

TAPE RECORDING



Mr. Roy Perrin
231 Wildland Ave.
Rutherford, N.J.

Recording a Newstape Interview. See page 19.



Why documentary recordist Tony Schwartz prefers tough, long-lasting tapes of Du Pont MYLAR®



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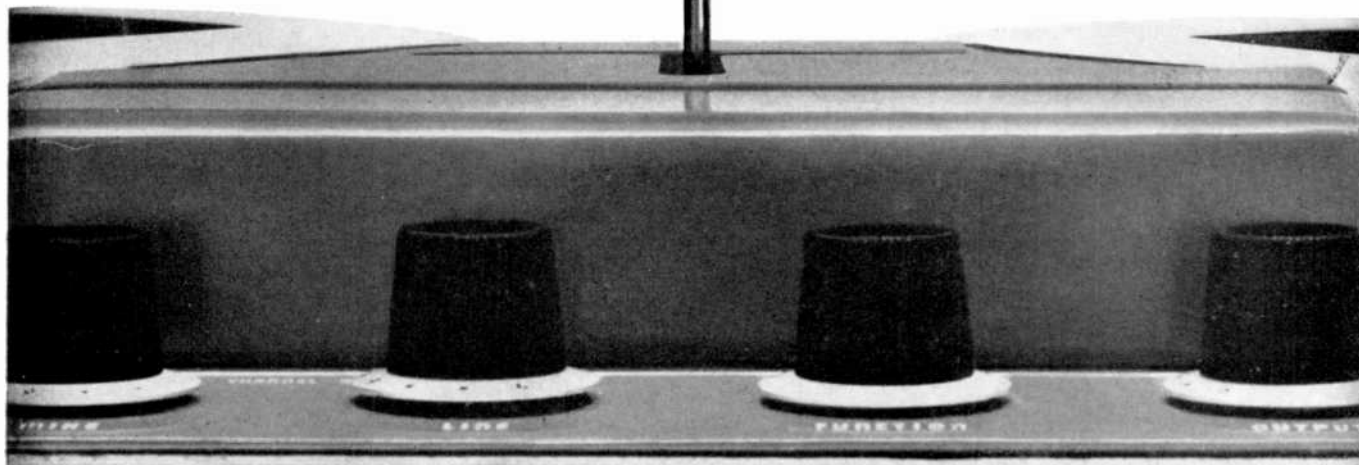
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HI-FI

TAPE RECORDING

VOL. 6 NO. 7

JUNE 1959

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Cover Illustration: Roger Nordmann, chief commentator for the Swiss Broadcasting Corp. of Lausanne, Switzerland, records interview with Crippled Children Fund collectors. Photo by Carroll Hebbel, WMAR-TV.



HI-FI TAPE RECORDING is published monthly by Mooney-Rowan Publications, Inc., Severna Park, Md. (Severna Park 548). Entered as second class matter January 7, 1954 at the Postoffice, Severna Park, Md., under the Act of March 3, 1879. National Advertising Representative: J. V. Associates, 274 Madison Ave., New York 16, N. Y. (ORegon 9-0030). Subscriptions, U. S. and Possessions, Canada and Mexico, \$3.75 for one year, all others add \$1.00 a year. Two years \$7.00. Contents copyrighted by Mooney-Rowan Publications, Inc., 1959. Printed in U. S. A.
POSTMASTER—Send all address labels clipped from undeliverable copies with Form 3579 to Hi-Fi Tape Recording, Severna Park, Md.

CROSSTALK

from the Editors

THE FAMILY tape recorder has certainly sparked a new bunch of relatives lately . . . most of them headed for outer space. These special, tiny recorders have been installed in a number of satellites to store information when the satellite is not within range of the ground station. Almost every newspaper you pick up nowadays has some mention of magnetic tape.

* * * * *

REEVES SOUNDCRAFT recently announced the signing of a contract to use Bernard Cousino's patented process of lubricating tape with graphite. This tape is for use in the continuous type of cartridge that goes on repeating until shut off. Up to now demand for tape has been so-so, most of it being used in cartridges for special applications, such as point of sale machines, etc. But lately, demand for lubricated tape has taken an upsurge as machines come on the market which will play two hours of music before repeating. Cartridges run at 3 3/4 inches per second speed, sound good. Market potential enough to make other tape manufacturers perk up ears and, in some cases, put the heat on research.

* * * * *

TRANSISTORIZED portable recorders are not only making news they are getting it also. Station WNEW which has a battery of eleven of the Steelman units was awarded the George Peabody Radio News Award for the excellent news coverage job they did. The on-the-spot interviews frequently scooped most other news media. The station interrupted all programs for important interviews taken on the Transitapes and played back to the studio from the nearest telephone booth. Each WNEW reporter is equipped with one of the recorders for both interviews and their own on-the-spot commentary. The coming of the small, self-contained portables to the market brings the day that much nearer when tape recordists will carry a recorder just as cameras are now carried on vacation trips.

* * * * *

MONAURAL MUSIC on tape may be due for a strong comeback, not as a medium for home use, for the average recordist can tape all he wants from the radio or TV, but as background music for small shops and offices. Livingston Audio Products, Caldwell, New Jersey, already has cranked out a number of two hour continuous reels of background-tape music and is rapidly expanding the library. The reels are housed in a Fidelipac cartridge which will play until shut off on a transistorized player that is the companion piece. The player has only two moving parts, the capstan and pressure roller and can be operated simply by pushing the cartridge in to play it or pulling it out to stop it.

* * * * *

IF OUR MAIL is any criterion, we predict a happy future for the new, lightweight recorders now coming on the market from some firms. They should be especially welcome in the schools where feminine teachers must handle them.

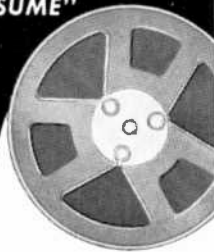
* * * * *

NEWEST PLACE for a tape recorder to show up is on the Boeing jet which is fitted out for President Eisenhower and other VIP's. Plane is a modified 707 type with special interior, conference tables, etc.

Smashing

stereo tapes,
what!

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Bizet
SUITE FROM CARMEN —
Mannheim National Sym-
phony, Joseph Rosenstock,
cond. 2019C

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phony, Joseph Rosenstock,
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NEW TAPES

These are the first 4-track tapes reviewed in our column. At the present time High Fidelity Recording, Inc. and the Stereophonic Music Society are the only companies releasing 4-track recorded tapes. Hifitape is recorded at 3 3/4 ips and SMS at 7 1/2 ips. While RCA has some 4-track cartridges finally available, as of this writing there is no machine available to play them on. However, the tape may be removed from the cartridge and transferred to a reel.

To the ear, any great sound deviation is undistinguishable between 3 3/4 and 7 1/2 ips. While a frequency meter might show a drop in cycles, just listening you are not aware of it. Therefore, when we make mention of the fidelity of these tapes we are referring to the best fidelity which can be produced at the recorded speed.

POPULAR

FLIGHT TO TOKYO

Japanese Sandman
It Looks Like Rain in Cherry Blossom Lane
Japanese Sunset
Cherry
Poor Butterfly
Nagasaki
Rickety Rickshaw Man
China Nights
One Fine Day
Kyoto Beguine
Lady Picking Mulberries
Japansy
Japanese Can-Can

George Wright playing the 5-manual Wurlitzer

HIFITAPE R717

\$12.95... 45 ins.

4-track, 3 3/4 ips

When I hear Mr. Wright on this mighty organ, I'm lost in the music. He brings out the best in every melody and his Oriental shenanigans are superb. We could listen to his interpretations all day. This collection of renditions has an Oriental flavor, although I must admit I saw a bit of Paris in the Japanese Can-Can. Japanese Sandman really swings and when Mr. Wright swings, the Wurlitzer must sway with him. Grab your hat and make your plane reservation before you push the play button, cause you're going on a trip to Tokyo with George.

The sounds this great entertainer wrings from the Wurlitzer are unique to say the least. He invents his own ear ticklers.

Top grade fidelity.

DANCING IN HIGH SOCIETY

The Lady is a Tramp, I Talk to the Trees,
All of You, Goody-Goody
In the Still of the Night, Love Walked In,
Beyond the Sea (La Mer), I've Grown
Accustomed to Her Face, I Could Have
Danced All Night
I Can't Get Started, You're Blase, Some
Enchanted Evening, Two Cigarettes in
the Dark
Waltz For a Ball
I Wish I Were in Love Again, Foggy Day,
It's All Right With Me, At Long Last
Love, String of Pearls

Nice Work If You Can Get It, Thank
Heaven For Little Girls, I Could Write
a Book, It's D'Lovely, I Won't Dance
September Song, May 17, Siren Song, My
Funny Valentine

Cherry Pink and Apple Blossom White

El Silbador ("The Whistler")

People Will Say We're In Love, The Way
You Look Tonight, All the Things You
Are

From This Moment On, Smile, Darn Ya,
Smile, Keep It Gay, When the Saints
Go Marching In

Ben Ludlow and His Orchestra

STEREOPHONIC MUSIC SOCIETY SMS S3

\$7.95... 44 mins.

4-track, 7 1/2 ips

Mr. Ludlow's style has a steady beat, sometimes just a bit too steady so as to become a little tiring. You feel more or less breathless after a while. I would prefer to hear more of this orchestra playing individual melodies rather than so many fast-moving medleys.

The music is well chosen and with a slower tempo would be grand for dancing. We tried dancing to this and found the pace a bit fast. The younger folk might just like the faster, swinging style. Cherry Pink and Apple Blossom White, however, is done as a Cha-Cha-Cha and is very good for this popular dance.

The orchestra does have a happy sound, as though the musicians were smiling joyously and the fidelity is high grade.

ON THE ROCKS

Maki
Leimomi
Papio
Ke Kale Nei Au
I Got Hooked at a Hukilau
Blue Hawaii
Tamure Tamure
Leahi
O'Makala Pua
Nane Wale
Pidgin English Hula
I Will Remember You
Waikapu
Hawaiian War Chant

The Surfers

HIFITAPE R408

\$12.95... 30 mins.

4-track, 3 3/4 ips

The Surfers are all native-born Hawaiians, and all are young, the oldest being 21. They bring you songs of the Islands, all their own arrangements. These fellows are favorites at Luau's, beach parties, and exotic entertainments.

Some of the selections are the fast-moving type and others are slow romantic melodies. No matter what the type, you can picture the hula gals rhythmic motions. If you like Hawaiian music, you will want this tape.

The recording engineers did not lose a syllable of this Hawaiian serenade, and the sound clarity is tops.

BWANA a

Bwana a

South Pacific Moonlight

Moon Over A Ruined Castle
 Waikiki Serenade
 La Paloma
 Otome San
 Canton Rose
 Blue Sands
 Malaguena
 Vera Cruz
 Pua Carnation
 Colonel Bogey's March

Arthur Lyman's group
 HIFITAPE R808
 \$12.95...40 mins.
 4-track-3 $\frac{3}{4}$ ips

For those of you who have never heard the Arthur Lyman group, you are in store for a delicious bit of haunting melodic music. Arthur Lyman plays 4-mallet vibes, doubling on marimba, guitar and often percussions. Allen Soares builds piano and celeste rhythm and harmonies. John Kramer keeps the string bass beat, sometimes taking off on flute. Harold Chang plays drums, but good. Some of the less usual percussions heard include: wind chimes, ass's jaw, boobams, cocktail drums, ankle spurs, finger cymbals, cowbells, castanets, tambourine, guido and all manner of bongo, conga, samba, snare and other drums. Also assisting the Lyman group are Japanese vocalist Ethel Azama, pianist Paul Conrad and Chinese Chew Hoon Chang, who plays the butterfly, or moon harp. He also plays a Chinese bamboo flute. Chew Hoon Chang is nearly 75 years old, but his agility with these instruments is amazing.

This tape is not recommended for teenagers, nor is it danceable music, but for pure extraordinary listening pleasure it fills the bill most adequately. Each selection creates its own mood and releases a store of feeling. South Pacific Moonlight, for instance, has the sound of two conch shells and you can hear the rolling surf as it unfurls along the beach. Otome San is a Japanese drinking song, and the party spirit grows as the saki goes down.

Through the courtesy of Henry J. Kaiser, this tape was recorded in the Kaiser Aluminum Dome outside the Hawaiian Village Hotel in Honolulu which is nearly perfect acoustically. Fidelity throughout is good, although I sometimes found certain passages fading a little too far into the background. Nonetheless, the tape is entirely different from any I've heard, and most entertaining.

TABOO

Taboo
 Kalua
 Ringo Oiwake
 Sea Breeze
 Misirlou
 China Clipper
 Sim Sim
 Katsumi Love Theme
 Caravan
 Akaka Falls
 Dahil Sayo
 Hilo March

Arthur Lyman & His Group
 HIFITAPE R806
 \$12.95...37 mins.
 4-track, 3 $\frac{3}{4}$ ips

What an astounding array of sounds woven into this music. Odd—but nice. Arthur Lyman and his group have contrasted the native and the modern into a



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P.O. Box 88, WILMETTE, ILLINOIS

bewitching, sometimes eerie, combination of rhythmic and melodic interpretation. Arrangements are by Mr. Lyman and Paul Conrad.

This tape, just as Bwana a, was recorded in Henry J. Kaiser's Aluminum Dome, outside the Hawaiian Village Hotel in Honolulu. Perfect sound reproduction.

SHOWS

GEORGE WRIGHT GOES SOUTH PACIFIC

Overture
Dites Moi
There's Nothin' Like A Dame
Honey Bun
Some Enchanted Evening
Bloody Mary
Bali Ha'i
Younger Than Springtime
Happy Talk
This Nearly Was Mine
I'm Gonna Wash That Man Right Out-
My Hair
I'm in Love With a Wonderful Guy
George Wright playing 5-manual Wurlitzer
HIFITAPE R716
\$12.95 ... 41 mins.
4-track, 3 $\frac{3}{4}$ ips

George Wright playing the mighty 5-manual Wurlitzer pipe organ is, to use a teenager's expression, the "most." He is master of the instrument and proves it on this tape. He achieves new, unusual sounds from pipes and percussions. No other organist has been able to devise so wide a variety of orchestral and organ sounds from a theater pipe organ. There are shak-

ing 16 cycle per second pulsations of the 32' pedal Bombarde and cute xylophone and bell tricks, together with the ever changing array of full harmonies and tone colors.

The music of Broadway's South Pacific is delightful and the combination of Mr. Wright, the Wurlitzer, and music from this musical make this tape a joy to listen to. Just as Mr. Wright was transported to a beach in the South Pacific, Wurlitzer and all, per the box label, so too are you as you listen. If you have seen either the stage production or the picture you can visualize the scenes as you listen to the tape. I can recall vividly Bloody Mary peddling her wares, Liat's motions in Happy Talk, Nellie's gyrations in Honey Bun, etc. You feel like singing right along.

In our opinion, the fidelity is excellent and any difference between 7 $\frac{1}{2}$ and 3 $\frac{3}{4}$ ips speed is undetectable to the ear.

FLOWER DRUM SONG

Overture
You Are Beautiful
100 Million Miracles
I Enjoy Being A Girl
I Am Going To Like It Here
Like A God
Chop Suey
Don't Marry Me
Grant Avenue
Love Look Away
The Other Generation
Sunday
Finale

Featuring voices of: Cely Carillo, Edna McGriff, Jean Arnold, Wayne Sherwood, Artie Malvin, June Ericson; chorus and orchestra under the direction of Jimmy Carroll.

STEREOPHONIC MUSIC SOCIETY

SMS 52
\$7.95 ... 37 mins.
4-track, 7 $\frac{1}{2}$ ips

Ready? We're going on a visit to San Francisco's Chinatown. This music carries you there.

The clear clarity of voices on this tape is beautiful and the music is typical of Rodgers and Hammerstein—superb. This Broadway hit is also a tape hit.

The music, arrangements, and performers are a great combination on this release and we recommend it heartily for anyone who likes show music. Some of this musical's selections, such as "You Are Beautiful" have become quite popular.

Quality engineering—duplication is tops.

JAZZ

BIG DIXIE

South Rampart Street Parade
Wabash Blues
When the Roll Is Called Up Yonder
Tin Roof Blues
Way Down Yonder in New Orleans
Tiger Rag That's A-Plenty
Basin Street Blues
High Society
Dark Town Strutters Ball
Chimes Blues
Twelfth Street Rag

Harry Zimmerman, director

HIFITAPE R608
\$12.95 ... 33 mins.
4-track, 3 $\frac{3}{4}$ ips

Dixieland originated as a result of the oldtimers down New Orleans way who gathered together after work and brought

along their instruments for a jam session. They just played—and played—and played, for fun. Most could not read a note of music and each was allowed to improvise any way he saw fit provided he did not steal the show. True Dixieland is produced by a composite group who play together, not individually. Such is the case with the musicians on this tape, all of whom are lost in the music. Each one contributes his share without overdoing.

Harry Zimmerman, who directs music for the Dinah Shore Chevy Show, demonstrates his directing genius with this group. Arrangements are by Heinie Beau, who also plays sax.

There is an even spread of music and while it might be thought the brass is sometimes overly loud in a Dixieland congregation, such is not the case here. There is instrumental balance throughout.

Dixieland connoisseurs will wish to add this tape to their collection. It is not recommended for those of you who like soft, or classical type music.

Performance and recording are first-rate.

FOLK

LEON BIBB SINGS FOLK SONGS

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

Leon Bibb with chorus and orchestra; Milt Okun, conductor; Fred Hellerman, guitar
STEREOPHONIC MUSIC SOCIETY

SMS 51
\$7.95 ... 39 mins.
4-track, 7 $\frac{1}{2}$ ips

Leon Bibb renders each song on this tape with stirring feeling. Each presents its own dramatic image. You find yourself listening to the words and story each tells and the interpretations only tend to conjure up a clearer picture. And the picture is one of real life.

Mr. Bibb has a lyric baritone voice which glides easily into the tenor register. It can be soft or bold as the case may warrant. He does not record a song until he feels complete conviction in it. While folk songs fill a central place in his varied repertory, he is not solely a folk song singer. He has appeared on the musical stage in roles including "Lost in the Stars" and "Living the Life."

No tape library should be without a folk song section and this tape certainly belongs here.

The sound on this tape is precise and distinct throughout. Pure listening enjoyment.

STAFF CHANGE

It is with regret that we must announce that our star reviewer of these many months, Georgie Sigsbee, will no longer be on our reviewing staff due to illness. We are sorry to lose Georgie and wish her the best of luck.

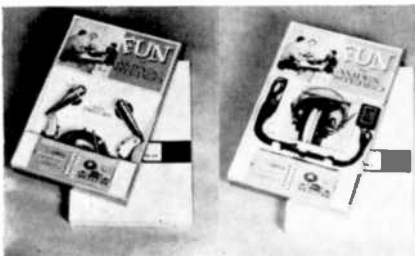
NEW PRODUCTS

LEE CENTURY 21



Lee Incorporated, 625 New York Avenue, N.W., Washington 1, D. C. has introduced its Century 21 professional tape recorder which is available for rack mounting, rack mount "pull-out," in portable case, or portable "lift-up." This machine is available in speeds of 7½ and 15 ips, or 3½, and 7½ ips; it has a two speed synchronous drive motor with two torque motors for reeling; it is push button, relay-operated, with remote control feature available; it has completely transistorized electronics with printed circuit plug-in amplifier, relay, bias oscillator, and equalizer circuits; it has smooth dynamic braking with fail-safe feature; and it can be adapted to stereo without changing size and with less than 5 lbs. additional weight. Frequency response is 30-18,000 cps, plus or minus 2 db at the fastest speed; signal-to-noise ratio is 60 db full track; and flutter and wow is 0.1% RMS or better. For additional information and price, contact the manufacturer.

AMPEX STEREO KITS



Ampex Audio, Inc., 1020 Kifer Road, Sunnyvale, Calif., has announced the addition to its line of two new stereophonic accessory kits: a Stereo Microphone Kit #880; and a Stereo Headset Kit #881. The microphone kit contains two high-quality dynamic mikes, omnidirectional, precision-matched for stereo recording. Each is equipped with on-off shorting switch, detachable 8-foot cable and standard 2-conductor plug. Also included is an Ampex Stereo-graph, which provides in graphic "slide-rule" form, basic control settings and directions for over a dozen different recording and playback functions on an Ampex stereo recorder; as well as the new 16-page booklet "Fun with Ampex Stereo."

The headset kit contains a stereo headset

(which is actually a pair of high quality headband-mounted miniature dynamic speakers), with chamois-cushioned ear-pieces, a 5-foot cable terminating in a standard 3-conductor plug, instructions for use with any conventional amplifier, and a junction box with 12-foot extension and twin outlets to enable a second stereo headset to be plugged in if desired. The Stereo-graph and booklet are also included in this kit. The 880 is priced at \$69.95; and the 881 at \$55.95.

PHONO-TRIX



A tiny tape recorder, about the size of a man's hand, requiring no external power source, is now being marketed by Antrex Corp., 856 North Rockwell Street, Chicago 22, Illinois. This unit is called the Phono-Trix; it is transistorized and weighs only 4 pounds. It is powered by four standard flashlight batteries, uses standard recording tape and 3" reels. Features include continuously variable speeds from 1⅞ to 7½ ips; fast rewind; a built-in electronic brain which automatically adjusts the volume control during recording; it has a 3" speaker which the manufacturer claims gives fidelity similar to that of a pocket radio; and it will operate in a car or train. Battery life is 50 hours. The Phono-Trix sells for \$99.50. Further information is available from Antrex.

PARK STEREO-MONITOR



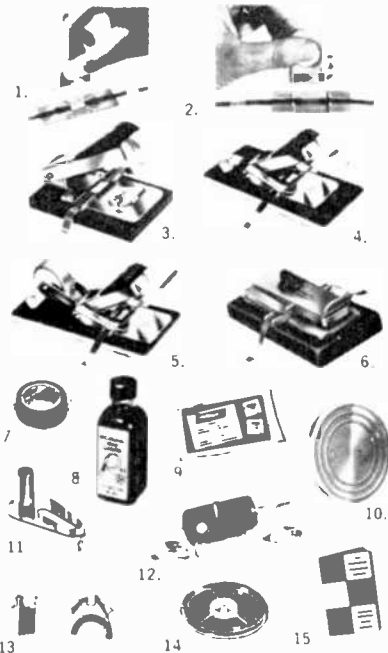
Park Products Co. Inc., 4901 Perkins Avenue, Cleveland 3, Ohio, has announced the development and production of its new Park Stereo-Monitor unit which measures the difference between speakers and tells the user if both channels have equal loudness. If the speaker to the right of the listener is louder than the speaker on the left, the needle moves to the right. By adjusting the balance gains, the needle is returned to center and equal loudness is reached. For additional details and price, contact the manufacturer.

15

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| 9 | Tape Cleaning Cloth JCT 2 | 1.00 |
| 10 | Tape Storage Can (7" and 5") | |
| | TC-7 | .75 |
| | TC-5 | .55 |
| 11 | Tape Threader TT 1 | 1.00 |
| 12 | Tape Head Demagnetizer HD 6 | 10.00 |
| 13 | Tape Clips TC 12 | .35 |
| 14 | Tape Reel 7" TR 70 | .75 |
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TAPE CLUB NEWS

Busy B.T.R.S. Member



Jack Talling (pictured above at International Hair Display), assistant secretary of the British Tape Recording Society, has been doing some fine work with his recorder. He made recordings of the "City Wall Jazzmen" of Chester and "The Betty Smith Quintet" which were broadcast to Middle East Forces, from Radio Tripoli. Jack also supplied tape recorded background music for an International Hair Style Display at Quaintways in Chester.

Organ Music Enthusiasts

The Organ Music Enthusiasts is an informally organized group of recorder owners who either like to listen to or play organ music. Some prefer pipe and some electric organs, but most like both about equally.

Started about a year ago by Carl Williams, this club now numbers about 80 members, most of whom also belong to another regular tape club. Carl heads things as secretary. Seward Burton (Montana) is assistant secretary and Harry Place (New Jersey) is technical advisor.

They have distributed a directory, which indicates each member's particular organ interest, be it owning an organ, having one available for recording, or just plain listening and exchanging music. This club does not promote conversation tape exchange, but rather organ music tape exchange.

To date, this organization has been supported solely by voluntary contributions; however, it is planning a small fee to cover future mailings. Anyone interested may contact Mr. Williams, whose address appears in the box listing.

T-R-I Boosters Committee

Bob and Betty Dreste, Phoenix, Arizona, have been named as co-chairmen of the T-R-I Boosters Committee. Other recent appointments announced by T-R-I Secretary Jim Greene were three new members of the T-R-I Welcoming Committee—Elmer M. Luther, Sr., of Long Beach, Calif., Bob Shaw of Rochelle, Ill., and Charles L. Riecke, III, of Johns Island, South Carolina.

Tackard Contest Winner

Bill Murphy, T6KAT, Tokyo, Japan, was the winner of the 1958 Tackard Contest, sponsored by the T-R-I Tape Network. His prize was an 1800' reel of Mylar tape, presented by ORRadio Industries, Inc., of

Opelika, Alabama. Network members exchange Tackards similar to the way radio "hams" exchange Q-S-L cards. Roy Trumbull, T6QRM, Corte Madera, Calif., submitted the first place Tackard in the 1957 contest.

British T-R-I Rep

Robert Ellis, whose address is Schoolhouse, Whitsome, By Duns, Berwickshire, Scotland, has been named British representative for Tape-Respondents, International, announces T-R-I Secretary, Jim Greene. Persons living in Great Britain may apply to Bob regarding membership without the necessity of writing to the United States.

Operation Porterfield

Pfc. Nolan A. Porterfield, Tape-Respondents International member who was the first director of the T-R-I Tape Network, and is now serving in the U. S. Army, recently was honored by other Net members on a king-sized round robin tape entitled Operation Porterfield. The tape contains the voices of some 50 members of the Network all over the world—Australia, Japan, East Africa, Norway, Sweden, England and all sections of the United States, each paying tribute to Nolan in one way or another. The tape contains music, skits, philosophy, jokes, and just plain conversation, and runs for one hour and 45 minutes. Three different dubbings of the tape are now being circulated among all members who participated, and the tape later will be added to the T-R-I Tape Library for others to hear.

Four-Track Tapespondence

With the advent of the four-track tape recorder, Tape-Respondents International is modifying its taping procedure to enable members possessing this equipment to double the tape-response time previously afforded on dual-track machines. T-R-I's new application blanks now list five tracking combinations, to be checked by new members: dual track, full track, stereo stacked, stereo staggered, and four-track.

Standard T-R-I procedure for four-track machines is as follows: First record on Track #1 (edge of tape). Flip reels and record in opposite direction on Track #4 (other edge); change to "extra play" and record in original direction on Track #3; flip reels and record in opposite direction on Track #2.

While T-R-I will obtain the information automatically on new members' equipment, old members possessing four-track machines are being asked to notify the secretary. By standardizing the "flipping procedure" members can be certain they hear the beginning of the tape before the end.

Voicespondence Special Fund

We would like to mention once again the great charitable work carried on through the Voicespondence Club's Special Fund. Recording is an expensive hobby, and this

club endeavors to aid its handicapped members financially as much as possible. All contributions to the Fund are voluntary and come from fellow club members. Some of the handicapped members who could not otherwise afford recording tape are able to obtain 3" of 1 mil Mylar post-paid at special low prices the Fund asks.

The Special Fund has helped a few members purchase recorders. Some of these people pay back the cost in small monthly installments. It also has paid dues at times when certain handicapped folks couldn't afford them.

Our congratulations to the club for maintaining such a worthy branch and to all contributing members.

JOIN A CLUB

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

AURORA SCIENCE TAPE SOCIETY

Walt Richard Sheasby, Jr.
215 North Baldwin Ave.
Sierra Madre, Calif.

BILINGUAL RECORDING CLUB OF CANADA

J. P. Paquette, Recruiter
1993 Morgan Boulevard
Montreal, Quebec, Canada

CATHOLIC TAPE RECORDERS OF AMERICA, INTERNATIONAL

Jerome W. Ciarrocchi, Secretary
26 South Mount Vernon Avenue
Uniontown, Pennsylvania

CLUB DU RUBAN SONORE

J. A. Freddy Masson, Secretary
Grosse Ile, Cte, Montmagny,
P. Que., Canada

ORGAN MUSIC ENTHUSIASTS

Carl Williams, Secretary
19 Van Derveer St.
Amsterdam, New York

TAPE RESPONDENTS INTERNATIONAL

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

THE VOICESPONDENCE CLUB

Charles Owen, Secretary
Noel, Virginia

UNITED RECORDING CLUB

Richard L. Marshall, President
2516 S. Austin Boulevard
Chicago 50, Ill.

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

FOREIGN

AUSTRALIAN TAPE RECORDISTS ASSOC.

Jack A. Ferry, Federal President
Springbank Rd., Clapham, S. Australia

BRITISH TAPE RECORDING SOCIETY

Peter M. Bardach, U. S. Representative
210-16 Grand Central Parkway
Queens Village 27, N. Y.

TAPE RECORDER CLUB

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

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

Attention—United Recording Club Members

Due to getting the booklet "Tape Tours" published, the United Recording Club was unable to publish the URC Microphone for the months of Dec., Jan., Feb. and March. You will be hearing more about this from club headquarters. The April-May issue, however, will be published.

We have seen a copy of "Tape Tours" and consider it well done and very nice looking.

World Tape Pals Members Exchange Daughters

In addition to exchanging tapes, two physician members of World Tape Pals also exchanged daughters. Dr. Leslie Mackenzie of Southport, England, and Dr. Louis B. Desmoreaux of Bauge, France, had been exchanging tapes for some time and when they did their daughters usually added a message of their own to each other, both in French and English. Last July Fiona Mackenzie's parents saw her off on a trip to Paris alone. Fiona was delighted with her great adventure. She was met by the Desmoreaux family and spent three weeks in France. When she returned to England Helene Desmoreaux returned with her.

During the exchange visits, the girls picked up some of the native language of each other. Another example of the friendship developed through these tape-sponding clubs.

Election Results

Final results of officer elections in the Club Du Ruban Sonore are as follows:

President: Jacques Cimon
Vice-President: Lise Roch
Secretary: Freddy Masson
Treasurer: Raymond Dagenais
Publicist: Gilles Roch

Our congratulations to the above members. We wish them success.

Taped Answer

In the future all requests for more information about Club Du Ruban Sonore will be answered by a 3" reel of tape. Anyone interested may contact the club secretary, J. A. Freddy Masson, whose address is listed in the Join A Club box.

New British Club

The Tape Recorder Club of Surrey, England, is a club still in its infancy, but growing rapidly. It publishes an attractive monthly bulletin, has a vast record lending library, and is building a recorded tape library.

This club also has secured the services, on a voluntary basis, of a Technical Advisory Panel associated with the industry to answer members' technical problems.

Any interested parties may contact the club secretary listed in the club box.

Tap-o-tek

A new name seems to have filtered its way around the Bilingual Recording Club of Canada concerning their tape library. It is being called "Tap-o-tek," derived from the French word for library, "Bibliothèque," pronounced "Be-ble-o-tek." This name was contributed by the club's secretary-treasurer, Andre Coulombe.

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QUESTIONS & ANSWERS

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

Q—I have built an eraser from an old TV power transformer, the laminations of which measure 3" x 4" x 2½" thick. I have mounted it in a soft iron box with a plexiglass cover and a red light as a warning that it is "on." I have also designed an eccentric movable post that locates the tape of either a 3, 4, 5 or 7" reel over the most powerful part of the field, and it works fine. To my ears a tape treated on this eraser has a sound level of absolute zero.

Since I cannot get the eraser face much closer than ½" from the pole pieces of the heads, would it be to my advantage to hold it there for a longer period before slowly drawing it away in order to assure a complete erasure. Will it do any harm to other parts of my recorder such as the permanent magnet of my speaker?—J. M., Chicago 40, Ill.

A—It is doubtful that a bulk eraser will do a good job of head demagnetization because of the mu metal shielding around the head which protects it. It will be necessary to get the magnet near to the pole pieces themselves to be effective. While a powerful magnet such as you have can and will demagnetize a permanent magnet, such as is found in speakers, it is doubtful that it would have much effect at the distance of the heads.

Q—I have an RCA tape recorder about five years old. I usually use one of the standard brands of tape but have tried some of the cheaper tapes. When I use them they sometimes make a sort of whistling noise. Can you tell me what makes them noisy and if there is anything I can do to quiet them?—M. F. C., Lewiston, Maine.

A—Bargain tapes are sometimes no bargain. We would suggest that you first check the pressure pads on your recorder to make sure they are in good condition. They should not be hard or glazed and, if they are, they should be cleaned up with a little carbon tetrachloride or one of the commercially available cleaning solutions for recorders and brushed up to restore the nap. What you are hearing is most probably tape squeal which is a mechanical noise caused by the tape rubbing against the machine. Cheap tapes sometimes lack the lubrication that better tapes have and are more prone to develop such troubles. As to remedying the situation, if cleaning the pressure pads does not do the trick get some Long-Life tape lubricant and apply it to the tape or secure a Pylon tape lubricator. Your dealer should be able to get them for you. These are silicone base lubricants which should help.

Q—As a subscriber to your informative magazine would you kindly advise where I may purchase monaural tape. I have tried several leading stores in this part of the country and have been informed that this

tape is not now manufactured, due, of course, to stereo.

Perhaps you have a source of purchase either new or second-hand, or maybe one of your readers would have this information, I would prefer the classics.—W. J. Orr, 8114 Fifth Ave., North Bergen, N. J.

A—Due to lack of demand, monaural tape is practically extinct today. Webcor has a small library of monaural and perhaps your local Webcor dealer can obtain some for you. They are mostly classics. Some months ago the Atlantic Sound Co., Box 22, Milltown, N. J. advertised quite a few monaural tapes for sale at bargain prices. Perhaps they still have some left. Anyone having monaural tapes for sale is invited to contact Mr. Orr directly.

Q—I have a Pentron stereo recorder one year old Christmas. I haven't had anything done to it and it gave me good service. Now what I want to know is why it hasn't the pickup with the mike or from the radio or TV like it used to. I have to use too much volume control and then the VU meter runs in the red. Could it be just weak tubes or something else? There are not many Pentrons around here and I don't want anyone experimenting with it. I have to drive 50 miles to the nearest Pentron service station. If it were only the tubes, I could have the radio man here do the work. See if you can help me on this.—A. T., Elyria, Ohio

A—There are number of possible causes of weak recording. First, we would suggest you check and clean the heads and make sure the pressure pads are functioning properly. If everything seems right in this category, the next step would be to check the tubes, which your local serviceman should be able to do. If the tubes are O.K. have him check the bias voltage to the head which he can do with his vacuum-tube voltmeter. He might also check the incoming signal through the recording preamp to make sure there isn't a defective resistor or capacitor in the unit.

Q—A friend of mine told me that I could not record a program from a TV set since the TV has an electro-magnetic speaker. The voltage to the speaker is too much and would ruin my recording head. I have been recording from the speaker by using two alligator clips. Is this method O.K.—M. M., Hyattsville, Md.

A—All speakers might be termed electro-magnetic. What your friend was thinking of is an electro-dynamic speaker which has quite a heavy voltage on the coil which supplies the magnetism to make the speaker work. However, these speakers also have a voice coil in which the current is low and from which recording is done. There is no signal on the high voltage coil at all.

FEEDBACK

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

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

Which Motor?

To the Editor:

As a reader of HI-FI TAPE RECORDING I thought I would write to you and get this matter off my chest.

Some time ago my Crestwood 402 tape recorder went bad. My motor was not working as it should so I sent the machine out to be repaired. The man that started to repair it said it needed a motor, so good I said order one, then is when all the trouble started, locally he couldn't get a motor, so he sends a letter to the Daystrom people to send a motor and some other parts. They sent the small parts but no motor. We waited and waited. Then a postal card was sent to them. No answer.

Then a letter by me to them about the poor service. No answer.

Then we sent a telegram. No answer.

Now please could you tell me what are we consumers supposed to do when we run into conditions like this? When companies like Daystrom Electric do not even have the courtesy to tell a consumer where he could purchase parts for an item that he pays \$300 in hard money. The old motor has no label, no name, so that we could trace the manufacturer. This I think is a crime. My recorder has been out of service since before November, 1958. I hope that the manufacturers will get together and give the people that buy the junk they build better service.—J. S. Szanyos

Perhaps one of our readers can give you the dope on the motor. We do not have the information in the file. It doubtless is a motor which is still available as tape recorder motors are more or less standard.

Help With Speech

To the Editor:

Do any of your readers have a school or educational center with a speech clinic?

Do those attending the speech clinic desire to tapespond with those attending other speech clinics?

If so, ask them to tape a message to the English and Speech Department, Associated Teaching Center, Inc., 3411 Old York Road, Baltimore 18, Maryland. Ask them to use a dual track recorder, three-inch reels, and 3¾ ips speed.

They will find their tapes eagerly accepted and answered by several boys and girls in the ATC. Some of these children's interests are as follows:

(1) Neil is nine years old and interested in all boys' things. He particularly would enjoy tapesponding in English with a boy in Israel.

(2) Cindy, an 11 year old girl, is mostly interested in the Girl Scouts and sports.

(3) Catherine is a college Freshman who is interested in people and civil rights.

(4) Charles, 13 years old, is primarily interested in "just being a boy" and talking "just boy" interests.

(5) Douglas, 9 years old, is a Cub Scout and vastly interested in just about everything from Scouting and sports to human interest subjects.

(6) Tommy, 15 years old, is a Boy Scout Leader, and is interested in just that—Scouting. He also is interested in talking about school activities.

(7) Barbara, 13 years old, though limited by a heart ailment, is very interested in people and in talking about people's interests. She especially enjoys talking about her church and the Catholic faith.

Anyone For Russian?

To the Editor:

In your last issue a reader requested information on tape instruction in Russian. I have been interested in learning Russian for some time, but have not gone very far to date; however, I thought a club might be started to correspond by tape. That is, beginners or those who speak Russian and would perhaps like to help the beginners. Later, members could correspond only in Russian which, in my opinion, would be better than practicing alone since it would be like being in the country and talking to natives.

If anyone is interested in such a club they can write me.—D. W. Stickleby, 6312 Waldron St., Pittsburgh 17, Pa.

School Sound Demonstration

To the Editor:

I am a high school physics teacher at North Sanpete High School. I wish to report a method of demonstrating the physical property of sound by using two tape recorders. It is a well known principle of sound that to increase the frequency increases the pitch and it is in direct proportion, so therefore by doubling the speed of a recording you can increase the pitch exactly one octave.

I have used a tuning fork having rather low frequency (about 256 cps) and recorded this sound at a slow speed on one tape recorder. Then, playing this back through the microphone of the second tape recorder, set at a fast speed the sound pitch increased by one octave.

Then playing this back through the microphone of the second recorder set at fast speed this pitch is also increased by one octave. By doing this it is possible to take a given pitch and by a series of changing the speed of recordings increase the frequency up past the capabilities of the recorder or near the limit of sound hearing. This type of demonstration is practical inasmuch as it demonstrates the physical properties of sound. It also is a little away from the ordinary demonstration in physics and therefore very interesting to students.—Russell Aiken, Mt. Pleasant, Utah.

Good idea. Teachers please note.

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TEEN TAPERS

BY JERRY HEISLER

FOR quite some time now, we have been fanning our thoughts at those of you who have your own tape recorders. The thought occurred to us recently that this column might be read by some people who do not own recorders of their own. For those of you who fall into this category, perhaps you find many uses for a recorder in school or in some other place, but you don't feel that you have enough use for a recorder of your own. Let us spend a few moments on this subject.

Of course if we had our way every person would have a recorder at home, but unfortunately this is not the case. I doubt that a single family exists that could not find use for a recorder. A recorder can be used as a study aid, a party-fun tool, a source of music enjoyment, a source for valued family memories, and a host of other uses. Today recorders are available for \$100 on up, and in modern terms, this is not a lot of money, considering the use that can be derived from a recorder.

If you have any doubt in your mind as to what use you could make of a recorder, just jot down some of the ideas I've mentioned and think how they might apply to your own home situation. If there is still a doubt, let us know and we'll be glad to show you what you can do with a recorder.

We mentioned some time ago that we would again like to try recording in the car. We have had a chance to use an inverter again and have come up with a few new ideas.

Having a car that was equipped with a good radio plus a back seat speaker, we found it quite easy to play tapes through the system and thus we were able to enjoy some good music while going on a rather long motor trip. The recorder was mounted in the trunk and suitably supported so that it would not topple. This put it conveniently out of the way, while still giving us ample enjoyment.

We often wondered, too, if it would be possible to make use of the time spent in driving to and from school for some study. This was proven by recording a speech we had to memorize and playing it in the car on the way to school. It was no more distracting than the radio, and for a week preceding the day the speech was due, we had an extra hour of practice. Of course this could be applied to anything you had to learn in school.

We found also that the recorder provided a good amplifier system, and by mounting a speaker on the outside of the car, we were able to "advertise" a coming school event around the campus. We also provided appropriate theme music over the tape recorder, in between the announcements.

Of course the opportunities are unlimited for recordings. You can record anywhere you can drive your car. Sound effects of a downtown traffic jam, water running over

a colorful waterfall, singing by a campfire in the spring evenings. These were all good sources that we were fortunate enough to record.

We've often been faced with the problem of having to record something off of the radio, only to find that we would not be home at the time of the broadcast. This could be remedied by recording off of the car radio, should you be travelling at the time of broadcast.

But how is all of this done? An inverter is a device which converts the car battery current to 120 volts, or the same as house current. There are numerous models available supplying varying degrees of wattage. They are made by the American Television and Radio Company, commonly known as "ATR," of St. Paul, Minnesota; The Carter Electric Company, and several other firms. They are commonly available from parts houses. The prices run from \$20 to \$60 or more, depending upon the size needed. The model we use, mounts in the trunk and is connected to the battery by means of a cable running under the floor board. We installed it ourselves in less than half an hour and no special tools were required. An outlet screws onto the dashboard along with a switch. All we need do is set the recorder on the front seat and plug it in, and we're ready for use. If any of you try this we suggest you keep your car motor running so that you will not discharge the car battery. We were unable to start the car once, after running the recorder with the ignition turned off.

Such a device can provide endless hours of enjoyment during the summer months.

Now that June is with us again and some of you will be leaving for camp, let us again urge you to take your recorders with you. We have a good collection of memorable events recorded several summers ago at camp.

Those of you who are acquainted with the functions of a tape club at school, might do your camp a service by informing them of the advantages such a group might bring to a camp.

We had an entire column on this subject some time ago if you would like to refer to back copies.

Next month we will touch upon the subject of using your recording equipment to record radio type scripts, and in the meantime let us hear from you regarding your fun, problems, and ideas about teens and tape recording.

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TAPE IN EDUCATION

BY MAJOR JOSEPH J. KRAMP, USAF, RET.

ALTHOUGH the educators of our children seem to be too fascinated with television, for the most part, to capitalize on the great benefits of tape, much work is being done by the Armed forces and industry. It seems significant that where there are no axes to grind, and where increased productivity must be shown, tape has gained a firm foothold.

Tape is being used at an increasing rate in industrial education to teach the basic principles of physics and electronics and to supplement courses in servicing and repair. Many laboratory demonstrations are faithfully simulated by tape that would be difficult or impractical to do with the usual laboratory apparatus. Many effects can be recorded which have not been generally demonstrated in the classroom. In a course in engine repair, for example, the students can actually hear the characteristic sounds of an engine as various parts malfunction or fail. The students learn in the classroom to recognize all of the subtle sounds of the engine that they would normally learn only after a considerable amount of experience. In the servicing of electronic equipment it is much easier to simulate the right and wrong waveforms for a particular stage by means of tape than it is to induce a malfunction in the equipment itself. It is also of value to have these demonstrations accurately reproducible.

Many industrial classes are taught with the aid of film strips and taped lectures. These seem to be preferred over motion pictures on several counts. Of course they are much cheaper, take less time to produce and can be re-edited when necessary.

It is in the Armed forces where tape has probably had its greatest support. The great need for language training by the services resulted in the development of the language laboratory as we know it today. Thousands of servicemen have been taught exotic languages quickly and thoroughly at the various language schools. The services have also expanded the use of tape all the way from teaching illiterates to read and write to the teaching of highly technical skills.

It seems strange indeed that tape whose versatility and value has been demonstrated repeatedly, does not receive more attention from the educators behind our public school systems.

I have just received two tapes from the Campus Library; "Argumentations and Debate" and "Contemporary Europe." These tapes are distributed by Campus World, Inc., 3449 McClintock Ave., Los Angeles 7, Calif. Both are excellent. "Argumentation and Debate" is a very interesting two hour lecture by Dr. James H. McBath, associate professor of Speech and Director of Forensics at the University of Southern California. In the short space of two hours, Dr. McBath gives you a complete coverage of the subject such as: background and perspective,

propositions for debate, research, analysis and case, proof-evidence and reasoning, refutation, cross examination and evaluation in debate.

"Contemporary Europe" from the history series is a two hour lecture by Dr. John E. Rodes, Assistant Professor of History and Chairman of History of Civilization at Occidental College in Los Angeles. This lecture covers the new century, World War I, the 1920's—insecurity and recovery, the 1930's—dictators, crises, and approaching war, World War II and its aftermath, and Europe in the cold war.

Although each of these covers a very wide field in a two hour period, the material is so well organized that all of the significant points in each subject are well covered and interestingly presented. The recording is very well done and well edited. The Campus Library offers a selection of thirty-five tapes in several subject areas. The list of professors who have prepared these tapes is indeed impressive and we feel that the Campus Library has made a very notable contribution to the cause of learning and culture.

When we speak of foreign language training, on tape or otherwise, most of us are inclined to think of French, Spanish, German or similar, relatively well-known languages that have been taught in most school systems for years.

But these are not the languages that will be most in demand in the future. Already there is a ground-swell rising for the inclusion of Russian in the school curriculums of this nation and a number of high schools are already giving instruction in it. There will be more and the firms that can supply the tapes and instructional material in Russian should do some business with the school systems.

The languages which will receive the attention in the future are the languages of the world's so-called undeveloped peoples. Such exotic languages as Bantu, Hindustani, and, even perhaps, Pidgin English will be sought after.

Likewise Chinese and Japanese will become increasingly important as will the dialects of many of the far eastern countries.

When you realize that millions upon millions of people use these languages, which have remained untaught in our schools and that these peoples will be the ones which will be sought after as allies and friends in the future, it causes one to wonder why this fact was not discovered and acted upon long before.

In many of the languages of Africa and Asia, there are no grammars, or tapes, or lessons. All this remains to be done and the tape recorders will have to go far afield to get the native recordings. There is a tremendous job to be done in this area of little known but vitally important languages and one which will not be done overnight.

We should be starting on it.

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You Don't Have To Know How It Works

by Vollie Tripp

... this couple, with little knowledge of a recorder, put on a successful trailer rally using such a machine and slides.

ALL I know about tape recording I've learned in the past 6 weeks. Not only that, but it was necessary to "un-learn" some strongly held wrong ideas. For example, I'd always assumed making a satisfactory recording was an extremely technical business, for experts only, in a sound proof room with other expensive equipment.

I still don't savvy the technical end. The story here is how a recording machine in the hands of two complete amateurs is enormously assisting our work in publicity. In fact, now that we have one, I wonder that we ever attempted this job without it.

It all began last Sept. 30th, when Mrs. Tripp and I checked into a Palm Springs trailer park, for a winter of rest and play. The big annual Palm Springs Trailer Rally and Show were due in late October. Suddenly I found myself in charge of publicity for this important event.

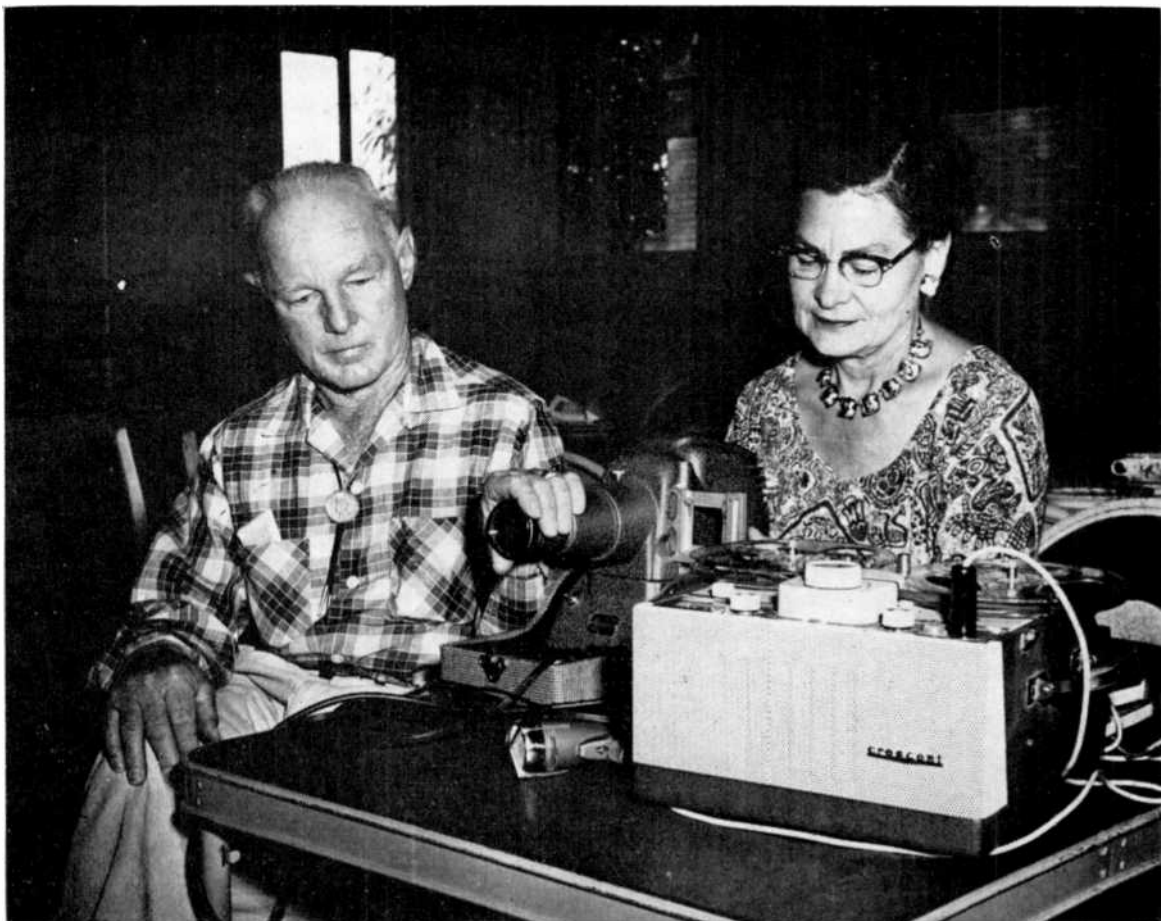
Soon both of us were busy on the Rally, with general promotion and publicity. The Rally went over pretty well, and showed a neat profit. It was our intention in the spring to go to Florida, but the Rally Committee wouldn't let us

resign. They made us a monthly salary offer, with earnest entreaties to help with the coming fall Rally.

I outlined a publicity campaign to be carried out in the Pacific Northwest in the spring and summer. We were to take colored slides of the Palm Springs area, and the parks represented in our association. Mrs. Tripp takes excellent slides. The slides, with appropriate narration, would be shown to people in the hope of inducing them to come to the Rally, and perhaps staying in Palm Springs for the winter. Brochures and other literature would be distributed, and contacts made over a wide section.

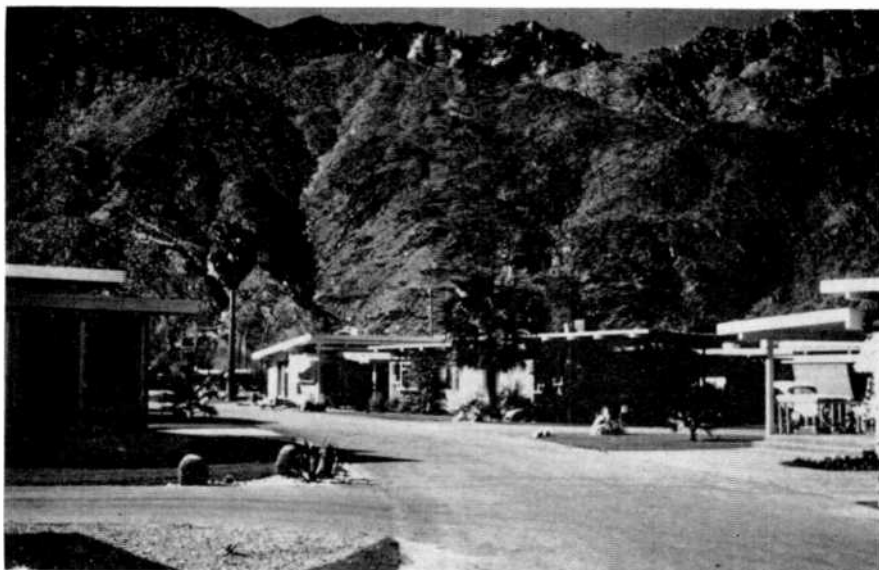
Before leaving Palm Springs, we began looking for a light compact loudspeaker, since the narration would have to be given outdoors at times, and my voice doesn't carry too well. We found nothing suitable, and were a bit discouraged until a salesman suggested that the light Crescent recorder, with its built-in speaker, and booster post would cost little more than a good loudspeaker. He hauled a slightly used machine out to show what it could do.

Now, at that time I was still thinking merely in terms of



With this older type Gold E. projector, and a small Crescent tape recorder, the Tripp's, Vollie and Hazel, put on a successful promotion campaign for the Palm Springs Trailer Rally. With their taped narration were shown 139 colored slides of the Palm Springs and desert area. Although they knew little of the mechanics of the recorder, they had no trouble in obtaining good recordings.

The Sahara resort was pictured on one of the slides the author prepared for a publicity campaign for the annual Palm Springs Trailer Rally.



a small not too expensive, and not too bulky P. A. system. It was my intention to explain the slides and do all the narrating by voice, no great chore for a professional speaker, which I'm decidedly not. Then, following the hour long show, you always have to meet and talk with people again. This can get to be something very like work.

Well, the loudspeaker in the machine was pretty good. But when the salesman began recording bits of stuff, playing it back, and erasing it to start all over again, I lost interest in the speaker angle. Was it possible that we, plain novices, could get a satisfactory narration on the magnetic tape, synchronize it with our slides, and save our voices? The salesman said we could.

You see, I was that dumb about the scope and application of this amazing device! I knew the pros did it, those with a lot of hi fi knowledge and experience. Yes, I just couldn't imagine us doing it even half well. But, if we could record my talk, and time it with the slides, it would greatly simplify our summer task.

We bought the machine, a few spools of thin long playing tape, and some extra reels. At home that night we began to experiment a bit. I was amazed that my voice sounded better, more resonant and deep than it does naturally. It had enough range for our purpose. We were hooked, good.

We had decided on an hour show, as about right. There are 139 colored slides to be shown and "narrated." This meant allowing approximately ten seconds per picture, on the average, though some are exposed less, and some for longer periods. A slide projector with hand feed is best for our purpose, though not so rapid as the magazine type. There had to be ample time for the wife to change slides manually, at the same time avoiding too long periods of silence.

The narration was to begin with a two-minute introductory talk. I composed this, and worked out a suitable caption for each picture, in their proper sequence. Testing it out for time, it seemed about right.

We chose a quiet morning to put the talk on tape. With a sign: "Recording. Do Not Disturb," on our front door, I sweated it out the full hour without a break. As each caption was read into the mike, I silently counted the seconds that had been pre-determined as right for that particular picture, as indicated on the script.

That first recording was not too bad. True, it had a few flubs in it, as I expected there would be. But every word was clear and audible, with a range far beyond my own voice.

We played it to our Rally President, Merle Hancock, and



Slides such as this were used to induce folks to come to Palm Springs for the winter season.



This slide of the Desert Inn looks good enough to encourage any trailer fan to head in the direction of Palm Springs.

to our Chairman, Paul Harrison. Both expressed delight with it. We left Palm Springs May 15th, put on our first showing at Pomona, California, for a large group of trailer fans. Later, I revised the script in the light of public reaction, or the lack of it, to some of my quips. The second recording was considerably better.

We now had learned to stop the tape at once in case of a cough, or flagrant error in grammar, erase that part, and do it all over again. This was not difficult, as we had these blank areas on the tape to tie back into. It took considerably longer to blue pencil out the flubs and tongue slips, but the result was much better.

Mrs. Tripp also made a recording, using her script, and a woman's interpretation of the slide scenes. I didn't like her emphasis on some parts, and she made another recording. It is very good. I have made a third one, the one we are now using. But I see some imperfections, which I shall try to eliminate in a fourth try, when the proper conditions of quiet can be found.

We have been showing these slides, and their synchronized recording now for the past 5 weeks. It is my job to modulate the sound, and keep the slides in focus. This leaves my wife free to operate the projector. I sit in front of a

small table we use for both machines, in easy reach of the projecting lens, and the recorder controls.

We have put on our show in strategic areas of Northern California, and are now well into Oregon, currently at Bend. Response and interest has proved the soundness of the basic publicity plan, as outlined to the Rally people, last winter. We plan to show chiefly to trailer clubs, and to residents of trailer parks. But we will show our slides to any group that expresses an interest in seeing them.

The application of the magnetic tape recording machine is without limit, of course. It has proved, and is proving a tremendous assist in our present work. Already, I am thinking of another promotional deal to submit to another industry in the South. A tape recorder, perhaps a larger and more powerful one, will figure prominently, of course.

Never was a person sold so completely, so quickly, as I have been. But the point I would like to drive home to readers is this: You don't have to be a genius, an electronics engineer, a scientist, to make and use a tape recording. True, specific technical knowledge is no handicap. But it isn't necessary to understand how the thing works. I don't, and never will. Few people understand the principle of the telephone, for that matter.



Tamarisk Park is one of the favorite trailer park locations for travelling enthusiasts to visit.

NEWSTAPES

by Michael Blake
Radio Station W-L-N-A

... tape recorded news stories give dramatic impact to radio reporting.



On-the-spot reports of fires are very effective when they include recordings of comments made by fire officials, in addition to the blaring of fire engine sirens, gushing of water, scurrying people, etc. Such reports are more apt to catch a listener's attention, than to simply present the story within the framework of a newscast.

ONE of my best newstapes was an interview with a woman minutes after a butcher knife had been put to her throat. I was handling the night news desk on one of those real dead nights when nothing seemed to be breaking.

Suddenly the police monitor blasted with the report of a candy-store hold-up at Main and East. Main and East—three blocks from the studios.

The police and I arrived on the scene at about the same time. There in the store was an elderly woman in a state of near hysteria. My tape consisted of about four minutes of the woman's description of how she was thrown against the wall by a youth, how he drew a twelve-inch knife, and threatened to "lay your guts on the floor." The account was punctuated with tears and the recurring remark "such a nice-looking boy. . .such a nice-looking boy."

The edited version for broadcast lasted one-minute 40-seconds. The extent of my part of the interview was limited to four words repeated several times—"and then what happened?"

You plan, rehearse, you write scripts for, newstapes of various kinds, and then a situation occurs when all you have

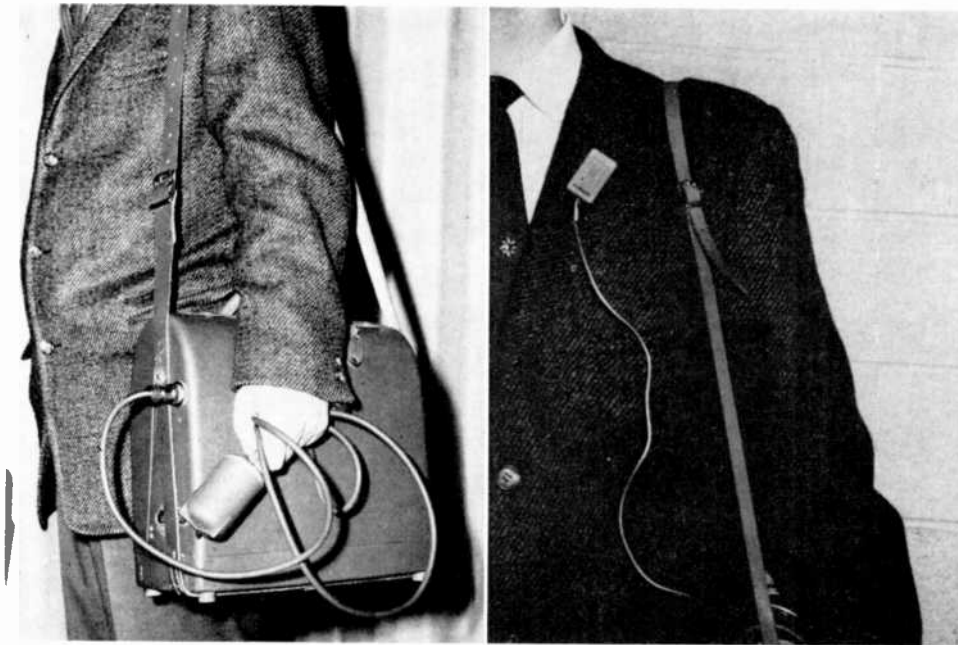
to do is repeat four words and you've come-up with a tape that wins the praise of management and most important of all, the others on the news staff.

This is an example of a shock tape. So far as news coverage is concerned it might be compared to an action photo, a candid shot, a front-page picture.

Radio news has come a long way since the days when Dr. Lee De Forest, the father of radio, invented the vacuum tube that made broadcasting possible. Dr. De Forest broadcast to a few amateur radio buffs the early returns of the presidential contest between Wilson and Hughes. The date of the first newscast was November 7th, 1916.

Radio news has gone through a cycle. The complexion of radio news coverage has changed with the advent of television. The radio networks are now all but a thing of the past. Radio news now emphasizes regional coverage. Local news coverage by radio is now moving into the area that only newspapers once served.

Emphasis on local news reporting by radio stations does not mean the demise of newspapers. The two can hardly compete. Newspapers now and always will have the advan-



Left: The Cub-Corder, often used for field recording of newstapes, is carried over the shoulder and weighs about twelve pounds. Powered by a wet cell it records at either $3\frac{3}{4}$ or $7\frac{1}{2}$. Right: Another recorder used for this purpose is the Mohawk, also carried over the shoulder. The microphone clips to the lapel. Powered by a dry cell, it records at $3\frac{3}{4}$ on tape contained in a magazine cartridge.

tage of depth reporting. They can devote columns and columns to background material to which radio often can only allude.

How does radio news compete with the printed word? Radio offers immediacy and dramatic impact. Aiding the radio newsman in the presentment of impact is the newstape. The newstape is coming into perspective as a working tool of radio news just as the photo is an important part of our daily newspapers. Both are worth a thousand words.

The shock tape already mentioned compares to a candid photo. The rehearsed or planned newstape is a posed shot. An example of a posed shot might be an interview with a police chief explaining some new phase of the traffic laws, the fund-drive chairman kicking-off the campaign, or any number of other interviews that are planned and made to serve a particular purpose.

Just as a picture can be cropped to fill a space limitation, so too a tape can be cropped to fit into a time limitation. Just as photographs can be made more complete with artwork, so too a newstape can be made more complete with artwork.

One of the newsphotographers most important tools is a paint brush which is used for editing before the print is photoengraved. This is another area of discussion which is best not expanded here. Suffice it to say that the best newsphotographers are not always the ones who take the best pictures.

By artwork in the editing of newstapes, I do not mean deception. This would not be keeping faith with listeners.

Let me give an example of artwork. It was once my assignment to do a two-minute tape with the Commander of an Air Force Base on the occasion of Armed Services Day. The tape was one which was fully prepared in advance replete with script and two dry runs because the Colonel was a little stupid. Sad but true.

The tape could have been cut under ideal conditions in the studio but I felt that it would be more effective to cut it amid the sounds of busy airstrip traffic. The Colonel and I stood out on the field for twenty minutes and, you guessed it, no planes.

This problem was solved by cutting the interview with the officer and then waiting for a busy-traffic period some time later. At the studio it was a simple matter to mix the sound onto a single tape. Deception? Not at all. Rather, it was artwork to better help the listener visualize the scene.

Still another artwork example is an interview with a postmaster on some new phase of the postal laws. The interview is begun close to the staccato sound of the mail cancelling machine. The interviewer and the postmaster then step from the machine for the meat of the questioning and then toward the end step back again to the machine. Artwork.

Not every picture snapped is published. Photographers usually over-shoot so that the best can be chosen. With a newstape it is advisable to over-tape for the same reason. This does not mean that every story in which recording equipment is used that the tape must necessarily be broadcast. To both a radio newsman and a newspaper reporter, stock-in-trade remains words. Photos and tapes are fine but only if they are an integral part of the story and only if they are of good quality. All too often inferior newstapes are broadcast purely out of the sheer enthusiasm of the newsman. This might be laid to the fact that tape coverage in radio news is still young.

The first thing that a newsphotographer asks himself when he arrives on the scene of a violent occurrence is "how and what will I shoot?"

In an auto collision the photographer has little choice. He snaps a mass of tangled wreckage. It is the same kind of shot that can be found in any newspaper on any day. A newstape cannot capture a scene like this but a good tape would be an interview with an eye-witness to the crash or with one of the survivors or with a police officer describing how the accident might have occurred.

Another facet of tape coverage is the beeper-phone report. As you probably know, the Federal Communications Commission has ruled that all telephone recording must have the 15-second beeper. Beeper-phone reports are used for all kinds of news coverage. Accidents and fires are the most common but the beeper is used to good advantage in the reporting of important meetings.

It is easier to capture the listeners attention with an on-the-spot direct from City Hall than it is just to recount the story within the framework of a newscast. On-the-spot coverage or what might be called "production" will focus the attention of a listener even though he is not particularly interested in a specific story. A good newstape captures attention exactly the same way that a good newspicture captures attention. Both are an example of production.

Often the best newsphotos never reach publication. For instance it would not be in the public interest to show a dead body of a suicide jump-victim impaled on a spiked fence nor would it be good to print a picture of the splattered remains of such a victim.

Newstapes are limited in that they cannot encompass the horror of a scene as a newsphoto can, but there are tapes that have an aspect of horror and can be classed as not in the public interest. I can recall several instances when a newseditor praised my enthusiasm but refused to allow broadcast of the recording.

One involved an interview with two young hoodlums'

friends and the brother of a youth who had just shot-it-out with police in a gun battle. Wounded three times, the youth ended up on the critical list at the hospital but later survived—which was a definite loss to the community. Less than an hour following the shooting I talked with the boys as follows:

Just what is your opinion of the gun battle?

First Youth: Lousy cops. It took three of 'em to bring 'em down.

Brother: He was only tryin' to scare 'em.

Your brother fired the first shot didn't he?

Brother: Yeah, but he was only foolin'.

Second Youth: Dirty cops, pickin' on kids.

First Youth: Lousy cops, always picking on kids and drunks.

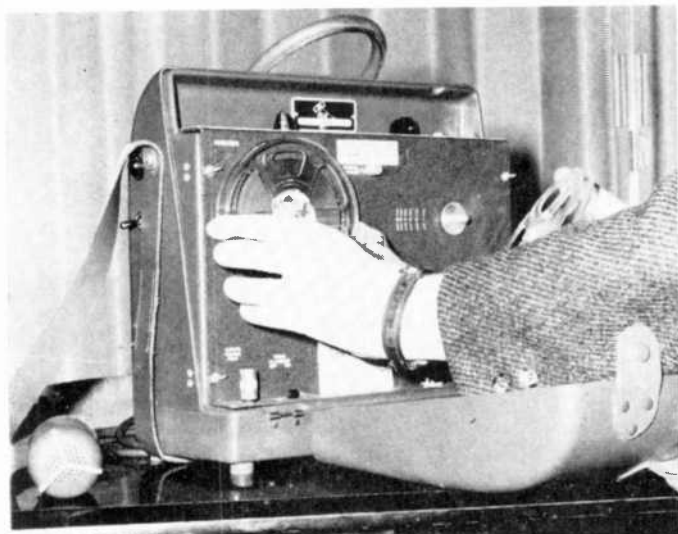
Is there anything else you want to say?

First Youth: Lousy cops.

Second Youth: Kids and drunks is all they know.

Brother: He was only tryin' to scare 'em.

At the time I thought the tape was worthwhile but the



Left: Recorded reels of the Cub-Corder can be removed and used directly for broadcast. Right: Recordings made on the Mohawk must be transferred from the magazine tape to reels for broadcast.



The author prepares for a broadcast. Often the best newstapes end up on the cutting room floor when the news editor considers them not in the public interest because they contain an aspect of horror which would be distasteful to the public.

editor ruled that it was not in the public interest to allow the boys to have the dignity of the microphone to vent their spleen on three policemen who were already sick over the whole thing.

This tape was ruled not in the public interest. Whether or not you agree with the public-interest aspect of newstapes few cases are clear-cut. It enters into an area of opinion which would vary from station to station just as picture coverage varies from newspaper to newspaper.

In summing-up let me say that I hope that I have not given you the impression that a radio news beat is filled with the actions of shootings, fires, and explosions. The truth is that a radio news job is hard work and boredom for the most part as is any job on any news beat.

It was my purpose here to point-out in a small way the importance of tapes to radio news coverage and some of the responsibilities that go along with this new tool.

You plan, you rehearse, you write scripts for, newstapes of various kinds. You spend hours and sometimes days in the planning. And then a situation occurs—you're at the scene—you've thrown the recorder switch—and suddenly you have your candid photo—a front-page picture.

Make Your Own Thunder

by L. L. Farkas

. . . whether you record the real thing, use someone else's recording, or simulate the sound—collecting sound effects is fun.



Marching men come down the road. This gadget of wooden blocks simulates a group of people marching. It can be made from scraps of wood you may have handy around the house.

WHEN you need a clap of thunder for your next dramatic tape recording, you can do one of three things: buy a sound record which includes claps and rumbles of thunder, wait for a thunderstorm and record its sounds, or make your own thunder. Whatever method you choose may depend upon your temperament; but often there are very good reasons for using either one specific method or all of them combined.

For the person with limited time, the one who cannot wait for a thunderstorm or does not want to take the steps necessary to simulate thunder at home, the most practical thing is to go out and buy a record of the particular sound desired. There are records of thunderstorms, explosions, steamboat whistles, trains puffing, rugs snorting, subways rumbling, lions roaring; in fact, of any type of sound and background noise you need. All you do is plunk down your money, pick up your record and play it at home on your record player. Or you may pick out a dealer and order what you want from a convenient list.

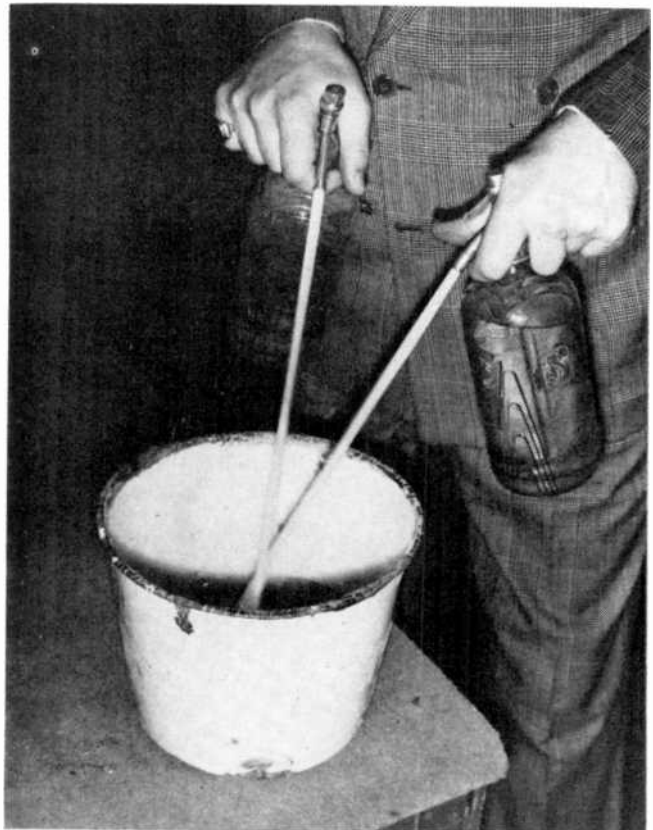
There is of course the little matter of timing in using such a record. But this can be learned easily. Perhaps you

have watched a disk jockey set up his records. If not the process is simple enough. You play the record until you reach the spot where your sound is located. Turn off the player. Then, with the playback head still on the record, proceed to rotate the record backward one-half to one turn. Turn down the volume control of the record player. Now you're set.

A few minutes before you need the sound, place your fingers on the record and switch on the record player. The turntable will spin while the record remains motionless. At the desired time, let go of the record and turn up your volume. With a few rounds of practice, you should be able to bring your sound in "right on the nose," when needed.

Now this is fun, and an accomplishment too, but you can go one step further. You can make your own recordings of the sounds you need ahead of time, so that you can have them available on tape whenever you want to use them.

Still this method presents problems. For instance, in recording sounds indoors there is always the question of room reverberation, either too little or too much of it. When little or no echo is present, the room sounds dead and any-



Steam escaping or twin rocket guns can be reproduced with syphons. You will, of course, need a container to catch the water—a bucket will do.

ching recorded in it will seem unreal and choked; with too much reverberation, the sounds will be distorted and boomy. So either you will have to pick your locations for indoor sounds, or you will have to remedy the particular situation: using hard-surfaced reflective panels in the dead room, and sound absorbing materials in the room which is too live.

Recording sounds outdoors can prove just as engrossing. But there you will be plagued by extraneous sounds—noises which have the bad habit of crowding into a recording, diverting attention, or even blanketing the desired sound. Traffic noise does that, so that you must use a directional mike to concentrate your pick-up upon the specific sound desired, or change your location until you get what you want. You may have to tape the effect a number of times, hoping that one of these recordings will produce your effect.

You will also encounter wind which often makes such a hiss in the microphone that any other sound is drowned out. The results are even worse when a parabolic reflector is used, as in long distance pick-ups, for the wind, captured by the paraboloid is focussed upon the microphone diaphragm. Of course here the rule is to shield the reflector from the wind by placing it in the sheltered side of a house or behind a wind screen. And the microphone diaphragm itself can be protected by wrapping a handkerchief around it.

There may be other times when you want to record a sound close to water, or in the rain. There a common bathing cap slipped over the microphone will keep water from splashing or dripping into the diaphragm.

In some instances the sound you want to record may be so loud that it will cause either the microphone, the recorder, or both to distort, so that the recorded sound will seem choked. Then you will have to record the sound again, but with the microphone farther away, or turned to one side,



Horse's hoofs, from a walk to a full gallop can be produced quite easily by beating two halves of coconut shells or dried grapefruit rind into sand or gravel.

so that the full volume of the sound does not strike the center of the microphone beam.

Perspective also presents problems. Should your sound appear close or distant, be loud or soft in comparison to its background or other sounds on your tape? This is over and above the problem of angular orientation posed by binaural recording which must orient the sound to the front, to the right, or to the left, thus adding a third dimensional requirement to the sound picked-up.

The degree of volume can readily be handled by recording at either high or low level. The effect of distance can be obtained by placing the microphone directly in front of



Dried twigs lashed together can be used for simulating a man or animal creeping through underbrush; the dowels add heavier sounds.

the sound source and varying its distance to produce the desired perspective. The same effect can be obtained also by turning the microphone from an on-beam to an off-beam position, the degree away from the on-beam position determining the perspective. However this last method can be used only with monaural recordings since an additional and unwanted effect of location either side of center would appear in a binaural recording.

Power available for your recorder may be another problem. You can of course use a long extension cord to transmit this power from a house outlet to your recorder. Or a converter, working from your car battery, can supply the necessary alternating current. Most practical are the battery and spring-operated portable recorders requiring no external source of power.

Don't be discouraged by the number of problems mentioned. A little practice will teach you how to handle them and you will soon be launched as an inveterate sound chaser, moving with microphone and recorder in hand to the site of all and sundry sounds made by man, machine, beast, or



Walter Otto, sound effects technician, gets ready to slam a door and smash a partition as Evelyn Juster, of CBS radio, acts out the story. Sometimes the best sound duplication can only be achieved by using the actual item such as a door closing.

the elements. And in the evening, when the lights are low, you can stir up spine-ringing tales, with sound effects, of how you captured a particularly savage sound.

Seriously, recording actual sounds is an art which requires patience, stubbornness, and an ever-present desire for realistic reproduction. This may mean recording the same sound a dozen times or waiting hours for a particular sound to be heard, all in an effort to get it and get it right. But once you have done so, then you have gained not only the effect required for your recording, but also an immense feeling of satisfaction in having captured a live sound with the most possible realism.

But the most imaginative and to me the most fascinating way to obtain any desired sound is to simulate it. Here you actually make your own thunder. And how do you go about doing that? Quite easily. For instance, there are several methods to produce thunder more or less realistically. One of the best ways is to roll dried peas inside a drum head. The resulting rumble is like thunder rolling in the distance. If you have no drum head or peas, pebbles rolling inside the cover of a large ashcan will also produce a fairly realistic effect. Incidentally by adding rhythm to the sound, the roar of surf crashing on a beach can be duplicated. Of course a close thunder clap is sharper and louder. This can be produced by a sharp crack with your fist on a large piece of roofing tin up close to the microphone.

But let us not be limited to thunder. A frequently used effect is that of gunfire. Now a cap pistol or a revolver with blank shells can be used, but such weapons have the nasty habit of failing just at the moment when you need the shot. A simpler and more foolproof method is to use a

two-foot ruler. By slapping the ruler down flat upon a table, a sharp crack is produced which cannot be distinguished from a real pistol shot.

A crackling fire, be it in the fireplace or burning down a house, can be simulated simply by crinkling cellophane, the size of the fire being varied by the nearness of the effect to the microphone. An ordinary wrapper from a pack of cigarettes will do very nicely. A house being wrecked can be duplicated by crushing a berry basket; an explosion by a sharp crack on a kettle drum; a blow by hitting your fist into the palm of your hand; a kiss by actually kissing the back of your hand; a falling body by setting three or four heavy books on the edge of a chair and making them topple to the floor almost simultaneously.

Some effects need elaborate props, resembling Rube Goldberg gadgets, but others are relatively simple. The screech of car brakes can be produced by drawing a crude rake—made up of four or five nails protruding from a piece of wood—upon a pane of glass. The creak of a door can be simulated by turning a wooden peg within a tight-fitting hole in a block of wood. Of course you will need some kind of handle on the peg to enable you to turn it slowly. Marching men become long and narrow blocks, four to five rows of four, hinged at one end and literally marched over a board covered with sandpaper. Wind, from a gentle zephyr to a screeching gale, can be created by means of a clothesline pulley and a piece of canvas. By mounting the pulley so that it is rubbing against a partially stretched piece of canvas, and adding a crank to the pulley, the speed and intensity of the wind can be varied simply by changing the cranking rate.



Keith Wadsworth with one of his creations, a bamboo rig for making skeleton sounds. You might wish to visit a local TV or radio station and talk to the sound effects man to obtain ideas for your own props.

Sometimes the actual item must be used. For instance, the best duplicate for the sound of a door closing or opening can be created only by using an actual door. In such a case it helps to have a cut-down version of a door and frame mounted on casters so that they can be readily moved to any location. Either a half-scale model of a regular-sized door or a door sawed in half can be used. A two or three-step stairs is also handy to have around for scenes where a person has to go up or down stairs. These can be built from scrap lumber. In a pinch, a kitchen step-stool can be used. And for footsteps, a shallow wooden box filled either with sand or gravel can be set on the floor close to the microphone and the desired sound of footsteps created by having someone walk inside the box. By beating two halves of coconut shells, or even the dried rind of a grapefruit cut in half, into the sand or gravel, the sound of a horse's hoofs can be readily duplicated.

If you have a radio or television station nearby, you might visit the sound effects man there and see what tricks he uses to produce his sound effects. I am sure that he will be happy to show you the various devices he has on hand, and probably point with pride to the ones he has devised for particular hard-to-reproduce sounds. A short time expended in this way can prove both instructive and profitable.

You may then want to build a sound table. Essentially this is a bar-like structure, high enough so that you can set effects at the level of an ordinary stand microphone. The top portion is felt padded, so that the various pieces can be set down noiselessly while recording. The outside portion is generally closed. On the inside is a shelf to store effects not in immediate use.

Now with this sound shelf you will probably want all kinds of electrical gadgets, such as pushbuttons that will actuate different kinds of bells or horns. You can have quite a lot of fun making this from components rescued from a junk yard or picked up at a surplus store. And if you want your sound coverage to be complete, you will probably add one or two turntables with variable speed control so that you can not only put records on of any speed, vary their speed as they are played, but also have them feeding into a mixer connected to an amplifier with tone control so that the sound output of these tables can be blended and distorted to produce all kinds of effects into a loudspeaker. You can place the turntables on a separate stand, at the side of your sound table, the mixer and amplifier in front of you, on your sound table shelf, and the loudspeaker somewhere out in front of your recording microphone. With such a system and the various props, you are then ready to tackle any type of sound simulation needed.

Thus you see the means to create various sounds are limited only by your imagination and the amount of time and effort you can devote to the search for the right combination. Such a search can be a good party game. By having each guest simulate a sound with whatever he can find around the house; recording it, without revealing what it is; and then playing it back to a group of judges, prizes can be given for the best, the worst, and the most incongruous.

Such endeavors may lead to other, often more rewarding recordings, such as taping bird or insect sounds, or perhaps the recording of fish voices; or, in another direction, the knocking of an old car engine. Whatever it may be, you will have fun doing it. And when you want to raise a storm, you will be right there, always ready to make your own thunder.



NBC Photo



NBC Photo

Top: A woodsman and a railroad man make ready to chop a tree and set a tie. Middle: Selena Royle and Reed Brown, Jr. drink a toast while the sound effects man clinks glasses. Bottom: At the NBC studios we see in the background a turntable complete with three recording heads, mixer and amplifier. In the foreground, the chain draped over iron bars simulates the sound of a ferry boat being docked or, when pulled slowly, the sound of chains clanking in a haunted house. Note the gears which the sound man is about to crank; also, the tank of compressed air and the mobile doors.



Figure 1: This is the complete system: the control station, lower right, operates the recorder from a remote location. In addition, the automatic timeswitch, lower left, provides automatic cycling.

Build This Automatic Control Unit

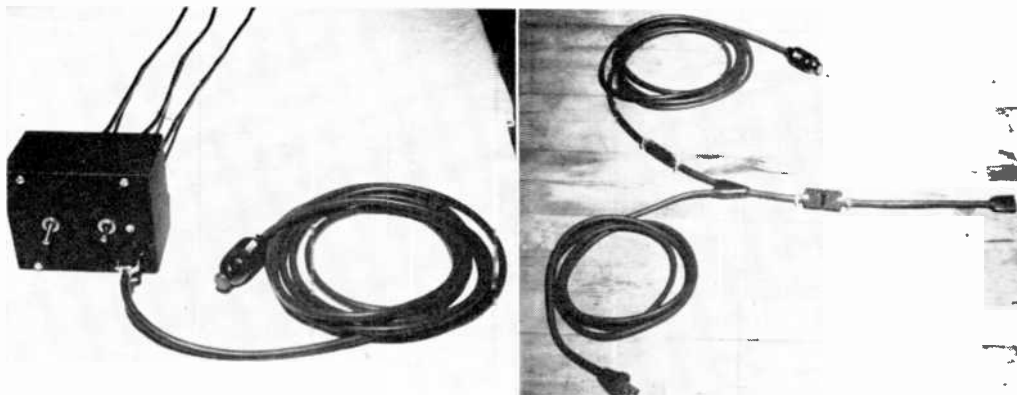
by Michael Bernstein, S.A.E.S.

... actuate your recorder to start and stop at a preset time.

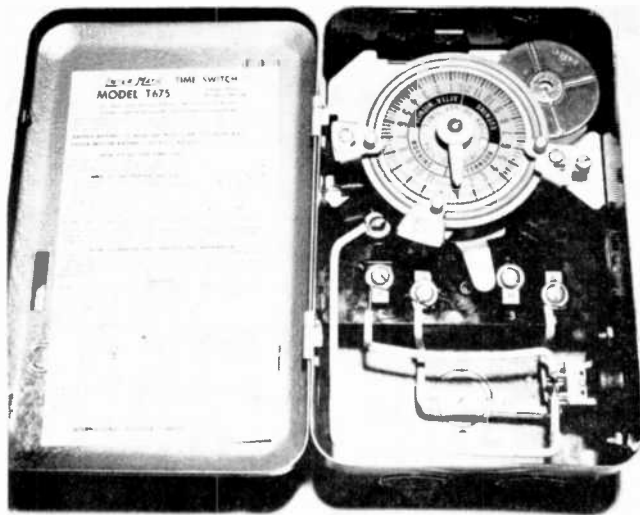
FOR a cost of fifteen to twenty-five dollars, you can build this control unit for your tape recorder and other appliances. With it, your recorder is actuated by an automatic timeswitch or by the override switches on the front panel. It automatically allows time for your recorder to warm up before engaging the tape transport mechanism. In addition, it has three accessory outlets on the back panel for automatic or remotely controlled operation of other appliances.

To build this unit, you will need a drill press or portable drill and a soldering iron of the type used in

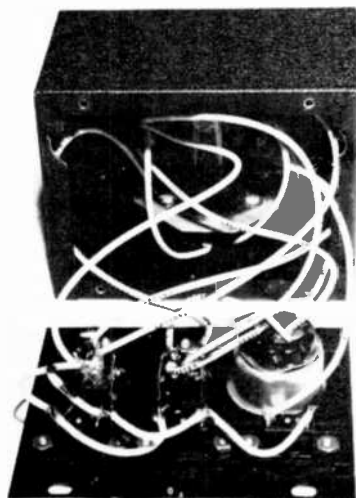
electronic work. Chassis punches will be an added convenience and will help give your work that elusive professional appearance, but they are not a necessity. Of course, if you have access to an indexing type punch press, you will be able to punch the necessary holes in a matter of minutes, and the finished product will be as near to perfect as it is possible to get it. Since the box in which the unit is housed is nicely finished when you buy it, it is worth pointing out that the less time your project is on the workbench, the more completely free of scratches it will remain.



Left, Figure 2: High quality plastic covered hook-up wire is used for wiring the control station. Note notches cut in central part of the box to receive the extreme ends of the row of AC outlets. Right, Figure 3: The standard accessory cords are modified by replacing molded rubber fittings with standard, easily obtainable plugs and sockets. Modification does not interfere with old method of use.



Above, Figure 4: The Intermatic T-675 time-switch is used as a single pole, single throw switch with its contacts normally open. The case is fitted with a standard 4-pole recessed plug. Wiring is heavy duty house wiring type. Right, Figure 5: A close-up of the control station shows the extension remote control facility. The Hand Control is modified with standard electrical fittings.



For this unit, an Intermatic model T-675 timeswitch was selected. This timeswitch permits up to twelve on-off cycles in a twenty-four hour period. Three trippers are supplied with the unit, providing three on-off cycles; additional trippers are available from the manufacturer at nominal cost. The length of each cycle is independently adjustable from five minutes to an hour.

For this application, the T-675 is used as a single pole, single throw switch with its contacts normally open. If you plan on using a timeswitch for other applications, it may be of interest to you that the T-675 may be used as a single pole, single throw switch, normally closed, or as a single pole, double throw switch as well. Of course, there are many timeswitches which are readily applied to this project, and the selection is a matter of personal preference.

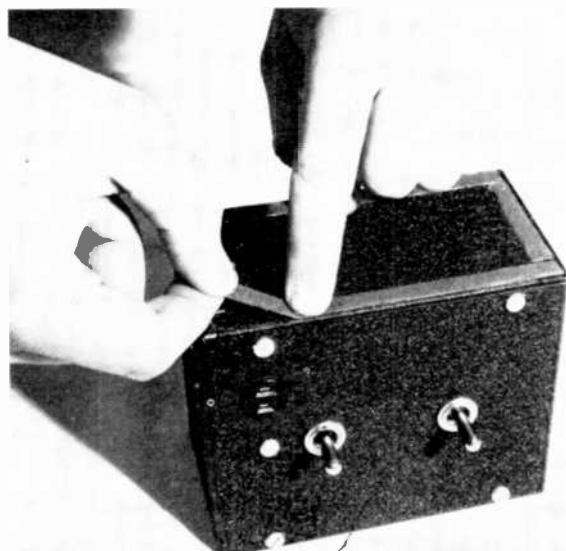
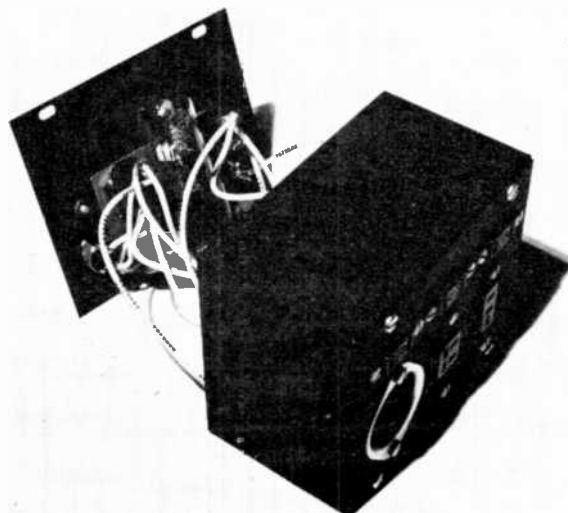
If you are building this unit for a Revere keyboard recorder or any other recorder in which the pressure roller solenoid is operated on the line current, e.g., 115 VAC, you may use the circuit shown in figure 14. Notice that three conductors carry the current from the control station to the recorder. Of these, conductor 1 serves only the solenoid, conductor 2 serves the electronic chassis and motor, and conductor 3 is common.

At the instant the timeswitch (or override switch)

contacts are closed, power is supplied via conductors 2 and 3 to the motor and electronic chassis of the recorder and, within the control box, to the heater element of the Amperite thermostatic delay relay. The AC outlets on the back of the box are also energized at this time. When the desired delay time has elapsed, the relay contacts close, energizing the solenoid.

If the solenoid in your recorder is not supplied by the line current but rather by some lower voltage DC, and, or if the solenoid circuit within the recorder is closed by a relay which is not fed by the line current, it will be necessary to use the circuit shown in figure 15. In this case a four conductor line runs from the control station to the recorder.

If your recorder is not equipped with a solenoid, you may wish to modify it by installing one. However, this is at best a risky business unless you have had a great deal of experience with tape recorders. It will probably be better for you to engage your tape transport mechanism while the power is off when automatic operation is desired; then the whole works will start up at once when the timeswitch contacts close.



Top, Figure 6: The thermostatic delay type relay is mounted on a bracket attached to the front panel. Also on front panel are override switches and remote control socket. Bottom, Figure 7: Adhesive backed felt is applied in strips to the bottom of the box. Felt is good protection against scratching furniture on which the box is set during use.

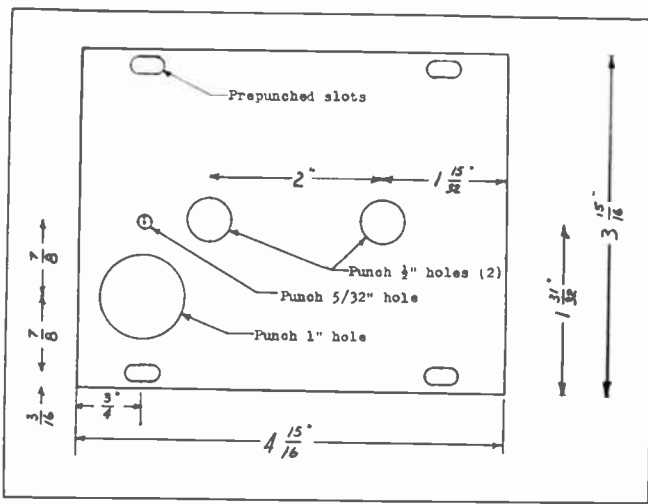


FIGURE 8

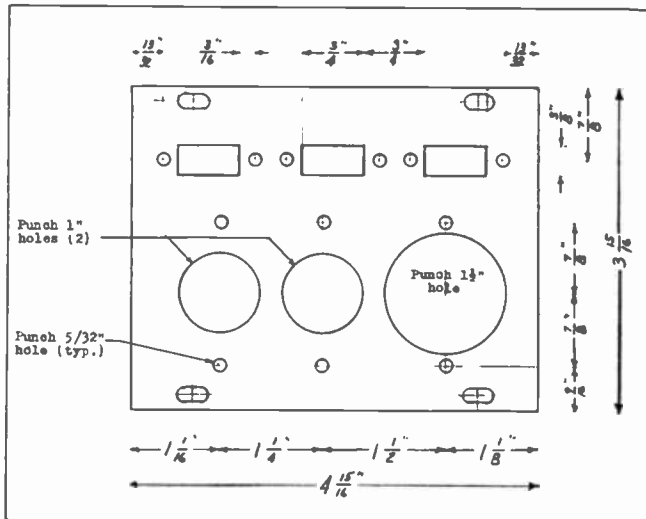


FIGURE 9

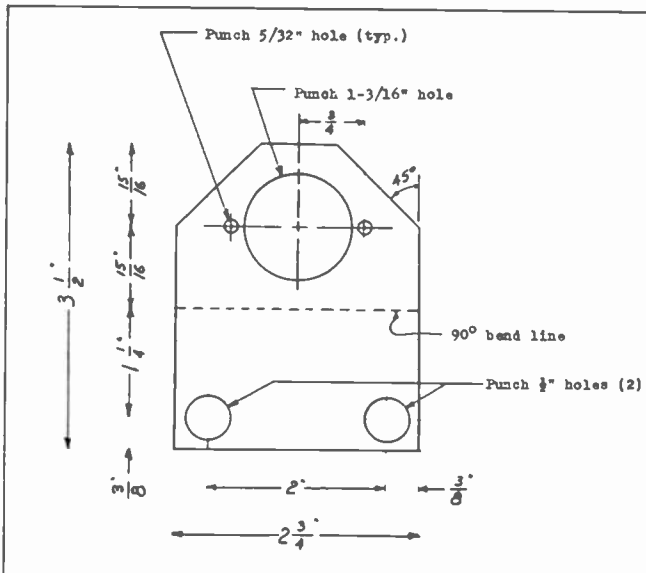


FIGURE 10

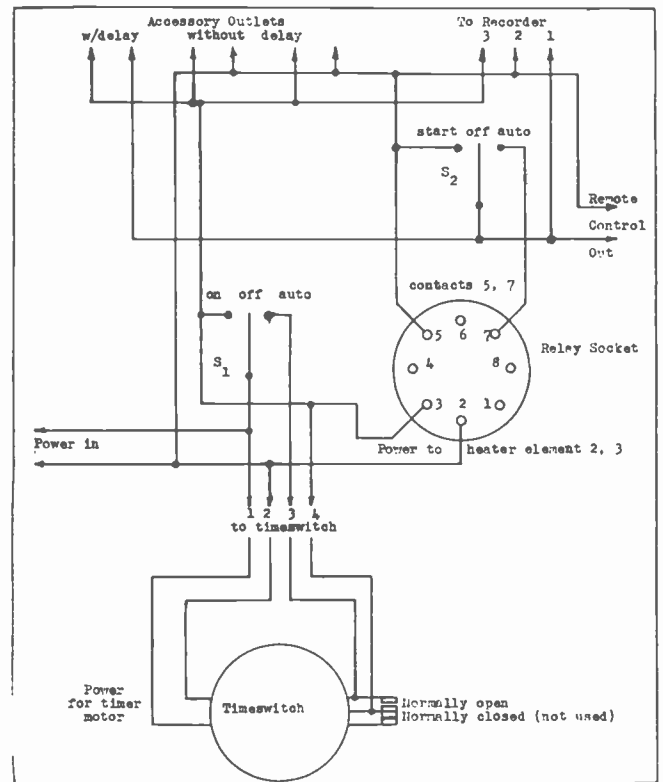


FIGURE 11

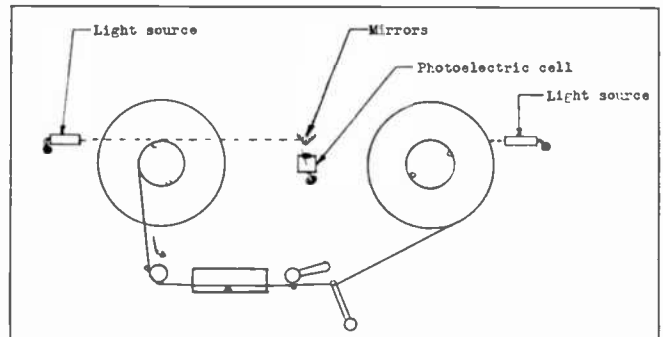


FIGURE 12

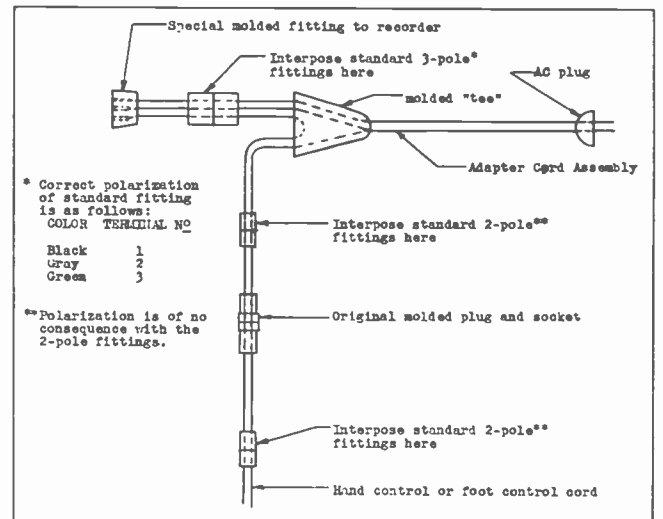


FIGURE 13

Figure 8: Layout of the front plate corresponding to the circuit of Fig. 11. Figure 9: Layout of the rear plate corresponding to the circuit of Fig. 11. Figure 10: The tube mounting bracket is laid out and punched as shown and then bent along the broken line. Figure 11: Circuit for use with Revere keyboard recorder, including extendable remote control. Figure 12: Photoelectric cell mounted on tape drive further increases automation. According to the phase of operation in which the recorder is engaged at the time the photo cell is activated and the setting of a preselector switch in the control unit, the next phase of operation is determined and automatically actuated. Used only with recorders featuring solenoid actuated fast forward, rewind, and stop functions, this arrangement is the last word in automatic tape drive control. Figure 13: The standard accessory cords for the Revere keyboard recorder are modified by the inclusion of standard fittings. It is important that the orientation of added fittings be consistent with original construction.

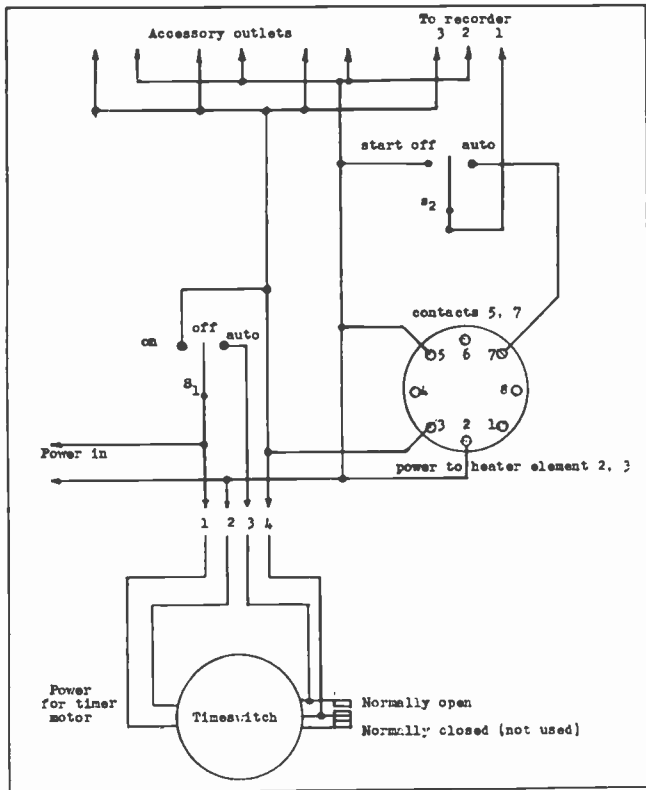


FIGURE 14

If you follow this procedure, the delay circuit will be of no use unless a delay is desired in one or more of the a.c. outlets. You might therefore omit the relay, one of the override switches, and numerous three-pole fittings, thereby effecting a substantial saving in cost. It should be pointed out, however, that the trend in the tape recording industry is definitely toward remotely controllable equipment, in which solenoid operation is both commonplace and extremely practical. Therefore, even though your present equipment may be manually operated, you may wish to provide for the future by including the delay circuitry.

It should also be noted that the rubber pressure roller will not remain perfectly round if it is allowed to remain engaged without turning for an extended length of time. Therefore, if you are planning to use a manually operated recorder in the manner described above, you will do well to recognize in advance that your pressure roller will need replacing more frequently. If it becomes out of round, your recordings will display excessive flutter and wow, and the bearings of your capstan will wear more rapidly.

If you wish, you may have one or more of the AC outlets wired into the delay circuit. Also, you may wish to have remote control extendable from the control station. These features have been incorporated in the circuit of figure 11, which is otherwise the same as figure 14. The latter of these two features may easily be incorporated in the circuit of figure 15, for recorders utilizing a DC actuated solenoid.

Only your imagination need limit what features you build into your control system. If your recorder is equipped with complete remote control circuitry permitting any phase of operation to be actuated remotely, you may wish to build a *complete* remote control system into this unit. With the use of photoelectric cells mounted on the tape transport mechanism of such a recorder, as in figure 12, it would be practicable to incorporate a circuit for automatic

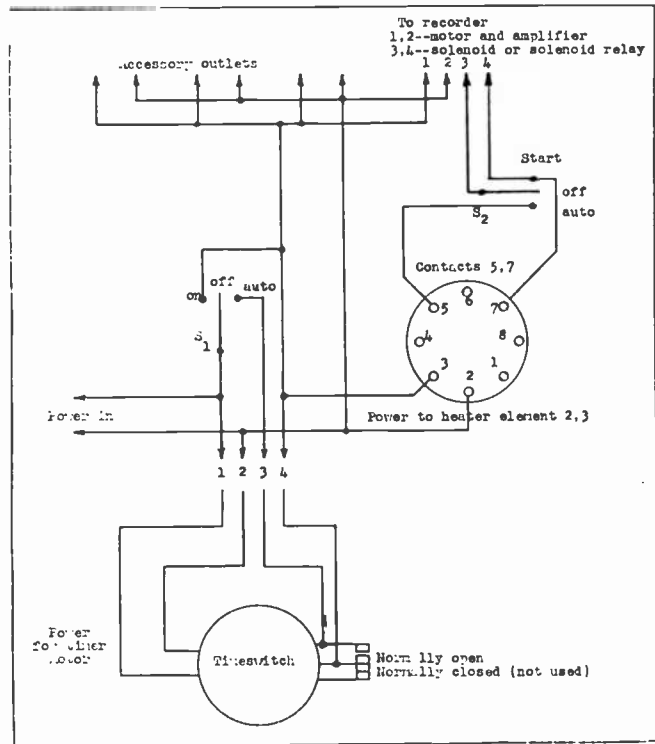


FIGURE 15

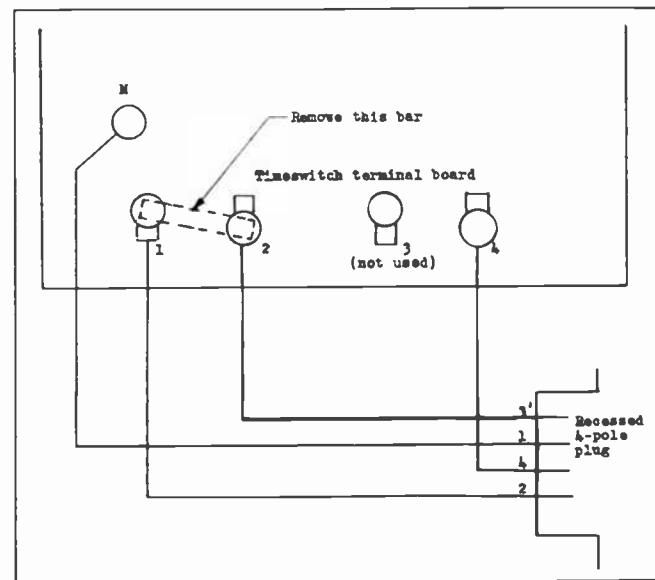


FIGURE 16

Figure 14: The basic circuit for Revere keyboard recorders does not include extendable remote control or optional delay on AC outlets. Figure 15: The circuit for recorders utilizing DC actuated solenoid requires one extra conductor from the control unit to recorder. Extendable remote control is easily added to this circuit by tapping the two wires from terminals 3 and 4 of the plug leading to the recorder and providing an external switch to close the circuit. Figure 16: Wiring diagram for Intermatic T-675 timeswitch for use in conjunction with the circuit of Figs. 14 or 15.

rewind with subsequent re-cycling, stand by, or shut off determined by a preselector switch.

If you devise special circuitry, you are cautioned against experimenting with your recorder, without first checking your circuit very carefully. It would be well to go over the circuit in detail with an engineer or technician versed in electricity if you are not absolutely certain of your design.

Any one of the circuits described in this article may be readily built into a standard 3" x 4" x 5" utility box, which is readily obtainable at your local radio parts

supply house. The first thing to do after you have purchased all the parts is to lay out and punch the holes in the front and back covers. One practical layout of the front and back plates is shown in figures 8 and 9. This layout may be used for the circuit of figure 11. In laying out the holes, scribe sharp lines on what is to be the inside of each plate. The layouts shown are as viewed from inside the box, and hence you can work directly from these drawings. For other circuits, it will be necessary to modify the arrangement of parts slightly.

It is important that reasonably close tolerances be observed in the layout of the two half-inch holes for the override switches, since the relay mounting bracket must have the same hole spacing in order to fit. It may be convenient to line up the unbent blank for the relay mounting bracket on the front plate, clamp the two parts securely together, and then drill or punch the two holes at one setting. After the relay mounting bracket has been punched, trimmed to shape, and sanded free of sharp edges, it is readily bent in a bending brake or vise.

The rectangular holes on the back plate are made by first punching three pairs of 3/8" holes in line, and then filing to shape with a square file. Here again, careful layout will be rewarding in terms of a well fitting assembly. It is best to finish the rectangular holes with a fine mill file and remove burrs with fine aluminum oxide cloth.

The components are now fastened in place with 6-32 machine screws and nuts. If the AC outlets bind against one another, carefully sand a minimum amount of material off the ends of the center one until they clear. It should not be necessary to remove more than 1/64" of material in this manner. If these parts are sanded too far, they may crack when they are clamped in place. It will be necessary to file two curved notches in the large center part of the box (see figure 2) to receive the extreme ends of the row of AC outlets.

It will be found practical to use high quality, plastic covered hook-up wire, either stranded or solid, in wiring up the unit. Be sure to allow sufficient length of wire so that when one side is completed and fastened to the center portion, the wires will extend through far enough to facilitate connection to the other side. They should not, however, extend so far as to create a major problem stuffing them into the box.

Before fastening the sides in place, carefully check the entire circuit from one end to the other. Make certain that all joints are firmly soldered. Check to see that wires emanating from adjacent contacts are not so close as to touch one another. Make certain that all plugs and sockets work freely but firmly. Finally, insert the relay in its socket and fasten the sides in place. Do not overtighten the sheet metal screws; tighten them firmly, but not so tight as to strip the prepunched holes in the center part of the box.

A four-pole recessed plug must now be fitted to the case of the timer. Note that if the timer selected is not provided with a case, it will be necessary to connect the four conductor line directly to the proper terminals of the timer. The recessed plug will make your unit more versatile, however, and if convenient, should be used. Cords of various lengths may be readily made up to allow the control station to be moved to a remote location without regard to the placement of the recorder and timeswitch. The timeswitch may be conveniently mounted on a wall

or in your equipment enclosure, or, if it is intended for portable use, it may simply be inserted in some convenient place in a book case or tape storage cabinet.

The wiring for the T-675 is shown in figures 4 and 16. Heavy duty wire is used so as not to limit the usefulness of the timeswitch itself. It is important in wiring multiple terminal fittings to carefully observe terminal numbers so that no mix-up can occur. These plugs are all polarized; that is, they can only be plugged in one way. Hence if they are wired correctly, they can only be plugged in correctly.

If the circuit being constructed is for a Revere keyboard recorder, it will be found convenient to modify the standard remote control *Adapter Cord Assembly TRA-1102* and the *Hand Control TH-701 (or Foot Control TF-702)* as shown in figures 3 and 13. Fitted with the more commonly used Cinch-Jones connectors, these accessory cords are useful with your control unit as well as with one another.

If you are building the control unit for the Revere keyboard recorder with extendable remote control (figure 11), you can plug in your modified accessory cords on the front panel. With the right hand switch S-2 in the center *off-remote* position, the extended remote is in full control of the stop-start function. It should be noted, however, that if the extended remote control circuit is closed (i.e., *on*), the delay circuit will be bypassed within the unit, regardless of the setting of the switch S-2. Therefore, if delayed actuation is desired, the extended remote control circuit must be open (i.e., *off or unplugged*) and the switch S-2 must be thrown up to *automatic*.

You are now ready to use your recorder in much the same manner as a clock radio, the difference being that with your new rig, you wake up to your favorite music rather than some blaring commercial. In addition, you can easily set your recorder to automatically record your favorite program while you are out. Whatever use you put it to, your little black box will be a useful and versatile accessory.

PARTS LIST

The following is a tabulation of parts used in the construction of the unit pictured in this article. It is the circuit of figure 11, for use with Revere keyboard recorders.

Number Req.	Description	Est. Cost
1	Intermatic T-675 timer	\$11.02
1	Calif. Chassis CA132 utility box	1.05
1	Amphenol 61M10 recessed plug .....	.30
2	Carling 2FC64-73 SPDT Center off switches ...	1.32
1	Pacific Elec. 2103-20F Cord	1.49
8 ft.	Belden 8453 three conductor Cord .....	.48
8 ft.	Belden 8454 four conductor cord .....	.56
1	Amperite 115N020 delay type relay	2.40
1	Amphenol 77M1P8 socket .....	.09
1	Cinch-Jones S303FP socket .....	.33
2	Cinch-Jones P303CCT plug .....	.86
2	Cinch-Jones P302CCT plug .....	.80
1	Cinch-Jones S302FP socket .....	.31
1	Cinch-Jones S304CCT socket .....	.47
1	Cinch-Jones S304RP plug .....	.42
1	Cinch-Jones P304CCT plug .....	.47
1	Cinch-Jones S304FP socket .....	.38
3	Cinch-Jones 2R2 receptacle .....	.45
2	Cinch-Jones S302CCT socket .....	.82
2	Cinch-Jones S303CCT socket .....	.88

It is to be noted that brand names mentioned herein are in no way to be construed as recommendations of the author. They are listed only as a guide to the parts used in the unit shown in the accompanying photographs. The author is in no way connected with the above manufacturers, their agencies, or distributors.

TAPE RECORDING ANAGRAM

BY JOHN A. COMSTOCK

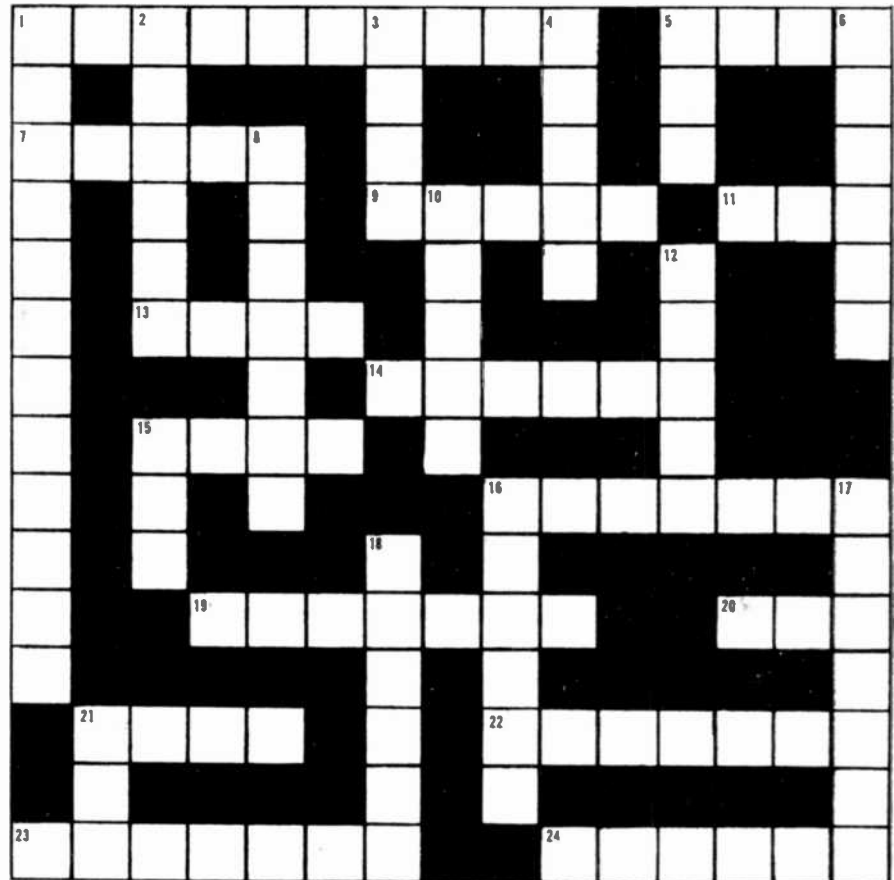
If you can correctly fill in all of the empty boxes of this tape recording anagram without obtaining help from fellow recordists, you deserve a congratulating handshake and pat on the back! Do you have a pencil handy? Then let's see how well you can do—here are the clues. Answer on page 34.

ACROSS

1. A record level that is too high will cause this.
5. A rapid tape speed such as 7½ ips.
7. An "eye" type of record level indicator (see #11 across).
9. Sometimes necessary when editing a tape.
11. A so called magic type of record level indicator (See #7 across).
13. A reduction in signal strength.
14. Device employed when telephone conversations are recorded.
15. The name of the current that flows through the windings of the record head.
16. A type of microphone used for musical instrument pickup (especially string instruments).
19. Advisable at the end of a selection or program for good continuity.
20. You can actually --- high signal peaks on a neon-bulb type record level indicator.
21. The connector found at the end of a microphone's cable.
22. A flow of electricity.
23. A rapid tape advancing provision found on most tape recorders.
24. A large low-frequency reproducing speaker.

DOWN

1. Used to remove magnetization from a magnetically "charged" head.
2. An electric current which carries intelligence.
3. A recorder utilizing a magnetizable iron coated ribbon.
4. Undesirable in a tape recording.
5. It keeps the tape recorder running cool.
6. The spool onto which the tape is wound during record or playback.
8. The revolving shaft which the pressure roller engages.



10. A program source.

12. Most type recorders have a separate ----- for microphone and radio-
phono.

15. It is considered --- tape recording practice to merely place a microphone in front of a radio or TV's speaker for good program pickup.

16. Part of a tape recorder's mechanical mechanism.

17. A small speaker used in a tape recorder to reproduce only the high frequencies.

18. The button pushed to start recording.
21. Every recordist should take the necessary pains to make his recordings sound real ---.

LIGHT HUMOR

by Fred Pernitz

"What do you mean it hasn't been put on tape yet. . . . I heard it myself on FM!"

"I want some blank recording tape but I don't remember the kind I'm supposed to get. It's for one of those bisexual tape recorders."

"Sure we'll give you an allowance on your trade-in." . . . "What's the name of your recorder?" . . . "a Gramophone?"

"So we held the mike up to the radio, pushed the 'Recording' button down and turned the volume up, but . . . I don't know . . . I just wasn't with it."

"My boss sent me down to get your price on a 10 inch reel, three to seven revolutions for some kind of naural tape machine—can you give it to me in a hurry please, I took a little extra long for lunch!"

"What do you mean 'You haven't lived till you hear the two-speaker system?'—my mother-in-law lives with us!"

"But, but, . . . but where's the needle?"

"I know that it's so simple to operate that a six-year-old can do it with no trouble; but you can see, my ten-year-old is like a four-year-old and . . ."

"You say you can record over and over on the same tape, but tell me, won't it sound funny?"

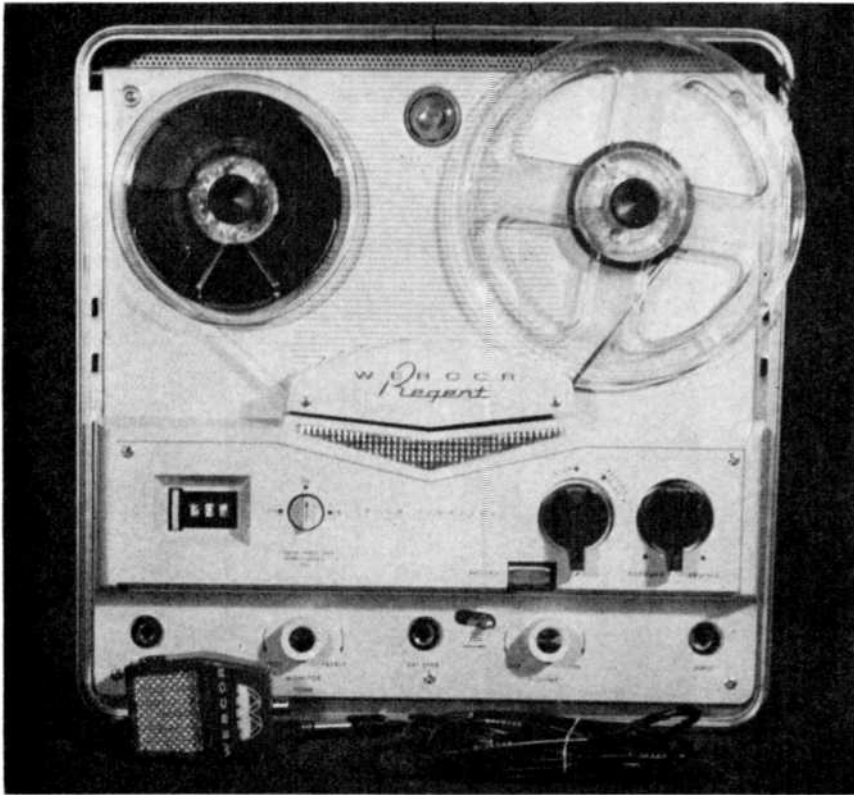
"Look! I don't care how long you've been selling tape recorders—I tell you mine goes at 16 revolutions and I want some tape for it!"

"And when I got home, I looked and looked, but I couldn't find the erasers!"

"So I took a piece of chewing gum for the time being to hold the two loose pieces together, and then I forgot all about it, and then . . ."

NEW PRODUCT REPORT

STA **OK** STED



WEBCOR ROYALITE RECORDER

*... three speeds, light weight, edit key,
10 watt output, vertical or horizontal use.*

In our opinion Webcor has done some very clever designing on this new machine. For one thing, through the extensive use of aluminum and modern plastic materials they have cut the weight of the unit to 20 pounds. This should go well with the ladies and especially with the school teachers who will be using recorders in increasing numbers.

The case and lid are made of Royalite which has permanent color and is scuff and mar proof. The aluminum mechanism is self supporting.

One of the unusual features for a recorder of this type is that it can be used in either the horizontal or vertical position. Rubber reel locks hold the reels in place and the machine operates irrespective of angle or position.

An edit key is provided for stopping and starting the tape instantaneously. This feature will be found useful in eliminating commercials when record-

ing from radio or TV, or when doing dictation.

Unlike previous Webcors, this machine has one motor and does not have the "no reel turnover" feature.

The unit has two 3 x 5" elliptical speakers mounted in the sides of the case. The speakers are independently baffled inside the case.

Unusual also is the use of a single cord for a number of purposes, including as a cord for the mike. The microphone is held in the lid by means of a snap on its back. To use the mike, it is removed merely by pulling it loose and the cinch plug inserted in the jack on the bottom of the mike case. The microphone element is ceramic.

The same cord is also used as an external amplifier and speaker cord.

The Royalite has a full set of controls including record/play, fast forward and rewind, a counter, record interlock, external amplifier jack, external speaker

Product: Webcor Royalite Recorder.

*Manufacturer: Webcor, Inc.,
5610 W. Bloomingdale Ave.,
Chicago, Ill.*

Price: \$189.95

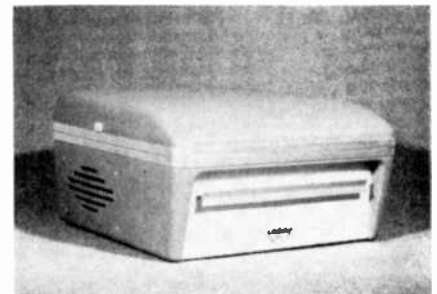
jack, edit key, volume control, input and a combination tone control and monitor switch.

This last feature is very handy for with it the speakers can be turned on while recording from radio, TV or phonograph and the sound heard from the speakers as it is recorded.

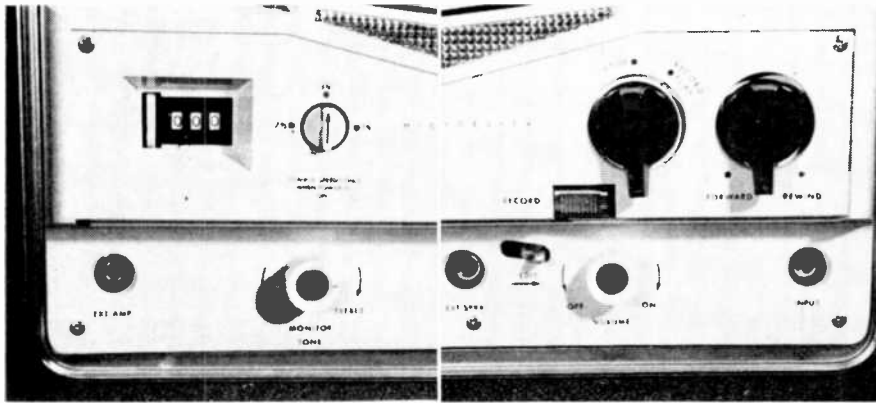
The recorder may also be used as a PA system by turning on the speakers with the monitor switch, locking down the record safety lock and plugging in the mike. The recorder will play irrespective of the position of the monitor switch. It is effective only when the machine is in the record position.

The external speaker jack is a double jack. When the plug is put in halfway both the external speaker and the speakers in the case will sound. When it is pushed all the way in, the recorder speakers are cut and the external speaker is powered.

The machine we tested was the monaural model (2001). This is a dual track machine with three speeds, 1 $\frac{7}{8}$ ips, 3 $\frac{3}{4}$ ips and 7 $\frac{1}{2}$ ips. Performance was satisfactory at all speeds with peak to peak response at the fast speed of



The recorder with case closed. Speakers are mounted in the sides of case. The carrying handle is on the front, held against the case by internal springs.



Above left: the left hand side of the recorder showing the external amplifier jack, tape program indicator, speed change lever (which must be used only when the power is on), and combination tone control and speaker monitor switch. Above right: right hand side of the recorder contains external speaker jack, record/play lever and record interlock, fast forward or rewind lever, edit key, volume control and input jack. Right: the recorder may be used in either vertical or horizontal position.



up to 12,000 cps. The signal to noise ratio was satisfactory.

Inasmuch as there is only one input which is used for all purposes, it is necessary to have a different cord to hook up to a radio or TV besides the one furnished with the recorder. These cords are available through the Webcor dealers and we would suggest that you invest in one if you purchase one of these recorders.

The input jack, like the external speaker jack is a double one. The plug on the mike cord is single ended and makes the proper connection to the preamp when plugged in.

The accessory cord for recording from higher gain outputs, such as radio and TV has a double tipped plug and

incorporates a 22,000 ohm resistor to cut down the level of the current reaching the preamp. If the mike cord is used without the resistor in the line, the signal may become distorted and the recording will not be as good as it can be.

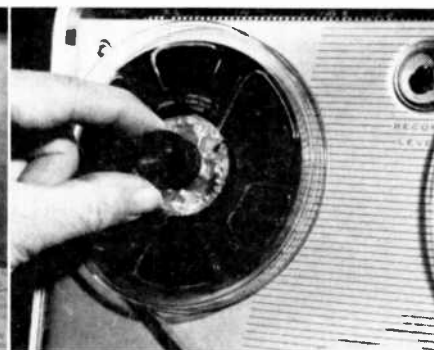
In recording from radio, set the radio so that a good volume of sound is audible in the speaker. Correct recording level is determined by the cathode ray indicator.

We liked the positive breaking action on this machine. When the lever was thrown to the stop position from either fast forward or rewind, the tape stopped within a few inches. It is practically impossible to spill tape on it.

The Royalite is also available in a



Left: the microphone does not have a cord attached and is snapped into its holder in the lid by means of a button on the back of the mike case as shown. Mike cord also serves as an output cord for the recorder. Right: rubber reel locks insure quiet operation and permit the recorder to be used in any position.



stereo model (2002) which lists for about twenty dollars more than the monaural model.

About the only thing which we did not like on this machine was the position of the line cord. Unless care is taken to see that it is clear, it may rub the reel when a 7" reel is used.

We feel that for the money, this is a fine little recorder. The performance is pleasing and the light weight and attractive appearance are definite plus factors.

If you are considering the purchase of a new recorder we believe it will be worth your while to consider this machine.

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FOR SALE: Ampex tape recorder Model #A122 and 2 Ampex amplifier speakers, portable, used only 4 1/2 hours. Like new and original packing cases. Cost \$995. Sell for \$600. Reason for selling—death of husband, Alice Duggan, 859 Garfield Ave., Jersey City 5, N. J.

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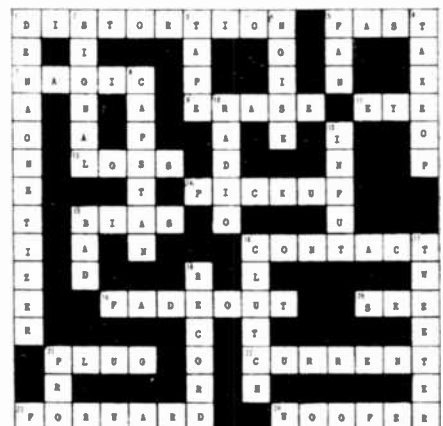
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Answer to Anagram, page 31



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