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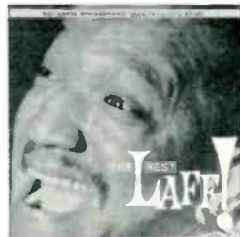
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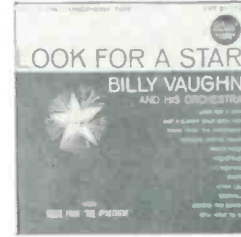
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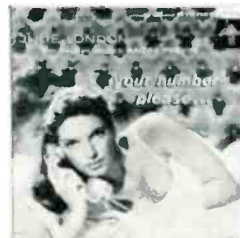
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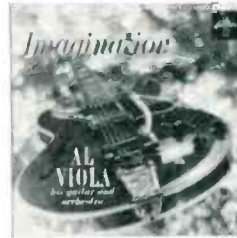
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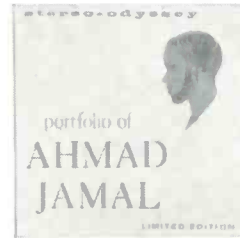


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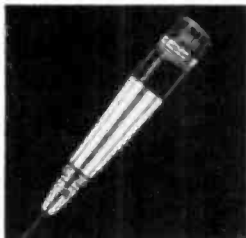




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# TAPE RECORDING

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MARK MOONEY, JR.  
*Editor and Publisher*

JOHN L. ALLEN  
*Circulation Manager*

JEAN COVER  
*Assistant Editor*

ROBERT W. LAPHAM  
*Art Director*

JAMES H. MILLS, SR.  
*Technical Consultant*

ANTHONY J. MORIN, JR.  
*National Advertising Manager*  
274 Madison Ave., New York 16, N. Y.

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# NEW TAPES

★—Fair

★★—Good

★★★—Very Good

★★★★—Excellent

## CLASSICAL

Reviewed by Robert E. Benson



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

HANDEL: Royal Fireworks Music  
HANDEL: Water Music Suite (\*)  
Vienna State Opera Orchestra conducted by  
Edmond Appia and (\*) Felix Prohaska  
VANGUARD VTC 1621  
4 track 7 1/2 ips  
\$7.95 . . . 40 min.

Staples in the symphonic repertory, well played and recorded. This tape contains the best-known excerpts from both the *Royal Fireworks* and *Water Music*. The Epic tape of the complete *Water Music* (EC 803, \$7.95) with Van Beinum and the Concertgebouw Orchestra could hardly be bettered, but the Vanguard tape will satisfy listeners who prefer only highlights from these two scores. Aside from rather boomy tympani, this tape is technically up to current stereo standards.



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

DEBUSSY: La Mer Afternoon of a Faun  
RAVEL: Rapsodie Espagnole  
Suisse Romande Orchestra conducted by  
Ernest Ansermet  
LONDON LCL 80013  
4 track, 7 1/2 ips  
\$7.95 . . . 45 min.

Ansermet is famous for his interpretations of the French repertory, and has recorded all of these works at least twice. The Suisse Romande Orchestra plays particularly well, but it still has the characteristic tonal quality of a French orchestra which I do not find appealing, even in music such as this.

Of the three selections on this tape, the *Rapsodie Espagnole* is the most successful from a performance standpoint, with Ansermet's meticulous baton bringing out details usually not heard, but *La Mer* is a pallid view of one of the greatest masterpieces of the impressionist school.

The sound is extraordinarily close and, unfortunately, almost completely lacking in hall reverberation. Many of the older London monophonic records are far superior to this in over-all balance and presence, even without the benefits of stereo. There are stereodisc versions of all three works on this tape superior in orchestral per-

formance and sonics, notably Reiner's *Rapsodie Espagnole* (RCA LSC 2183), Beinum's *La Mer* (Epic BC 1020) and Ormandy's *Faun* (Columbia MS 6077).



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

VON SUPPE: Five Overtures (Poet and Peasant, Light Cavalry, Beautiful Galathea, Morning, Noon and Night in Vienna and Boccaccio)  
Southwest German Radio Orchestra, Baden-Baden, Tibor Szoke, cond.  
VOX XTC 715  
4 track, 7 1/2 ips  
\$7.95 . . . 42 min.

Von Suppe Overtures are, for the most part, potboilers, but they can be real rousers when played with all the stops out, which is the way they're treated in this new recording.

Tibor Szoke is a new name to me, and apparently he isn't afraid to let lose with the orchestra. He also doesn't hesitate to add cymbals here and there, which make these overtures all the more brilliant. These are extraordinarily exciting performances, with tempi that sound just right.

This is the finest sound I've ever heard on a Vox recording, with some of the biggest bass you're likely to hear, and wonderful, big acoustics. Highs are perhaps a little on the strident side, but can be adjusted easily with the treble control.



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

RACHMANINOFF: Piano Concerto No. 3 in D Minor, Op. 30  
Van Cliburn, pianist; Symphony of the Air conducted by Kiril Kondrashin  
RCA VICTOR FTC 2001  
4 track, 7 1/2 ips  
\$8.95 . . . 43 min.

A tape that should be in every library, if only for its historical value. This was recorded at Cliburn's triumphant Carnegie Hall concert in May of 1958, immediately after his return from Russia, and contains extraordinarily beautiful piano playing. This is the only recording of the complete score with the original cadenzas, and Cliburn's performance shows clearly that he deserves his wide acclaim.

Reproduction is no more than adequate, and the small-sounding orchestra is unable to supply the surges of swelling sound for the Rachmaninoff climaxes—obviously this is Cliburn's show. The tape is infinitely superior to either the mono or stereodisc

versions, but why does Victor feel it has a right to charge more than other companies for their tapes?

## POPULAR



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

WHEN YOU'RE SMILING  
Who, Roses of Picardy, Always, Let Me Call You Sweetheart, My Gal Sal, After You've Gone  
When You're Smiling, It Had To Be You, The Sheik of Araby, Drifting and Dreaming, My Blue Heaven, Limehouse Blues  
Eddie Peabody  
DOT (Bel Canto) DST-25155  
4 track, 7 1/2 ips  
\$7.95 . . . 26 mins.

We class Eddie Peabody as the tops on the banjo. His mastery of this ever-popular instrument is truly a delight to hear. Eddie rings every conceivable sound from his dancing, happy-sounding banjo.

This is the type release you never tire of, at least we "short-hairs" don't. The music is sparkling and it lifts the spirit.

On some of the selections here such as Let Me Call You Sweetheart and My Blue Heaven Eddie uses his own invention, the "banjolene," which is an electric banjo with vibrato attachment. The resultant sound is different and most enjoyable.

Fidelity and stereo effect here sort of put you right inside the ringing banjo.

Summarization—we like it!—J. Cover



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

ELLA FITZGERALD SINGS THE GEORGE AND IRA GERSHWIN SONG BOOK

Sam and Delilah, But Not For Me, My One and Only, Let's Call the Whole Thing Off, Beginner's Luck, Oh, Lady Be Good, Nice Work If You Can Get It, Things Are Looking Up, and others  
By Strauss, Someone to Watch Over Me, The Real American Folk Song, Who Cares?, Looking For A Boy, They All Laughed, My Cousin From Milwaukee and others  
Music arranged and conducted by Nelson Riddle

VERVE VSTP-244  
4 track, 7 1/2 ips, Twin-Pak  
\$11.95 . . . 89 mins.

Miss Show Business—that's Ella Fitzgerald. Ella can sing most any popular song quite well. She has one of the most versatile

voices we ever heard and her range is terrific.

Our only complaint here is that we have too much of a good thing. After awhile you find yourself yawning, and this is hardly an opinion of Ella's singing. It is simply that the sameness of one voice singing constantly begins to have a hypnotizing effect on you and you slowly go into a trance.

Again we must mention the excellent backing of Nelson Riddle. His arranging and conducting are an asset to any singer.

Reproduction is top drawer.—J. Cover



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

**SPIKE JONES PRESENTS OMNIBUST**

Ah-1, Ah-2, Ah-Sunset Strip, Lawrence Staccato Gets His Private Eyes Crossed, Loretta's Soapopera, The Wonderful World of Hari Kari, A Mudder's Day Sport Spectacular, The Late Late Late Movies—Parts I & II

Spike Jones and the band that plays for fun  
LIBERTY (Bel Canto) LT-7140  
4 track, 7½ ips  
\$7.95 . . . 28 mins.

Spike is at his wacky best on this tape per usual. The selections are silly, naturally, and are amusing—if you enjoy this type of nonsense. In this world full of tensions and warring peoples, it is nice to listen to something so lacking in inhibitions as this and to have a chuckle or two.

Spike uses (or I should say misuses) the "private eye" theme so prevalent on TV and from it has created his own musical (?) interpretation. He also has created his own late, late movies and his own sport spectacular, in short this is a TV Spiketacular.

Every eerie shriek, every wild hoot, every grunt and growl is quite clear and in stereo it becomes even more frenzied.—J. Cover



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

**I GET A BOOT OUT OF YOU**

Side 1: It Don't Mean A Thing, No More, Love for Sale, Moanin'  
Side 2: Violets for Your Furs, What Am I Here For, Cottontail, Warm Valley, Things Ain't What They Used to Be

Marty Paich  
WARNER BROS. WST-1349  
4 track, 7½ ips  
\$7.95 . . . 36 mins.

Oh for some good old familiar, or new familiar, but at least familiar tunes. I have on too numerous occasions pointed out that these tape releases lack what the public wants to hear—not all the public mind you, but at least the greater majority.

Created in a tradition of excellence

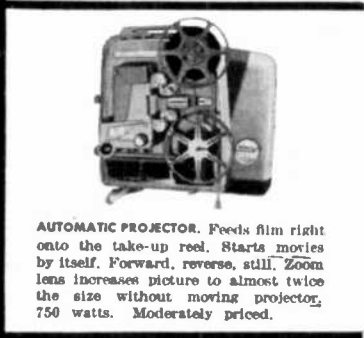
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These are the kind of selections which are heard and immediately forgotten.

I can easily point out specifics on a release which are exceptionally good, for instance, the glossy smoothness of the brass here and the clear clarity of the piano and other percussive instruments, but what they are playing lacks any polish whatsoever.

Generalizing, the tape has little real musical appeal.

The performers are good, the fidelity is excellent, but the music should be hidden under a rock and forgotten.—J. Cover



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

**POPULAR PIANO CONCERTOS OF THE WORLD'S GREAT LOVE THEMES & GREATEST MOTION PICTURE PIANO CONCERTOS**

The Song from "Moulin Rouge," Lullaby of Broadway, The Bad and the Beautiful, Tara's Theme, The River Kwai March—and others

George Greeley; Guest pianist with The Warner Bros. Orchestra

**WARNER BROTHERS WSTP 2601**

4 track, 7½ ips, Twin-Pak  
\$11.95 . . . 68 mins.

Perfectly beautiful, lilting music, well arranged and played. The acoustics on this recording are excellent and the resultant sound is all encompassing. There is a hollowness which lends to, rather than detracts from, the all around orchestral bigness of this tape.

And in the middle of it all is George Greeley, delightfully garnishing the whole scene with his talented performance on the piano.

This is grand background music you could play over and over and still not tire of.

Excellent reproduction.—J. Cover



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

**JASMINE & JADE**

Moonlight on the Ganges, Baubles, Bangles, and Beads, Japanese Sandman, Nai-ani, Caravan

Jasmine and Jade, On A Little Street in Singapore, Flamingo, Pagan Love Song, Lotus Land

Axel Stordahl and His Orchestra  
DOT DST-25282  
4 track, 7½ ips  
\$7.95 . . . 30 mins.

To the usual compliment of orchestral components—strings, reeds, brass and percussion—Axel Stordahl has added some unusual, but most realistic, musical sounds.

You might consider this a tape travelogue. It transports you to foreign shores via the music. Mr. Stordahl strives for as much atmosphere in the musical arrangement as is possible—atmosphere associated with the particular land which the music is representing.

This tape makes interesting listening. There is a conformity to the whole thing which makes it a smooth, well-arranged and well-produced presentation.

Fidelity is of the highest.—*J. Cover*

## SHOWS



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

### CAROUSEL

Side 1: The Carousel Waltz, You're a Queer One, Julie Jordan!, Mister Snow, If I Loved You, When the Children Are Asleep, June Is Bustin' Out All Over

Side 2: Soliloquy, Blow High, Blow Low, A Real Nice Clambake, Stonecutters Cut It On Stone, What's the Use of Wondrin', You'll Never Walk Alone

Sound track of the motion picture  
Gordon MacRae, Shirley Jones, Barbara Ruick  
CAPITOL ZW 694

4 track, 7½ ips  
\$7.98 . . . 46 mins.

The music of Rodgers and Hammerstein is, as always, superb—that is, if you like semi-classical show type of music. Even if you didn't know the background of the story connected with Carousel, you could visualize much of it by just listening to this music which tells much of the story in song.

The singers, who are also the stars of the movie do a most impressive job here voice-wise. It would seem logical that those portraying the story in a movie should hence put more feeling into the music and so they do.

Sterling reproduction of the sound track.—*J. Cover*

## FOLK



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

MY EYES HAVE SEEN  
Poor Little Jesus, Bald Headed Woman,

Motherless Children, I Know Where I'm Going, The Foggy Dew, I've Been Driving on Bald Mountain, and Water Boy

Ox Driver Song, Down On Me, Saro Jane, Three Pigs, No More Cane on the Brazos, Jumpin' Judy, Battle Hymn of the Republic

Odetta, accompanying herself on the guitar, with Bill Lee, string-bass

VANGUARD VTC-1627  
4 track, 7½ ips  
\$7.95 . . . 40 mins.

Odetta has a strong voice and she sings these folk melodies with strong emotional force. Without expressions of feeling, folk songs are lifeless and lost. Odetta breathes life into them.

Not only does this talented personage sing this type song exceptionally well, she also handles the guitar well and the combination is stirring. She has all the right inflections in the right places, plus a few extras thrown in besides. If you like folk music you will like this release.

I was most amused by Odetta's short interpretation on the Three Pigs—her "oinks" are something to hear and I know any children hearing this would squeal with delight.

The sound is not at all one-sided, but is equally balanced.—*J. Cover*

## LATIN



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

### JOSE MELIS PLAYS THE LATIN WAY

La Cumparsa, El Negrito Del Batey, Campanitas De Cristal, Magdalena, Santa, Bacosco, Rumba Chant, No Te Importe Saber, Campanas De Escuela, Silencio, Lamento Borincano, Mi Concerto

Jose Melis  
SEECO SEC-303  
4 track, 7½ ips  
\$7.95 . . . 34 mins.

For this recording, Jose Melis has added guitar, bongo and gourd to his basic trio of piano, bass and drums. This Latin music is smooth and easy to dance to—it is not the fiery type of Latin we often hear.

Jose is no stranger to the ivories and his piano stylings and playing are impressive, while not overly so.

Just continuous, easy, quite rhythmic, Latin melodies.

Fidelity is as clear as the winter air whistling thru the bare tree tops.—*J. Cover*

## EDUCATION

POLITICS: The Folklore of Government.  
C. W. Parkinson with Julian Franklin, by ACADEMY RECORDING INSTITUTE

It is only natural that any discussion with Dr. Parkinson should begin with a discussion of the famous Parkinson's law. This series is no exception. Parkinson's Law

states that work expands to fill the time available to its completion. Although the formulation of this law takes place over a length of time, Dr. Parkinson's first observations in this direction occurred when he or Major Parkinson as he was known then held a position somewhere in the middle of a chain of command in an office of the War Department. It became evident to the Major that as an increasing number of working members of the office became absent for various reasons, the amount of work done decreased accordingly. In other words some of the work done with a full staff was simply generation of work. How much of the work was necessary and how much was generated is rather difficult to discover empirically. It would probably involve surveying the entire staff on a vacation and if anyone were missed for other than social reasons, thus perhaps a useful function was being performed. We still wouldn't know how much of the work was the creation of someone's idle hours in another office.

From this and other rather ludicrous aspects of bureaucracy Dr. Parkinson takes his cue and composes most of his conclusions to the tune of whimsy.

Julian Franklin on the other hand refuses to be fooled by the hints of Dr. Parkinson and pursues the more serious chords with zeal. Under this type of cross-fire the characters who play their parts in the offices of bureaucracies become more like the serious people in a comedy who are willing straight men for the thing to which they have dedicated their lives.

This very entertaining springhand serves to launch other discussions concerning the political climate of the Far East, political cycles, monarchy, oligarchy, dictatorship, and the Russian-Communist Gleeocracy, and the phenomenon of war.

The conclusion entitled The Bureaucratic Malignancy, is as the catalogue states, a hard serious analysis of the phenomenon on which Dr. Parkinson has become the world's foremost authority. How we can break out of Red tape.

The entire series consists of 10, 45 minute tapes costing \$7.50 per discussion or \$50.00 for the entire revelation.—*Paul W'bittenburg*

## NEW TAPES RECEIVED

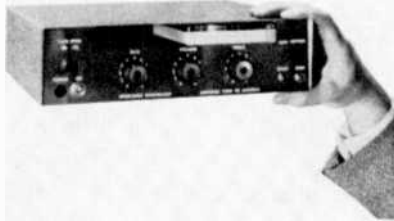
### REEL TO REEL

Bel Canto, Woody Woodbury Looks at Love & Life, ST/150, 4 track, 7½ ips  
Capitol, Satin Brass, The George Shearing Quintet with brass choir, ZT 1326, 4 track, 7½ ips  
Dot, The Big 100, Billy Vaughn, DST-30500, 4 track, 7½ ips  
Kapp, Tonight!, Roger Williams at Town Hall, KTP-45009 (Twin-Pak), 4 track, 7½ ips  
Liberty, Bel Canto, Roar Along With The Singing 20's, The Johnny Mann Singers, LT-7149, 4 track, 7½ ips  
MGM, The Subterraneans, original sound track album, STC-3812, 4 track, 7½ ips  
RCA, Finian's Rainbow, original cast, FTO-5003, 4 track, 7½ ips  
RCA, The Blend and the Beat, The Ames Brothers, FTP-1027, 4 track, 7½ ips



# NEW PRODUCTS

## MAGNEMATIC



The Magnematic Division of the Amplifier Corp. of America, 398 Broadway, New York 13, N. Y., has announced the addition of the Magnematic recorder to their line. This new unit handles Fidelipac plastic cartridges, which are of the continuous, self-contained, single-reel type which operate on an endless-loop principle. Features of the unit include instantaneous start-stop, self-lubricating ball bearings, wear-proof anodized aluminum pulleys and a cast machined, dynamically balanced fly-wheel. Two types are available: the Bookshelf for the home (illustrated), and the Broadcaster in rack panel form for professional use. Models are available with stereophonic or monophonic record-play facilities, utilizing 1, 2, 3, or 4 tracks operating at speeds of  $1\frac{7}{8}$ ,  $3\frac{3}{4}$ ,  $7\frac{1}{2}$ , or 15 inches per second. Three types of units are available: play only for background music applications; record only; and record-play combinations for general use. Prices of standard models range from \$199 to \$389. Complete technical specifications, descriptive literature, and all prices may be obtained by writing to above address.

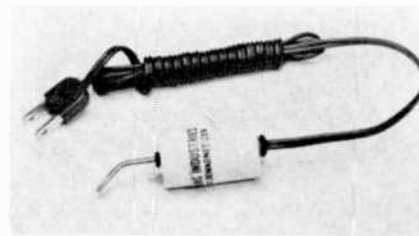
## SHURE MIKE OUTFIT



Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Ill., is marketing a personalized microphone outfit, complete with mike, carrying case, engraved name plate, and plugs and adapters for quick hook-ups anywhere. Heart of the outfit is the Model 545 Unidyne III microphone which weighs  $8\frac{1}{2}$  ounces, has a swivel adapter which permits it to be tilted through  $90^\circ$  from vertical to horizontal, and it can be disengaged from the adapter and used as a hand-held unit. It has a cardioid pickup pattern, a frequency response over a 50 to 15,000 cps range, and

it is ruggedly built. It is unaffected by temperature and humidity variations. The Model 545 professional entertainer's outfit is available on special order from Shure distributors, and it is priced at \$75. Contact Shure for additional details.

## ROBINS DEMAGNETIZER



Robins Industries, 36-27 Prince Street, Flushing 54, N. Y., has a new tape head demagnetizer available known as Model HD-3. It features a special plastic sleeve on the tip of the probe that prevents accidental scratches. The specially shaped probe makes any tape head accessible so that it can be easily demagnetized. Individually packaged in a sturdy, two-color box, this handy unit lists at only \$5.95. Write Robins for information.

## ASTRA-SONIC II



The Pentron Sales Co., Inc., 777 S. Tripp Ave., Chicago 24, Ill., has introduced a new tape recorder, the Astra-Sonic II, which carries a full one year warranty on both parts and labor. This machine has such features as the 'Pentrodyne' flywheel assembly, piano key push-button control system, a low distortion amplifier which is hand wired, a transformer power supply, a Nortronic  $\frac{1}{4}$  track stereophonic head for playback of all two and four track recorded tapes, and all speakers are front mounted in a new leatherette covered wood cabinet. There is a 4" by 6" coaxial tweeter speaker and a four inch round speaker. Specifications include frequency response of 40-15,000 cps at the faster speed of  $7\frac{1}{2}$  ips (also has  $3\frac{3}{4}$  ips), signal to noise ratio of -45 db, and power output of 8 watts peak power. Prices: AR-62 monophonic, \$189.95; AR-62 stereophonic, \$219.95. Contact Pentron for more information.

## GERMAN RECORDER

Korting (German) has introduced its 158 four-track stereo tape recorder which has speeds of  $3\frac{3}{4}$  and  $7\frac{1}{2}$  ips, and will

record and playback stereo. It incorporates the Korting 'Synchronized Dubbing' feature with which you hear the first recording while the second is being added, and "Direct Tape Monitoring" with which you monitor the actual recording, rather than the input signal. Frequency response is 30-20,000 cps at the faster speed and wow and flutter is less than 2% at  $7\frac{1}{2}$  ips. Other features include: low noise transistor input stage, pause button, recording level indicator, connections for radio, phono, external amplifier, 2 external speakers, 2 microphones or 1 stereo microphone, tape counter with zero adjustment, automatic shut-off, and a wide-range speaker 4 x 6 in. The cost is \$289.95 for Model MT158. The Korting representative for the United States is Don J. Rizzo & Associates, Inc., 324 Nc. Oak Street, Buffalo 3, N. Y.

## TAPE CONTAINERS



The Magnetic Shield Division of Perfection Mica Company, 1322 N. Elston Avenue, Chicago 22, Illinois, is marketing NETIC tape containers. The magnetically shielded containers hold one 10" reel of tape. They are constructed of a NETIC alloy which will protect the tape from extraneous magnetic fields, even if accidentally placed on a tape degausser. A label on the container identifies the contents. Containers can be padlocked. They are non-shock sensitive, non-retentive and do not require periodic annealing to retain shielding effectiveness. For prices and any other information, contact the manufacturer.

## MOVING?

If so, please notify us in advance of your change of address so you will not miss an issue.

TAPE RECORDING  
Severna Park, Md.

# CROSSTALK

from the Editors

IT SEEMS TO US that there are two industries which are not making enough use of each other. One is the radio broadcasting industry and the other is the magnetic recording industry.

\* \* \* \* \*

BROADCASTERS DO make heavy use of tape recordings in their programs and you hear more and more on-the-spot tape recorded reports which were made by the use of portable tape recorders . . . and the magnetic recording industry makes the tapes and the recorders which the broadcasters use. So far so good.

\* \* \* \* \*

BUT THERE ARE an estimated two and a half million tape recorders now in use, most of them in the hands of private individuals who use them for many purposes.

\* \* \* \* \*

THERE ARE SOMETHING like 3000 radio stations who busy themselves filling the air with all sorts of material, some good some bad, 24 hours a day.

\* \* \* \* \*

SINCE BOTH THE TAPE RECORDISTS and the radio stations are dealing in the same thing—sound, it seems that they might well get together on mutual projects. This has been done, to a very limited extent, with special programs for tape recorder owners.

\* \* \* \* \*

IF TAPE RECORDER owners paid more attention to the creative side of their hobby, they might very well produce some program material that the radio stations would be very glad to have for broadcast purposes. This could certainly lend some spice and local flavor to their programs which they very well might welcome.

\* \* \* \* \*

THERE ARE LOTS OF KINDS of shows on tape which could be produced by amateurs. In contrast to the news pickups, which the station staff men do with their portables, there is feature material available in wide variety. Suppose, for instance, you were interested in the history of your locality and interviewed all the old timers. How about the disappearing sounds of your town? The steam engine is about gone, in favor of the diesels, the propeller driven air liner is starting to take a back seat to the jet—there could be a good radio show in that area alone. Readings of plays by local dramatic groups, church choirs—there is plenty that the amateur recordist could do.

\* \* \* \* \*

HAVING HIS PROGRAM aired would be analogous to having an article published in a magazine. Naturally, the stations would have to decide if the material was good enough for broadcast, just as a magazine editor picks stories which he feels would be of greatest interest to his readers. Your baby's first words, while priceless to you, would have little interest to a general radio audience but the same kind of thing, done up in story form with sound effects might make an amusing show.

\* \* \* \* \*

AS WE HAVE MENTIONED before, the Europeans are ahead of us in this respect. The BBC makes use of amateur recordings and presents performances for the benefit of tape recorder owners. Actual face-to-face tape clubs hold regular meetings and undertake projects of interest to the members.

\* \* \* \* \*

ONE NEEDS ONLY LOOK at the growth of the photographic hobby and industry which presents its results to the public in magazines and newspapers. Dealing with sound, the magnetic recording industry has its outlet in radio for mass appreciation. We think it's high time that something was done about it.

# INDUSTRY NEWS

MINNESOTA MINING AND MANUFACTURING will introduce its cartridge tapes and player in time for the 1961 Christmas season according to H. P. Buetow, president of the company. Revere Camera Co., which became part of 3M during the year, is moving forward on the development of production models of the player.

MAGNETIC RECORDING INDUSTRY ASSOCIATION has named two new members to the board of directors. They are John Ihreg, executive vice president of Webcor and William Gallagher, vice president of sales for Columbia Records Sales Corp. Dan Denham, general sales manager of the Magnetic Products Division of 3M accepted the post of chairman of the public relations committee.

The Association is also sponsoring the first combined Home and High Fidelity Show to be held in San Francisco's Cow Palace March 15 through 19, 1961. James Logan will be the show director of the new enterprise which may become a bellwether for other joint hi-fi and home shows in other cities.

REEVES SOUND CRAFT subsidiary, Reevesound, Inc., has developed the first remotely controlled 16 mm sound motion picture projector for aircraft. It was developed for Inflight Motion Pictures and will be used by major transcontinental and intercontinental airlines for airborne showings of pre-release feature pictures. Each show will last from 1 to 1½ hours.

The equipment is contained within the structure of the plane and each passenger wishing to participate will be furnished with a lightweight headset which plugs into a receptacle mounted on the seat. Flight announcements will override the movie sound and also be audible through the plane regular PA system.

C. J. LEBEL, Chairman of the MRIA Standards Committee has announced the formation of 10 sub-committees having to do with standards for tape and machines. These include: 1—Measurement of Frequency Response, 2—Measurement of distortion, signal to noise ratio, 3—Measurement of wow and flutter, speed tolerance, 4—Measurement of power output, 5—Measurement of stereo characteristics, crosstalk, differential phase shift, 6—Measurement of head characteristics, 7—Standard reproducing characteristics, 8—Head dimensions, 9—Track dimensions, 10—Tape and reel dimensions.

Industry engineers interested in serving on these committees are invited to write to Mr. LeBel at Audio Devices, 444 Madison Ave., New York 22, N. Y.

PENTRON president Irving Rossman predicts a 25% increase in the number of tape recorders sold in 1961. He bases his prediction on the fact that the TV market is pretty much saturated, stereo disc equipment has not gone over as well as expected and there is a lively interest in the tape recorder as a new and exciting piece of home entertainment. This coupled with the rise in recorded tape sales from about one million dollars worth in 1959

to five million in 1960 and a forecast of ten million in 1961 paints a good picture for the year ahead.

A TAPE PATENT issued to Marvin Camras of Armour Research Foundation and used by 3M in tape manufacture was declared invalid in a recent Federal Court decision in New York. The patent covered a method of using iron oxide in making recording tape. A Chicago court of Appeals in a prior decision had also ruled against the patent. American, German and Japanese patents antedating the Camras patent were put in evidence.

CONSOLIDATED ELECTRODYNAMICS has developed a tiny reel-to-reel recorder for space and missile applications. The unit holds 750 feet of tape on co-axially mounted reels holding 95 minutes worth of data. It records at one inch per second and plays back at 18 inches per second. It weighs only four pounds and occupies only 200 cubic inches of space. Power requirement is less than one watt.

REEVES SOUND CRAFT says that future telemetry recording systems will require tape capable of handling frequencies in the area of 2 megacycles. Engineers are already requesting higher frequency tapes for telemetry, computer and instrumentation purposes to keep pace with new developments in those fields. A few years ago the capability of the tape was far ahead of that of the equipment but now the equipment has been so improved that it is demanding better tapes.

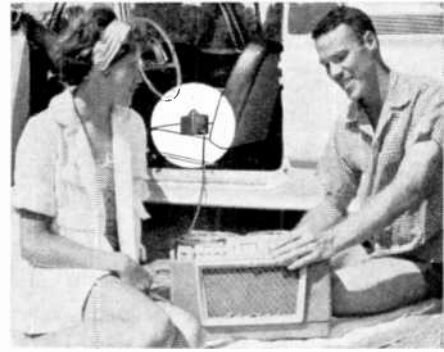
The largest market for instrumentation type tape lies in its use by computers, followed by telemetry, general purpose computations and numerical control. Reeves is nearing completion on a tape research department in the recently completed 30,000 square foot addition to their Danbury plant.

THE SIXTH WASHINGTON Hi-Fi Show will be held at the Shoreham Hotel in Washington, February 10, 11 and 12. The show will open at 6 P.M. on Friday and run to 10 P.M. Other days the show will run from 1 to 10 P.M.

FIDELITONE, phonograph needle and record accessory firm of Chicago has introduced a quarter-track tape head. Firm was one of first to sell magnetic tape. A companion erase head will be introduced early this year. Sales so far have been to manufacturers but action will be taken to introduce the heads to the consumer field.

JOEL TALL who is the inventor of the Editall Splicing Block will take over its sales and distribution. Tech Laboratories will continue to be the manufacturer of the blocks.

ELECTRONIC TEACHING LABS have split stock two for one, increasing the number of shares outstanding to 803,400 according to John E. Medaris, president. The firm's board also authorized the sale of additional shares and stockholders approved a boost in the capital stock to six million shares. The firm makes the Monitor Language Laboratory and was one of the pioneers in the field.



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# TAPE CLUB NEWS

## Omaha Hobbyrama



Voicespondence members, Don Hill and  
Carroll Gustavson (left to right), beginning  
a tape at the Omaha Hobbyrama where  
the club exhibited.

The hobby of tape recording got a big  
boost at the Omaha Hobbyrama held on  
November 18, 19 and 20. Led by Carroll  
Gustavson, a group of Voicespondence Club  
members that included Don Hill, Thomas  
Gesellschaft and William Rapp erected, de-  
corated, and operated an interesting booth  
that featured almost continuous reproduc-  
tion of voices of other VS-ers from around  
the world. In addition, the fellows per-  
mitted visitors and observers to make re-  
cordings of their own voices, either to hear  
themselves or to send to distant friends and  
relatives, and explained in detail the work-  
ings of tape recorders and the thrill of  
voicespondence around the world. Other  
members of the Club had been asked to con-  
tribute short messages and other material  
to be played at the Hobbyrama, and tapes  
poured in from all over to provide a con-  
siderable length of taped program for play-  
ing.

### Voicespondence Headquarters

Many of you have noticed that the head-  
quarters of The Voicespondence Club is at  
Noel, Virginia, and you may have won-  
dered about the location of this tiny spot.  
It is situated in the deep Virginia woods  
about 30 miles northwest of Richmond  
and has about 20 residents scattered over  
about 30 or 40 square miles of countryside.  
The microscopic postoffice is just a closet  
in the front hall of a private home but at  
Christmastime it does a tremendous busi-  
ness postmarking Christmas cards sent in  
from all over the world to get that famous  
Noel postmark and Christmas angel cachet.  
This holiday business results from the fact  
that "Noel" means "Christmas" in French,  
and it, plus the heavy mailings of The  
Voicespondence Club, has just brought the  
Noel postoffice up to third class—even  
though there are only about 20 other  
patrons and no rural routes.

### World Tape Pals Stamp Reel

Definite organizational work for the WTP  
Stamp Reel has been done by Bill Weaver  
of Tucson, Arizona, and Al Bagnall of  
Dallas, Texas. A postcard for use by all  
interested members was circulated through-  
out the club, to be filled out and returned  
to Al Bagnall, 3408 Centenary, Dallas 25,  
Texas, who will handle the classifying of  
Stamp Reel members.

A Tape Library for the Stamp Reel is the  
special project of Bill Weaver, who says,  
"The basis for building such a tape library  
should be a good Stamp Educational Pro-  
gram." He outlines the functions of such a  
program as follows: 1. To develop a series  
of tapes on Fundamentals of Stamp Collec-  
ting for the beginner and intermediate col-  
lector. 2. To have available interesting Stamp  
Talks for all collectors. 3. To develop spe-  
cial stamp groups of specialized and/or  
advanced collectors, as well as interested  
general collectors, to help produce the  
Fundamentals of Stamp Collecting series  
and special philatelic research projects of  
their own interests in stamp collecting. 4.  
To help organize and contact stamp clubs  
and similar groups to exchange philatelic  
information.

Great response is expected from forma-  
tion of the Stamp Reel. As no fund for  
postage to answer letters is available, a  
stamped envelope must accompany your re-  
quest to the Chairman of the Stamp Reel.

### JOIN A CLUB

AMERICAN TAPE EXCHANGE  
Cortlandt Parent, Secretary  
Box 324  
Shrub Oak, N. Y.

BILINGUAL RECORDING CLUB OF CANADA  
Rene Fontaine, Secretary  
1657 Gilford St.  
Montreal 34, P. Que, Canada

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

CLUB DU RUBAN SONORE  
J. A. Freddy Masson, Secretary  
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# TAPE IN EDUCATION

Robert C. Snyder

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

THE single paramount fact about language learning is that it concerns, not problem solving, but the formation and performance of habits," writes Nelson Brooks in his book, "Language and Language Learning: Theory and Practice," published in 1960, at \$3.50, by Harcourt, Brace and Company, New York, N. Y.

Traditional methods of language teaching, which have relied on instruction in the "base" language and constant translation between the "base" and the foreign languages, produce what is sometimes called a *compound system* in which the foreign language is learned and known only in context with the "base" language.

Recognition of the possibilities of the new learning techniques lead instead to a system sometimes called the *coordinate system*.

In the *coordinate system* the learner learns the foreign language largely apart from the "base" language. He does not translate, he does not ask questions in his "base" or "mother" language, and he does not speak his "base" language during the foreign language class period.

Such a technique, of course, demands a vastly different approach to language teaching and learning.

All of the old grammar-translation type language books must be thrown out. The student must hear almost exclusively the foreign language, and it must be presented to him by authentic native speakers of the foreign language.

In turn, he learns first to hear and to repeat the words and sounds of the foreign language in *small manageable doses*. Then he moves on to simple phrases and usages in the new language until he begins to grasp the new language as an entity in terms of itself. He must learn to ask his questions in the new language and, above all, to understand the answers when given in the new language.

In this *coordinate system*, one of the great thrills comes on the day when the student realizes that he can look up unknown words in a dictionary written solely in the foreign language (without any translating section) and can understand the meaning of the explanation being given totally in the words of the foreign language.

Unfortunately, this method of teaching a foreign language through a bi-lingual approach is today more theory than practice. Bi-lingual learning calls for a teacher or teaching device which is adequate and accurate in the foreign language. Almost no American schools today require foreign language teachers to be fluent in the foreign languages which they are supposed to teach. And how can one teach what he himself does not know?

Moreover, it is widely recognized today that there is a pressing need for Americans to learn the unusual, the exotic languages of the world which were formerly almost

never studied in this country.

Where will we find the teachers fluent in languages such as Urdu, Swahili, and other languages of Africa and of the Orient?

To how many students shall the least common of these foreign languages be taught? And how shall the teacher and the single student studying the particular language at a particular level in a small remote school system be brought together?

It seems obvious that the answer does not lie in the direction of traditional thinking.

Most of the books currently being written on teaching modern foreign languages continue to think of language instruction in terms of classroom situations in which a group of students must learn the same thing at the same rate from the same teacher.

Even if it were possible to teach foreign languages well in this way—which seems subject to great doubt—it does not appear realistic to believe that the required teachers can be found or that the economics of public education will ever permit one public school teacher to be teaching a foreign language to only one or two students at a time.

So the answer must lie in another direction if it is to be found at all.

Just as the idea of grammar-translation is now being rejected as a method of teaching the language, so must traditional methods of bringing instruction to the student be changed.

Today, the language laboratory is almost universally considered only a practice program to supplement the instruction which is expected to take place in the classroom.

This thinking is generally in keeping with present attitudes toward most teaching. The effort in our schools today is to place the burden of instruction upon the classroom teacher and to hold the student to a set pace of learning.

If we are ever going to move forward in language learning and other areas of advanced study which must be studied by the few rather than by the many, we must recognize that the student can teach himself much of the material if he is provided with the right learning devices and properly programmed instructional materials.

If teaching devices can be developed to permit any qualified student to study any language through use of standardized courses which include oral-aural materials on tape, sound films, and TV, and which utilize advanced written grammatical materials in properly constructed "teaching machine" workbooks, then there may be hope of providing widespread instruction in a large number of different languages.

Progress is being made in these directions today. Techniques and devices are still in experimental stages and there is a great shortage of properly programmed course material. Nonetheless, it is clear that the desired end is achievable and that it can be reached within a relatively short time.

Next month or the month after we will begin a short series of columns on teaching machines and how they may be applied to instruction in modern foreign languages.

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YOU wish to know ways and means of getting the most from your recorder and—

YOU like how-to-do-it articles for home fun and—

YOU are interested in the newest new products on the market and—

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

YOU follow consumer reports on equipment tested by our staff—

## THEN . . .

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

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# FEEDBACK

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

### Projector Omission

To the Editor:

I was very interested in your recent article "Synchronize Your Slides with Tape" that appeared in the January issue of *Tape Recording*.

On the other hand I was disappointed in the omission of the LaBelle Professional 88 projector in the list of those units to work with synchronizer mechanisms.

As the manufacturer of the first automatic slide projector, certain features of our projectors should be important to those people planning slide-sound shows. First our slide magazine will hold up to 150 slides without changing trays or holders. Secondly, less than 1/2 second is required for changing slides and this rapid change provides the illusion of motion for certain programs. Quick slide change makes it possible to change the pace and the usual longer silent periods before changes are not necessary.

I know that mistakes do happen despite the research and time spent on the article.—Robert Rumpel, Field Sales Manager, La Belle Industries, Inc., Oconomowoc, Wis.

*Thank you for calling this omission to our attention and we are sorry that the La Belle Professional 88 automatic was omitted from the listing. We goofed.—Ed.*

### Recording Ups and Downs

To the Editor:

I have been a devoted recordist since 1955. I have a few things on my chest and wish to sound off. If you should decide to publish this letter, or parts of it—maybe it will do us all some good in one way or another. Aren't we, the readers of *Tape Recording*, all in the same boat, having our joys (and troubles) with our wonderful hobby.

I own my third recorder now, a Webcor 2007. I purchased it shortly after the model came on the market. With this recorder I have made stereo and mono recordings of nearly professional quality. This, however, is possible only with the application of extreme care. It has been my experience that the new 4-track heads require a great deal of cleaning, due to their sensitivity. The smallest oxide deposit can cause a drop out of the higher frequencies or even, if planted in the "right" spot—one channel to fade away completely. To get crisp, clean recordings a good head cleaning is a must. For myself the rule goes: cleaning before every recording session or after every 8 hours of playback. I am using good tape and yet it has happened more than once that during playback a sudden loss of volume or loss of higher frequencies occurred. Cleaning made everything fine again.

Cleaning becomes less of an ordeal with practice and the right "tools." Alcohol, pipe cleaners, a small, stiff brush (as is

available for Schick electric razors) and a roll of "Kleen Tape" will do. A short piece of "Kleen Tape" slightly moistened with alcohol is excellent for pulling over the heads by hand. When running the roll through the recorder, the arm with the pressure pad should be lifted away (which is easily done on the Webcor 2007 just by reaching in from the left side with a toothpick and pushing slightly against the pressure arm) since the tape is too rough on the felt pad. Otherwise "Kleen Tape" is doing a good job, especially on the pressure roller and capstan. For the pressure pad a little brush is best.

Why do manufacturers say little or nothing about cleaning? Maybe out of fear they might scare prospective buyers away? That is poor policy, indeed. How can a completely inexperienced tape recorder owner get top performance from his machine if he doesn't know how to keep it in top condition? Manufacturers *should* furnish with every recorder they sell a cleaning kit with all the information about cleaning. A few spare pressure pads would come in handy for pennies only and a great service would be done if the recorder buyer could get a cover made of plastic or similar material to protect the recorder while it is open but not played. This should be a must with recorders that can't be closed while 7" reels are on the recorder.—Helmut W. Kranz, Philadelphia, Pa.

### Likes Industry News

To the Editor:

Just a line to let you know that I enjoy the Industry News column. This appeals to me because I like to know what's happening in the industry and what we might expect in the future. I enjoy the entire magazine but wanted you to know particularly about this new column.—Holland Kelley, Bartow, Florida.

### Any Notre Dame Recordists?

To the Editor:

It would please me very much to have a tape contact with someone at Notre Dame University because my neighbor's son just started as a student there. I think his parents would like to hear an occasional tape from their boy.—Charles W. Fraser, Star Route A, Box 13, Flemington, N. J.

*If any of you Fighting Irish own a recorder please contact Mr. Fraser.*

### Needs Tape Pals

To the Editor:

I need tape pals. I subscribe to your wonderful magazine and I joined a tape club but only one tape pal have I. Three tapes (one to England) all received by the addressee but only one answer. Will answer *all* tapes in one week. Can you help?—Paul F. McAvoy, 5 Gladiolus Avenue, Floral Park, N. Y.

# QUESTIONS AND ANSWERS

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

## Telephone Voice

**Q**—I prepare tape recorded music and sound effects to accompany slide shows and sometimes I would like to create the effect of a voice coming over the telephone or loudspeaker. For example, I want to record the conversation between a pilot and the control tower with the pilot's voice being heard over the loudspeaker.

Can you tell me how to get this type of sound effect? I have a Webcor Stereo Royalte recorder.—F. J. H., Syracuse, N. Y.

**A**—The problem of duplicating telephone or communications radio is one of producing lo-fi. These media of communication "peak" in those frequencies which convey the most intelligibility. The effect may be secured by putting an audio filter in the line between the mike and the recorder, such as the Blonder-Tongue Audio Baton with which it is possible to boost the wanted frequencies and cut the unwanted ones. You might also try taping the mike with cellophane tape to the back of a pie tin and speaking. The tinny resonance you get, especially if a contact mike is used, may serve your purpose.

## Cleaning Tapes

**Q**—How often should I clean my tapes? (I keep them in reel cans). I have a Revere model T-1100. I am told that a Revere head de-magnetizes itself. Is this true? What is the life expectancy of a plastic base tape?—N. H., Portsmouth, N. H.

**A**—It is not necessary to clean tapes as movie film must be cleaned but there is no harm in doing so. More important is to keep them properly lubricated and this may be accomplished by treating them with one of the preparations now on the market, such as Long Life or Robins Industries materials. Of course, if the tape becomes dusty, dirty or oily it should be cleaned to prevent the dirt transferring to the heads. If this happens a loss of high frequencies will be the result.

The T-1100 has a circuit that demagnetizes the heads every time the machine is shut off so there is no need for other demagnetization.

Regarding the life expectancy of plastic based tape, it has not been definitely established. Test tapes kept under proper storage conditions are as good today as when first stored years ago. Mylar tapes should last indefinitely.

## Varying Speed

**Q**—I must commend you on your fine magazine. I imagine that I am one of the few who have every issue of your magazine. I must say that I have picked up a lot of valuable and useful information in the past seven years through your publication.

I first got the tape bug in 1952 when I purchased a Wilcox-Gay machine. I have recently disposed of it and am thinking of buying another machine. However, I have found that in playing my tapes back over other machines, the reproduction is not true. Over the years my Wilcox-Gay motor had lost some of its pep and the playback of my recordings on other machines is not at the exact same speed. I am thinking of purchasing a new tape recorder. Can I attach some sort of rheostat to the motor of the new recorder to slow its speed so that it can more nearly match the original speed of my machine?—J. R. S., Kansas City, Mo.

**A**—We think the best solution to your problem would be to dub your tapes by playing them on the old Wilcox-Gay and recording them on a new recorder—if you can borrow the old one back again.

You might also be able to have copies of the tapes made by having them done professionally by one of the duplicating houses that would have variable speed equipment.

It is not very practical to attempt to vary speed by means of a rheostat since many of the motors used in recorders depend upon the frequency rather than the voltage.

Speed change can be effected by altering the diameter of the capstan by slipping a sleeve over it. This will have the effect of speeding up the tape, which apparently is what you need to do. We still feel it would be most advisable, however, to copy the tapes so that you will have true speed tapes and will not need to make further adjustments in the future.

## Echo Chamber

**Q**—If I am not asking too much, I would like to know what constitutes a good echo chamber. What are the dimensions and materials used for its construction?—S. J. J., Little Rock, Ark.

**A**—A typical echo chamber is a hard-walled (masonite, plaster, etc., cement floor) approximately 18 feet long, 15 feet wide and 12 feet high which gives a reverberation time of about 4 seconds. The ceiling must be non-parallel to the floor. The speaker is at one end and mikes with different pickup characteristics used for different effects. The room may be divided with a hard moveable partition down the center with the speaker on one side and the mike on the other. The sound must then travel a greater distance. An echo chamber must contain at least 2300 cubic feet. More modern are the electronic reverberators such as the Echo Fonic device. The reverberated signal is mixed with the principle signal in making the recording.

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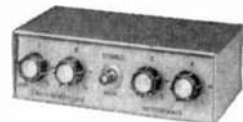
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# THE STORY OF

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## Part I



Top: Frank Healy, General Manager of 3 M's Minicom Division with John T. Mullin, Director of Engineering who brought one of the first Magnetophones into this country at the close of World War II. Another pioneer is J. Herbert Orr, Former president of Orradio Industries who made Irish tape. The Magnetophone shown was captured in Germany and reassembled by Mr. Orr after the war. The Mullin machine shown to Bing Crosby started the use of tape recorders in the broadcast industry in the United States when Bing used it for his programs.

**T**HE voice of Adolph Hitler was coming through loud and clear over the radio but it was coming through at all hours of the day and night. The Allies knew that Hitler was far too busy to make so many broadcasts but yet there was his voice in full fury with no distortion or scratch. Obviously it was a recording but one much finer than any of the Allies had.

They were not destined to know until Germany collapsed and into the hands of the advancing armies fell the answer—the German Magnetophone and tape.

It was in 1839 that the first recorder was made by Poulsen the Danish "Edison." Its recording medium was wire, its signals were weak for the vacuum tube had not been invented and there was no known way of amplifying them. In 1912 Lee DeForest swept away the last barrier with his invention of the vacuum tube.

Wire recording continued well into the late 1940's when the advent of tape with its many advantages gradually forced it from the scene.

Actually tape experiments date back to 1920 when A. Nasavischwily of Germany first suggested the use of pow-

dered magnetic material coated on a base. In 1927 Pflumer of Germany continued the experiments with powdered materials on both paper and plastic base and patents covering patented recording media were issued to him, J. A. O'Neill of the USA and Ofanhauser of Germany.

While the idea was good, apparently the actual production of the material was another matter for in 1930 the BBC used a machine which employed huge reels of steel tape and it was not until the next year that I. G. Farben Co. of Germany developed a coated tape. The Magnetophone, forerunner of all present day machines was first produced in 1935 by Farben and used plastic tape running at 30 inches per second.

On this side of the pond, Bell Telephone Labs developed a steel tape machine and in 1937 they demonstrated their Mirrophone using Vicalloy steel tape. In the same year, Brush Development brought out its Soundmirror which also used steel tape. This year also saw the first demonstration of stereo sound using steel tape. The cost of recording on the steel tapes ran as high as \$1.00 a minute.

It then became a question of which should come first, the chicken or the egg. Tape on a paper or plastic base was the obvious answer but why bother to make it when there were practically no recorders to use it? On the other hand, why make recorders when no one had a tape available to use on the machines?

Brush developed a paper based tape but since they wanted to make machines and not tape they interested Minnesota Mining in developing a tape. In 1944 Dr. Ralph Oace of 3M's undertook the job—which proved to be a tough one. Binders and plasticizers had to be found where none existed, and to make matters worse, there were so few recorders that each experimental batch had to be sent to Brush for testing.

In 1946 Brush demonstrated its machine, now designed for tape. Three firms, Brush, Indiana Steel and 3M had tape but not in marketable quantities. The Indiana tape was friable metal, not a coated oxide.

1947 was the year when things began to happen. Four recorders were on the market and 3M having licked the production problems of the new product brought out their #100 paper tape with a black oxide tailored to the Magnetophone machines. In the same year Dr. W. W. Wetzel, H. K. Smith and R. Herr developed the now familiar red oxide but found Marvin Camras had filed a prior patent claim for the same material.

Now that tapes were available, other manufacturers were encouraged to make machines and following a dem-



# MAGNETIC TAPE

*articles on the history, manufacture  
that made modern recording possible*

by

Mark Mooney, Jr.

onstration to Bing Crosby, ABC bought 12 Ampexes at \$5,200 each and things were off and running. 1948 also saw the first half-track head in use.

One of the most romantic stories of the early days of tape concerns J. Herbert Orr, founder of ORRadio Industries who was a Major in the Signal Corps, hot on the heels of the retreating Germans who blew up every radio installation as the Allied armies approached. They missed one, the largest of all, Radio Luxembourg, and three Magnetophones fell into Allied hands. Orr turned one on and from it came the best music reproduction he had ever heard.

In 1945 General Eisenhower made an important broadcast to the German people using a Magnetophone and the captured tape. Right in the middle of the broadcast came the Fuhrer's voice—the tape had not erased completely. Ike was sore and chewed out the radio staff and



Granddaddy of all Scotch Brand magnetic tapes was this tape No. 100 with a paper backing and a black oxide produced in 1947. The only recorder on the market at the time was the Brush Soundmirror. This was followed in same year by Amplifier Corp. of America "Magnephone," Ekotape by Webster Electric and Magnesonic by Sound Recorder and Reproducer Co.



Dr. W. W. Wetzel, Vice President and General Manager of the Magnetic Products Division of Minnesota Mining and Manufacturing Co., makers of Scotch Brand tape with M. C. Hegdal, Production Manager and R. L. Westbee, Vice President. This is the team that produced the first commercially available magnetic tape in the year 1947. It was paper base and had a black oxide.

laid down the dictum that henceforth no old tape was to be used—they'd have to learn how to make the stuff.

The job of learning how fell to Major Orr and he tracked down Dr. Karl Pfleumer, who had worked on tape since the 1920's. He explained his predicament and the elderly German scientist agreed to tell him how to make usable tape—not the very latest but simplest. The formula was written on a brown paper sack using an auto fender as a desk since Orr had failed to bring along his notebook and there was no other paper available.

Two weeks later he was producing usable tape using material originally intended to be used in making womens pocketbooks.

Not long after Orr was involved in a terrible auto wreck that broke his back in three places. After a long siege in the hospital he was slated to be shipped home. As he was being carried out of the hospital, the old scientist Dr. Pfleumer came up. He handed an envelope to Major Orr remarking that it was a token of esteem for the American. The content was not a get-well card—it was all of his formulae and findings on how to make quality tape.

Orr returned to his home in Opelika, Alabama and put a Magnetophone together, that he had managed to bring back with him and set up for tape manufacture. From this came the firm recently sold to the Ampex Corporation.

At the present time there are nine manufacturers of tape having their own plants and selling the tape under their own brand names. Minnesota Mining and Manufacturing Company, (1947); Audio Devices, (1949); Orradio Industries—Ampex (1949); Reeves Soundcraft (1950); Ferrodynamics (1956); Triton—Brand Products (1959); RCA (1960); American Tape (1960) and Sarkes-Tarzian (1960).

A brief history such as this cannot do justice to the many men who have participated in the development of tape nor can it delineate all of the disappointments and frustrations attendant to the development of a new product.

*(Next month: Tape bases and oxides)*



Fig. 1: Whether recording live, from TV or FM, or just dubbing records as shown here, it's often a distinct advantage to hear what you are recording as you record it. Even with an inexpensive home recorder, the addition of an auxiliary tape head (at arrow) and separate playback system make this easily possible.

## Monitoring With the "Echo-Master"

by Tommy Thomas

... now you can listen to what is being recorded as you record it .

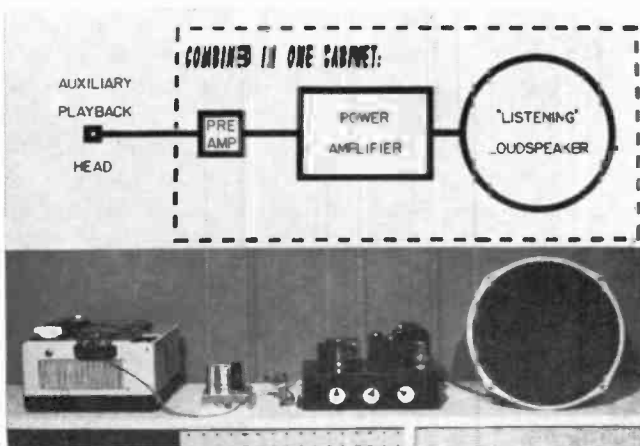


Fig. 2: These are the basic elements needed to add a monitor playback system to your recorder . . . though if you have an amplifier that already has a tape input, then of course the special tape preamp is not needed. Also, a much smaller amplifier and speaker system will likely serve, as long as it at least matches that of your recorder.

LAST month we began exploring the greatly expanded usefulness of a tape recorder that had added to it an extra playback head. This extra play-head mounts out-rigger fashion to the side of the recorder and leads to an extra preamplifier, power amplifier and loudspeaker system entirely separate from the electronics of the original recorder. In that manner, you are able to make a recording and listen to the recorded result *immediately*, even while you continue to record. This permits your recorder, now with three heads, to perform many interesting "feats."

One of the most useful functions offered by the addition of the extra tape head is in monitoring. Now, by listening to what is being recorded *as you record it*, you can finally gain ultimate command of this very important feature at all, offers a "beforehand" type of monitoring that is of very limited usefulness. A portion of the incoming signal being fed to the Record Head is diverted off to a set of headphones that allows you to listen in. But notice that here you are listening to what is being fed *into* your recorder, and not what is coming out (actually

being recorded). So, no matter how adept you are at interpreting the readings of your Record-Level-Indicator (whether it's a flickering neon bulb or a more exacting VU meter), you don't really know *for sure* that you are getting a perfect recording.

Let's see what happens when we can actually listen to our recorded material immediately, as we record it. Perhaps we want to dub some LP's or 45's onto tape, as in Fig. 1. You hook up your record player in the regular manner, plugging its output into your recorder as always, but with one vital difference: *you disengage the loudspeaker connected to the record player*. If it's a simple, low-powered system, then just flipping an SPST toggle switch that disconnects one of the speaker wires will likely do the trick. But if it's a more expensive system, then you had better arrange for a *dummy load* to take the speaker's place, so that the signal (voltage) coming from the amplifier will be "absorbed" harmlessly without possibly damaging the output transformer. This "dummy load" is merely a fixed resistor that matches your hi-fi system: i.e., for a 10-watt amplifier leading to an 8-ohm loudspeaker, when cutting out the speaker you should substitute a 10-watt, 8-ohm resistor in its place. A simple switch arrangement will take care of this changeover automatically.

Tape record in the regular manner, though with the hi-fi speaker silent as mentioned. And have the tape go from the Record Head to around the Auxiliary Play Head on its way to the takeup reel of the recorder. Then, with the Auxiliary Play Head plugged into its own electronics system (see photos), turn the "listening" speaker's volume up to a comfortable level as you listen to the LP or 45 you are putting on tape. *But remember! You are hearing the actual tape recording now, and not the original disk.* This is the final, tape-recorded result. If it sounds good here, then you've got it, and there's no doubt.

The way I work it, when dubbing records onto tape, is to *test-record* the music first. I record with one hand on the recording level knob, inching it up more and more until I get to a point where I can just begin to hear distortion on the tape. Then, for the final recording (and usually one preliminary run-through is all that is necessary), I back the recording volume up just enough to eliminate the distortion. The result is a tape that can be played at minimum possible playback volume, which of course means that I have subdued both tape noise and the amplifier's inherent background noise level to its min-



Fig. 5: For those of you who wish to get the ultimate performance out of your recorder (specially now if you're adding a third tape head), these accessories are practically essential. You need them to get the positive alignment and adjustment necessary to obtain the maximum brilliance from the important higher frequencies.

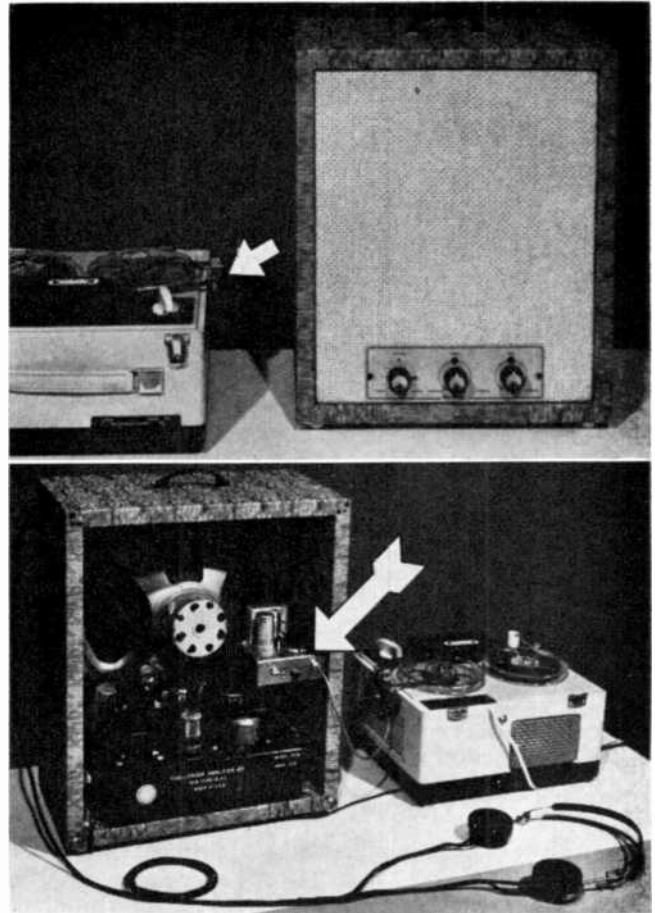


Fig. 3, top: To keep your recording "system" as compact as possible, it's best to combine the preamp, the power amplifier and the auxiliary "listening" speaker all in one portable cabinet. Also, in the interests of portability, I have found it desirable to leave the extra tape head (at arrow) permanently fastened to the recorder.

Fig. 4, bottom: To attach the tape preamplifier inside the cabinet (at arrow) with wood screws, two holes were first drilled through the metal preamp chassis. And since headphones are often so essential in monitoring, a pair of phone-tip jacks were installed, connected to the speaker leads, along with an SPST switch for silencing the speaker.

imum also. This often amounts to being quite an improvement, especially when using an inexpensive recorder.

This same system of monitoring, with miscellaneous variations, can be used when recording from radio to TV. And where it especially excels is when you are called upon to do a recording of a *completely new nature to you*. Whatever comes up, unless you've recorded something like it before, you may be at a complete loss at how to judge recording volume under unfamiliar circumstances. And knowing that you have to get it recorded right the first time doesn't help your confidence any. Here, then, being able to immediately hear the actual recorded result is worth its weight in gold. And you'll soon discover that you've developed a certain "sense" of control that seems to warn you when a further upping of the recording volume will bring distortion, so you can stop short ahead of time.

By the way, recording from TV presents a unique problem of its own in that your sound—as heard played back from the tape—is a second or so behind the action on the screen. My own approach, since I'm primarily interested in getting a fine tape, is to overlook this annoyance of following the TV version "unsynchronized."

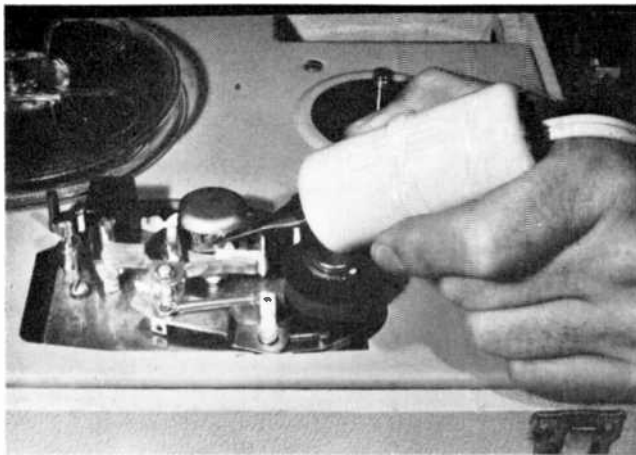


Fig. 6: Demagnetizing your tape head(s) should be a regular procedure every ten hours or so. It's the only way to be certain that accumulated residual magnetism is dispelled before it starts erasing the high frequencies of your already recorded tapes. And incidentally, erasing those same high frequencies on the test tape, ruining it.

But, frankly, this doesn't go over too big with others so when I'm not doing this by myself I usually leave the TV speaker on for everyone else to enjoy and I listen to the taped version wearing headphones. That way, everyone is happy! It's necessary to exclude the sound from the TV speaker as much as possible, so I do that doubly by moving the recorder quite some distance away, and I completely enclose my ears with a pair of soft rubber headphone cushions ("G" in Fig. 5) that fit snugly onto my headphones. You can get these phone cushions from the Burstein-Applebee Co., 1012-14 McGee St., Kansas City 6, Mo. Cat. No. 17A35, 88¢ a pair, plus postage.

#### THE AUXILIARY PLAYBACK SYSTEM

Last month, for use as the "Echo-Master," I had you put the special tape preamplifier in a small cabinet of its own, and then use your TV set to supply the extra needed power amplifier and speaker. This works fine if all you want to do is have fun bouncing back your recorded "echo," but it's rather limiting—I soon discovered—for further use. It's best if you can eliminate having

to depend on the TV's electronics, and have a completely independent amplifier/speaker system. The monaural amplifier and 12" speaker that you see in the photos I've had so long that I don't remember where I got them or even how much they cost. Actually, both of these components are much *larger* than should be necessary for monitoring purposes, so shop around for a smaller and less expensive combination that will allow you to build a more portable cabinet. Your local electronics supply dealer can help you make a choice.

#### TESTING YOUR RECORDER

A. *Audiotester Tape*. Audio Cat. No. 30-206, \$3.90 plus postage, from Arrow Electronics, Inc., 65 Cortlandt St., N. Y. 7, N. Y. This fascinating test tape is for 7½"/sec., and checks both monophonic and stereo systems for head alignment, resonance, frequency response, NAB equalization, IM distortion, flutter and stereo balance. It's not only extremely useful for aligning your new tape head accurately, but also for discovering just how good your recorder is . . . which is quite an interesting revelation in itself, I found out. By testing first your recorder and then the auxiliary tape head, you get an exact comparison which can be obtained in no other way.

B. *Tape Head Demagnetizer*, Robins Model HD-6, Cat. No. 92R990, \$7.35 plus postage on 1 lb., from Allied Radio Corp., 100 N. Western Ave., Chicago 80, Ill. My only added comment here is that if you don't *already* own and use a head demagnetizer on a regular basis, you should be ashamed of yourself.

C. *Hi-Fi VU Meter*, Realistic Cat. No. A94L115, \$4.95 plus postage on 3 lbs., from Radio Shack Corp., 730 Commonwealth Ave., Boston 17, Mass. Here's an economy priced monaural VU meter that works perfectly with the Audiotester Tape. Just attach it across the loudspeaker (I plug it into the earphone jacks), play the test tape and watch and note the meter readings at the different frequencies. First test your regular tape head and then the new one, for a direct comparison. This will give you an accurate rendition of your recorder performance, from alignment of the tape head to testing the flutter

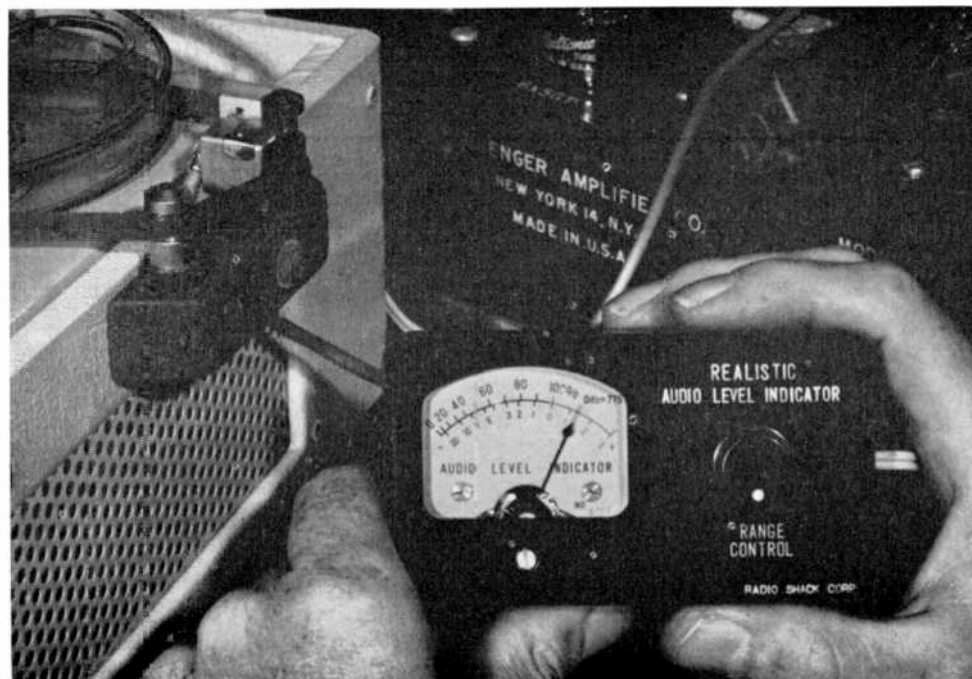


Fig. 7: Though somewhat of a luxury item for most of us, this VU meter is inexpensive enough to be worth having. Here, after an initial volume adjustment, the meter is being used to align the new play head. The head has been adjusted so that the meter reads a maximum deflection when the 7500-cycle band is played on the test tape.

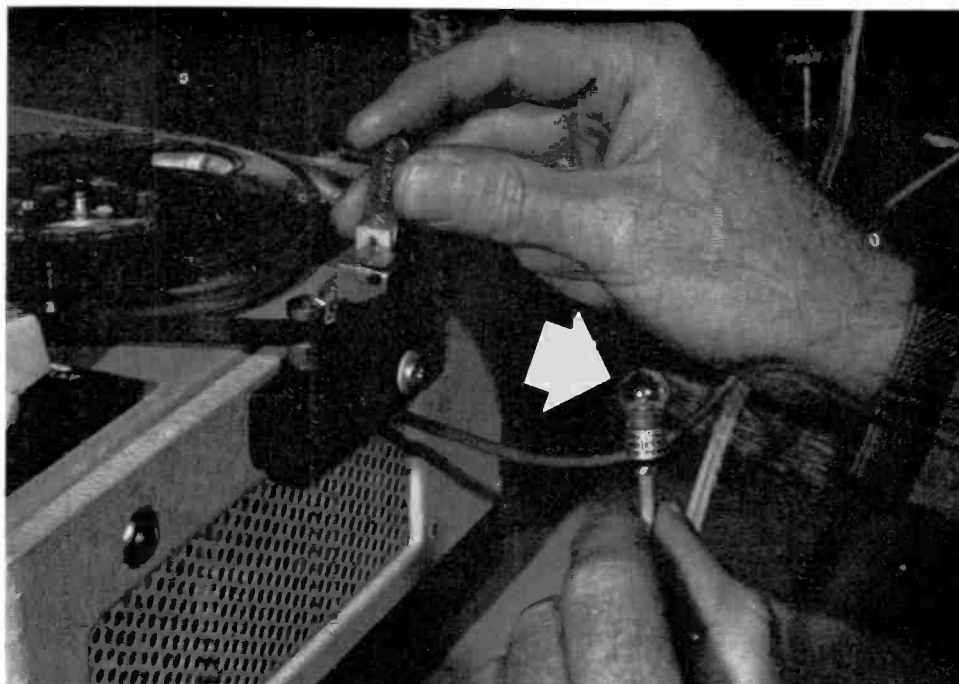


Fig. 8: An ordinary 2-cell flashlight bulb can also be used as a "meter." Solder it to a length of double wire that has two clips on the other end. Then attach these clips to the speaker leads and let the varying brightness of the bulb indicate your various "readings." Complete instructions come with the test tape.

of the passing tape . . . both very important to know when introducing a new tape head into a system.

D. *Flashlight-Bulb Tester*. Though definitely not as accurate nor as easy to "read" as the level meter, it's inexpensive and can readily serve in its place.

E. *Stroboscope Tape-Speed Checker*, Irish Cat. No. TSB-1, \$4.95 plus tax, postpaid from "STROBOSCOPES," Box 190, Opelika, Alabama. This device permits you to easily and accurately check the speed of your recorder. The rotating disc is scaled and ruled in three concentric rings of radiating lines representing  $3\frac{3}{4}$ ,  $7\frac{1}{2}$  and  $15$ "/second. When held against the surface of the moving tape (it works best against the *takeup* reel), the disc will revolve at the same speed as the tape and indicate the speed at which the tape is moving. If the tape speed is correct, one of the rings of bars will stand still. If the bars move forward in the direction of the tape, the tape is going

too fast. If backward, too slow. To find the percentage of error, if any, count the number of bars that move past a fixed point during exactly one minute. No matter what the tape speed, every 72 bars/minute represent a 1% error, which isn't at all bad for a home recorder. In fact, up to 2% (144 bars/minute) is still fair. More important, though, is that this gives you the means of discovering whether or not the addition of the auxiliary tape head introduces any *additional* error to your system. If it does, then you'll have to realign whatever parts are necessary to eliminate this new error.

F. *Neon Test Lamp*. Fifty cents or so at your local hardware or dime store. Ordinary incandescent light can be used to observe the disc, but it won't give you a very "sharp" image. Better to use this inexpensive flickering neon bulb that can be plugged into the end of any extension cord and held immediately above the rotating disc.



Fig. 9: The stroboscope tape disc, when held against the surface of the moving tape, will revolve at the same speed as the tape and thus indicate the tape speed. First measure the speed of the tape in the recorder in the regular manner, then pass the tape around the auxiliary head and check again. The two speeds must match!



A youth group in Dusseldorf, Germany, prepared group tapes for exchange with other clubs. Such tapes can become valuable educational aids in the school classroom as well as international friendship bonds.

# How to Organize a Tape Club

by Marjorie Matthews

**W**HEN tape enthusiasts meet, there is always a gab-fest during which all sorts of things are discussed such as technical excellence of various pieces of equipment, techniques of recording, interesting live recordings made, fascinating tape pals in other parts of the world, and so on, ad infinitum, until one says to another, "Why don't we get together more often for this sort of thing? How about starting a club?"

The popularity of local clubs is just beginning in the United States, in comparison to England and Germany, where they have been going strong for the last three years.

Occasionally a group starts with great enthusiasm, only to find after they have had a few meetings and gotten acquainted, that they have run out of ideas. Attendance drops off, and the club dies. A Dallas, Texas tape club, Reel #1 of World Tape Pals, has experienced most of the troubles of such organizations, and now, over 2½ years old, is stronger than ever. From its experiences, some basic rules for the success of a local tape club have evolved.

The first requirement is at least three tape enthusiasts who are genuinely interested in seeing a local club formed. These persons will form the nucleus of the club around which the others will cling, like the electrons around the nucleus of the atom. They will be the ones to undertake the organizational work; they will devote time and energy to securing a meeting place and getting in touch with

other tape recorder owners and inviting them to the organizational meetings.

The permanent club meeting place should be in a public building of some sort rather than in the homes of members. Most communities can offer a Community Center meeting room, a local YMCA or YWCA which will be happy to cooperate, or an auditorium in a community bank building. Such places are usually available at no charge except an evening's pay for the building custodian. Most offer facilities for refreshments, and some even furnish the coffee! (Bring your own doughnuts, though!)

A conventional slate of officers, president, vice-president, secretary, treasurer, program chairman, publicity chairman, and attendance chairman should be elected, with particular thought to the position of program chairman and attendance chairman, as these two officers will perform the hardest tasks. Reel #1 found that combining some of these offices has worked out well. The Vice-President is automatically head of the Program Committee, and the Secretary doubles as Treasurer. The President may also act as Publicity Chairman.

Now that our club has its officers elected, and a place to meet, what is the next step? A meeting of the Executive Committee, composed of all officers and heads of committees should be held to discuss and present to the membership a few knotty questions that some organizations

tend to shy away from; mainly, what finances are needed, what will they be used for, and how is the club going to get them. Necessary expenses are money for paying the custodian, for use of the meeting hall, money for refreshments, postage, and printing for cards to notify members of meetings, and membership cards and club yearbooks, if the membership wants them. If a definite plan for these necessities is worked out by the Executive Committee and presented for discussion to the general membership, a great deal more will be accomplished with less loss of time and fewer long drawn out business sessions than if all these questions are discussed in open meeting.

Because tape recording is a family hobby, most clubs assess annual dues of \$3.00 or \$4.00 for the first member of the family, with \$1.00 additional for other members of that family. Husband, wife, and older children all can enjoy tape clubs together.

Now to the heart of the situation: What do you do at a tape club meeting? Below are some ideas for club activities which have been tried and found successful.

As the success of any local club lies in holding the interest of its membership, the Program Chairman should avail himself of the best talent in the group to serve on his committee. He will enroll the services of members with imagination and originality, because tape recording is a hobby with unlimited possibilities for creative activities. **TAPE/SLIDE SHOWS:** This is the easiest program to



When tape enthusiasts meet, they discuss equipment. Ralph Zuar, above, of East Vansburg, Alberta, Canada, visits with Wally Walsh, of Malton, Ontario, Canada, during a vacation trip.

present, and one on which the program chairman can fall back at any time. Since several members of the local club probably belong to an international tape exchange group such as World Tape Pals, an interesting program of 35mm color slides with taped commentary, prepared by a person in another country, will provide an excellent program. This program may be given newspaper publicity, and an invitation to the general public may be issued. This will promote interest in the club and gain new members for it. **TECHNICAL DEMONSTRATIONS:** Not everyone who owns a tape recorder is an expert in recording. Demonstrations on the technical aspect of making good tape recordings can provide at least two good programs a year. These technical programs may cover everything from the use of jack cords in dubbing from radio, television, or record player to recorder, or from one recorder to another, to the proper placement of the microphone for live recordings of speakers, combos, orchestras, and choirs. Ask some of the members to provide the live music to be recorded, and you will have a doubly attractive program of local talent show and technical instruction.

**PARTICIPATION PROGRAMS:** A highly successful meeting is one where each member takes an active part. At one meeting, ask each person to bring 3 minutes only of an interesting tape he has made or received from a tape pal, to play for the group, with brief explanation or comment. One word of caution, however; be sure to limit each member to three minutes. What may be highly interesting to one member may be boring to another.

The impromptu production and recording of a skit can provide a hilariously entertaining meeting. There are a few commercially prepared skits available, but if you have any writing talent in the club, by all means call upon it. Parts may be typed out, folded up, and placed in a box, to be drawn by members as they arrive. Try an old-fashioned "melodrama," with plenty of sound effects produced by members. Keep the skit short, not more than 15 minutes, because everyone will have to hear it played back, and your meeting can run into the wee, small hours as favorite parts are played over and over.

**CLUB PROJECTS:** Several projects come to mind which can be undertaken by a club and the results presented at a meeting for editing and approval of the membership. Some of these projects will take quite a bit of time and work, and may extend over a period of several weeks.

1. Tape/slide shows about your locality: Invite each member to provide a few 35mm slides and compile these



One excellent club project is organizing and staffing a tape recording booth at local fairs. The Auckland, New Zealand, members of WTP had an excellent exhibit at the Hobbies Fair held Easter week-end, 1960.



Robert Krouch, of Paris, France (third from right) was honored at a dinner sponsored by WTP Reel #1, Dallas, Texas.

into a 30-minute tape/slide show, to be exchanged with individuals or clubs in other countries.

2. Documentary tapes on your city, town, or community: Assign phases of this project to several members, and compile the results into a valuable documentary tape. Ask the Mayor and other city officials to speak; get the Chamber of Commerce president to talk on the future outlook for your city, etc. Your Public Library and Board of Education may want copies to add to their permanent files.

3. Recording of special events: Offer the services of your club to local officials for recording special events, whether it is the speech of the Governor as he lays a cornerstone, or the crowning of the local beauty queen. Your club will be providing a public service and winning recognition and members at the same time.

4. Record messages from foreign students and send them to parents and friends: This project will make the student happy, and will certainly make the parents happy; and your club will feel that it has really done a worthwhile project. Before you make the recordings, be sure you have a tape contact in the foreign country who will see that the message is played for parents or friends. There is nothing so disappointing to a foreign visitor as to send off a tape in eager anticipation, only to learn that it is never heard by those for whom it is made. So write your airletters weeks in advance, and get your replies before you set up the tape-making meeting.

5. Programs for shut-ins: Recording of programs for inmates of sanitariums, veterans' hospitals, and other shut-ins has been a successful group activity for many tape clubs. Here again, care should be taken that the subject matter recorded is of interest to the listeners, and that the program is kept brief. Never bore a captive audience with a too-long tape program. Your club can tell if its program has been successful: if it is invited back.

**SOCIAL MEETINGS:** Once or twice a year, your club may want to have a purely social meeting. But this does not mean that the Program Committee can take time off. At that mid-summer picnic, be sure that tape recorders are on hand to record the impromptu barber-shop quarter; or the carols at a Christmas Party; and at a formal dinner honoring the outgoing officers and welcoming the new ones, these important speeches should be preserved for posterity!

In order to encourage local clubs, World Tape Pals, an international association for the exchange of recorded tapes based in Dallas, Texas, provides for club memberships, issues charters to groups meeting the requirements for a "reel," and publishes news of member club activities in its periodical. Membership in an international group will give the local club names of clubs and groups in other countries with which to exchange tapes and tape/slide shows. The address of World Tape Pals will be found on the Club Page of this issue of *Tape Recording*.



Seattle members of World Tape Pals met at the home of Dorothy and Ito DiLuck for organizational meeting of WTP Reel #2.





Some of the local belles are not at all adverse to chatting with the author as he records them on tape.



## African Sound Panorama

by Frank Weston

... Africa abounds in new, unusual sounds, to capture on tape.

*Mr. Frank Weston, of H.M. Prison, KINGOLWIRA, Nr. Morogoro, is a Colonial Prison Officer serving in Tanganyika. He is the East African Representative of World Tape Pals, Tape Respondents International, and the British Recording Club, Founder member and first Chairman of the Tanganyika Tape Recording Society.*

**T**ANGANYIKA TERRITORY with its two extremes of topographical relief, Africa's highest mountain, the mighty Kilimanjaro rising to over 19,000 ft. with its permanent ice cap and the world's second deepest lake, Lake Tanganyika offers unbounded opportunities for the sound catcher.

Less than 20 towns provide an electric power service and much of the recording and playback is done either on small private plants or vibrator or rotary type packs. Recorders suitable for use in East Africa must operate from 230 volts. A.C. 50 cycles when power is available. Non mains type recorders with either electric or spring wound motors with transistorized matching amplifiers are rapidly coming to the fore but there is only one generally available which will play back on the "Base" machine, this



Shy, but willing to be recorded, is the attitude of most natives. There are, however, still others who run at the sight of a white person, let alone his "witchdoctors box."



A modern Arab, a mike and a Mosque. A vivid description of the Mosque will enhance this recording and there is no better time to describe such a structure than when viewing it first-hand.

is the West German Butoba, and it is at present sweeping the board. Regular supplies of the Steelman are hoped for soon. There are several privately imported Steelmans in use, they have created a very good impression indeed and their future seems assured. Dollar exchange has in the past, proved troublesome and severely restricted the import of American built machines. The odd few that have filtered in during the past years, however, have impressed and the Bell and Howell, Webcor and Wollensak have been the most popular. I would dearly love to try out the Crown Broadcaster a dear friend of mine in Logansport, Indiana has and still does send me some wonderful top quality recordings from just such a machine. It is the general hope of most people here, and interest is growing daily, that more American manufacturers will seek agencies in East Africa. Careful selection would, however, be imperative and I would be only too pleased to assist in this direction.

American tapes have been more prominent and Irish, Audio and Soundcraft are very popular. The climate here from dry cold to extreme humidity demands a lot from tape. Mold forms almost overnight in some areas and "sticky" tapes are often a problem. I always store my tapes in polythene bags and experience no trouble, Mylar is one of the very best for our conditions. Plastic base is unpopular, it seems to dry out or stretch or break easily. Polyester is another base that does well. Print through surprisingly enough gives little trouble, in fact I have had some "Irish" in store on the coast for two years and it is still as good as new. Scotch is the cheapest and most popular of the tapes on general sale.

Long term reliability of machines is of paramount importance in Tanganyika—qualified maintenance firms are rare and confined to the big Towns in an area of some 366,000 square miles of climatic conditions which are rigorous to say the least. Here the Ferrograph has swept the board to be followed in the lower price range by the Telefunken which has put up an extremely good show.

For serious recording low impedance dynamic mikes with long lines are essential—the odd Ribbon is to be found in the home of the "Quality men" for indoor music recordings. For the "On the spot" outdoor recordings it is often necessary to use lines up to a quarter of a mile long and good results are obtained.

The majority of opportunities for "Top" and "Interest" recordings present themselves in areas without mains, the many languages of the local market, there are some forty different nationalities here, and it is enthralling to capture such a scene—a kaleidoscope of colour and voice. The local fisherman whose lined face tells of many years on the sea under a tropical sun, and his story rivals that of fishermen anywhere. Or, an interview with the Captain



Gina Weston records an Asian shopkeeper of East Africa. Many languages are spoken in the local market and it is a hubub of color and activity.

of a Dhow who has just completed a voyage of many thousands of miles from Arabia without any modern means of navigation, well, his story is unchanged since the time of Sinbad, and he is only too willing to tell the story of his bejewelled sword as well, or of the carpets of great beauty hidden away in the holds. One can capture the sound from the minaret of a Mosque or the drum from a bush Church calling people to pray. I have just completed one such a bush Church recording, 100 miles up river in an area of 34,000 square miles, with only 150 miles of P.W.D. roads, cut off for much of the year with access only by canoe.

And, talking of drums, perhaps one of the most fascinating recordings is that of an "Ngoma," literal translation drum, but, used loosely to cover anything from a local dance or feast in full regalia to the "Western Type" dancing popular in some of the bigger towns. An opportunity to record a "non commercial or tourist" type Ngoma does not present itself very often and when it does the greatest care must be taken over the recording as the next opportunity will probably be a long time coming—the biggest difficulty here is that some of the largest drums have, dependent on the wind, a range of up to 40 miles and it is extremely difficult to capture all the highly colourful singing, stamping of feet and general background noise so important for atmosphere, without overmodulating on the drums.

Tanganyika possesses some of the finest game areas in the world, of late the camera has replaced the gun and now the tape recorder is coming to the fore—great care, (and long lines) has to be taken when recording to ensure that the playback is not made by the "Star" itself. Over 1000 species of birds with song almost as varied are never far from the microphone. The night sounds of the bush and jungle, the cough of the leopard, the roar of the lion and the trumpeting of the elephant are here for the asking.

Mixer Units are becoming more popular and lend enormously for a quality on the spot recording with a live commentary over the top.

Regular and thorough maintenance is a must here, and the "Tape Pal" who sends a tape joined with ordinary office type adhesive tape can have little idea how it comes back, if it does come back. The comments are unrecordable. Head cleaning fluid as such is unobtainable and white meths. or methyl alcohol is usually pressed into service. Head depolarisers and bulk erasers are becoming more appreciated as "musts" for quality recordings and I have received several enquiries for the Robins line, advertised in the columns of "Tape Recording" which, incidentally, is now undertaking many "Safaris" in East Africa. People are also interested in the Super Gibson Girl Splicer.

With the rapid advance towards self government comes the opportunity for many "This is history" type recordings—the opinion of the politician, the man in the street, and



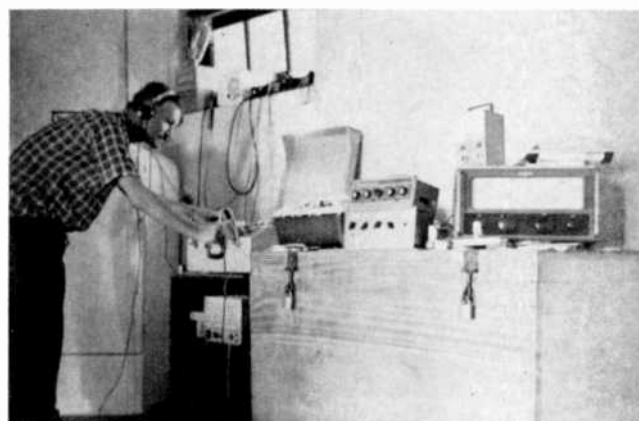
A key man in a local tribal dance grins as he looks over the "magic box." A cigarette often helps put such natives at ease when interviewing them.

there are over 8,000,000 Africans alone. The minorities also will usually co-operate and afford a wealth of material, so do old Settlers and of course the White Hunters. Over the last six years or so, I have made many such recordings and have developed many techniques to get the best out of the subject, the offer of a cigarette, a talk about children, a picture in a book, some tea or sugar, indeed there are many and not least of all is patience and understanding. But of course one still does meet the local who will run at the sight of a white person, let alone a "Witchdoctors Box," as a recorder is often referred to.

Indoor recordings present some difficulties, hard floors, walls and ceilings and scanty furnishings in many of the houses and flats need an awful lot of treatment. Four wall flutter and "bounce" are the biggest problems.

International Tape Clubs are gaining ground and must now have somewhere in the region of 60 members between them, but lines of communication are long and internal recruitment difficult and slow. The Tanganyika Tape Recording Society (Secretary Miss Irene Pye, c/o Senr. Asst. Commissioner of Police, Private Bag, Dar es Salaam) was formed about a year ago. It now has some 50 members and is doing a good job, but of course many of the members only meet when passing through Dar es Salaam, (literal translation—Haven of Peace) the Capital.

The African is born to rhythm and music, he is advancing and keen to learn and the first manufacturer to produce a small battery portable within the price range of say 60 to 80 dollars, could with plenty of advance radio publicity, easily "sell a million copies."



Here the author is back at his temporary base and is shown with some of his recording equipment. His many tape friends around the globe must find his tapes fascinating listening indeed.

## SOUND STORY No. 4 AFRICA

by Frank Weston

Eight exciting minutes of authentic sounds recorded in the wilds of Africa. Hear native chants, the Ngomas, cries of bush animals, the din of the tribal dance, etc.

7½ ips, dual track

**\$1.00**

Order from: Sound Story #4, Tape Recording, Severna Park, Md.

# REVERB

by Frank Smith

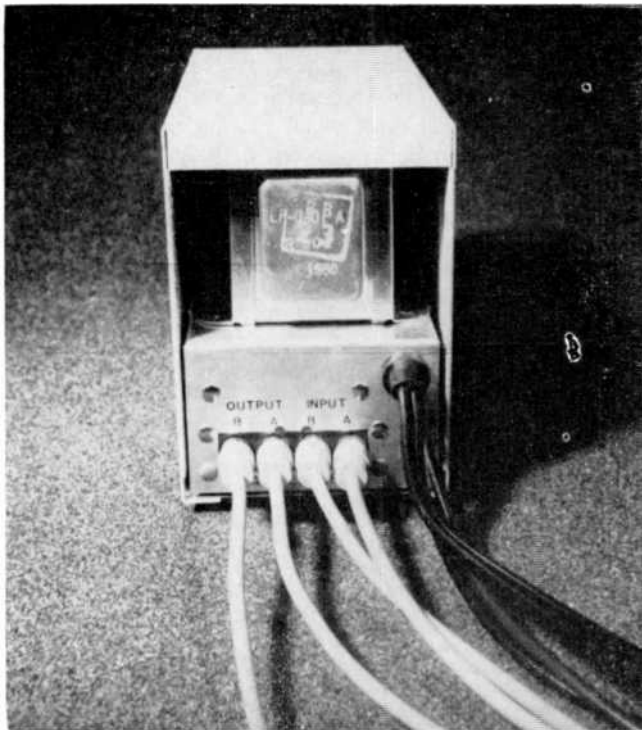
. . . reverberation adds "liveness" to basic sounds.

**"R**EVERB" is short for "reverberation" and reverberation is long for "echo."

Reverb is the newest thing on the home music front having been introduced just last July at the Music Show in Chicago by a few firms who offered it as a built-in part of the stereo units.

The Hammond Organ Company, makers of the electronic organs of the same name were the originators of the mechanism and had incorporated it in a reverb cabinet which gave a more spacious sound than was otherwise possible using straight audio.

If you have ever shouted "hello" at a cliff or in a canyon, even a man made one, to hear the echo come back, you were playing with reverberation. Sometimes there would be a multiple echo getting fainter and fainter as the sound was reflected and re-reflected.



Rear view of Knight KN-701 Reverberation Unit. Dark cords are line cord and two leads to reverb device. Light gray leads are inputs from preamp and outputs to power amplifier. Input may be up to 1 volt.

Any wave form may be reverberated. Light waves will bounce off a mirror, radar waves reflect from objects back to the radar antenna and create the image on the screen, heat waves may be reflected, as any camper knows who has used a reflector oven. Sound waves have the same characteristics as other wave forms, hence also may be reflected.

These are natural reverberations, their effect depending upon the surroundings. Everyone has heard thunder. This starts as a single sharp "crack" as the huge spark burns its way through the air. The familiar rolling, bumbling sound is the result of the reverberations of the single, sharp sound.

The analogy of waves in water has often been used as an example. A stone thrown in a quiet pond will set up a series of waves which travel in concentric circles out from the spot where the stone entered the water. If the waves enter a marshy spot on the shore, they are broken up and diffused.

If the waves meet up with something straight and hard, such as a rock face, they will be reflected and can be seen heading back toward the starting point, still in ever widening circles.

Even these waves, if they strike other objects in the water will again be reflected.

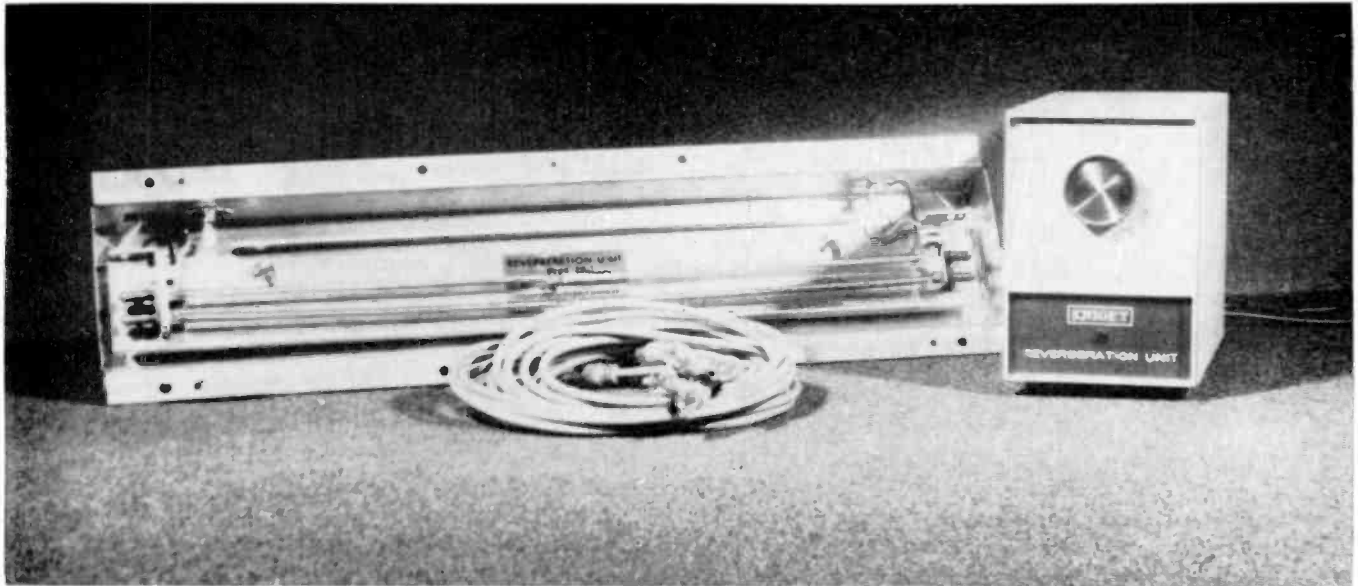
The same is true of sound. The echoing of sound, or reverberation, adds "liveness" to a basic sound while absorption deadens it.

The extreme of the "dead" room is the anechoic chamber, the walls and ceilings of which are built to reflect no sound waves at all. When you speak in such a room your voice is flat and lifeless. The opposite extreme would be a room such as a gymnasium where the sound echos and reechos from the hard walls and ceiling and the polished floor. This is a very "live" room.

Auditoriums, living rooms and other places fall somewhere between these two extremes.

Some reverberation is necessary to make sound "sound" natural, since we are used to hearing it with some echo. It is reverberation which imparts some of the liveness and brilliance to recorded music. A certain amount is highly desirable, too much leads to distortion.

You perhaps have noticed this yourself in large auditoriums or outdoor stadiums which have PA systems, the sound from one speaker reaching you before that of an-



Complete unit showing Hammond Reverberation Device and Knight control. Leads are furnished. Unit must be connected between pre-amp and power amplifier. If used with mike, microphone output must be preamplified before being fed to control unit and reverberator. Output then goes to recorder using high level input.

other. When the time delay is serious, the same words will overlap and the speech become almost unintelligible.

In a carefully designed radio or recording studio, great care is taken to get just the right amount of sound reflection to produce the kind of sound that is wanted. This factor is so important, that some recording companies will use only certain concert halls and auditoriums for their recordings because they have found by experience that these give the music the liveness it needs. The location of these is oftentimes jealously guarded.

So much for natural reverberation, which is a product of the surroundings.

Since a reverberation is simply a delayed reflection of the original sound, it can be produced artificially using a time delay device which makes part of the original sound lag behind.

One reverberation device, used by studios, records the original sound on tape as it is picked up by the microphone and then reproduces this sound from one or more playback heads set short distances from the record head and mixing it with the original sound. The head distances can be altered to get the number and time delay desired in each echo.

The Hammond unit, which is the base of most of the reverb outfits for home use, employs two transducers which feed the signal across a pair of long springs. The delay caused by this treatment is enough to give the reverberant effect, and in fact it is adjustable. The output from the reverb unit is then mixed with the original signal and the result fed to the speakers.

Since the listening room has almost as much effect on the character of the music as the room in which it was recorded it was felt that units which would add reverb at the playing end would be helpful—as indeed they are.

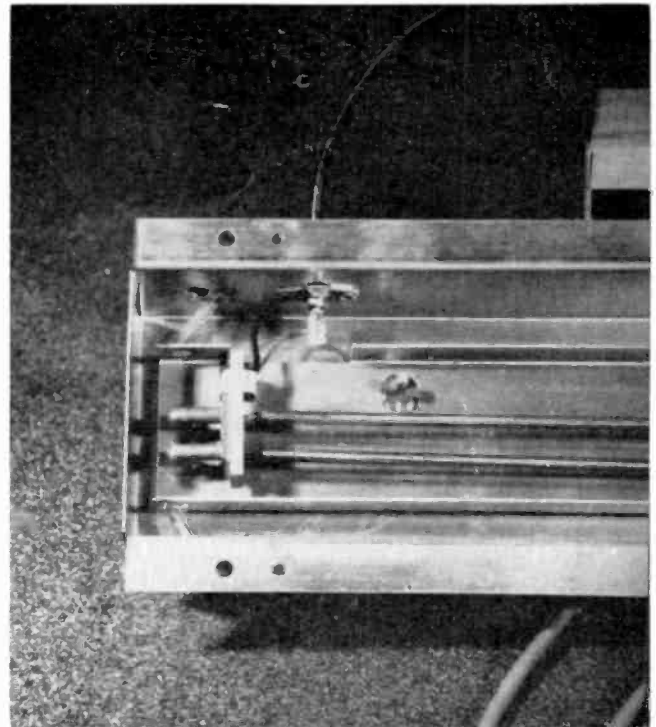
The Knight reverberation unit is shown here. It consists of the time delay unit, the long metal box, which is mounted on the back of the speaker cabinet or other convenient spot and the control unit which mixes the signals and controls the amount of reverberation. The unit will operate with either monophonic or stereo sound and must be interposed between the pre-amplifier and the power

amplifier. Thus on a recorder it is connected to the external amplifier jack and an amplifier-speaker.

It may also be used to add reverberation to the input side. In the case of a mike, the sound can be made to be very hollow. It is necessary to pre-amplify the microphone output, interposing the reverb unit between the mike preamplifier and the recorder input.

By recording with the unit in the input side, the tapes will then have built-in reverb.

Like seasoning in a stew, reverb must be used just enough to bring out the best in the music or to give the effect desired, too much will be unpleasant.



Closeup of one end of mechanical delay device showing ferrite transducer which applies signal to delay springs. This is picked up by second transducer and mixed with straight signal by means of the Knight KN-701 control.

# Whaaat Did He Say ???

by Bart Pierson

. . . you can create some totally unbelievable commercials by recording real ones—and then with a splicer . . .

**D**ID you ever wish for an opportunity to retaliate against the loud commercials that invade your living room? Do you ever feel like yelling back at them when they start their free swinging speeis for products to make your elementary tract work like clockwork, your stomach rumblings disappear forever or your exhalations resemble the breeze from fields of violets?

Well, be of good cheer, brother, your day has come. Your tape recorder, a reel of tape and a splicer are the weapons that will turn obnoxious commercials into a hilarious farce.

How is this miracle wrought? Simply by stalking commercials on radio and TV, recording them and then by cutting them apart and piecing them together with the splicer, creating entirely different commercials that will be a sure cure for gloom—but little else.

You are probably familiar with the fare dished out on your local radio and TV stations and know already which ones will produce the most commercials per minute of listening time. These provide the best hunting grounds for basic material.

First, the recorder should be hooked up to the radio or TV. You can use the microphone and simply place it near the speaker if you do not wish to dive into the innards of the receiving set. This method produces lo-fi, which really doesn't matter too much, and it also means that you will have to be quiet in the house when you are doing recording with the mike, otherwise any background noises will be added to the sound you are recording.

Better yet is to use the accessory cord that is usually supplied with the recorder and hook the leads to the voice coil terminals on the speaker. The other end of the cord is then plugged into the radio/phono input on your recorder. Be very careful if you use an AC/DC table model radio for some of these have a "hot" chassis that can give you a nasty shock. If in doubt, your local radio serviceman can install a jack on your set into which you can plug the accessory cord without bothering to hook on the voice coil terminals each time. This is handy for any off-the-air recording you might want to do.

Next step is to load the recorder with a reel of tape and then you're ready to begin the talent hunt. In view of the fact that you will be splicing various bits of different commercials together to make your final reel it is a good idea to pick a station where the same announcer has to read most of them himself. This will then give you the same voice throughout. In many cases these commercials are supplied to stations already recorded on discs. This is especially true of the musical variety which employs a touching little ditty. These are sometimes difficult to cut into each other since they are neither in the same

voices nor the same musical keys. Even so, if handled with loving and tender care, something can be got from them too.

Even though you probably have a dual track or four track recorder, use only one track on the tape. Since you will have to cut the tape into pieces, anything which might be recorded on other tracks would be chopped up anyhow.

The pause button on your recorder will be very useful for stopping the machine between commercials. Because you will have no idea of what is coming next, after a musical number is finished, you will have to start recording at that point. If it proves to be something which you feel is suitable for the purpose at hand, let the recorder roll on to the finish. If it is not, perhaps just some announcer chit-chat that doesn't fit into the scheme, then stop the recorder, rewind it to the spot where the last recording ended and lie in wait again.

Do the recording at the 7½ inch per second speed. This is not to produce a hi-fi result nor to use up more tape, it just gives you more room to work when you start the splices. For instance, a half-second pause will mean you have 3¾ inches of blank tape into which you can cut. If you had made the recording at 3¾ ips, then you would have only 1⅞ inches in which to swing your splicing blade. The higher speed also gives more length of tape between words, making it easier to cut and splice between them.

At the 7½ ips speed, you will be able to record 30 minutes of material on a seven inch reel. To record 30 minutes of suitable stuff, you are going to have to listen to a few hours of radio, unless your local station is really loaded with commercials.

Once you have recorded a batch of commercials, put the recorder in playback and listen to them. You will find yourself chuckling in anticipation as various combinations come to mind.

If you have a stenographer friend or an ever-loving helpful spouse that will lend a hand, one of the best ways is to type out what is on the tape. Mark each cut so you can find it later in the tape.

Let's say we have two commercials that go like this:

"Are you looking for a light, dry beery, beery beer? Look no farther. Ask the man for Zilche's beer. Available at your favorite store in cans, throw away bottles on tap or by the case. Put some in your refrigerator tonight. Look for the beer with a real head on it. Zilche's beer."

"Daisy Dew is the deodorant that keeps you fresh as a daisy all day long. Only one application does it. Get 24 hour protection, get Daisy Dew at your beauty counter today. Don't delay. Available in either the convenient spray can or the roll-on applicator for your travel kit. Keep

sweet and clean with Daisy Dew. Get some right now."

So there are two samples we just made up but which are typical of the stuff aired day-in and day-out. Looking them over, what can you come up with by various combinations—the goofier the better.

For instance you might cut the tape and reassemble the words like this: Are you looking for a light, dry, beery deodorant. Look no farther. Ask the man for Zilche's Dew. Available at your favorite store in throw-away bottles or by the case. Look for the deodorant with the real head on it. Get 24 hour protection, get Zilche's Dew. Put some in your refrigerator tonight.

That will serve to give you the idea but we are sure you can do much better with the real McCoy right off the airwaves.

The serious, driving voice in which most commercials are delivered also makes them sound more ludicrous when they are goofed up.

The cutting and splicing to get the sequence you want may now be done. This will involve some close editing, oftentimes cutting between two words where there is little space.

A China marking pencil is used to make a mark on the back of the tape at the point where it should be cut. If you can get at the heads of the recorder, this mark should be placed over the head gap, then the tape is pulled away from the head and cut at that point for splicing to another piece.

If you cannot get to the heads conveniently, then a reference point must be used. This may be simply a mark on the deck of the recorder placed a convenient distance from the head. For example, suppose you place a mark exactly 3 inches from the head gap. This must be placed on the side of the deck on which the takeup reel is situated. Three inches from this mark, place another mark.

To locate the point at which you will cut, play the tape through and stop it when the desired point is reached. Place a mark on the tape using the first mark on the deck as a guide. Move this mark on the tape to the second mark on the deck. The point that was over the head gap should now be located over the first mark on the deck and is the point to cut.

One way to locate the exact spot on the tape at which to make your cut is to rock the tape back and forth near where you want to cut, with the recorder in play. On some recorders this can be done easily and on others it is practically impossible.

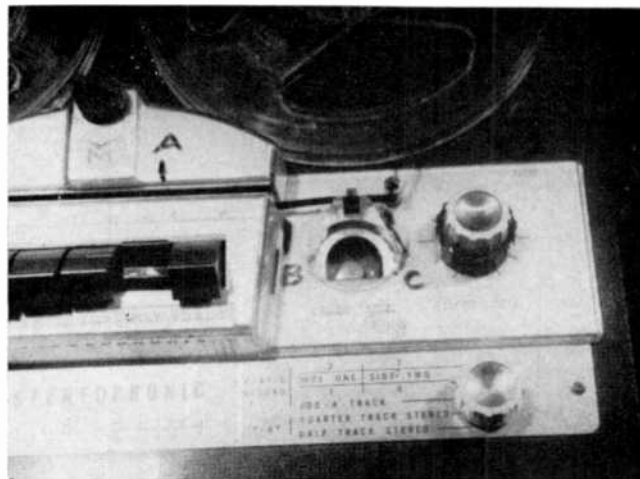
By rocking the tape back and forth over the head you can hear the exact endings or beginnings of words and, with a little practice, you will find the sounds are recognizable even at the slow speed imparted by the hand motion. Mark the spot with the marking pencil and then remove the tape from the head before cutting the tape.

The tape is then played through, holding the cut end in your hand, until the end of the particular segment is reached when the tape is again marked, the mark advanced and the tape cut.

The separate pieces may be put in individual pill boxes or touched to a piece of masking tape fastened to the table edge or a wall. The cuts may be numbered on the back with the marking pencil to identify them.

As you cut pieces from the reel, the remaining ends will have to be spliced together to keep the reel in one piece and make it convenient to work with.

Splicing should be done with a simple splicing block



On a V-M recorder, mark A is directly above the head gap. Mark B is at the end of the head covers and mark C is an equal distance away. After spot is located, tape is marked on back with china marking pencil at B. This mark is then moved to point C and tape is cut at point B.

or one of the Gibson Girl splicers made by Robins Industries. These are very handy and inexpensive.

It has been mentioned so often that you must use splicing tape to make splices and not regular cellophane tape that we won't bother to mention it again.

When you have all your pieces cut and in order, they are spliced together. Then the tape is run through the recorder and an attentive ear bent to hear the result. After you have finished laughing at what you have done, listen to the tape again to see if it needs tightening up by removing any overlong spaces between words or phrases.

The finished goofed up commercials should be kept on a separate reel. Once you have completed a number of them, you can then make up a radio-type program by interspersing music between the commercials in usual fashion. This, plus the announcers, introductions of the numbers may likewise be taped from the radio.

In fact, you might want to set up and just let the recorder run, taping both commercials and music, and then go back through the reel and rework the commercials to suit your fancy, leaving the other parts of the program as they were.

You can spring this on your audience in a number of ways. One, of course, is simply to play the tape on the recorder. Another is to put the recorder out of sight and connect the external speaker output of the recorder to the loudspeaker terminals of the radio. This is extra trouble but it does add realism. Better disconnect the radio from the power line for safety's sake.

The third way is to get one of the little phono broadcasting units, such as is put out by Allied Radio in kit form. This broadcasts a weak signal that can be picked up by a radio without any connection. The broadcaster is tuned to a dead spot on the dial where there is no radio station, so interference will not result. This results in the ultimate in realism and you can count the success of your efforts by the double-take that your audience makes when they hear the commercials.

Even if you only play back the tape yourself you will still have the soul-satisfying satisfaction of actually doing something to and about those commercials which annoy you the most.

# NEW PRODUCT REPORT

STAFKSTED



## PENTRON ASTRA-SONIC II

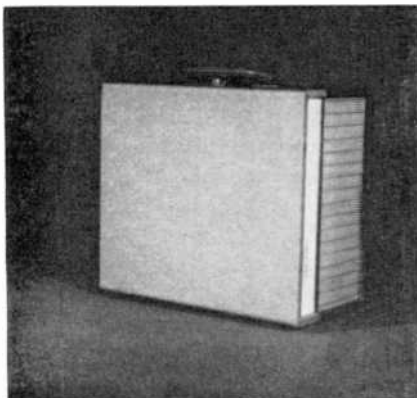
... lightweight, compact recorder available in either mono or stereo.

**T**HE Pentron Astra Sonic II is an attractive recorder following the modern trend toward smaller and lighter units.

It measures 7 x 12 x 13½ inches and weighs but 19 pounds, making it easily transportable.

The recorder is furnished with a mike, line cord and stereo connection cord and also includes a 7" reel of Reeves Soundcraft tape.

The function controls are conveniently grouped on the left side of the recorder with the volume and tone control knobs below them on the polished deck. Above the control keys is the odometer type counter



Recorder with case closed. It is finished in two tones of grey and chrome.

and the speed change switch which may be operated in any push button position with the power on.

At the left of the control buttons is the pause lever. This serves a dual function, allowing the stoppage of the tape at any time without turning off the electronics and as a record safety interlock.

When it is desired to put the recorder in the record mode of operation, the pause lever is pulled out with the left hand while the record button is depressed with the right. This "two-hand" operation prevents accidental erasure of recorded tapes. When ready to record, after depressing the record button, it is only necessary to release the pause lever. Using the lever, stops may be made at any point during recording without clicks on the tape.

The tape is lifted from hard contact with the heads in fast forward or rewinding thus saving wear and tear on both tapes and heads, however, some sound may be heard in the speaker to provide for cuing or the location of a particular section of tape by listening.

There are two inputs on the recorder, one for the microphone or other low level source, such as a mag-

**Product:** Astra-Sonic II  
**Manufacturer:** Pentron Corp.,  
777 S. Tripp Ave., Chicago, 24,  
Ill.

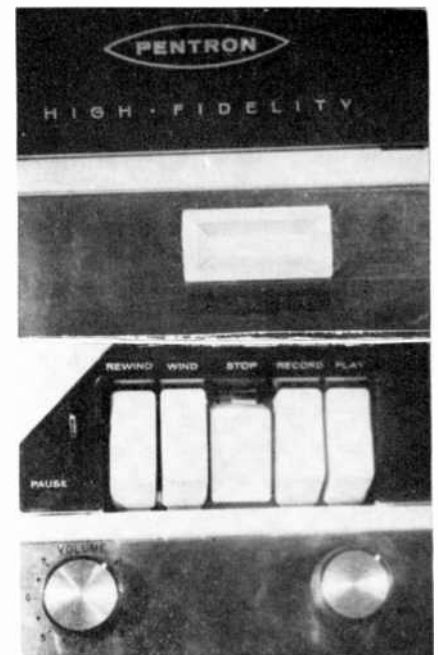
**Price:** AR-62 Mono \$189.95  
AR-62 Stereo \$219.95

netic cartridge and the other for recording from high-level sources such as radio, phono, tuner, etc.

The recording level indicator is of the electron beam type in which two lighted segments advance toward each other as the level is increased. Maximum level is when the two just about touch. We found the indicator to be positive in operation and bright enough for use in strong room lighting.

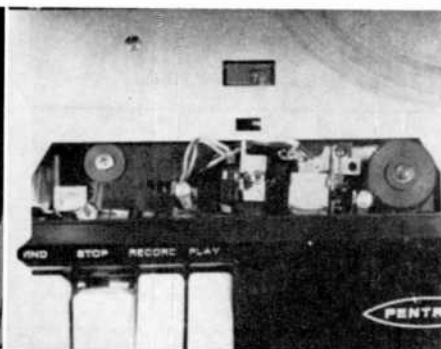
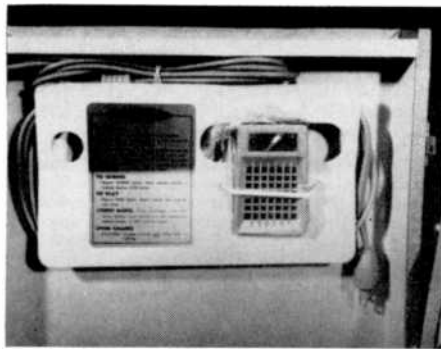
The outputs are grouped on a panel on the rear of the recorder. The amplifier output jack is of the cathode follower type with a 1000 to 2000 ohm impedance. The jack for the external speaker is an 8 ohm outlet and the stereo preamp output jack is high impedance for connection to an external amplifier-speaker. A matching unit, the Astra-Sonic II Companion (Model MA-9) is available for the stereo channel.

On the same panel as the outputs is the Monitor Switch. The function-



Top: the volume indicator is of the electron beam type. Lower: controls are grouped at left of recorder and include pause lever, rewind, wind, stop, record and play. Volume control and on-off switch and tone control are below keys.





Upper left: Lid has holders for microphone, line cord and stereo connection cord. Upper right: the head covers are easily removed giving quick access for cleaning and demagnetizing. Lower left: output panel which has jacks for stereo amplifier, external speaker and external amplifier plus monitor switch. Lower right: inputs are for microphone and radio/phono.

ing of the recorder is not affected in any way by the position of this switch, whether off or on. When feeding a signal from a radio or phono, the switch may be put in the on position to hear the sound from the recorder speaker. The same is true of microphone recording except care must be taken to keep the mike away from the speaker to avoid feedback. Headphones may be plugged into the external speaker jack which will silence the recorder speakers. The signal is then heard only in the phones and the danger of feedback eliminated.

The recorder records and plays dual track monaural and will play back 4-track stereo. The head is positioned so that no shifting is necessary.

Threading is straight line with the stop button depressed. The recorder has an automatic shutoff which stops the machine at the end of the tape or if the tape should break. It functions in all operating positions.

To use the recorder as a PA system, the mike is plugged into the "Radio" input jack. The tape is removed from the slot, allowing the cutoff switch to function and the recorder put in play.

This particular recorder which we received for test was put to work in behalf of the local Chamber of Commerce being used to play Christmas

music through a large power amplifier for outdoor speakers. It was run four hours a day continuously for a period of ten days and did not falter once. Periodic cleaning of the heads and guides with a commercial cleaner and demagnetization about every 10-15 hours was the only maintenance performed on it. No lubrication of this machine should ever become necessary since all lubrication is sealed in at the factory.

Frequency response is very adequate and the tone quality is good. We were able to hear a 12,000 cps note through the speaker in the recorder.

The machine is nicely made and finished and worked smoothly and easily in all modes of operation.



Speed change between 3¾ ips and 7½ ips is effected by moving the switch situated between the reels.

# HOW'S YOUR HEARING?

## Tapebook #2

by James M. Laing, M.Ed.

Are You Getting The Most Out of Your HI-FI or Stereo?

Can You Understand Speakers? Hear Lyrics Plainly?

Protected hearing is the key to your listening enjoyment.

Hearing is one of your most precious human possessions. It, however, like every other precious possession, requires protective care. Without proper protection your hearing can leave you completely, and without warning.

To properly protect your hearing there are two things you must do: (1.) test your hearing periodically, and (2.) seek early medical guidance as soon as a hearing test indicates a possible hearing loss.

Periodical hearing tests are important because, unlike most other ailments, a hearing loss gives you little positive warning. A hearing loss can creep into your life so gradually that you can be completely unaware of its presence.

Test your hearing . . . and be sure!

To help you check your hearing periodically is the purpose of this "hearing check recording."

### TAPE CONTAINS

30 minutes of music by the famous Lenny Herman Orchestra—good for listening or dancing as well as screen testing of hearing. Specially monitored.

33 ton pairs to test musical discrimination

75 word pairs to test speech discrimination

Full 7" 7½ IPS  
dual track reel  
full direction booklet  
Only \$9.95

Postpaid

**ASK YOUR DEALER  
OR USE COUPON BELOW**

TAPEBOOK DEPT.  
Mooney-Rowan Publications  
Severna Park, Md.

Please send me . . . . copies of TAPE-

BOOK #2. I enclose \$ . . . . .

Please bill me later . . . . .

Name . . . . .

Address . . . . .

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

**The Original Magneraser\***  
For All Types of Recording Tape



100% ERASURE  
OF TAPE ON REEL  
WITHOUT REWINDING

LOWERS NOISE LEVEL OF  
UNUSED MAGNETIC TAPE

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39B Broadway, New York 13, N. Y.

**RECORDS FROM YOUR TAPES**

Meetings, concerts, training aids, etc.  
economically re-recorded on perma-  
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THREE  
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OUR CHOICE  
only 50c

Send order  
with remittance to  
**BACK ISSUES TAPE RECORDING**  
Severna Park, Md.

**DO YOU HAVE TWO  
"SOUND" FRIENDS?**

We will be happy to send  
a FREE sample copy of

**TAPE RECORDING  
Magazine**

to two fellow recording friends of yours  
if you will just send us the names on a  
postcard or use the coupon below.

**TAPE RECORDING**

Severna Park, Md.

Please send a copy of Tape Re-  
cording without charge to:

Name .....

Address .....

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

Name .....

Address .....

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

Your Name .....

Address .....

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

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

**WANTED: PENTRON HF-400** new or used.  
Write giving condition and price. If it's beat up,  
I don't want it. Not interested in any other model.  
Milton M. Katz, 220 No. Broad St., Trenton 8,  
N. J.

**TAPES COPIED** to Hi-Fi discs. Free price list.  
Vance Studios, 3409 Grand Ave., Oakland 10,  
Calif.

**WANTED: (TWO) PULTEC PROGRAM** equalizers.  
Model EQP-1A or EQH-2. Good condition.  
Dave Huntbach, 4528 Whitaker Ave., Phila. 20,  
Pa.

**PROMPT DELIVERY,** we will not be undersold.  
Amplifiers, tape recorders, tuners, etc. No Catalogs.  
Air Mail Quotes. Compare. L. M. Brown Sales  
Corp., Dept. T, 239 E. 24 St., N.Y. 10, N.Y.

**SPECIAL OFFER!** Scott 210-F, Amplifier & Scott  
310-B, FM Tuner. Immaculate. \$175.00 takes both.  
\$95.00 takes either. B. K. Balch, 611 Livingston  
Rd., Linden, N. J.

**READING FOR SPEECHES, TALKS**—any kind  
of reading, even children's stories. Send your blank  
tape. Herman E. Pawsat, 428 East Second St., Mays-  
ville, Kentucky.

**WANTED: TAPESPENDENTS TO JOIN** the Re-  
ligious Tape Club. For more particulars, write to  
Lee W. Holm, Box 232, Brainerd, Minnesota.

**KOSS STEREOPHONE HEADSET** \$14. Electro-  
Voice microphone 729, \$9; Garrard, Model-T  
w/base, \$12. B. J. Duffe, 93 Michael St., Iselin,  
New Jersey.

**LEARN MUSICAL INSTRUMENT** of your choice  
—easy! New home study tape course. Write for  
free brochure. Carver School, Box 366-T, Palos  
Heights, Ill.

**WANTED**—good used amplifier-speaker for use  
with playback pre-amp. Performance counts. Write  
or tape complete details to Ronnie Page, 135—6th  
St., Dover, New Hamp.

**WEBCOR 210-113** recorder \$65; Webster #250  
recorder \$95; Pentron NL-25 (Champ. stereo) in  
sealed carton \$125; RME UHF TV Converter \$12;  
Dozen used Audiotape 1200' x 7", \$10; satisfaction  
guaranteed, priced FOB. Lackner, 2029 Bradley,  
Chicago 18.

**GERMAN LANGUAGE TEACHES INDIVIDU-  
ALLY** by Tapespondence. Heinz Geller, 25 Stanton  
Road, Brookline 46, Mass.

**LEARN HYPNOTISM, SELF-HYPNOSIS** from re-  
corded tapes! Other amazing Tapes, Books, Records.  
Complete Sleep-Learning information! Free Cata-  
log! Philanthropic Library, Drawer TR697, Rui-  
doso, New Mexico.

**RENT STEREO TAPES**—over 1500 different—all  
major labels—free catalog. Stereo-Parti, 811-F Cen-  
tinela Ave., Inglewood 3, California.

**NEW METALLIZED MYLAR CONDUCTING**  
tape, for recorders with automatic stop or reverse.  
Norelco-Tandberg-Wollensak-DeJur-Uher, etc. PS  
adhesive, non-abrasive, 1 mil. Quantity discounts.  
1/8" and 1/4" width, \$1.25 per roll. Postpaid.  
EL Products, Box 771-A, Havertown, Pa.

**PROFESSIONAL RECORDING TAPE.** First qual-  
ity of prime manufacturer. Full frequency response.  
Permanently lubricated. Money back guarantee.  
Acetate—1200', 1 1/2 Mil, 4/\$5.00; 1800', 1 Mil,  
4/\$6.65; Mylar—1200', 1 1/2 Mil, 4/\$5.95; 1800',  
1 Mil, 4/\$8.20. Postage 20c each reel. Hisonic,  
1212 North Park Road, Hollywood, Fla.

**LEARN WHILE ASLEEP,** hypnotize with your re-  
corder, phonograph or amazing Electronic Educator  
endless tape recorder. Free catalog lists over 200 un-  
usual tapes, records, equipment for experimenters.  
Sleep-Learning Research Association, Box 24-TR,  
Olympia, Washington.

**SELL: AMPEX A-122** in case, excellent condition,  
\$175.00; Presto T-18 turntable, with Gray arm  
and Fairchild SM-1 cartridge mounted in base,  
\$75.00; Ampertec microphone, \$10.00; Vertical  
and Lateral 16-inch transcriptions, 350 for \$75.00,  
very good condition, 450 Polish and American 78  
rpm records, \$80.00; loads of books—all subjects.  
V. Maycher, 13-00 Plaza Road, Fair Lawn, N. J.

**WANTED:** Three speed used tape recorder, either  
mono or stereo. State make, condition and price.  
H. M. Patterson, Mediapolis, Iowa.

**"LITTLE FLOCK"** (Luke 12:32) non-denomina-  
tional Bible Classes (Rev 18:4) with tape record-  
ers, seek faith contacts. Christian Bible Classes, Inc.,  
donations accepted, 2521 N.W. 23 St., Miami, Fla.  
Phone NE 40460.

**WANTED:** Tapes to copy of Ford Startime TV  
programs, The Swinging Years and The Singing  
Swinging Years. Made in February and March 1960.  
Will pay postage and insurance both ways. G. Grant,  
2154 Beverly Blvd., Berkley, Michigan.

We specialize in **TRADE-INS** — highest  
allowances—Ampex, Concertone, Magne-  
cord, Norelco, Presto, Tandberg, etc.  
Hi-Fi Components—Citation, Thorens,  
Sherwood, etc. Write for lists of new and  
used items.

**BOYNTON STUDIO**

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Tuckahoe, N. Y. Tel. SP 9-5278

**HI-FI RECORDING TAPE**

Splice Free (except 2400')  
15 day money-back guarantee

	3+	12+	24+
1200' 7" acetate	\$1.29	\$1.17	\$ .99
1800' 7" acetate	1.75	1.59	1.45
1800' 7" mylar	2.09	1.99	1.85
2400' 7" mylar	3.29	2.99	2.75
2400' 7" tensitized mylar	4.25	3.95	3.75

Can be assorted. Add 15c postage per reel.  
10c for 24+ lot orders.

**HI-FI COMPONENTS, TAPE RECORDERS** avail-  
able from wide variety of stock and shipped within  
24 hours. Write for free wholesale catalogue. **"WE  
WILL NOT BE UNDERSOLD"**. Write us and see  
why.

**CARSTON** 125-C East 88 Street  
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**TRIPLE TREAT**

**3 SOUND STORY** tapes . . .  
The newest in creative recording,  
for only **\$2.50**

All on 3" reels, 7 1/2 ips.

No. 1—Dr. Valdimir A. Ussachevsky. Alters  
sounds to produce new and unusual sounds;  
Tony Schwartz, Sounds of New York City.  
No. 2—The Contact Microphone, A hilarious  
creative tape you have to hear to appreciate.  
No. 3—Beat Recording, Authentic Beatniks  
live it up—or down, as the case may be.

Order your set today  
Use the handy order blank below.

**TAPE RECORDING** Severna Park, Md.

Please send me.....sets of  
Sound Stories 1, 2 and 3.

Payment enclosed,  
 Bill me later.

Name .....

Address .....

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

# FOR YOUR AUDIO BOOKSHELF

## HOW TO GET THE MOST OUT OF TAPE RECORDING

by Lee Sheridan

This book is aimed at the new recordist, who has yet to discover the hundred and one unusual, interesting and profitable uses to which a tape recorder can be put . . . with patience, a little imagination, and a few accessories.

Lee Sheridan, who authored this book, is actually two people: Elsie Lee and Michael Sheridan, who comprise one of the most prolific and successful freelance writing teams in the country. They have appeared, with articles and short stories, in many magazines both here and abroad.

6" x 9", 128 pp., paper bound, illustrated . . . . . **\$1.00**

## TAPE RECORDERS AND TAPE RECORDING

by Harold D. Weiler

The latest book by the well known author of "Hi-Fi Simplified" which has sold over 65,000 copies. Written so that anyone can understand it the book covers Room Acoustics; Microphone Techniques; Recording From Records; Radio and TV; Sound Effects; Tape Recorder Maintenance; and Adding Sound to Slides and Movies. Over 100 illustrations and diagrams in 13 chapters of practical down-to-earth suggestions make this book the beginners bible.

5 1/2" x 8 1/4" — 190 pages —  
illustrated — paper bound . . . . . **\$2.95**

## HIGH FIDELITY SIMPLIFIED

by Harold D. Weiler

This book has sold more than 65,000 copies and is one of the most popular books on the subject. It covers the How, What, Why and Where of Hi-Fi, Sound, Acoustics, The Simple Loudspeaker, The High-Fidelity Loudspeaker, Loudspeaker-Enclosures, The Basic Amplifier, The Amplifier, The Record Player, Tuners, Use of a Home Music System, and Tape Recorders. It is illustrated with numerous drawings, charts and pictures. While authoritative, it is written in an easy-to-read style.

5 1/2" x 8 1/2", paper bound, 208 pp. Illustrated . . **\$3.30**

## HOW TO MAKE GOOD TAPE RECORDINGS

by C. J. Le Bel, Vice President Audio Devices, Inc.

A complete handbook of tape recording containing 150 pages of up-to-the-minute information of practical value to every tape recordist. Easy reading for the most inexperienced of home recordists.

Sections include: How A Tape Recorder Works, Characteristics of a Tape Recorder, Selecting A Tape Recorder, Selecting A Recording Tape, Using the Tape Recorder, Making A Microphone Recording, Acoustically Treating the Studio, Tape Editing, Binaural or Stereophonic Recording, Putting Together A Recording Show, and a Glossary of Tape Recording Terms.

5 1/4" x 8", 150 pp., paper bound,  
illustrated . . . . . **\$1.50**

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