators. Scripts can be dramatized, using actors and sound effects, if the exhibit lends itself to such treatment.

It permits each individual to pace his tour. The device can be stopped at any point so the visitor can study the exhibit, meditate, or rest.

It can point out details of an exhibit which the ordinary visitor would overlook, increasing understanding and appreciation.



Film star Eddie Albert is shown using an automatic tour guide at a Steuben glass exhibit. The professionally prepared commentary on the exhibit was recorded on magnetic tape for playback on a lightweight portable tape recorder—"Acoustiguide"—which was developed by a former Hollywood screen writer.

The tape can carry tour directions, and "commercials" calling attention to sales counters and other accommodations.

It does not require expensive installations and maintenance, like the "wired" wireless systems which are in use in some museums.

The Acoustiguide weighs 32 ounces, is four inches wide, nine inches long and two inches thick. It is carried over the shoulder like a camera, suspended from a strap.

It is equipped with two earphone jacks so two persons can use it jointly. One earphone has a short cord for the person carrying the device. The other earphone has a long cord for use by the companion. The earphone is attached to the ear by a sanitary, disposable paper loop. The Hertz sightseeing machine is equipped with a speaker, for use in a car, and with earphones for walking tours.

The unit has three controls—an on-off lever, a volume adjustment knob, and a reverse mechanism. The first two are controlled by the user. The reverse mechanism, to prepare the device for another user, is operated by a key which is kept by an exhibit attendant.

The end of each phase of a tour is signalled by an electronic beep, which notifies the user to turn off the machine and proceed to the next exhibit. Tour directions are recorded on the tape. The tour route and exhibits explained by the automated guide, are marked by an arrow design, the trademark of Acoustiguide.

The device is powered by a rechargeable battery. It is automatically recharged when the unit is placed in a storage cabinet which is fitted with a controlled, timed recharger and an ultra-violet lamp for sterilizing the earphones.

The unit uses No. 200 "Scotch" brand magnetic tape, which, it is claimed, was chosen for its fidelity, even at the machine's slow tape speed of 1 7/8 inches per second; strength, long-play and resistance to temperature and humidity changes. The tape also is impregnated with a dry silicone lubricant, which permits it to glide smoothly past the sensitive playback head with a minimum of friction and wear.

The devices are available to institutions and companies on a lease split-fee or flat rental basis.

Capturing the Melodies of

... the world's largest chorus is one of the least recorded. Here's an opportunity for many pleasant hours of recording fun.

THE next time you're wondering what to do with your tape-recorder, try setting it up in your backyard and picking up a little of the world's oldest and most unusual concert. You'll discover that tape recording insect sounds is one of the most fascinating hobbies you have ever undertaken. You'll enjoy making the recordings, and you'll have some of the world's most peculiar sounds to play back later.

There is no problem of finding material, or variety of material. Insect singers can be found in almost any kind of habitat, from the treetops to below the ground surface. Many species are actually more common in city backyards than anywhere else. More insects make noises than all other kinds of animals put together.

If you want to test the limitations of your equipment, try it out on some of the high-pitched insect sounds. Many of these have their stronger components above 10,000

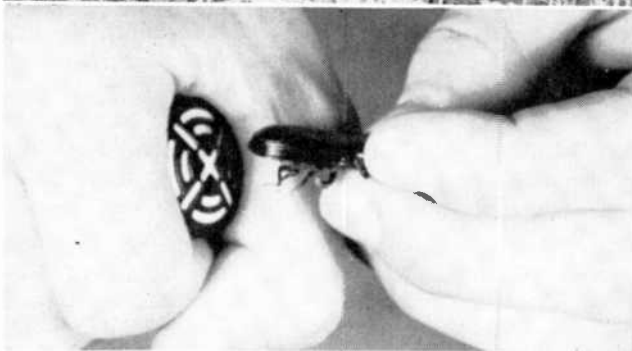
cycles per second, and even the best modern equipment has a tough time coping with them. Some insect sounds actually contain strong elements up around 60- or 70,000 cycles per second, higher than recorded for any other kind of animal. Fortunately, the majority are much lower pitched, and can be reproduced with simple and inexpensive equipment.

Insect sounds involve surprising extremes in many other respects as well. Some are loud enough to be heard nearly a mile away, and others are so soft they can scarcely be heard when the insect is held practically inside one's ear. Some insects may sing at terrific rates for hours without stopping, others may sing one short song, then not sing again for several minutes. Some sing by day only, some at night only, and others sing both day and night. Some species sing one song in the daytime and a completely different one at night.

The insect noise-makers in any locality can be arbitrarily divided into two groups. There is first a relatively small number of loud singers, comprising the crickets, katydids, long-horned grasshoppers, and cicadas. Through their combined efforts, these loud singers produce a veritable bedlam of noise throughout summer and fall. There are only about forty or fifty species in any given locality, and perhaps a few hundred in the country as a whole. The other group of sound-producers involves literally untold thousands of species that make peculiar, soft sounds that are seldom, if ever, heard by human ears. These include beetles, leafhoppers, treehoppers, spittlebugs, aquatic bugs, wasps, bees, ants, flies and many others. Even such a lowly creature as the hog louse has well-developed sound-producing organs.

The fact that there are so many insect singers is responsible for the biggest problem in making good recordings of insect sounds. Even though there are only a few loud species, there may be a thousand or more individuals shrilling away in your backyard at any one time. The problem is to pick out any one individual and get a decent recording of his song. The people who record bird songs obtain directionality and cut out extraneous noise by facing the microphone into a parabolic reflector. This reflector is then turned toward the singing animal, as shown (next page), and the sound waves striking its surface are reflected toward the microphone in the center. These reflectors are usually made of aluminum for light weight, and may be covered with automobile undercoating paint on one or both surfaces. This serves to dampen noises made by accidentally striking the reflector, and to eliminate an undesirable metallic effect that often occurs. The cost of such a reflector about two feet in diameter is usually around fifteen or twenty dollars.

This method works very well for the loud insect singers, and those that sing in the treetops, such as the angular-



Top: the author preparing to record a ground cricket with the mike fastened inside a household funnel to eliminate extraneous noises. Lower: recording the "protest" note of a Passalid or Betsy Beetle. This insect makes its noise with its tail end, by rubbing two sharp projections on its abdomen against the undersurface of its wings.

Insect Singers

by
Richard D. Alexander

winged katydids, the true katydid, some of the tree crickets, and the cicadas. However, it is generally unsatisfactory for those insects that sing more softly in bushes, weeds, or on the ground. It is difficult to carry such equipment through brush and undergrowth, and when the insect can be closely approached, it is no longer necessary. In these cases it is more desirable to have the microphone very close to the insect and pointing at it, and all that is needed is a small, cone-shaped device surrounding the microphone to exclude unwanted sounds. The author has found a household funnel with the spout removed to be quite satisfactory. The microphone can be seated inside the funnel in sponge rubber, and held in place with a split rubber stopper fitted around the microphone shaft and into the hole at the bottom of the funnel. A better and slightly more expensive method would be to have the cone spun out of aluminum into a bell-shape. Both sides of the cone should be taped or undercoated to prevent reflection. Actually this apparatus can be used very successfully for even treetop singers and others that cannot be closely approached.

You may have to learn to set your feet down softly if you want to sneak up on some of these singers. The ground singers, such as the field crickets, the ground crickets, and the mole crickets, are extremely sensitive to vibrations of the substrate. Sometimes it's necessary to wait a moment or two until a startled singer continues his song.

Most of the crickets will keep on singing if you turn a flashlight on them at night, but some of the katydids and long-horned grasshoppers will stop, and a few may fly away. In these cases you can usually get by if you keep the light directed to one side so that the insect is never in its full glare.

The other big problem is a consequence of the extremely high frequencies present in the songs of many insects. The most difficult to reproduce are the songs of the cone-headed grasshoppers, the meadow grasshoppers, the bush katydids, and the sword-bearing crickets. Some of these are actually above the hearing range of many people. A tape speed of fifteen inches per second and a high quality microphone are a must in such cases.

Another solution to the problem of obtaining decent recordings of soft singers, or those ordinarily surrounded by louder singers in the field, is to capture the insect and cage it, either indoors or out-of-doors. Most of the crickets, katydids, and long-horned grasshoppers are very easy to keep alive, and will sing readily in captivity. They will eat ground dog food, and water can be supplied by placing a pad of cotton in a dish of water or with a dental wick and

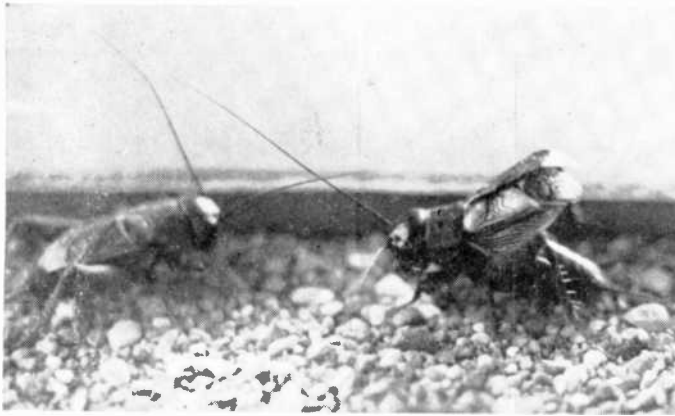


The author demonstrating the use of an aluminum parabolic reflector with the Magnemite Portable to record cicadas and other treetop singing insects.

corked vial as shown on page 33. The ground and field crickets can be cultured continuously this way with a minimum of care. A dish of wet sand will induce egg-laying, and the young crickets hatch in about fifteen days.

Recording caged insects, especially crickets, is a great deal of fun for another reason. You can pry right into the private lives of these little songsters and record some real "cricket talk." Sometimes a cricket will chirp continuously for a half hour or more, changing the quality of his chirp a little each time one of the other crickets in the cage moves. After listening and watching a while you can tell exactly what is going on in a cricket culture without even looking. Some of the courtship "songs and dances" are really fantastic.

If you want to get some weird sounds on tape, you might



Upper left: A male field cricket "talking back" to another male by chirping loudly. The wings are lifted and scraped together to make the noise. Upper right: one of the large black ants. Lower left: the cicada, commonly called a "locust" which sings loudly from the treetops in the summer. Lower right: a leaf hopper which imitates a thorn.

try picking up some of the beetles, bugs, ants, etc., that were mentioned earlier. Most of these will squeak or "bark" when they are caught and held. The sounds are usually so soft you can scarcely hear them. However, if you cup your hand around the microphone with the recorder gain turned all the way up and hold the insect right inside your hand, you can usually get a good recording. You may not believe what you hear when you play it back.

One of the interesting things that may be encountered in recording insect sounds is the presence of regional "dialects" or "accents" much like those in human speech. For example, in the northern states, the true katydid, *Pterophylla camellifolia*, usually sings a two-pulse phrase, "katydid!" The same species in the south sings five, six, or even seven-pulse phrases, like, "katy-she-did-she-did-she-did!" These accents are not learned like ours, however, and a southern katydid reared in New England would probably still sing with a southern accent.

Insect songs all change in speed with the temperature. The snowy tree cricket, *Oecanthus niveus*, is sometimes called the temperature cricket because of the formula worked out by A. E. Dolbear in 1897. He found that the number of chirps in fifteen seconds plus forty gives a close approximation of the temperature in degrees Fahrenheit. A similar formula could probably be worked out for any singing insect.

Some of the facts about insect sounds are as unbelievable as anything a science fiction writer could dream up. We know, for example, that insect sounds are probably the oldest animal sounds on earth. We can imagine a landscape, around two hundred million years ago, practically devoid of animal life as we know it, but with the air ringing with insect songs. As insect sound signals developed

through the ages they followed a path completely different from our own. We have always considered insect sounds to be monotonously simple and inflexible, because they lack the dimension of pitch which is so important to our ears. Actually their significant features involve pulsations and rhythms so rapid that they represent another dimension to which our ears are as deaf as insect ears are to pitch change. It is intriguing to realize that we humans have always been surrounded by sounds we can hear perfectly well, but that we are completely unable to "decode."

The development of modern recording and analyzing equipment, in addition to studies on the capabilities of insect auditory organs, have begun to show us just how unique and complicated insect sounds really are. You can pick out some of their "hidden" qualities by playing recordings at reduced speeds. The field cricket's chirp becomes a three- or four-pulse sound instead of a continuous blurb as our ears hear it. Different kinds of field crickets have consistent variations in the numbers of these pulses in their chirps. The angular-winged katydid's, "zzz-zi-zik!" at one-eighth speed sounds like a heavy spinning metal disc slowly settling on a concrete floor.

These characteristics of insect sounds are due to the type of structure that produces them. This usually consists of a sharp-edged scraper which is rubbed across a row of tiny teeth called the file. In the crickets, katydids, and long-horned grasshoppers, this file and scraper arrangement is located on the front wings. The cicadas have large stiff drums on the sides of their abdomens that they pop in and out like the bottoms of two tin cans.

Generally speaking, the more closely related insect species are, the more similar are their songs. The crickets all make more or less clear musical sounds while the katy-

A battery jar culture of field crickets with dog food, water, and a dish of damp sand for egg laying. Almost any type of large jar or screen wire cage is satisfactory for confining the crickets, katydids, and long-horned grasshoppers so that their songs can be recorded.

did, long-horned grasshoppers, and cicadas make rasping, lisping, buzzing, or clicking sounds that are not at all clear and musical. The field crickets chirp loudly day and night. The mole cricket, the bush crickets, and the snowy tree cricket chirp only at night. The rest of the tree crickets, the sword-bearing crickets, and most of the ground crickets sing in trills, some day and night and some only at night. The shield-backed grasshoppers sing groups of short buzzes at night. The bush katydids produce single or grouped lispy phrases day and night. The true katydid steadily produces groups of loud, coarse rasps at night. The angular-winged katydids and the oblong-winged and round-winged katydids also sing loud coarse chirps or clicks at night only. Most of the coneheaded grasshoppers produce loud continuous buzzes starting late in the evening. The meadow grasshoppers usually sing two different kinds of notes, or sing at two different speeds. Their songs are rather soft and they sing both day and night. Some can only be heard a few feet away. The cicadas sing loud, vibrating songs only in the daytime, or at dusk.

The songs of insects are, in general, easy to tell apart. Learning to recognize them is fun for children and adults alike. The quickest and easiest way is by using recordings of the songs. They can be played over and over again, and similar songs can be closely compared.



School Tape (CONTINUED from page 23)

49. LARRY: I wonder why?
I am sure the Saskatchewan class will set my class straight on this.
50. STAFFORD: Christopher Fraser's mother lived in Saskatchewan. She told Christopher about her uncle who drove a minister home backwards at the rate of 20 miles per hour.
51. MUSIC: CLAPPING SONG. FIRST TIME
FLUTES. SECOND TIME CLAPPING,
AND REPEAT TO TIME. FADE
DURING FIRST CLAPPING FOR:
- To record Elana's voice over a background of music, the music of the flutophones is recorded first. Then the tape is rewound to the point where you wish Elana to begin speaking. Depress the "Record" and the "Superimpose" buttons just before Elana speaks. It may take one or two practice runs to establish the right volume level (you want to be able to hear Elana comfortably above the music) but it is worth the effort to get it right.
52. LARRY: Elana Wheaton has the last word.
53. ELANA: I think Saskatchewan might be a pretty place. It might have many farms, many trees and many flowers. It might have streams and rivers. It might have many animals and many people. It *must* be a very, very pretty place.
54. MUSIC: UP TO TIME AND OUT.

Your tape is probably far too long. If so, you may drop the weakest link—but you will disappoint those boys and girls (and their mothers) who have been hearing about this tape recording effort. It makes for a better tape, instead, if you increase the pacing of your script. In general, cut out all long pauses and dead air. As a "producer" use radio's technique of pointing to the next person to speak, and have speeches follow immediately one after the other.

Pause Button. Stopping and starting the machine can be a problem. The easiest solution is to have your material so well rehearsed that your class will swing into it—and do a perfect job from beginning to end, without a break. Few classes are so well disciplined, and if they are the rigid discipline may mar the spontaneity of the tape. Here's where the Pause Button comes in. Originally designed for a quick stopping and starting again of the tape so that unwanted materials, such as commercials, can be cut out, the Pause Button enables you to produce your school tape in units, or segments, as each becomes ready for "airing".

Although it is a pleasant thought to plan to record the whole tape at one session yet it isn't always practical. The Principal walks in to make an announcement when you have just nicely begun. Or, the recess bell rings to spoil the high point of your tape. Doing it in parts lets you utilize spare moments to record one scene or a song at a time. And it is surprising how soon the little bits here and there will add up to a finished tape—a school tape that is a joy to listen to when played back in its entirety.

FAST SHIPMENTS

RECORDERS • TAPES

COMPONENTS • KITS

- BEST-BY-COMPARISON PRICES
- VISIT OUR STORE
- FACTORY SEALED CARTONS
- SEND FOR "QUOTES" ON PACKAGE DEALS AND SAVE MORE
- WRITE FOR MONTHLY SPECIALS



CARSTON Studios

125-A East 88 St., New York 28, N. Y.

BUILD A SOUND STORY LIBRARY

These unusual, different 3" reels of recorded tapes are already a library in sound. Each is authentic and original.

\$100 EACH

postpaid

- #1—General examples and excerpts of Tape Recorder Music, Dr. Vladimir A. Ussachevsky; plus, Sounds of New York City, Tony Schwartz
- #2—The Contact Microphone, Kenneth Miller—A hilarious tape that demonstrates creative production.
- #3—Beat Recording, O. Nodlchs—The cats who swing this crazy tape are real-reel beat.
- #4—Africa, Frank Weston — Authentic sounds recorded in the wilds of Africa.
- #5—Portuguese Fado, Jahn H. Lerch—Fados are songs of fate, typical throughout Portugal.
- #6—Tape Travelogue—Yucatan, Mexico, Russell B. Maxey
- #7—B & O Locomotive 25 — Interview with engineer and authentic sounds of this old-timer.

All tapes are dual track and all except #7 are 7½ ips. #7 is 3¼ ips. Order from: Sound Story Dept., Mooney-Rowan Pub., Inc., Severna Park, Md.

SHOP OR SWAP

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

RATES: Commercial ads, \$30 per word. Individual ads, non-commercial, \$.05 a word.

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

Remittance in full must accompany copy. No exceptions permitted. Ads will be inserted in next available issue. Please print or type your copy to avoid error. Address ad to: Shop or Swap, Tape Recording Magazine, Severna Park, Md.

REVERE T11 Professional Tape Recorder, \$115; Webcor 3-speed "Magic Mind" Record-Changer in portable case, with amplifier and speaker, \$25; Continuous-Loop Tape Recorder, \$25. All in excellent condition. V. R. Hein, 418 Gregory, Rockford, Illinois.

USED MYLAR TAPES—1800 foot—7-inch reels. \$1.00 each postage prepaid. Send check or money order. B. Freeman, 800 W. 87th St., Kansas City 14, Mo.

BIG BANDS air checks, collectors items. Box 322, Glen Head, New York.

SELL—JAMES LANSING compact speaker system, 15", D53, LE14C, walnut, purchased recently, excellent, original carton, \$130.00, cost \$198.00. Edward Bernhardt, Monona, Iowa.

SELL—GARRARD RECORD-CHANGER, 3-speed, Model RC80, with automatic 45 rpm spindle and wood base, \$25; Pilot FM Tuner, \$15. Both in excellent condition. V. R. Hein, 418 Gregory, Rockford, Illinois.

NOW YOU CAN BUY 4-track Stereo Tapes at great savings! Name Brands! Ron's Stereo Tape Club, 449 E. 7th St., Red Wing, Minn.

FOR SALE: BELL Model RP120 Record Playback preamplifier. Excellent condition. \$60.00 postage prepaid. Austin E. Jones, General Delivery, Springfield, Ohio.

EDITALL PROFESSIONAL tape editor/splicer, \$6.50. Literature on request. Write for outstanding prices on blank tape, standard reels or 3" mailers by leading manufacturer. Substantial discounts to quantity orders. CollegeTown Audio, Box 342, Columbia, Missouri.

LEARN HYPNOTISM, SELF HYPNOSIS from recorded tapes! Other amazing Tapes, Books, Records. Complete Sleep-Learning information! Free Catalog! Philanthropic Library, Drawer TR 400, Ruidoso, New Mexico.

WRITE for our low quotation on components, recorders. Hi-Fidelity Supply, 2817-C JC Third, N. Y. C. 55.

RENT STEREO TAPES—Over 2,500 different—all major labels—free catalog. Stereo-Parti, 811-F Centinela Ave., Inglewood 3, California.

LEARN WHILE ASLEEP, hypnotize with your recorder, phonograph or amazing Electronic Educator endless tape recorder. Free catalog lists over 300 unusual tapes, records, equipment for experimenters. Sleep-Learning Research Association, Box 24-TR, Olympia, Washington.

"Dr. Lovingstone I Presume"

A soggy saga of derring-do in the wilds of the world

Four male parts, three female plus an announcer and sound effects man. Full directions for simple sound effects. A zany script for your next recording party.

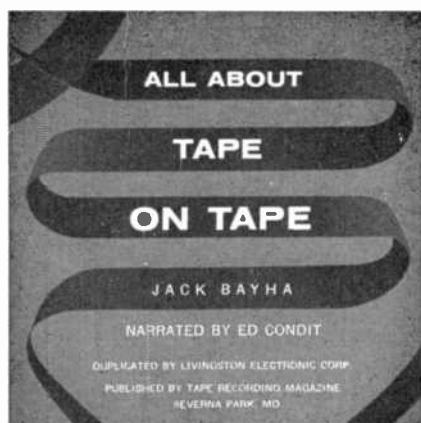
7 complete
scripts

\$249
postpaid



"For your information friend, that is a crocodile."

TAPEBOOKS AND OTHER TAPES



ALL ABOUT TAPE— ON TAPE

Will give you the information you need about tape recording in sound, not in the written word.

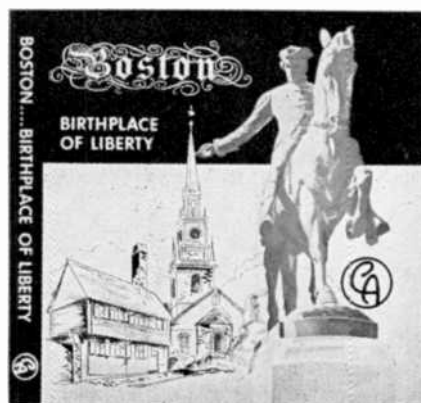
... authored by Jack Bayha ... a book to which you listen ... the first book specifically designed and produced on tape instead of the printed page. ... Now you can actually HEAR what good recording, over-recording, wow, flutter, distortion, wrong mike placement, etc., sound like. A test section allows you to adjust the head of your recorder for best results. Chapters include: How

a Tape Recorder Works, A Demonstrated Glossary, Recorder Operation, Home Recording, Field Recording, Low Impedance, Microphones, Recorder Maintenance and Testing. ... Playing time of the Tapebook is one hour. Accompanying each reel is a 28 page booklet containing 80 illustrations to supplement the spoken word. It is unique, enjoyable and instructive.

7 1/2 IPS, 7" Reel, Dual Track
\$6.95

3 3/4 IPS, 5" Reel, Dual Track
\$5.95

Including a 28 page manual of illustrations



BOSTON

A full 57 minute tour of one of America's most famous and historic cities. You visit in sound Boston Common, the Park Street Church, Kings Chapel, Old South Meeting and Faneuil Hall, the Cradle of Liberty. Hear the worship service at Old North Church in the belfry of which Paul Revere hung his famous lanterns and also hear the Vicar of Old North tell about the clear glass windows, kept clean so your forebearers could see the need outside, as well as the beauty inside. Every sound, every voice is authentic. Dual track, 7 1/2 ips. **\$6.95**

HOW TO STAY ALIVE ON THE HIGHWAY

This tape may save your life. Contains the actual voices of nearly 40 auto drivers, victims and survivors of highway accidents, police and traffic officials. Portions were secretly recorded in court rooms, on the highway and in police stations over a period of three years. A must for driver education programs. Dramatic, forceful—something you won't forget.

\$7.95

ADD-THE-MELODY TAPE

Twelve old favorite tunes for you to sing along with. Specially recorded with the melody missing so you can sing or play with the tape then, on playback hear both parts together. Suitable for use on any recorder with the ability to play the lower track while recording on the upper. Can be recorded again and again without harm to the Hammond Organ accompaniment by Hack Swain. You can get a million dollars worth of pleasure from this tape. **\$9.95**

HOW'S YOUR HEARING?

Periodic hearing tests are important because unlike most other ailments, a hearing loss gives little positive warning. Tape contains 33 tone pairs to test your musical discrimination, 75 word pairs to test speech discrimination and 30 minutes of music by the famous Lenny Herman orchestra for screen testing of hearing. Full 7" reel, 7 1/2 ips and booklet giving full directions for use of the tape.

\$9.95

JUST DRUMS

Synco introduces a new, exciting drum tape to which you can dance, whistle, play an instrument, sing or hum along. It contains 12 different tempos, each having a 4 bar intro, two 32 bar choruses and a 4 bar tag (end). The only exceptions to this are the Dixieland which has two 32 bar choruses and the Blues. You may begin to join in with the easily phrased beats anywhere. It is easy to follow and is excellent for music practice or dance instruction. Recorded Full Track, will play on any recorder. Excellent for Add+A+Track or Synchro Track use.

TEMPOS INCLUDED ARE - - - -

CHA-CHA • SLOW FOXTROT • TWIST • SLOW
12/8 • DIXIELAND • SLOW WALTZ • MARCH •
MEDIUM FOXTROT • BEGUINE • UP TEMPO •
BRIGHT SHUFFLE • SLOW SHUFFLE

7" Reel, 7 1/2 IPS

\$6.95
POSTPAID

TAPEBOOK DEPARTMENT TAPE RECORDING MAGAZINE Severna Park, Md.

Please send me the following:

- All About Tape on Tape, 7 1/2 ips.\$6.95
- All About Tape on Tape, 3 3/4 ips.\$5.95
- Boston, Birthplace of Liberty.\$6.95
- How to Stay Alive on the Highway.\$7.95
- Add-the-Melody Tape, 7 1/2 ips.\$9.95
- How's Your Hearing.\$9.95
- Just Drums\$6.95

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ADDRESS

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audiotape
't speaks for itself'



let the drums roll out

(Audiotape will capture every beat)

Audiotape is discreet. Whether your taste in music runs to drum solos or ocarina improvisations, Audiotape will keep your secret. And it will keep faith with the drum, too . . . or with an octet or an oboe. Whatever you record, Audiotape faithfully captures the highs and the lows and everything in between and reproduces them as naturally as life. Only Audiotape gives you such clarity and range . . . such freedom from dis-

ortion and background noise . . . such consistent quality, reel after reel.

So whether the drums roll out or the trombones twitter or the glockenspiels roar, Audiotape will capture every note every time. And whether you record on Audiotape for all the world to hear, or enjoy it behind locked doors, you are using the finest (and most trustworthy) tape ever made. There are eight types, one exactly right for your next recording.



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