



TAPE RECORDING

RECORDING SATELLITES

CHRISTMASTIME ON STEREO TAPE

HOW MANY MILES TO THE HEART OF A CHILD?

BUY YOURSELF A KIT FOR CHRISTMAS

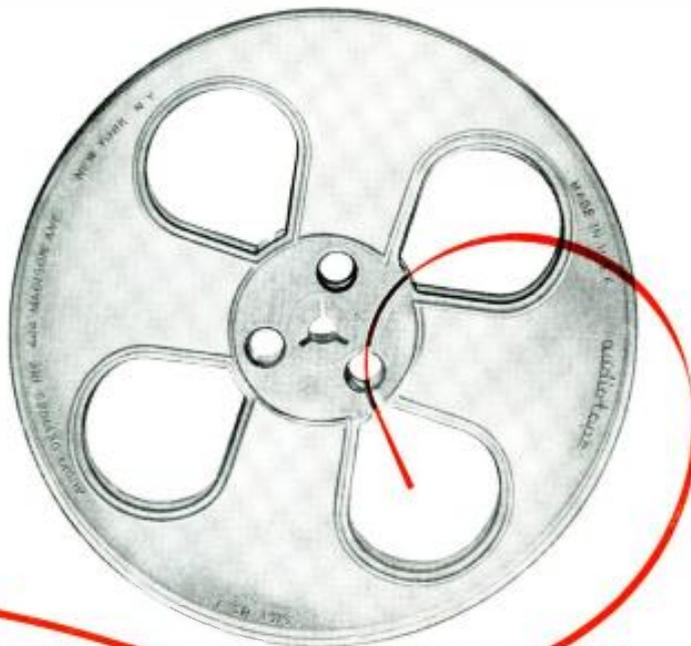
TAPE RECORDING IN THE CHURCH

Mr. Sydney G. Brooks
Brooks Jewelry
Cadiz, Ohio

35c

December, 1957

They're crazy about the C-slot reel!



Tape fans give enthusiastic reply to survey on new easy-threading reel

WHEN our research engineers developed the C-Slot reel, we were so convinced that it was the perfect solution to tape-threading problems that we put it into immediate production. But just to confirm our own enthusiasm, we sent out samples to 260 independent tape recorder owners — professional, educational and home recordists throughout the country. We asked them to test the new reel and tell us how they liked it.

So far, 203 persons have responded. Of these, 189 gave us their spirited approval. That's

93%. The remaining 14 indicated merely that they were neutral. There was not a single negative rating.

It seems to us that this survey, like Audiotape, "speaks for itself." They're crazy about the C-Slot reel! Just look at the comments quoted at the right.

If you haven't yet tried the C-Slot reel, get a 7-inch reel of Audiotape from your dealer and see for yourself. You'll be getting America's finest quality recording tape on the most convenient reel ever designed.

COMMENTS

"I hope the C-Slot reel will be used exclusively for your recording tape."

M. S. • Columbus, Ohio

"We find it especially easy to handle with big fingers."

E. G. A. • Platteville, Wisc.

"I think it is a great improvement over any other reel now on the market."

C. D. B. • Quarryville, Pa.

"Best to date. You have overcome one of the nuisances of tape recording."

R. H. B. • Bronx, N. Y.

"Also holds tape better."

L. A. • Fairlawn, N. J.

"It's about time someone improved the reel. I think it's the greatest."

E. B. A. • Los Angeles, Calif.

"Crazy!"

J. R. C. • Decatur, Illinois

"Very nice reel — good, clean appearance, and physically strong. A pleasure to use."

A. R. A. • Whippany, N. J.

"Threading tape on a reel never was a world-shaking problem. But it was bothersome and messy until your genius produced this. Time saving and beautiful in its simplicity."

B. R. • Phila., Pa.

"At last, 'the' answer to the threading problem."

E. R. A. • Caldwell, N. J.



it speaks for itself

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① E-V MODEL 664

Utilizing the revolutionary Variable D, this high-fidelity cardioid dynamic brings broadcast quality to tape recording and the P.A. and general purpose field. Proper placement of microphone stops unwanted sounds, gives accurate, natural pick-up of voice and music. Unprecedented ruggedness largely eliminates possibility of accidental damage.

Indestructible Acoustalloy diaphragm and precision manufacture assure long-life and dependable performance. Frequency response: 40 to 15,000 cps. Pressure cast case. Chrome finish. 18' cable. Size: 7-3/16" long, 1 7/8" diameter. Net weight: 1 lb. 10 oz. List price: \$85.00 (less stand).

② E-V MODEL 636

This model brings style and quality to the recording and public address fields. Slim and trim—only 1 3/8" in diameter x 10 1/4" long—it greatly reduces recording staging problems. Frequency response: 60 to 15,000 cps, essentially flat. Adjustable impedance. Gold or satin chrome finish. On-off switch standard equipment. Net weight: 15 oz. List price Chrome Finish: \$72.50 (less stand).

③ E-V MODEL 623

Excellent for both speech and music, its small, slim size makes it inconspicuous and easy to handle. Swivel mounting permits tilting microphone through a 57° arc toward the sound source. Acoustalloy diaphragm. Frequency response: 60 to 12,000 cps. Satin chrome finish. Net weight: 1 lb. List price: \$57.00 (less stand).

④ E-V MODEL 630

This is similar to Model 623 in performance characteristics but is traditionally styled. Frequency response: 60 to 11,000 cps. Satin chrome finish. Net weight: 1 lb. List price: \$52.50.



Your tapes will have a new depth of realism when you record with Electro-Voice High-Fidelity Dynamic Microphones!



See your E-V hi-fi dealer today. Write for "The ABC's of Microphones," Booklet HT712.

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HI-FI

TAPE RECORDING

VOL. 5 NO. 1

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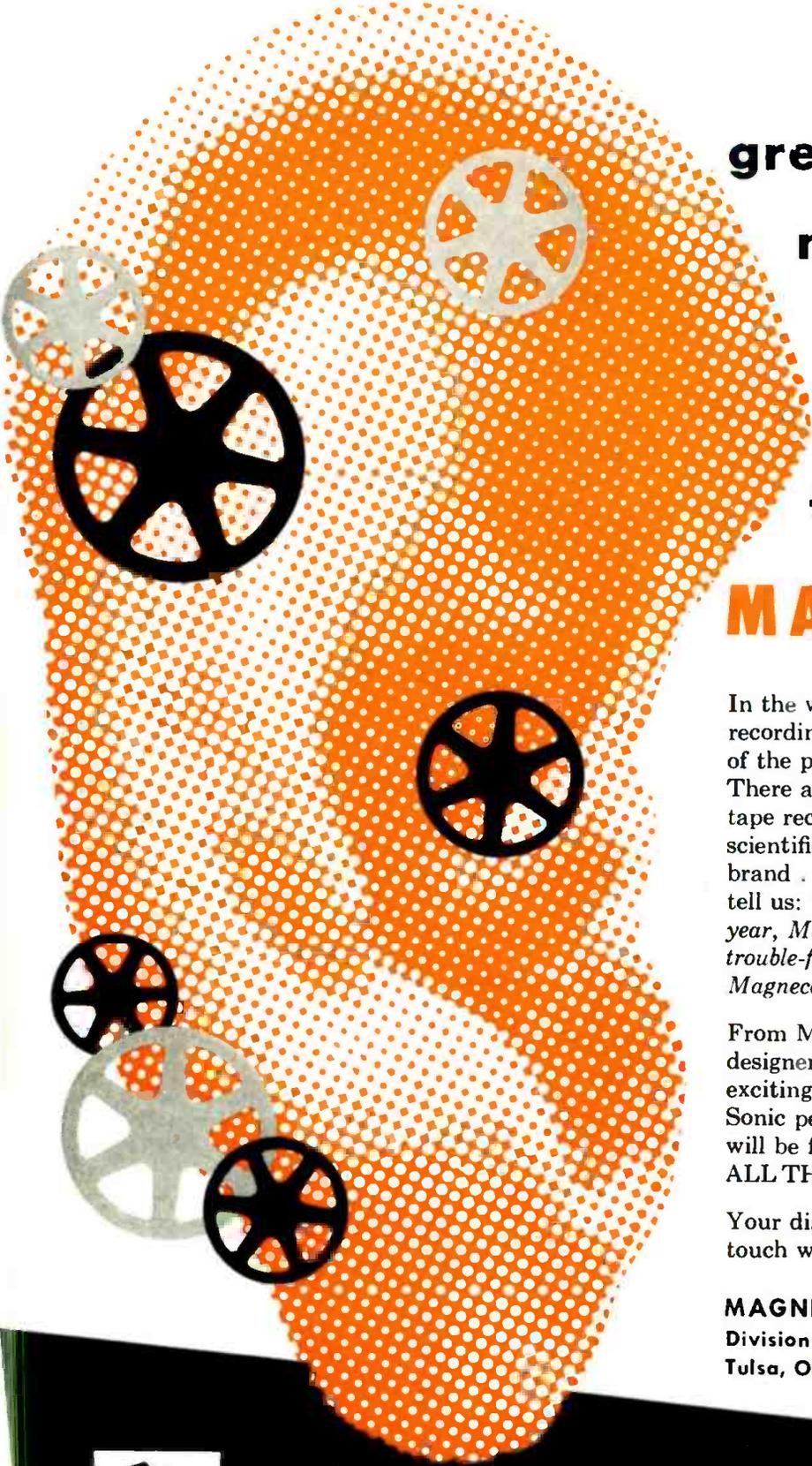
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THE SOUND OF THE FUTURE



NEW TAPES

By Georgie Sigsbee

CLASSICAL CONCERTO

BRAHMS

Violin Concerto in D Major, Op. 77
Erica Morini, Violinist
Philharmonic Symphony Orchestra of London
Artur Rodzinski, Conductor
SONOTAPE SWB 9005
Stereo...\$17.95... 39 mins.

Miss Morini, granted qualified assistance by both musical and technical crews, produces a recording of great strength and

brightness. She, without a shadow of doubt, proves that violin virtuosity is not necessarily a man's world alone. In lieu of the more typical feminine, gossamer approach, Miss Morini gives forth with astonishing virility, coupled with sensitivity.

The violin is placed to the left and a little forward so that each detail of her artistry is clearly secured. Rodzinski and the orchestra meet her on equal terms and the outcome is a dramatic performance.

To Miss Morini should go the lovely crown pictured on the front of the tape package.

GERSHWIN, George

Concerto in F
Sondra Bianca, pianist
New Symphony Society Orchestra
Walter Goehr, Conductor
CONCERT HALL SOCIETY CHT/BN 30
Stereo...\$11.95... 30 mins.

From the standpoint of musical technique this may not be a perfect wedding of jazz and classicism, but Gershwin certainly achieved an example of musical compatibility which is both agreeable and interesting.

Miss Bianca gives an exhilarating performance ably backed by Goehr and the orchestra.

The solo instrument is crystalline as is the overall recorded sound.

GRIEG

Concerto in A Minor
Artur Rubinstein, Pianist
RCA Victor Symphony Orchestra
Alfred Wallenstein, Conductor
RCA DCS-47
Stereo...\$12.95... 30 mins.

This is a definitive recording of Grieg's familiar work, presented with discernment and without excess display, by Rubinstein and the RCA orchestra.

The tonal reproduction is true. The piano seems to be a little left of center and the balance between the solo instrument and the orchestra is perfect. If you do not have this composition in your library, this edition comes highly recommended.

RCA has also released Ania Dorfmann performing with the Robin Hood Dell group. (RCA TB-2). See the June 1955 issue for a review of this tape.

Concerto—Overture

HAYDN

Trumpet Concerto in E Flat Major
Italian Overture No. 4 in D Major
Adolph Holler, trumpet
Vienna Philharmonica Symphony Orchestra
Hans Swarowsky, Conductor
URANIA UST 1203
Stereo...\$11.95... 19 mins.

These two works make appropriate companion pieces as both are very melodious and gay. Excellent performances given a first-class engineering job—net result—a superior reading.

SYMPHONY

PROKOFIEFF

Symphony No. 1 in D, Op. 25 ("Classical")
Philharmonia Orchestra
Nicolai Malko, Conductor
RCA ACS-37
Stereo...\$6.95... 13 mins.

Prokofieff's delightful pseudo-classical composition is given a vigorous, somewhat earnest, reading. Although Malko does not adopt an extremely light approach, I find his rendition to my liking. The final movement is gay and sprightly.

The lucid orchestration via stereo also places this recording high on the list.

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- Overture miniature
- Marche
- Danse de la Fee-Dragee
- Danse russe Trepak
- Danse Arabe
- Danse Chinoise
- Danse des Mirilitons
- Valse des Fleurs

The Symphony of the Air

CONCERTAPES 24-8

Stereo... \$11.95... 21 mins.

This stirring rendition of Tchaikowsky's Nutcracker Suite is performed by the Symphony of the Air, without a conductor on the podium. For years the great maestro himself, Toscanini, inspired this former NBC Symphony to meet his uncompromising standards. Under his leadership, the orchestra became legendary for its technical precision, intensely expressive playing, and rich sound.

Upon Toscanini's retirement, the NBC Symphony was disbanded, but not for long. It rose again as the Symphony of the Air. It has since won constant praise, and the conducting spirit of the maestro lives in its playing.

This recording of the Nutcracker Suite gives brilliant display to the symphony orchestra's tonal palette. Every choir of the orchestra is brought into prominence, from the soaring strings to the many-textured percussion. The recording was made in New York's famed Carnegie Hall, shortly after the orchestra's debut concert there.

Though not present at the recording session, Toscanini is spiritually present in every vibrant note of this interpretation.

Fidelity is tops.

IBERT

Escales

Boston Symphony Orchestra
Charles Munch, Conductor

RCA ACS-57

Stereo... \$6.95... 15 mins.

"Escales" is said to depict "ports of call" on the Mediterranean. The picturesque musical tapestries are colorfully translated by the Bostonians. Italy, Africa, and Spain are represented by varying rhythms and themes characteristic of each locale.

Within the oriental structure of the second section Ibert included the added tonal effect of an oboe solo which, in this instance, is played by Ralph Gomberg.

The recording benefits from the vivid, stereo reproduction.

RENDEZ-VOUS WITH OFFENBACH

The Vienna State Opera Orchestra
Josef Drexler, Conductor

LIVINGSTON 720-BN

Stereo... \$11.95... 30 mins.

A very charming musical montage of some of Offenbach's lovely compositions. Some 32 excerpts are performed and there is a graceful, even flow to the entire recording.

My particular favorite in this recording is the "Barcarolle" from the "Tales of Hoffman." The spice and gaiety of Offenbach's works are captured on tape and swirl about your room in stereo.

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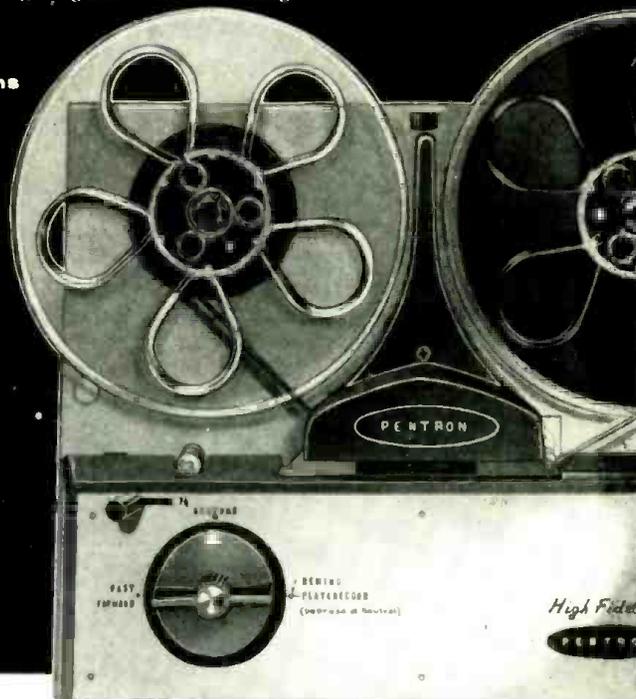
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basic specifications
TM series

mechanisms

COMBINATION HEAD:
Frequency response: 40-14,000 cps with proper equalization. Signal-to-Noise: 55 db with CA units; track width: .093"; gap width: 1/4 mil; impedance of record section: 6000 ohms; inductance of erase section: 60 mh • **STACKED HEAD:** track width: .080"; gap width: 15 mil; impedance: 3500 ohms • **FLUTTER:** under 0.4% at 7 1/2 ips; under 1% at 3 3/4 ips • **CAPSTAN DRIVE:** Idler driven • **MOTOR:** 4 pole induction type, individually balanced • **OUTPUTS:** 4 standard pin jack-outputs to accept shielded phono plug • **CONVENIENCE OUTLETS:** two auxiliary AC outlets controlled by mechanism power switch. Supplied with removable mounting brackets with shock mounts.



preamplifiers



CA-11

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



CA-13

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CA-15

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SAINT-SAENS

Carnival of the Animals
Garry Moore, Narrator
Vienna State Opera Orchestra
Hermann Scherchen, Conductor
Natural sounds of animals recorded in stereo
at the Bronx Zoo

SONOTAPE 8026

Stereo...\$11.95...37 mins.

In this latest recording much has been integrated into Saint-Saens' amiable score. The Sonotape people have certainly achieved a smooth engineering job of it too.

The very likeable Garry Moore introduces each section with some clever verses written by John Burt.

It would have been fun to watch the en-

gineers coaxing the animals to "perform." Judging from the bug-eyed reaction of the young fry, their work has resulted not only in realism, but a good surprise element when played without comment beforehand.

What with the vocal effects of man and animal, the solo instruments, and the full orchestra, this tape affords quite a panorama of sound. Josef and Grete Dichler, duo-pianists, supply attractive keyboard work while Scherchen and the orchestra turn in a lively, facile performance.

The continuity is well-blended and the fidelity is unimpaired. Here, again, is a fine tape for children as well as something different for hi-fi fans and music lovers, provided the latter group doesn't mind taking the score with these added colorings.

SAINT-SAENS

Symphony No. 3 in C minor, Op. 73
Vienna Philharmonica Symphony Orchestra
Hans Swarowsky, Conductor
URANIA UST 1201
Stereo...\$11.95...35 mins.

Saint-Saens' third symphony is rather unusual in several respects. It is divided into two parts instead of the usual traditional four movements and the scoring includes both organ and piano work.

The first portion of the "adagio" is erratic in nature but becomes tranquil and when it does one begins to hear some very tender, rhapsodic string passages. The advanced instrumentation applied by Saint-Saens creates quite a sonic impact via stereo, as you will agree when you hear the second part of the symphony.

Swarowsky and the entire assemblage put in a neat performance. The reproduction is fine. I did turn up the audio level slightly.

WOODWIND QUINTET

THE NEW YORK WOODWIND
QUINTET:

Samuel Baron, flute
Jerome Rath, oboe
David Glazer, clarinet
Bernard Garfield, bassoon
John Barrows, French horn
Kleine Kammermusik, Opus 24, No. 2,
Paul Hindemith

Lustig. Massig schnelle Viertel.
Walzer. Durchweg sehr leise.
Ruhig und einfach.
Schnelle Viertel.

Quintet, Opus 67, No.2, Franz Danzi
Allegro vivo
Larghetto
Minuetto: Allegretto
Allegretto

CONCERTAPES 24-4

Stereo...\$11.95...30 mins.

The New York Woodwind Quintet is an ensemble of glowing color. The ear is continually delighted by the interplay of sound. Each instrument leaps to prominence or recedes into the background as the music demands.

Again, Concertapes has achieved its unique balance between auditorium resonance and living-room closeness. The composers, Hindemith and Danzi, are curiously alike in their sensitiveness to the tonal possibilities of the woodwind ensemble and in their flexible handling of musical ideas.

ORCHESTRAL**BERLIOZ**

Reverie and Caprice, Op. 8

SAINT-SAENS

Havanaise, Op. 83

Introduction and Rondo Capriccioso, Op. 28

Aaron Rosand, Violinist

Southwest German Radio Orchestra, Baden-Baden

Rolf Reinhardt, Conductor

PHONOTAPES S-712

Stereo...\$11.95...28 mins.

Rosand plays these three showpieces for the violin with perception and skill. He weaves a spell of delicate lyricism, not

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BUXTEHUDE

Magnificat Cantata "Was mich auf dieser Welt betrübt". Soloists: Helen Baatwright, Janet Wheeler, Russell Oberlin, Charles Bressler, Paul Matthen; The Cantata Singers, New York, with String Orchestra and Organ; ALFRED MANN, Conductor. The rarely heard music of a great master. 900' UST 902 \$8.95

BRAHMS

Symphony No. 1 in C minor, Op. 68. Un poco sostenuto—Allegro, Andante sostenuto, Un poco allegretto e grazioso, Adagio—Allegro non troppo, ma con brio. Bavarian Symphony Orchestra, Henry Hall, Conductor. Brilliant in stereo sound. 1200' UST 1212 \$11.95

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TCHAIKOWSKY

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Symphony No. 3 in C minor, Op. 78
Franz Eibner, organ; Vienna Philharmonica Symphony Orchestra. Hans Swarowsky, cond. The full orchestral splendor coupled with a thrilling performance by Eibner on one of the most famous organs in all Europe. 1200' UST 1201 \$11.95

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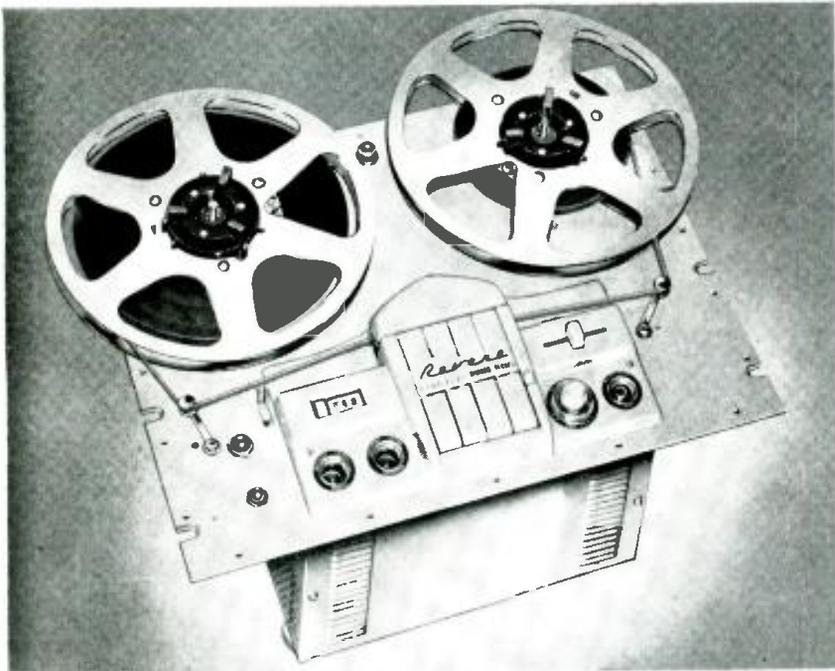
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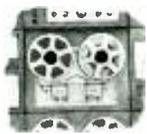


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TR-800-D—Same with built-in radio \$275.00

T-1100 Dual-Speed — Single knob control. Tape speeds of 3.75 and 7.5 i.p.s.; records up to three hours with new long-play tape. Durable fibre-glass case; two acoustically matched excursion speakers. Complete with microphone, radio attachment cord, two reels (one with tape) and case.....\$169.50
TR-1200—Same with built-in radio \$219.50



The preference for Revere by artists of renown is your guide to recorder selection.



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noted pianist



MARIAN ANDERSON
famed soprano



ANDRÉS SEGOVIA
foremost guitarist



ZINO FRANCESCATTI
brilliant violinist



ROBERT CASADESUS
piano virtuoso



LAURITZ MELCHIOR
great Wagnerian tenor

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without depth. Supported by a relatively small orchestra, it is the brilliant sound of the violin which shines throughout.

The extreme high notes are carried off very smoothly and the stereo reproduction is good. There is a chamber-music quality to the recording.

STRAVINSKY
Firebird Suite (1919 version)
Southwest German Radio Orchestra, Baden-Baden
Jascha Horenstein, Conductor
PHONOTAPES S-710
Stereo . . . \$11.95 . . . 21 mins.

This reading is not as dynamic as some I have heard. Horenstein gives a rather subdued impression of the music and I wonder had he but had at his disposal an orchestra of larger proportions, if he might not have effected a more powerful, sharply defined recording.

Stereo sound adds emphasis to Stravinsky's scoring. The fidelity on this tape is very good.

TCHAIKOVSKY
Nutcracker Highlights
Philharmonic Symphony Orchestra of London
Artur Rodzinski, Conductor
SONOTAPE SWB 7001
Stereo . . . \$6.95 . . . 15 mins.

Here is a release from the new Sonotape "7000" series. The tapes issued in this series will retail for \$6.95. The tapes are reproduced from Westminster originals on a one-to-one basis; each being a direct reproduction from the master.

These highlights from the "Nutcracker" ballet are beautifully recorded and performed by Mr. Rodzinski and the Philharmonic. The selections on this tape are the "March," "Dance of the Sugar Plum Fairy," "Russian Dance," "Chinese Dance," "Dance of the Toy Flute," and "Waltz of the Flowers."

If you have a young one who aspires to be a ballerina, put this on the Christmas list. It has been tested and has proven to be extremely popular with our younger set.

A wonderful gift for young or old alike.

Orchestral—Light Concert

STRAUSS IN STEREO
The Emperor Waltz
Intermezzo from the Thousand and One Nights
Waldmeister Overture
Fire Festival Polka
Vienna State Opera Orchestra
Joseph Drexler, Conductor

LIVINGSTON 721-BN
Stereo . . . \$11.95 . . . 30 mins.

The "Volkoper" must be working overtime of late. What with the demand for recordings of the waltz on the increase, they are a most sought-after group.

Here, under Drexler's astute direction, we are given a half-hour concert of music composed by the Strauss brothers. Johann and Josef, Drexler offers these selections with a touch of elegance and drama. The compositions are given a full symphonic treatment; albeit with a slight feeling of tension.

The recording is vibrant.

WEBER

Invitation to the Dance
STRAUSS, Richard
 Waltzes from "Der Rosenkavalier"
 Bamberg Symphony
 Henrich Hollreiser, Conductor

PHONOTAPES S-711
 Stereo...\$11.95...23 mins.

These lovely compositions are delivered with supple grace and keen Viennese sensitivity. If you don't have a recording of the waltzes from "Der Rosenkavalier" now is your chance to fill the gap in your library. You won't regret it. Just listening to these pieces by Strauss is somewhat akin to taking a musical Milwown!

The recording is brilliant.

THE WORLD'S BEST-LOVED WALTZES

Tchaikowsky: The Sleeping Beauty Waltz
 Ziehrer-Gould: Vienna Beauties
 Lehar: Gold and Silver
 Johann Strauss, Jr.: Fledermaus Waltzes
 Morton Gould and his orchestra

RCA BCS-52
 Stereo...\$8.95...21 mins.

Enchanting music presented in a spirited fashion by Morton Gould. He affectionately grasps the swaying lilt and romantic air which is the trademark of the waltz.

The recorded sound is somewhat like that of an orchestra at one end of a big ballroom—while you're dancing down toward the opposite end. I was reminded of the Hershey, Pa., ballroom where I used to hear dance music in an open-air atmosphere—lake and all.

VIENNESE WALTZES
 Waldteufel: Skater's Waltz
 Lehar: Gold and Silver Waltz

SONOTAPE SWB 7003
 Stereo...\$6.95...16 mins.

Deft performances of these two familiar waltzes are rendered by Aliberti and the "Volksoper." I find these relaxed, expressive versions, coupled with the full, shimmering sonics, are completely irresistible.

ORGAN

BACH, J. S.
 Prelude and Fugue in A Minor
 Trio Sonata No. 4 in E Minor
 Prelude and Fugue in E Minor
 "Wachet auf, ruft uns die Stimme"
 Carl Weinrich, Organist

SONOTAPE SWB 8025
 Stereo...\$11.95...29 mins.

For those who love fine organ music played, and recorded, with flawless precision, this tape will have great appeal. Mr. Weinrich is not an organist with exhibitionist tendencies, and the instrument he plays, though of fine baroque quality, is not overpowering in acoustical effect. The tonal beauty of the organ of Varfrukyrka at Skanninge, Sweden, is further enhanced by stereo-phononic reproduction.

I cannot hand-pick any selection I prefer over the other as they are all rendered with technical mastery and versatility. I am certainly looking forward to seeing this artist when he gives a concert here in Columbia, Missouri, in January.

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INTIMATE DANCE STYLES
 ST-28 \$7.95 16 min.

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 ST-29 \$11.95 32 min.

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- ST-35 • HAWAIIAN LUAU

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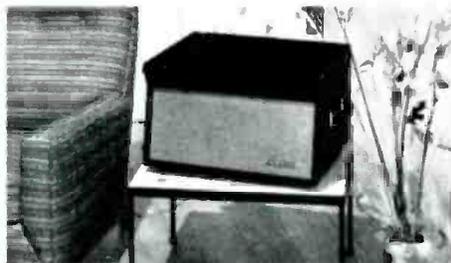
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CHORAL

BACH, J. S.

Christmas Oratorio (Cantatas #1, 2 and 3)

Helga Gabriel, soprano
 Ursula Boese, alto
 Leo Larsen, tenor
 Jakob Stampfli, bass
 Harald Willmann, trumpet
 Gertrud Weitz, flute
 Friedrich Wuhrer, violin
 Edwin Koch, cello
 Christoph von Kamptz, harpsichord
 Ekkehardt Tietze, organ
 The St. Thomas Choir, Leipzig
 Hamburg Chamber Orchestra
 Guenther Ramin, Conductor

CONCERT HALL CHT/BN 21-2

Stereo . . . \$23.90 . . . 1 hr., 34 mins.

This recording consists of the first three of the six cantatas which comprise the Christmas oratorio. Devoted to the six-day period beginning with Christmas and ending with the Epiphany, each cantata was performed on the prescribed day in conjunction with the church service. It is interesting to note that the performing choir hails from one of the churches in the town where Bach, as cantor, composed so much of his secular music.

The soloists are very good. Miss Boese possesses admirable vocal quality and strength. The two gentlemen combine these two talents with good expression. During the solo passages the vocalist is forward on one speaker while the chamber group is predominantly on the other side. During the duet between the soprano and bass, the same procedure is maintained. The choir sings beautifully and the stereo reproduction gives a wonderfully spacious, full touch. Ramin and the chamber orchestra accomplish their tasks with dispatch.

The work is sung in German and there is no text or English translation. Background notes are provided and will serve to guide to some degree. I wish Concert Hall would have at least included the titles of each recitative, chorale, etc.

The recorded sound is excellent.

THE CADET GLEE CLUB, WEST POINT

The Corps
 Song of the Vagabonds
 Black is the Color of My True Love's Hair
 The Ballad of Rodger Young
 The Lord's Prayer
 Hold 'em Joe
 Benny Havens, Oh!
 America the Beautiful
 Army Blue
 Chief Warrant Officer Frederic Boots, Director
 Spec. 3/C Charles Gigliotti, USMA, Accompanist

PHONOTAPES S-709

Stereo . . . \$11.95 . . . 27 mins.

This is an interesting tape, especially in content, as it contains several cherished Army songs which the general public does not often hear. The Cadet Glee Club of West Point has more than 140 members of whom 95 are selected to make concert appearances. On this tape are selections recorded at performances given at three schools in New York state.

This vocal contingent gives forth with strength and spirit. They may not be a high-

(Continued on page 16)



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| <p>SWB 7001 TCHAIKOVSKY
Nutcracker Highlights
Philharmonic Symphony Orchestra of London
Conducted by Artur Rodzinski</p> <p>SWB 7002 TCHAIKOVSKY
1812 Overture
Vienna State Opera Orchestra
Conducted by Hermann Scherchen</p> <p>SWB 7003 LEHAR:
Gold and Silver Waltz
WALDTEUFEL:
Skater's Waltz
Vienna State Opera Orchestra
Conducted by Armando Aliberti</p> <p>SWB 7004 DEUTSCHMEISTER ON PARADE
Deutschmeister Band
Conducted by Julius Herrmann</p> <p>SWB 7005 GYPSY PASSION
Lendvay Kalman and His Gypsy Band</p> <p>SWB 7006 RAVEL
Bolero
Vienna State Opera Orchestra
Conducted by Hermann Scherchen</p> <p>SWB 7007 LISZT
Mephisto Waltz
Vienna State Orchestra
Conducted by Hermann Scherchen</p> | <p>SWB 7008 KHACHATURIAN
Gayne Ballet Highlights
Vienna State Opera Orchestra
Conducted by Hermann Scherchen</p> <p>SWB 7009 TCHAIKOVSKY:
March Slav
KHACHATURIAN:
Lezghinka
Vienna State Opera Orchestra
Conducted by Hermann Scherchen</p> <p>SWB 7010 DUKAS
Sorcerer's Apprentice
Vienna State Opera Orchestra
Conducted by Hermann Scherchen</p> <p>SWB 7011 VERDI
Aida, Triumphal March & Ballet Music
Vienna State Opera Orchestra
Conducted by Armando Aliberti</p> <p>SWB 7012 SPIRITUALS
Graham Jackson Choir.</p> <p>SWB 7013 CATHEDRAL BELL RINGERS
Cathedral of St. Philip, Atlanta, Ga.</p> <p>SWB 7014 CHRISTMAS EVE IN THE CATHEDRAL
Chorus & Organ
Conducted by Homer Edwards</p> <p>SWB 7015 A MERRY WURLITZER CHRISTMAS
Dick Leibert, Organ</p> |
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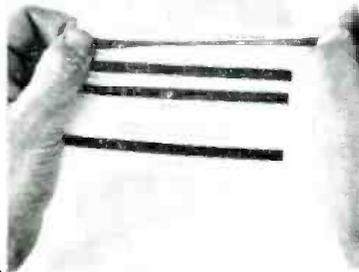
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ly-polished, professionally trained choral group, but they are a joy to hear. Selections #1, #7 and #9 are sung *a capella* while piano accompaniment is furnished on the other numbers.

There are three soloists; the most unusual act in this particular realm is the solo executed by Cadet William Seely during the lively calypso tune, "Hold 'em Joe." I might add that this number is startling in its contrast to the preceding song.

The engineers ran into some difficulty while doing these remote recordings. On my copy there is a brief, static-type disturbance just before the spoken words in "America the Beautiful."

The fidelity is rated "good."

VARIATIONS FOR VOCESTRA

Tango in D; Albeniz
Serenade; Schubert
Le Cygne; Saint-Saens
Liebeslied; Kreisler
Orientale; Cui
Nocturne; Grieg
Poupee Valsante; Poldini
Solveig's Song; Grieg
Meditation; Massenet
Clair de Lune; Debussy

STEREOPHONY, INC., C 151 S

Stereo \$7.95

In this recital you will hear an ensemble consisting of a small group of chamber instrumentalists and the wordless "singing" and/or humming of seven voices (3 female, 4 male) conducted by Andrew White. The selections are arranged by the competent William Austin.

This is an unusual tape and is performed with finesse. The voices, used for added tonal effects, blend with the instrumental music in a well-integrated fashion. There are some good violin and cello solos throughout the tape. The voices are so much a part of the whole that it is not until the "Nocturne" that they seem to come forward.

Here is something that is fresh and different and many may find it a pleasant new species of background music.

The reproduction is very good.

POPULAR

CHAMPAGNE FOR TWO

As Years Go By
When You're Away
I'll Remember April
Autumn in Rome
Baubles, Bangles and Beads
Out of This World
Summer Skies
Softly, As In a Morning Sunrise
I'll Take Romance

Candlelight Trio

STEREOPHONY, INC., B 150 S

Stereo \$7.95

Here, again, is something quite different in the currently popular field of background-type music. These light numbers are given a refined treatment by talented concert artists. This is the sort of music one would associate with a formal, yet gracious, dining place. The trio actually came out of the



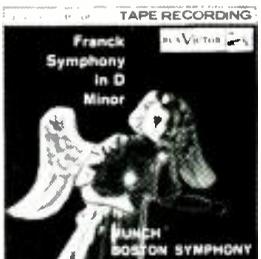
BCS-5 \$8.95



CCS-56 \$10.95



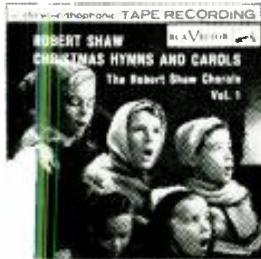
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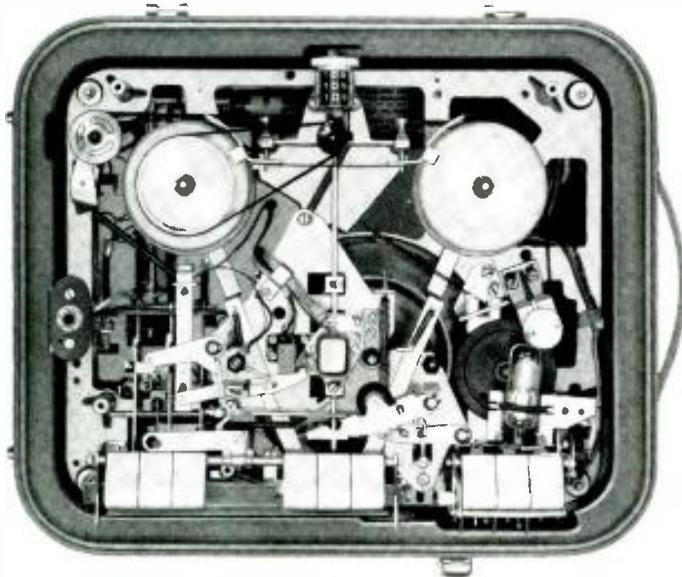
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Above is a technician's-eye view of the new Norelco 'Continental.' It is a reassuring picture to tape recorder mechanics — many are even calling the 'Continental' the most advanced machine of its type. But most of the readers of this magazine are not tape recorder mechanics — they are seekers of good sound. It is to these readers that we say — the specifications of the 'Continental' are great...but that's beside the point! We won't tell you about them yet — because we first want you to listen to the sound! Go to your dealer and ask for a demonstration. Then just listen. The Norelco 'Continental' will convince you with sound — not with cycles and decibels. Don't say we didn't tell you in time for Christmas!



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dining-room and recorded these selections in a living-room in order to achieve an intimate realism.

The trio was organized by Harold Mears who is staff pianist, organist, accompanist and arranger for station WHO AM-FM and TV in Des Moines, Iowa. The other two members are Margaret Davis, Professor of violin at Drake University, and John Ehrlich, Professor of cello at the same university.

Stereophony has included interesting notes on the artists and the selections they play. They also give timings for each number. The fidelity is clear and bright.

AROUND THE WORLD

American Patrol
Loch Lomond
Under the Bridges of Paris
Sailor Boy
Dardanella
Arabian Nights
Hindustan
Shina No Yoru
Blue Hawaii
South American Way
Frankie Carle, his piano and orchestra

RCA CPS-70

Stereo... \$10.95... 26 mins.

When I saw the title to this album I thought we had another Todd-Young musical tape, but not so. This is another one of those musical hop-skip-and-jumps about the sphere furnished, this time, in Carle's typical, smooth hotel-nightclub manner. The reproduction is clear.

THE BEAUTIFUL SOUNDS OF HARP AND FLUTE

Greensleeves
All Through the Night
David of White Rock
None But the Lonely Heart
Irish Fantasy
Legends
Claire de Lune
Elegie

Catheryn Thompson; Harp
George Poole, Flute

OMEGATAPE ST 2014

Stereo... \$11.95

This is more the "beautiful sounds of harp" as the flute participates in but two of the numbers: "Greensleeves" and "None But the Lonely Heart." These familiar airs are presented in a pleasant manner by Miss Thompson. The arrangements by the late Welsh harpist, John Thomas, are neat and not too showy. Miss Thompson was a member of the San Francisco Symphony and is now active in broadcasting and recording fields.

Mr. Poole, who is becoming a familiar artist via Omega releases, is with ABC as a staff musician and arranger. His flute adds a fitting sad note to "None But the Lonely Heart."

Where the two instruments are employed the stereo effect is fine... otherwise the sounds of the ethereal harp are clear and spread.

The "Claire de Lune" is not that of Debussy. If there is another, I am not acquainted with it.



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Soundcraft Tape. See
your Soundcraft dealer
now, or write us for
his name...he will tell
you how you can get
"SOUNDS OF CHRISTMAS"
recorded on your tape.
Not only the
"SOUNDS OF CHRISTMAS"
but the sounds of all
the year sound better
on Soundcraft Tape!



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CORP.

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West Coast—338 N. LaBrea,
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Just released:
8 BRILLIANT NEW STEREO TAPES

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Exciting jazz selections by the greatest jazz harpist in America. TN 100. \$10.95



DICK TODD
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Popular vocalist singing a group of old standards. TN 101. \$10.95

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"Chicago Jazz"



Chicago style jazz by the musicians who made it famous. TN 102. \$10.95



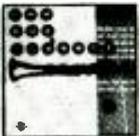
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"The Bud Freeman Group"

Presenting the famous originator of the Austin High School gang, himself! TN 103. \$10.95

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Piano selections by the brightest star on the modern jazz horizon! TN 104. \$10.95



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New arrangements for some "hot and cool" favorites. TN 106. \$10.95



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SWEET SEVENTEEN

All I do Is Dream of You
I'm Beginning to See the Light
Little White Lies
I don't Know Why
Don't Get Around Much Anymore
For Sentimental Reasons
Oh What It Seemed to Be
Seventeen

The Ames Brothers
Bill Finegan and His Orchestra

RCA CPS-75
Stereo . \$10.95 25 mins.

Somewhat I didn't expect this to go over so big with the local hit-parade crowd only because the tunes are not currently popular. But I was wrong! The teenagers have played this so much that if it were not tape, it would be worn out by now.

The Ames Brothers sing in their warm, mellow style and the other half of the former Sauter-team puts in a good showing. The recording is flawless.

JAZZ
THE NEW YORK JAZZ QUARTET GOES NATIVE

March of the Sugar-Cured Hams
Jungle Noon
Mat at Bat
Trade Winds
Oi Vay Calypso
Let Me Remember
Coo Coo Calypso
Joe Blow
Sambalu
The Mann Act

ELEKTRA TAPE EL7-7 BN (Livingston)
Stereo . \$11.95 29 mins.

Those of you who like music of West Indian or Latin American flavor may enjoy the slight jazz beat applied to these numbers. Herbie Mann plays the flute while Joe Puma takes over on guitar. Whitey Mitchell on bass, and Mat Mathews at the accordion. Two bongo drummers, Manuel Ramos and Teiji Ito, were added for this session.

The stereo sound is without distortion.

STREAMLINE

Streamline
Laura
Keystone
I Remember You
Swinging Till the Girls Come Home
Love Is Here to Stay
Rolf's Tune
The Rolf Kuhn Quartet

VANGUARD 3007
Stereo . \$11.95 30 mins.

For those who love good jazz, this is a recording not to be missed. Rolf Kuhn is a young (28-year-old) German clarinetist who may well become one of the great jazz artists of our time. He has played the instrument for some sixteen years and in that time has developed an exceptional talent. His artistry sparkles throughout the tape. From the fast opening number, which is a Kuhn original, right to the end of the recording, you are bound to be impressed.

Joining Kuhn on this session is another excellent artist, pianist Ronnell Bright. Making his recording debut, Bright adds plenty of glitter to the group. Bill Clark, of the George Shearing aggregation, and Joe Benjamin, who has been featured with Sarah Vaughan, round out the quartet.

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Model 3A/N (portable) with built in speaker. 3 3/4-7 1/2 ips \$379.50

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Quality standards have restricted our production and unforeseen demand may delay delivery, write TODAY for literature.

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404-PAGE 1958 ALLIED CATALOG



Buying guide to everything in electronics, including all equipment for the tape recorder: complete recorders, basic mechanisms, amplifiers, mixers, mikes, heads, phone pickups, tape, splicers, and accessories. Write for your FREE copy of the 1958 ALLIED Catalog.

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MAGNETIC TAPE ERASER



Erases recorded signals and noise from magnetic tape without rewinding. Spindle mounting of reel permits rapid coverage without missed spots. Noise level reduced below level of standard erase heads. Restores tape to like new condition or better. Reel size range 5", 7", 10½". May also be used for demagnetizing record—playback—erase heads.

Model HD-11 Price \$27.50

TELEPHONE PICK-UP COIL

For transcribing telephone conversations with recorder or making messages audible on amplifier. May also be used as probe for locating sources of hum. More constant signal level than base mounted units. Suction-cup mounting on any telephone receiver. Supplied with 68" shielded cable, terminated with standard phone plug for recorder or amplifier.



Model HP-61 Price \$7.95

MATCHING TRANSFORMER

A precision transformer developed to enable the audiophile to modify, enlarge, redesign, or rearrange his speaker systems. Permits use of additional speakers of different impedance ratings with present amplifier, or crossover networks, without impedance mismatch. Delivers equal, or 3 db. adjustable power, to all speakers. Power 50 watts, 100 watts peak. Frequency response 15 to 30,000 cycles. Matching range: any combination of 1 to 3 speakers of 16, 8, 4 Ω.



Model HM-80 Price \$21.75

Available from Electronic and Audio Distributors



The top fidelity highlights Kuhn's fine technique and tonal clarity.

BOB FLORENCE TRIO

I Like to Recognize the Tune
I'll Take Romance
Here Lies Love
Surrey With the Fringe on Top
Mambob
Love is the Sweetest Thing
Paris in the Spring
Doin' the New Lowdown
Flamingo
Cowbells
I'll Remember April

STEREOTAPE 7

Stereo... \$11.95... 31 mins.

This trio is composed of Bob Florence at the piano, Ken Greig on bass, and Jack Davenport at the drums. They present a mixture of both familiar and unfamiliar numbers. The group works well together in a rather quiet way. Their approach to "modern jazz" or "music in the best jazz tradition" is not a dazzling one. They remind me of a pleasant little combo tucked in a corner of a small bistro where the customers talk over, under, and through the music.

The recording is good. The piano is heard on one side of the room, the drums and the bass on the other.

BAND

DEUTSCHMEISTER ON PARADE

Castaldo Marsch
Lachende Sonne
Der alte Trommier

Egerlander Marsch
Nechledil Marsch
Nussdorfer Marsch
Deutschmeister Band
Julius Herrmann, Conductor

SONOTAPE SWB 7004

Stereo... \$6.95... 17 mins.

Band enthusiasts will want this one for sure. A grade-A recording of an equally top-grade Austrian band. On the opening number the audio realism of a parade is simulated as the band seems to come marching down the street, go right by and then away as they continue to play on.

The high fidelity man who likes to put on a particularly effective recording as a showpiece for his rig, should be pleased with this tape too. Some very good "hi-fi" spots are the drum rolls in "Der alte Trommier."

BAND CONCERT IN VIENNA

Deutschmeister March
Bad'ner Girls, Waltz
Flieger March
Freudenauer Galop
Albrechts March
Payerbacher Polka
Schoenfeld March
Schuetzenliesel Polka
Lyuk Lyuk, Hungarian March
Radetzky March

The Neue Deutschmeister Band
Karl Zaruba, Conductor

LIVINGSTON 716-BN

Stereo... \$11.95... 29 mins.

I presume this is the same band as found on the Sonotape recording... the word "new" evidently signifying the revival of this famous band after a layoff period during the Nazi occupation.

Here we have a most agreeable band concert of march, gallop, polka, and waltz selections (with tongue-twisting titles) which are performed in a brisk, stimulating manner.

The fidelity is very satisfactory.

FOLK

I COME FOR TO SING

John Henry
Dance, Boatman, Dance
Abilene
Lost Jimmy Whelan
To Morrow
Money Is King
Drill, Ye Tarrriers
Mattie Groves
I Come for To Sing
The Lily of the West
Springfield Mountain

RIVERSIDE 7-11 BN (Livingston)

Stereo... \$11.95... 28 mins.

Young Bob Gibson sings in a direct, friendly style. His enunciation is clear and his delivery animated. He does not use the depth of expression and phrasing evinced by such pros as White, Seeger, or Belafonte, but his straightforward, unembellished style is one you'll want to hear again.

Gibson accompanies himself on banjo and is assisted by a trio composed of Dick Rosmini on guitar, Trigger Alpert on bass, and Pete Berry at the conga drums.

You are sure to enjoy the catchy lyrics of "To Morrow" on this very fine stereo recording.

call in the family
call in your friends
... get ready to

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Bill Andrews'

"OLD TIMERS"

64 old time songs
played on the ALLEN ORGAN

Never before have so many old favorites been recorded on a one hour tape. You'll love listening to (singing along with) Bill Andrews' original styling as he brings you 64 old time songs... some lively and gay... some soft and sweet. It's truly A TREASURE FOR YOUR TAPE CHEST. Enjoy...

Let Me Call You Sweetheart, Margie,
If I Had My Way, Peg O' My Heart,
Sally, Mexicali Rose, Cuddle Up A Little
Closer, Honey, Heart Of My Heart,
Melancholy Baby... and 54 others

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VOTO SAMPLER... 1.50 ppd.

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Laura, My Wonderful One... and
18 others on a one-hour tape.

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VOTO Sampler... 1.50 ppd.

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TAPE CLUB NEWS

American Tape Exchange president Stuart Crowner reports that the club has a new member who speaks French and if there is anyone in the club who would like to correspond with this interesting tape pal, he may learn more about him by contacting Stu.

World Tape Pals has initiated a new service—a Recording Club Department. In order to recognize and encourage local clubs, it is inviting group memberships and will publish club news in Tape Topics (the club bulletin). The Club Department is

intended as a supplement to individual memberships in World Tape Pals. Members of an affiliated club may also join as individuals. Affiliated club members may subscribe to Tape Topics individually, and may obtain individual copies of the Membership Roster through their club secretary at the regular replacement price of \$2.00 per copy.

The first annual Tape-Vention of the Northeastern District of The Voicepondence Club was held recently at New York Mills, just outside Utica, N. Y. This district is

composed of New England and New York State, and while members from that section attended, there were also some from the surrounding area present, including a few from Canada.

A buffet luncheon and informal get-acquainted gathering preceded the meeting. There were several speakers, and the meeting was climaxed by an auction of tapes and other recording supplies donated by members and merchants. Proceeds were used to pay the cost of the meeting. The bidding was spirited and exciting. Members' children enjoyed supervised games, while their parents enjoyed the program and demonstrations.

The autumn issue of the Voicepondence Club quarterly magazine, together with its quarterly directory supplement has just been published. Since its formation several years ago when it reorganized from the old Wire-pondence Club, this organization has shown a steady growth in membership.

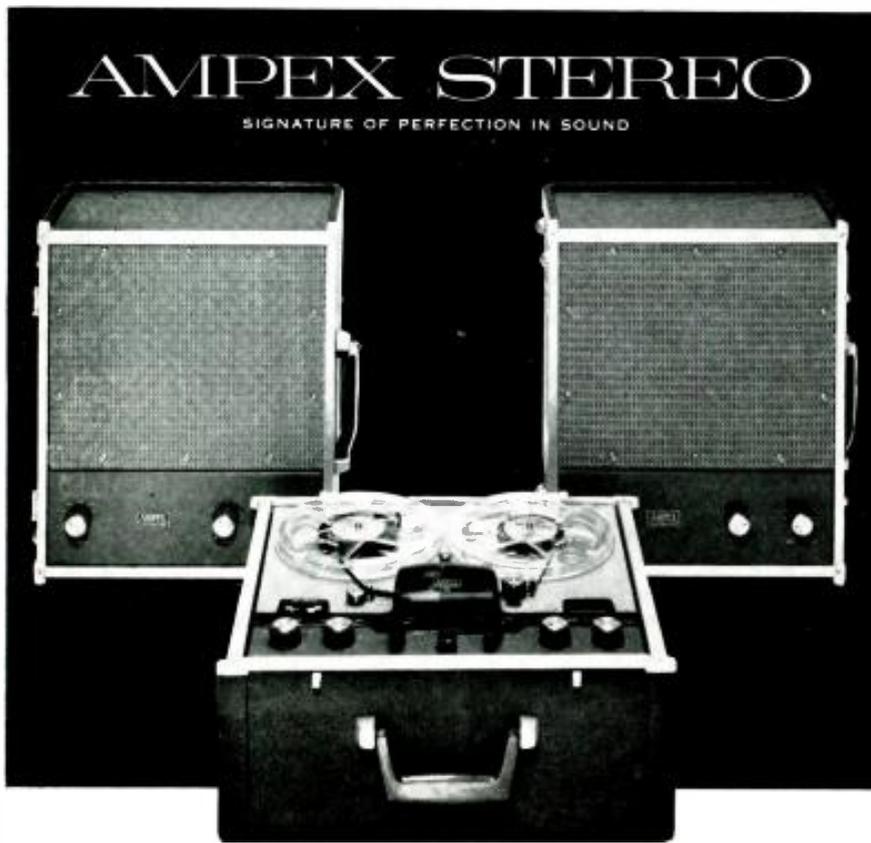
This club issues a completely new directory every year, with quarterly supplements, which keeps its listing very much up to date.

Tape Respondent, International member, Johnny Swaelens of Brussels, reports that a Belgian museum promoter, Paul Hellyn, has a tape collection of readings by 200 poets of 20 different countries, each reading his own work in his native tongue.

The tapes were made last September when the poets attended a poetry biennial. Mr. Hellyn advised Johnny that he would be willing to provide any cultural organization with copies of the tapes—not for commercial use, of course, in exchange for a small share of the cost.

Mr. Hellyn can be contacted at 147, Chaussee de Haecht, Brussels-Schaerbeek, Belgium.

American Tape Exchange member Darrell Howling of Toronto, Ontario has approximately 65 participating tape pals. At present, the club's all time record. Happy taping, Darrell.



An audio system is like a chain. For optimum performance, all the links must be equally strong... there can be no compromise with "weak-link" components in the system.

It was on this premise that the Ampex A122-SP Portable Stereophonic System was designed. Each link in the chain—from recording and playback heads to speaker—was forged to the same exacting standards and precision tolerances which guide the manufacture of world-famous Ampex professional recording and playback equipment.

Heads—Facing surfaces of head gaps lapped to an optical flatness so precise they reflect a single light band (1/2 micron) on flatness gage. This, plus initial surface polish of 6-8 micro-inches, insures sustained frequency response with negligible change in characteristics over many thousands of hours of operation—many times longer than with ordinary heads.

Amplifier-Speakers—Ampex-designed, Ampex-built as an integral part of system... yet may be used separately with other units of your system (has front-panel input switching for Tape, Tuner, TV, or Phono). Amplifier sensitivity 0.25 v for maximum power output; 20-20,000 cps \pm 1/2 db output with well under 1% harmonic distortion. Speaker features unusually high total gap energy, converts a maximum of output power into sound energy, with smooth, peak-free response.

Complete Specifications—Write today for free new full-color brochure containing complete specification sheet and description of full line of unmounted units, consoles, modular table-tops and portables.

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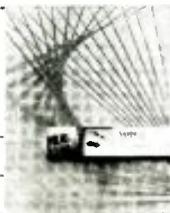
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Charles Owen, Secretary
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WORLD TAPE PALS, Inc.
Marjorie Matthews, Secretary
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AUSTRALIAN TAPE RECORDISTS ASSOC.
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Springbank Rd., Clapham, S. Australia

UNITED RECORDING CLUB
Richard L. Marshall, President
2516 S. Austin Boulevard
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THE NATIONAL TAPESPINNERS
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THE BRITISH AMATEUR TAPE RECORDING SOCIETY
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210 Stamford Road
Blacon, Chester, U. K.

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

TEEN TAPERS

BY JERRY HEISLER, National President



CLUB charters, membership cards, a booklet on how to organize a school tape club, and details of a reduced subscription rate await all those schools who will write in regarding Teen-Tapers clubs for their high schools. This fall an effort will be made to form these clubs throughout the United States.

These clubs, as is explained in the booklet, can provide your school with a group of trained recordists, and can provide the members of the club with many hours of entertainment. Clubs can exchange tapes with other clubs, record important school events, prepare tape broadcasts for a local radio station or for airing over the school public address system, and do as many other things as they have imagination for.

All member clubs will be affiliated with the national Teen-Tapers and will thus have the chance to share experiences with each other. This column will be partially devoted to the activities of the club in addition to our regular fare of teen information.

This activity is entirely free to all schools wishing to take part and we feel that most schools could use an activity like this since audio-visual aids are being used to such a great extent in the schools. We need *you* to sell this idea for us. You can help by talking to your principal or audio-visual director and telling him about the club. If you don't care to do this, drop us a card and we will send the information to the school and mention that you referred us to the school.

We are now in the process of contacting schools and we may contact yours, but don't wait, write to us today and let's get a club going in your school. Write to TEEN-TAPERS' Hi-Fi Tape Recording Magazine, Severna Park, Maryland.

A new stereo tape recording just came to my desk the other day and I can say without any hesitation whatsoever that this tape has the greatest "Teen-appeal" of any tape I've heard yet. On the Concertapes label, the reel is entitled "Invitation to Roseland" and features the swing dance music of Wendell Tracy and his orchestra. This is the first dance tape with a full band that I've heard yet, and it is simply fabulous. It is available in monaural as well as stereo so no matter what machine you have you can play it. Try to hear this one. It's got it.

Arrangements have been completed for us to use a stereo recorder in the popular price range, and shortly we'll be able to tell you how to record stereophonically in the applications that teens would want to use such a machine.

We had the opportunity of recently attending the Hi-Fi show in Chicago. It was very interesting and we had the chance to meet some of you. The show featured as exhibitors, most of the tape recorder manufacturers and most of them had something

to show in the way of a stereo machine.

We noticed, too, that a large percentage of those people attending the show were teens, many of who owned recorders or were planning on purchasing them. This of course just provides further evidence to our belief that recording has so much to offer teenagers.



Recorder-Stereophonic Reproducer

—Two-speed, precision-built tape transport, capable of playing over 4 hours from a single 7" reel of tape; sustained frequency response 30-16,000 cps (7½ ips), with dynamic range over 55 db; Flutter and wow under 0.25% rms at 7½ ips; Precision timing accuracy affords perfection of pitch held to tolerances of less than 1/3 of a half tone at highest frequencies.

Amplifier-Speakers

— Electronically and acoustically matched for optimum reproduction of stereo and monaural sound. These units deliver more undistorted sound per watt than the great majority of 12" and 15" speakers available today. Environmental inverse feedback from speaker voice coil circuit to cathode of first amplifier stage affords improved damping, lower distortion. Tilt-out push-button control panel for selecting input (Tape, TV, Tuner, or Phono); bass, treble and volume controls.

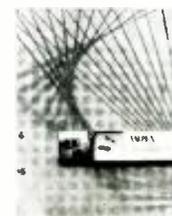
Complete Specifications—Information on the units shown above, plus consoles, portables, and unmounted units, available in free new full-color brochure.

We are very interested in collecting pictures of teens and tape recorders. If you have any photograph of teens doing something with a recorder, send us a print along with a description of the activity and we might print it along with your name in a future column of Teen-Tapers.

Now is a good time to begin planning your Christmas uses of a tape recorder. At school, you might plan to record the concerts, caroling, and perhaps the Christmas play. Teens seem to have a lot of parties around the Christmas season too, and your recorder comes in handy along those lines. A good project for a school club to take up would be to make a reel or two of Christmas music and arrange to play it in the halls during the Christmas season. It can be a lot of fun and can help put everyone in the spirit of Christmas.

Here is a stereo system you'll be as proud to show as you will to operate. The Ampex A121-SC Modular home music system was designed to satisfy not only the needs of the audio perfectionist, but also the increasing desire for a system that is as pleasing to the eyes as it is to the ears.

The A121-SC is an integrated system, and though any of the individual units can be incorporated smoothly into your own system, the combination of the three provides a level of performance not possible to achieve by any other means.



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A breathtaking showcase of stereo's vast range featuring Capitol's big-name artists. (ZH-2)

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"INTRO TO STEREO"

A narrated journey through the wonders of stereo - music and real-life sounds. (ZA-1)



2 CHANNEL - 7 1/2 IPS - FOR IN-LINE HEADS

QUESTIONS & ANSWERS

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

Q—In several issues of your magazine a number of articles have advised one to get a "good" microphone. Would a velocity or ribbon mike do much for an ordinary tape recorder? In other words, is an expensive mike useful with an amateur recorder?—J. M.

A—A velocity or ribbon microphone cannot be used with an amateur recorder that does not have enough gain in the pre-amplifier. Most amateur recorders do better with a good quality dynamic mike which has an output almost as great as the crystal mikes usually supplied with the recorders. To use a ribbon mike successfully you would need to amplify the mike output with a preamplifier before feeding it to the recorders. A good mike is a good investment.

Q—Is there any way of doubling the speed of a recorder which plays at 7 1/2 inches per second—make the tape go at a speed of 15 ips. Do you think that someday the better quality of reproduction at 15 ips will be had at slower tape speeds? Will the improvement be more likely in the tape heads or the quality of the tape itself?—F. S., Lexington, Mass.

A—Altering the speed of the machine is possible but we would proceed very carefully. You will have to change pulley or drive puck sizes, belts, etc., and it will turn into quite a task. If you can double the size of the capstan by means of a sleeve placed over the present one, that might be the easiest way to make the change. However, at 15 ips the equalization will not be the same as for 7 1/2 ips and you will have to change the amplifier circuit to get the proper highs and lows. Taking all things into consideration we feel that perhaps you had better not attempt it. Regarding improvements we believe that someday you will be able to get 15 ips quality at 7 1/2 ips or lower speed, in fact it is already approaching it on some of the recorders. The head is the governing factor and the smaller the gap, the higher the frequency that can be recorded at a given speed. Present day tapes are excellent but doubtless improvements will be made in them also which will contribute to higher and higher quality in sound reproduction.

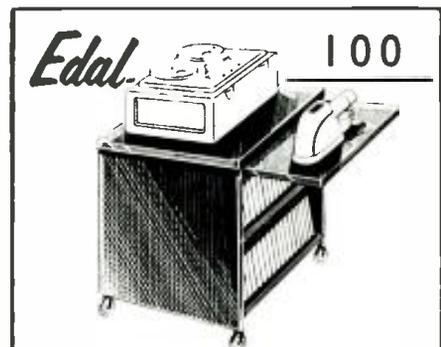
Q—I have been trying to make tapes from my radio but the tapes have a hum when played back. What can I do to get rid of the hum?—W. F., Indio, Cal.

A—There is nothing wrong with your recorder. The hum is caused by the fact that you either have a mismatch in im-

pedances or the "ground" of the recorder is different than the "ground" of the radio. You can use an isolation transformer, connecting one side to the radio and the other to the recorder input. Your local radio service man can tell you the best one to use for your machine. You might also ground the shield of the cable leading to the recorder on both the radio and recorder chassis. This may cure the difficulty. You might also take your tap off from the volume control of the radio rather than using the speaker terminals. This latter is the best method to use.

Q—When I play my record changer through the recorder I do not seem to get the full fidelity of sound. What do you suggest?—D. T., Bronx, N. Y.

A—Connect an external speaker to your recorder. This will greatly improve your results.



TAPE RECORDER STAND

- Heavy gauge welded steel construction
 - Storage for 92 seven-inch reels of boxed tape
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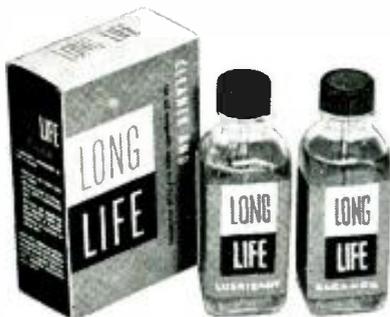
The most important part of your tape machine is the magnetic head. Protect it... prevent damage to precious tapes... insure peak performance with LONG LIFE Fluids, the only tape cleaner and lubricant safe and effective for all tape machines.

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- Poor uniformity of output
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WHAT HAPPENED TO THE MAN IN THE MIDDLE?*

Something seem to be missing when you listen to stereo? You hear music from the left, music from the right — but in between there's an unaccountable void. The "MAN IN THE MIDDLE" is missing.

Now listen to stereo as recorded by Stereophony Incorporated. What a difference! This is *true* stereo — a perfect blend of left, right and middle... all of the thrilling realism and presence of a live performance. And it's all done with only two channels and two speakers. That's all anyone needs to produce full stereophonic sound when the original recordings are made to the exacting technical and engineering standards of Stereophony Incorporated.

Be sure you get *all* the sound that's rightfully yours when you buy stereo. Ask your local high fidelity dealer for Stereophony Incorporated recordings, or write to us for the name of the Stereophony dealer in your area.

You hear MIDDLE, as well as left and right, on Stereophony • Incorporated Tapes

Christmas List of Current Releases

(HINT: Keep this listing handy in case the Santa Claus in your life asks what you want for Christmas.)

"RIGHT THERE" with SAM DONAHUE. Here's the first stereo release featuring a big name band. The same all-star aggregation presented on the NBC BAND STAND, in a series of excitingly arranged, danceable jazz standards. Catalog C 125, 32 minutes, 7 in. reel... \$8.95

"GLORY LAND" with THE WATCHMEN. One of the few surviving groups of itinerant revival singers, the Watchmen give out with an authentic brand of hand-clapping, foot-stomping camp meeting harmony. Catalog B 135, 22 minutes, 7 in. reel... \$7.95

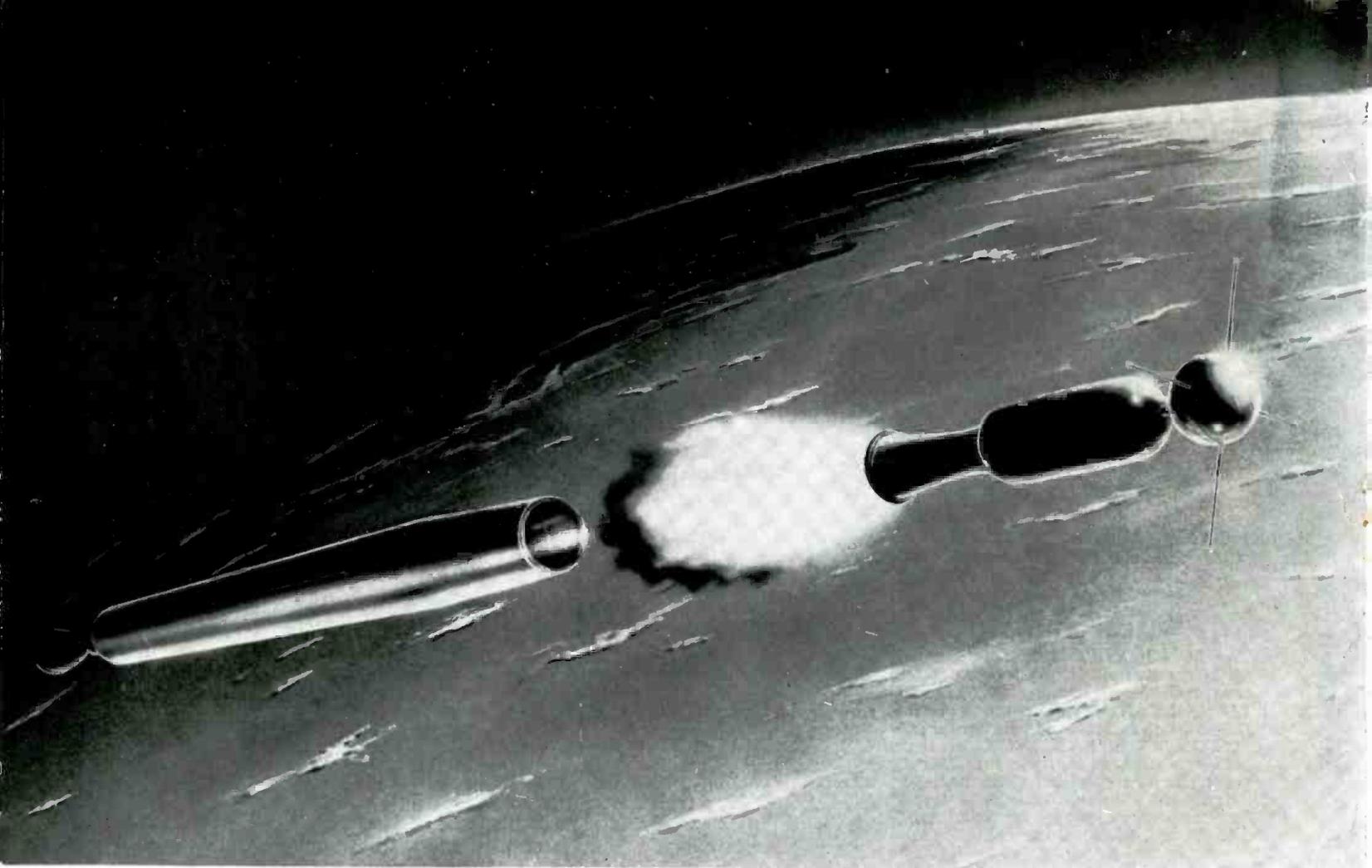
"SHOWCASE FOR SYMPHONIC BAND." Here is symphonic band music at its very best, played by the Chicago Symphonic Band — 48 woodwind, brass and percussion instruments. Ten exciting selections, from a Latin Beguine to a military march. Catalog C 141, 30 minutes, 7 in. reel... \$8.95

"STRINGS BY STARLIGHT" with THE STEREO-PHONY STRING ORCHESTRA. A lavishly orchestrated selection of melodies that linger in the memory; among them "Two Guitars," "April in Paris," "Adios" and "Body and Soul." A sentimental journey in superb stereo. Catalog C 155, 30 minutes, 7 in. reel... \$8.95

*He went to Stereophony Incorporated to make recordings!

STEREOPHONY INCORPORATED

DISTRIBUTED BY [emc] RECORDINGS CORPORATION • 806 E SEVENTH STREET • ST. PAUL 6 MINN.
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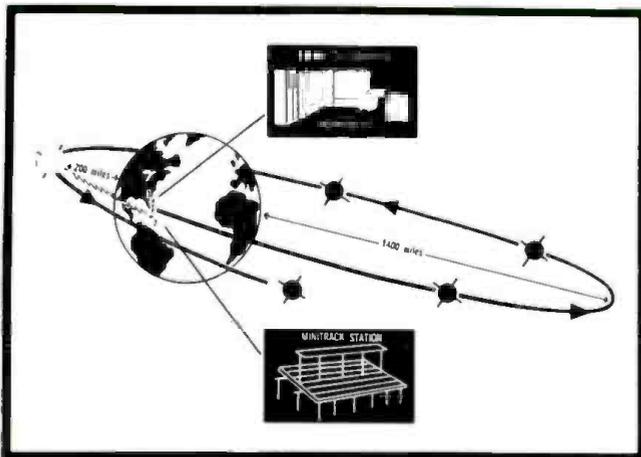
Once orbital velocity is reached the satellite is separated from the third stage rocket by a spring mechanism. For a time the empty third stage trails along as a second satellite. Satellite signals from U. S. Vanguard will be broadcast on 108 megacycles.

RECORDING SATELLITES

BY

MELVIN S. HASTINGS

..... the first earth satellite was heard by thousands and there will be others. Here's how to record their signals.



U. S. Vanguard Satellite will range from 200 to 1400 miles above the earth. Satellite in position at far left (1) is sending radio signal to Minitrack receiving station at 2. Signal is fed to IBM 704 computer, which processes messages and predicts future orbit of satellite.

BY the time you read this it is entirely likely that the Russian sputnik, launched on October 4th, will have lapsed into silence. Already the nose cone is reported to be breaking up and the rocket, now more than a half hour ahead of the satellite itself, is descending to a lower altitude where it may come to a flaming end like a meteor.

But there will be more "sputniks." Russia has said she will shoot a station to the moon. And the U. S. Project Vanguard is expected to begin sending up satellites in the near future.

Recording these visitors to outer space is a fascinating pastime and can have real scientific worth. When the Russians launched their sputnik, it broadcast on 20.005 megacycles and 40.002 megacycles. Our Minitrack stations, under construction to receive the Vanguard signals, which will be broadcast on 108 megacycles, were not ready to pick up the Russian satellite.

In the hours that it took to cut new antennas to convert Minitrack to the 20 and 40 megacycle range, radio hams were called upon to report to the Naval Research Laboratory in Washington the times that they heard the signals,



This official U. S. Navy photo shows an experimental six inch Satellite being tested by vibrations up to 25 G's at the Naval Research Laboratory, Washington, D. C. Units similar to this will be fired this year.

the times of greatest volume and the times the signals were lost as the orb sank beneath the horizon.

These early reports were fed into an IBM 704 computer which made millions of calculations and came up with an orbit very close to the actual orbit in space.

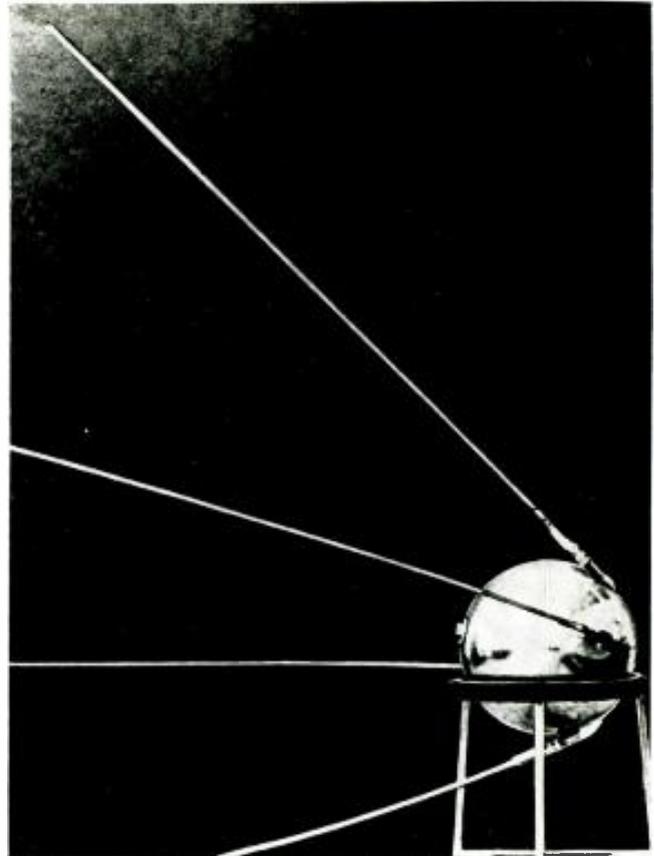
When Minitrack, using this basic information, swung into action, the orbit was accurately determined and it was then possible to announce the time and place that the sputnik would appear anywhere on the earth.

The Russians have not announced the frequency they will use for subsequent satellites so it will be pot luck when they are launched. The U. S. Project Vanguard satellites, however, will broadcast an AM signal on 108 megacycles.

Unfortunately, this is above the range of even the amateur communications receivers but it is not above the range of the ordinary FM tuner.

Because the signal will be an AM signal, it is necessary to convert it to AM. This is rather simply done.

The preferred system is using your FM tuner as a converter and coupling the IF signal from the FM tuner into an AM short wave receiver. The receiver should be tuned



Sovfoto

This is the first official photograph of the Russian satellite "sputnik." The weight has been given as 184.3 lbs. and it has a velocity of 18,000 miles an hour. Messages were sent out on 20.005 and 40.002 megacycles.

to the IF frequency of the FM tuner. In most of them this is 10.7 megacycles.

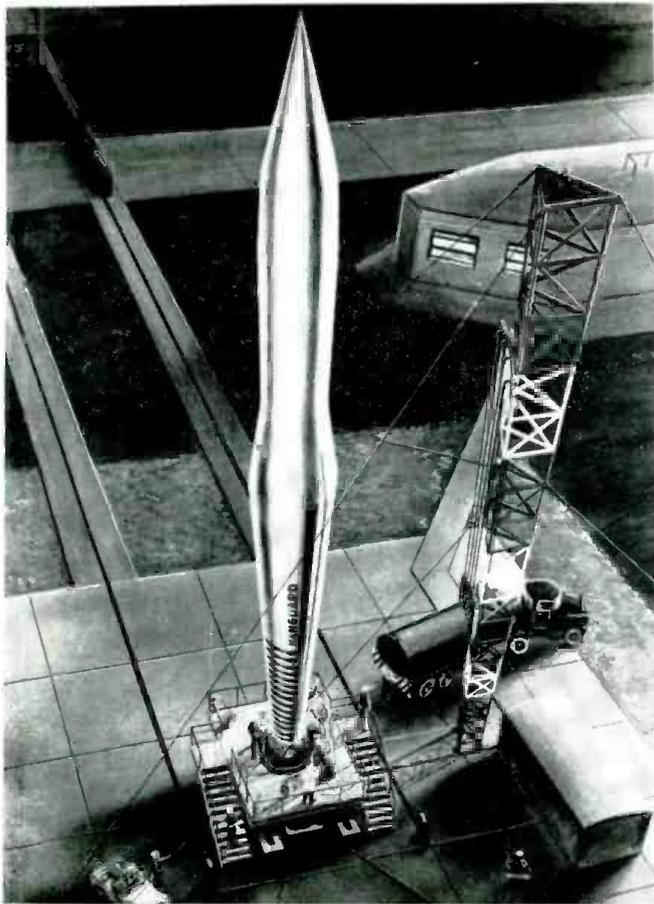
To get the IF output, the 2nd IF tube is removed from the tuner and an adapter plug, such as the Vector T7N, obtainable from radio parts houses, is added.

A shielded or coaxial lead is connected to the ± 1 grid pin and ground on the socket. For tubes such as the 6AU6, this corresponds to connecting the inner wire to pin 1 and the shield to pin 7 as shown in the diagram.

The inner wire should be connected to the antenna post of the short wave receiver and the shield to the ground



Melvin Hastings tunes the HRO receiver on 20.005 megacycles to catch the beep, beep signals from the Russian satellite sputnik. The output from the radio receiver was fed into the Magne-corder shown and results of the recording were excellent. At one point the signal was picked up while the satellite was 3,000 miles from the station. When almost overhead the signal from the one watt transmitter on the satellite was so loud volume had to be turned down for recording.



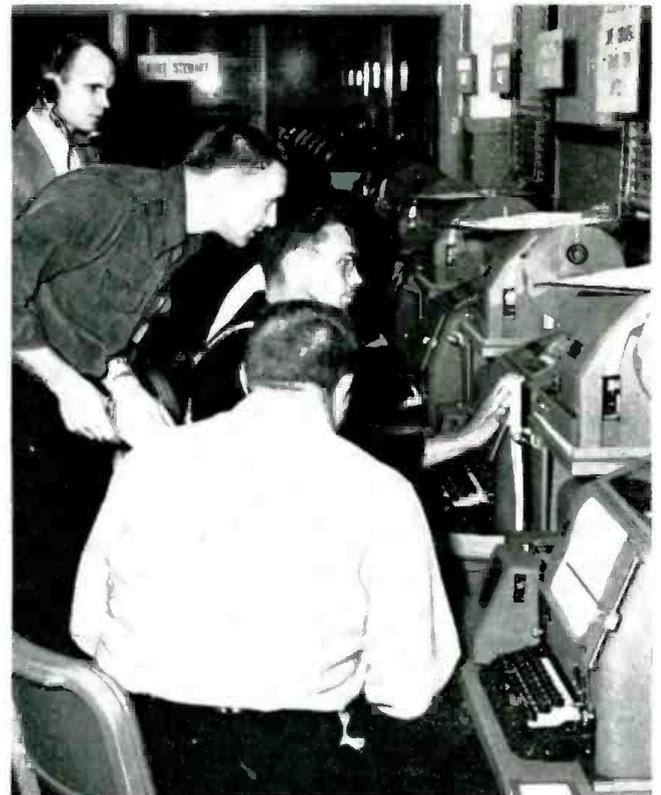
Left, the Vanguard rocket looks like a giant rifle bullet. Its payload will be a 20 inch sphere crammed with scientific instrumentation. To enter the orbit the satellite will have to obtain a velocity roughly ten times as great as that of a high powered rifle bullet. Right, fueling the rocket is a delicate task. Several of the liquids used in Vanguard are corrosive or inflammable and men must be dressed in protective clothing.

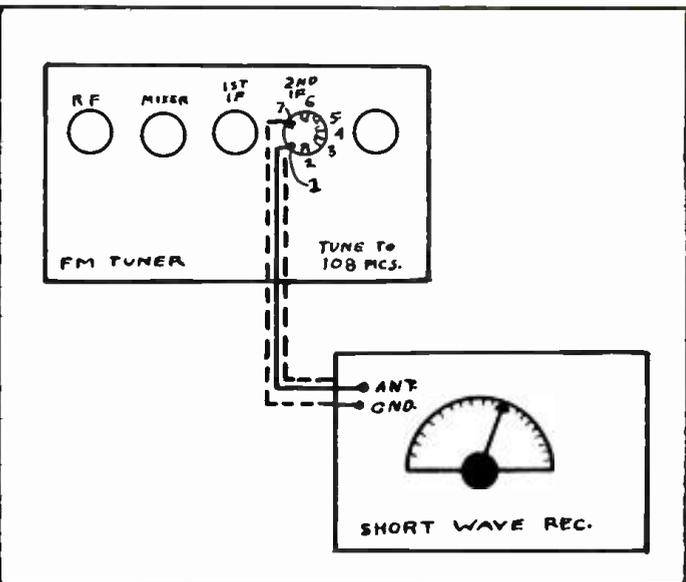
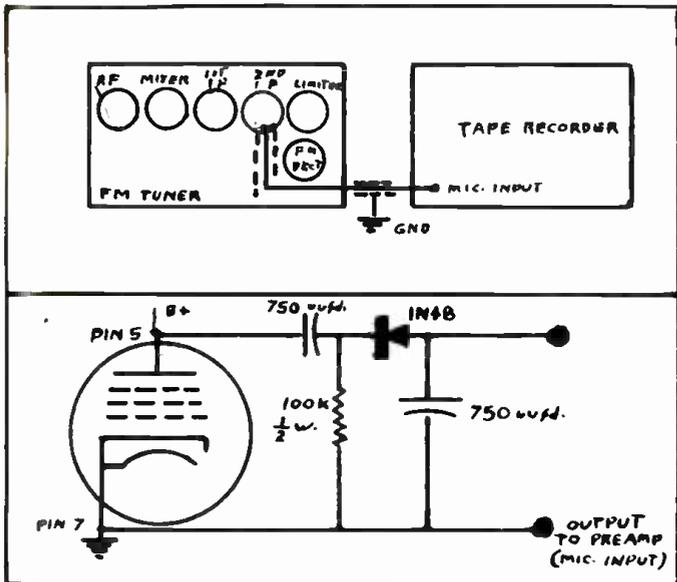
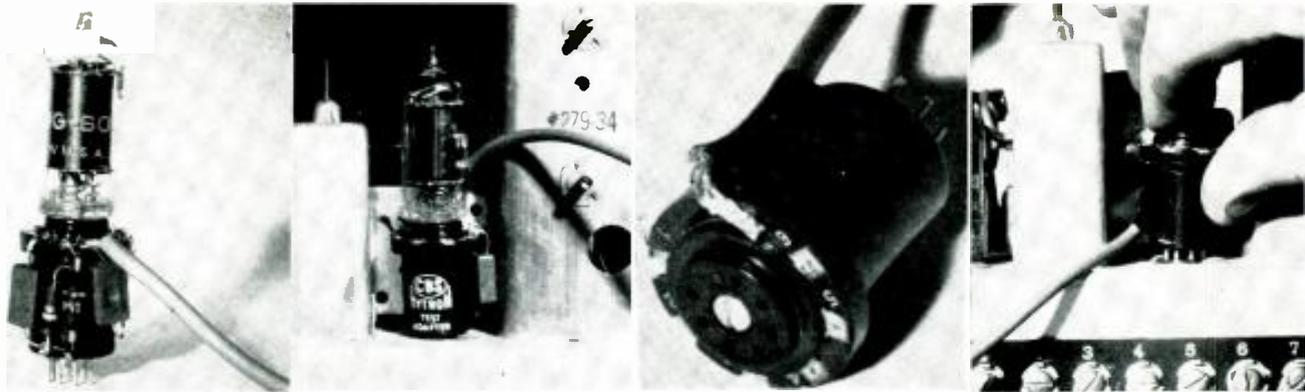
terminal. The short wave receiver should be tuned to the IF frequency of the FM tuner (in most 10.7 megacycles). The FM dial should then be set for 108 megacycles and reception of the satellite should be had when it passes over your location.

The second method of receiving Vanguard is to add an

adapter to the tuner to convert the tuner from an FM tuner to an AM tuner. This method is not as good as the first method since the signal to noise ratio is higher and when the satellite signals are weak reception may be difficult.

Below, technical information division members, June Berger, Nancy Monacelli, Marilyn Mercer, and Bettie Cheville, of the Naval Research Laboratory answered phones for over twenty-four hours without a break, when radio amateurs telephoned in their pickups of sputnik to the Naval Research Laboratory, whose equipment built to track the Vanguard Satellite was not able to tune in the Russian sputnik broadcasting on 108 megacycles. Right, Harry Carpenter, Al Nagy, TE/3, John Strain, and Bob Callen of the Naval Research Laboratory are monitoring the tracking on the station teletypes setup in the Naval Research Laboratory. Some of these NRL personnel were on duty for more than 48 hours straight.





The pictures and diagrams above show methods of converting the second I. F. stage of an FM Tuner so that the signal received is an AM signal. This can be fed into the microphone input of the tape recorder. To make the converter, a device called a stilt is obtained from any radio supply house and the necessary parts attached as per text. Pins seven and five of the socket, namely the cathode and the plate are the ones which are used. The FM Tuner is then tuned to 10.7 megacycles to pick up the Vanguard broadcast.

The adapter consists of an AM germanium crystal detector which is mounted on the adapter as shown in the diagram and photos. This adapter is plugged into the tuner at the tube socket of the last IF stage just ahead of the limiter tube. It is very important to plug this in ahead of the limiter. The crystal diode and associated circuitry are connected off the plate pin and ground pins. In the case of the Pilot tuner used, 5 was the plate and 7 was the ground. If you have any doubts as to which is which consult the manufacturers manual, your local serviceman or a radio ham.

As the tube must be replaced in the top of the adapter, you should check first to be sure you will have room for both tube and adapter inside the tuner case.

The capacitors are standard postage-stamp type of 750 ufd. and the resistor is a standard 1/2 watt, 10% accuracy carbon resistor. The diode is not critical, however, we used a 1N48 which worked very satisfactorily.

To receive the signals you should have a good FM antenna, preferably of the outdoor type. Any good FM dipole should be satisfactory.

To get the signals on tape the output of the converter should be connected to the input of the tape recorder. If the system using the converter and diode is used the

Photos of the above show top end of stilt with wires connecting to proper terminals for using a short wave receiver in conjunction with an FM Tuner. Shielded wire should be used to make the connection and this should be taped to the stilt to prevent it from being pulled loose accidentally. In this case the tube which is removed from the socket of the tuner is not replaced in the stilt. Pins one and seven shown in the diagram are connected to the short wave receiver which is tuned to 10.7 megs.

input should be made to the microphone jack on your recorder.

Using the other method, where the signal is fed into a short wave receiver, the output of the receiver may be plugged into the radio-phon input on the recorder.

Because the signals will be "beeps" and may reach good volume, the new low-print tape will avoid any difficulties from print-through.

If your recorder has a monitor switch, to enable you to hear program material as it is recorded, the switch should be thrown so you can hear what you are actually getting on the tape.

The Vanguard satellites, of which a number are planned for firing during the Geophysical year, will have power varying from 80 milliwatts (80 thousandths of a watt) to a full watt. Even though the power is low there will be little to block its path when it passes over your locality.

While the signal is only beeps, there is an undeniable thrill in listening to and recording them, knowing that they are actually coming from a man-made vehicle in space.

We can't tell you where or when the next satellite will begin its journey but we do suggest you be ready to record it.



Christmas

TIME doesn't just fly—it's a regular whizzing Sputnik. It seems as though you've just finished gently lifting the last ball off the Christmas tree and packed it away when the kids start jogging you with, "Boy, it's just 42 more days till Christmas."

The grown-ups all begin heaving sighs of well-remembered fatigue, while the youngsters all begin heaving hints of what they would like from Kris Kringle. After a hasty glance at the bank book, we begin to concentrate on the familiar gift list. This year something new can be added. I'm referring of course to recorded stereophonic tapes, a perfect solution to the problem of what to get for that him or her fortunate enough to be the proud possessor of a stereo playback machine.

With the ever-increasing list of stereo playback recorders now available, together with conversion kits and adaptors, it quite naturally follows that there will be an increasing demand for stereo tapes. It follows also that a seasonal music tape fits the occasion most appropriately.

Bel Canto has a stereo tape available which includes twenty traditional Christmas carols. It features Robert Rheims putting the Mighty Wurlitzer Pipe Organ at Columbia Square in Hollywood through its paces. He is accompanied by a fascinating integration of hammer-struck



chimes and the Maas-Rowe electronic carillons. Never before have these carols been so dramatically presented. This tape is available for either stacked or staggered machines. It's tape number ST-702.

Two new seasonal releases are being marketed by Capitol Records, both of which are worthy of inclusion in any music appreciation collector's repertoire. Tape ZF-14 presents the

music of Christmas, played by The Hollywood Bowl Symphony Orchestra, conducted by Carmen Dragon. It contains eleven symphonic arrangements. ZF-15 contains fourteen selections, beautifully sung by the Roger Wagner Chorale. These tapes are available for inline heads only.

Hallowed hall, crisp night air, the singing around the crackling hearth side, every locale is glowingly suggested by the Christmas arrangements displayed on Concertapes No. 505. Incomparable stereo recordings of time-honored favorites by the Concertapes Orchestra and The John Hal-



loran Choir. From sleigh bells to trumpet, from violin to soprano, the large chorus and orchestra are vividly recorded in full roundness. This tape evokes the spirit of Christmas the year 'round. Available for either stacked or staggered machines.

Livingston has issued a Christmas Highlights tape on which the Oberlin Choir and organist Emory Fanning artistically offer many of the well-known Christmas favorites. 724 BN is the number to ask for, and it is for either stacked or staggered heads.

A new presentation from RCA is their CCS-86 release, Christmas Hymns and Carols, Volume I. This high hi-fi tape features the Robert Shaw Chorale, giving out with their usual fine renditions. The singing is a capella, and the reproduction is similar to that of a big hall or church. Inline only.

Christmas In Stereo-O is the title of Tape-Of-The-Month's S-313 seasonal tape. This company is proud to present Frank Virtuoso and His Merry-men. Frank is an all round performer. During the war he was leader of the U. S. Navy Band at Bainbridge, Maryland, he has played in the



1 Stereo Tape

by Jean Cover

finest supper clubs in the east and has built up a tremendous video following. Ten Christmasy selections are presented



on this stacked or staggered machine tape. Eddie Osborn plays the recently constructed mammoth pipe organ of Replica Records on that company's T-517 tape. The first half of this tape is for the kiddies, and the carefully selected songs brim with Christmas cheer, thus endearing this spirited recording to their bubbling hearts forever. Some of the oldest and most beloved carols merrily bring the true messages of Christmas joys, through the nimble fingers of Fabulous Eddie in the second portion. Eddie, as his own narrator, refreshingly employs the glockenspiels, xylophone, drums and bells to give your favorite Christmas tunes the effervescent bounce which has



made him famous. For stacked or staggered machines. Sony has released a tape with Christmas carols rendered by the Culo Costello Male Chorus, a Japanese singing group. The popular carols are sung in English and German. Beautiful voices, effective stereo, on this F-4 tape, which is available for inline machines only.

There are two different and quite listenable Christmas tapes available from Vanguard. An 18th Century Christmas is the title of tape VRT-3017. Selections include Corelli's "Christmas Concerto" and other 18th century string music associated with Christmas. Antonio Janigro conducts I Solisti di Zagreb. On the other, entitled "Liane Sings Christmas Songs," VRT-3016, there are seasonal songs of all countries, including American. Liane is the famous thrush who has built up a vast American public solely through her records, revealing a sultry voice and an ability to sing with the same captivating style in a half-dozen languages. These tapes are obtainable in either stacked or staggered form.

Some of these haunting tapes are most adequate for being played in your church on the 25th, or perhaps at some pre-Christmas services. A consultation with your clergyman might warrant such a suggestion.

Add a little zest to your Christmas party or family gathering via these stereo gems. After a hearty dinner with all the trimmings, everyone just seems to want to relax in the afterglow—what better way than to spin a stereo tape of carols, sit back, give a slight contented burp and listen.

This past year stereo on tape has been heard and thoroughly enjoyed by more people than ever before. Once this truer reproduction of sound has bent the ear of a heretofore unindoctrinated individual, he is no longer content with anything less. Hearing it for the first time is a real treat, and a warm gathering of people at Christmas is a perfect time to welcome listeners to the stereo fold.

Just as a suggestion, you might place two speakers behind your Christmas tree and conceal the recorder somewhere else in the room. When everyone is comfortably sprawled about, push the burton and watch the startled, but delighted, faces of those present light up.

Then too, you could try something using other stereo tapes. For instance, you might obtain Audio Fidelity's Railroad Sounds tape and spin this while the offspring's train circles the tracks. Also, the stereo dance tapes available are better than ever for those who feel an evening is not complete without this type of entertainment.

Have a merry stereo Christmas!



Monika



Grandmother

How Many Miles to the Heart of a Child?

BY RANIER F. MEYEROWITZ

... here is the heart warming story of a Christmas reunion of a war separated family—via tape.

SEPARATION has always awakened the deepest emotions. The yearning for a husband, wife, or parent, the longing of a mother and father for their children, the desire of a father to see the child he begot but never saw, are drives which can lend strength and endurance to even a physically weak person. A man may be hardened and callous to his fellow beings, but he is not entirely devoid of this emotion; he too will look forward to reunion, if not with friends or relatives, then with a place he knew in his youth or early manhood.

Millions of people, young and old, experienced the bitterness of separation in the last two decades. I was one of many children sent away from Germany before war broke out in Europe in 1939. The British Isles took most of these children, refugees from Nazi oppression. Since unemployment was widespread in Britain, the parents of all these children either stayed behind or, if they were very lucky, made their way to some other asylum. Some of these new homes proved to be false security, like Holland and Belgium, which were soon overrun by Hitler.

I spent the first four years of my exile in Scotland; neither my parents nor my two sisters succeeded in emigrating from my native Berlin; they stayed there until our home burned down in an airraid in January of 1943. My father died, fortunately, in 1941. I say fortunately, for soon after that time the racial and political persecution reached a climax. After our home was destroyed, my family lived scattered in different parts of Germany until the end of the war; in the meantime I had moved to the lower half of the Isles, England.

Such is the complete breakdown and paradoxical nature of modern man in time of war that for six months after the war came to a halt, not a single communication with

my family was possible. Even the brief wartime Red Cross messages were discontinued; indeed, none of us knew if the others had survived.

My eldest sister in Freiburg had to learn from me finally that her sister and mother in another part of Germany were still alive.

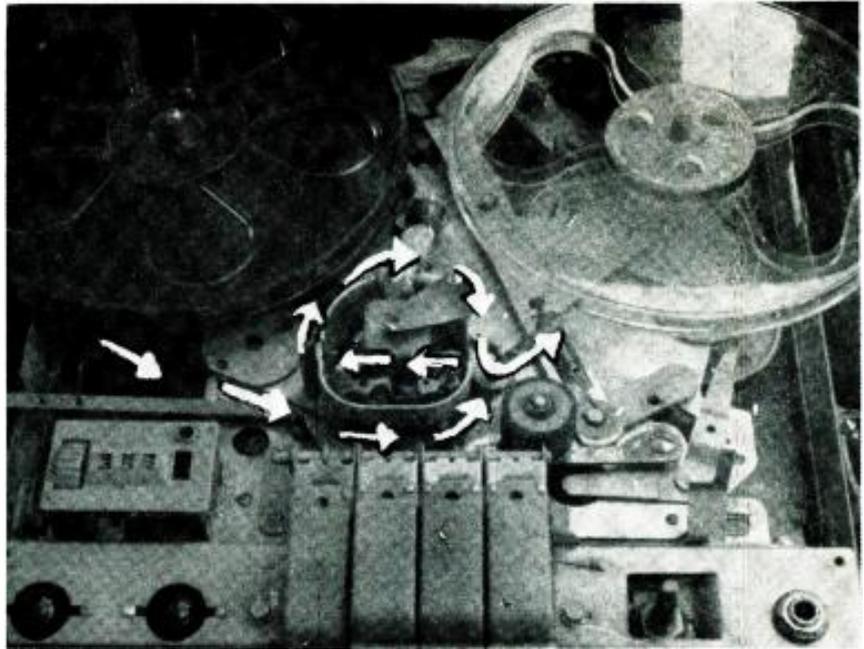
When the Americans, in their advance through Germany, arrived at Remagen on the Rhine, it took them just six hours to throw a bridge across the river to replace the ones the retreating Germans had blown up. Similar feats were accomplished by all nations during the war; yet half a year could go by when hostilities had ceased before a simple "I-am-alive" message could get through.

I emigrated to this country in 1947; less than two years later my mother and one of my sisters joined me. Ten years of separation were over; we were all together except for my eldest sister, who married a few days before my mother left and who stayed in Freiburg. A year and a half later, she gave birth to a daughter, Monika.

Several years went by and Christmas approached. Year after year, for one reason or another, we had found it impossible to visit my sister in Freiburg. Monika was a young lady of five years now, and we, here in the States, were yearning more and more to see the youngest member of our family.

December was well on its way when I came down with a severe headache and fever. While my mother was on nursing duty at the hospital, my tape recorder kept me company. One evening, while listening to a poetry recording made by my fiancée, the idea of exchanging tapes with my sister, so often described in news of tape clubs, took sudden and compelling hold of me. I dashed off an air mail letter to my sister in Germany, begging her, at that late date, to do her

The Christmas tape, when it arrived, could not be played in standard fashion on a machine made in the United States, because the German recorders record the lower track first instead of the upper. Reversing the reels to get the lower track on top merely resulted in the message being played backward. The author solved the problem as shown on his Revere tape recorder. The tape coming from the feed reel left is taken around the lower part of the head assembly and then across toward the left in front of the head. It is then taken around the pin and back of the head assembly, then through the capstan and roller to the take up reel. By this means he was able to successfully play the tape and copy it to another one which could be used in ordinary fashion.



utmost to get a tape recording of Monika and send it back by airmail for me to play to mother as a Christmas surprise; we would send an answer after Xmas. My poor sister had to walk miles to have the tape made and to get it off through postal regulations. She did a wonderful job of coaxing her little daughter to speak into this strange box in a stranger's home (tape recorders are prohibitively expensive in Germany and only a few people have one). In just over a week the tape arrived, luckily after my mother had left for work.

I immediately unpacked the tape and put it on my recorder, pressed the play button, and waited with pounding heart. To my unspeakable horror what came out of the speaker sounded like a man with a Cockney accent speaking through a 300 foot one-inch pipe—in French.

I did some fast thinking and concluded that the tape was B-wound. Replaying it that way eliminated the Cockney and the French, but produced a muffled sound. This gave me the clue that I was playing the tape in the right direction but the wrong way out, i.e., that machines in Germany play from right to left instead of left to right as do American-made recorders. I thereupon took the top plate off and guided the tape around the head as shown in the diagram.

If any reader attempts this "engineering", here are a few more helpful hints. Use whatever vertical and round points your recorder has to guide the tape past the head from right to left and back around the housing and between the drive-shaft and roller. You may not even have to take the top plate off—that'll depend on your machine. If the vertical points are sharp, cushion them with paper, cloth or what-have-you. A pencil or similar object may be useful to guide tape at the correct height—if the tape runs only a little too high or too low it will adversely affect the sound. You may even have to tilt the head temporarily, as far as necessary until you get good sound. Remember its original position before loosening it if it is so constructed that you cannot return it to normal easily and accurately. Finally, when you have everything working well, you ought to record it on another machine for future use—if you intend to play it more than once, that is. Not only will there be easier play-

back, but you will avoid the excessive wear and tear the tape will be subject to if played the "wrong" way frequently.

The reels, of course, are left in their usual position.

The result was gratifying: Monika's hesitant child's voice clearly sang out "O Tannebaum, O Tannebaum," Germany's favorite Christmas carol (same tune as Maryland, my Maryland!!). I heaved a sigh of relief, carefully hid the tape and put the recorder back together.

My sister had come from Chicago for the holidays, and when I asked her, mother and my fiancée (my folk dance partner, Tape Recording Dec. 55, now my wife!) to listen, and Monika's voice came lilting through the pine-smelling room, my mother's face took on a glad radiant look, as she sat entranced and drank in the voices of her granddaughter and eldest daughter.

As the tape reeled on, Monika began to lose some of her shyness and told her grandmother how simple it was "to take the ferry and come across to Germany". After ten minutes or so, however, the little girl plainly could be heard to get impatient, with such answers as "I don't know anything!" to her mother's demands to tell "Oma" (granny) something. I for one could fully appreciate Monika's growing rebellion when later I spoke an answer into my own recorder, in complete privacy. Words appeared to have the consistency of glue, so obstinately did they refuse to leave my mouth. The handclutch on the recorder was in constant use! (Unfortunately, postal regulations did not permit sending a tape answer to Germany).

When my sister asked Monika what she would do with Oma, the little girl replied: "Play!"—"And maybe go to the theatre?", asked her mother. "That'll be all right with me too", answered Monika.

Toward the end, a tired small voice, tinged with subdued sobs, let out a steady "yes, yes!" to her mother's diplomatic and hopeful hints. Just before the finish, however, she rallied and voiced her conviction that Oma "will surely think that Monika is right there!"

And for a moment Monika was.



BUY YOURSELF A KIT FOR CHRISTMAS

BY A. PEARCE KING

... you'll get a few hours constructive fun and a lifetime of use from the high-quality kits now on the market.

A LONG about this time of year when the Christmas club checks will soon be due, or you can smell a company Christmas bonus in the offing you can sense a general loosening of the purse strings.

About this time of year, too, you start making gift lists and tearing them up and remaking them again. We'd like to make one suggestion—put yourself down for a kit to make whatever you want in the audio line. Either that or leave enough catalogs around the house open to the right pages so that others can take a hint and order in time to put it under the Christmas tree for you.

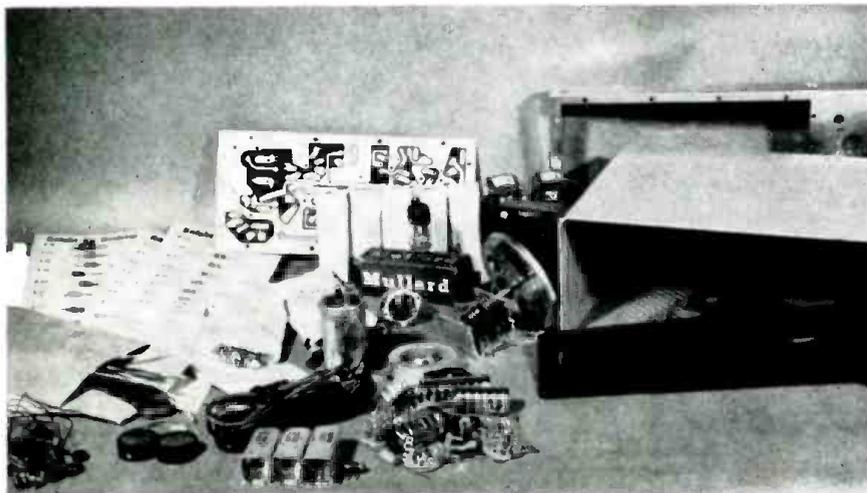
One of the nicest gifts I ever received was an amplifier kit, a Knight Linear DeLuxe Amplifier. When I first opened the box I wasn't too sure about it because I had never thought about putting a kit together before. It wasn't something I had asked for or even hinted at for I thought

it well beyond my powers as a do-it-yourselfer.

Now I am about to join the ranks of those who might almost be called "kit happy." I know of some folks who buy kits for the sheer fun of putting them together, even though they could well afford to buy any complete package unit they desired. Some folks put the kits together and then sell them to recover the costs and go right out and buy another kit and repeat the process. This usually isn't done until you have built the kits you want to keep as part of your music system.

It is surprising how many kits are available, from a simple crystal detector radio that uses an earphone to a large speaker cabinet costing hundreds of dollars.

Just glancing at one of the catalogs reveals a striking number of items. There are kits for transistor portable radios, communications receivers and ham transmitters,



At left is shown the parts for building the Knight FM Tuner. At first glance this seems to be a maze of pieces and wire. However, by carefully following the step by step directions contained in the assembly directions even the merest beginner can successfully construct a fine, usable unit. In addition to providing a few evenings of pleasurable construction activity, the finished tuner will provide many years of excellent reception.

oscilloscopes, meters of all types, tube testers, tuners, both AM and FM, signal generators, audio oscillators, electronic flash outfits, amplifiers, speakers . . . you name it—someone makes a kit to construct it.

Quite frankly I approached my first kit with some trepidation. When I opened the box and saw all the assorted parts I thought I would never get it together. But after reading the instructions and actually getting started, it was difficult to leave it. In fact, after it was finished and operating I was sorry it was finished, putting it together had been so much fun. I had no trouble at all believing the advertisements that state even a child could put one together.

The only tools required are a pair of long-nosed pliers, a soldering iron and a screw driver. A pair of diagonal cutters are handy to have around also.

I would suggest that you set up your base of operations in some spot that will not be disturbed. It is a nuisance to stop working and to have to pack away all the parts until another time. It is much better if you can spread them out on a broad tabletop and, when you are called elsewhere, or are off to work for the day, to be able to leave them as they are until you return.

So absorbing is the pleasant task of constructing a kit that you will find you will resent interruptions.

On the face of it, it may sound rather silly to feel sorry when the job is done because, after all, the object of the whole project is to complete a working unit of whatever kind you have chosen.

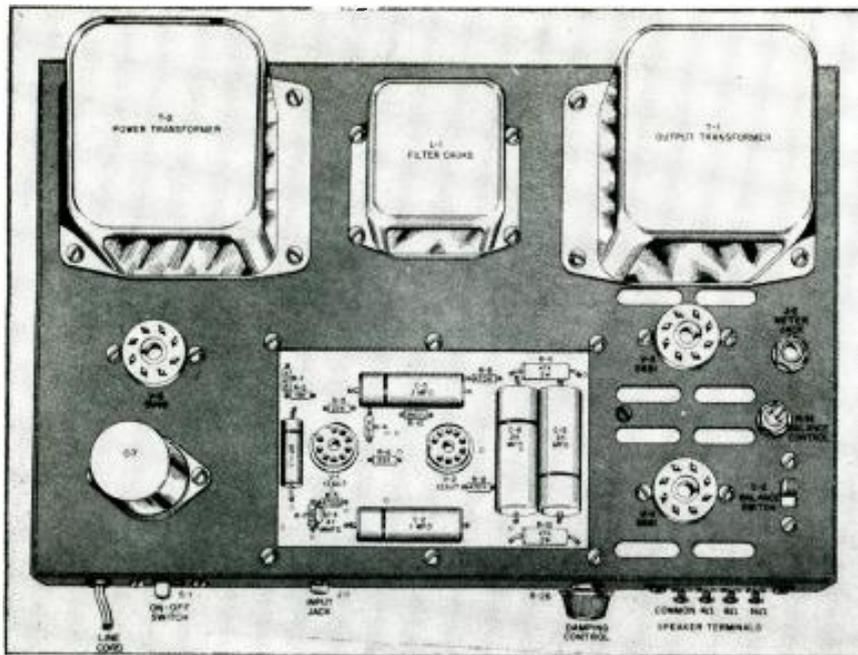
But as the great writer Cervantes said, "The road is better than the inn." And so you will find it too. Once you have put a kit together you will better understand the feelings we have been trying to describe.

Not being adept at intricate wiring, we were happy to see that this amplifier kit contained a printed circuit board. This eliminated most of the difficult wiring and with it that many chances of making an error.

The printed circuit board is a sheet of insulating material on which has been fastened a sheet of material to conduct electricity. This is then etched away and what remains is an actual hookup between the component parts. One is shown in the photo. The reverse side of these boards is printed with the names or numbers of the components. All you need do is to



Almost every sort of radio and audio equipment is obtainable in kit form. Oscilloscopes, ham receivers, audio generators, regular broadcast receivers, amplifiers, speakers of every kind, and AM and FM tuners, reading from top to bottom, all can be had in kit form from the manufacturers. The units shown here are from the Heath Company and the Allied Radio Corporation.



The diagrams furnished with all of the kits are very complete and detailed. This layout shows the diagram of parts placement for the Knight Linear Amplifier, made by the Allied Radio Corporation. In addition to general diagrams such as this there are specific closeup diagrams at any points where wiring is complicated. The use of printed circuits in kits such as this has eliminated possible mistakes in wiring and speeded up the construction.

push the leads through the holes, solder them in place and clip off the excess wire.

There are a few rules to be observed when working with printed circuits. The first is not to apply too much heat to the board or you may loosen the circuit from it. If you use a low wattage soldering iron (about 50 watts is good) you will be far less likely to do any heat damage.

Soldering the leads is a bit different too. The iron is applied to the lead after it has been pushed through the hole and bent over slightly. Once the lead is hot, the wire solder is applied and it melts and forms a bond between the lead and the printed circuit. Clip off the excess lead and the joint is complete.

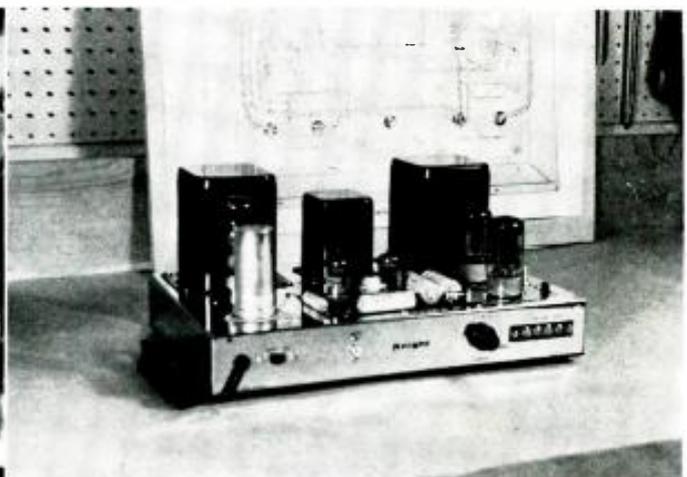
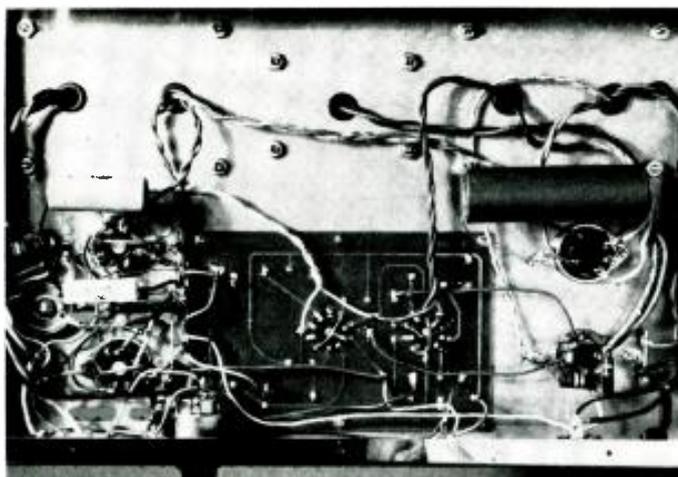
Sockets are attached by flowing a bit of solder between the socket pins and the printed wiring. It's as simple as that.

Because the prices of the kits are so low in comparison with the cost of a similar finished product, it might be thought that somewhere along the line quality had suffered a bit.

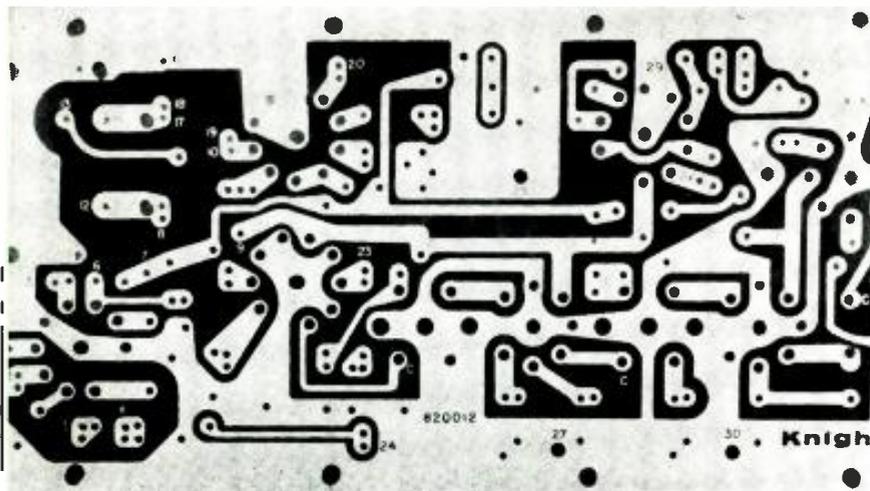
Such is not the case. Many firms give a 90 day warranty—even though you put the kit together! That's how sure they are that it can be done right. The low cost is apparently made possible because of volume purchases of components. If you were to buy all the parts separately we would dare say it would cost you more than the kit.

There are only a few general points to be considered in putting a kit together. One is to follow the instructions step by step and to the letter. Mark off the wiring as it is completed on the large pictorial diagram that is furnished with most kits. Also check off in the spaces provided, each step given in the instruction book.

Remember that the solder is not supposed to fill in large gaps between the wires and the terminals. All connections should be made, bare metal to bare metal and squeezed tight before the solder is applied. . . . just as though you were not going to solder it at all. Another thing to do is to let the solder cool and harden on a joint before you wiggle it to see if it is tight. Any motion in the joint before the solder cools will crystallize the solder and give



Left, the underside of the amplifier showing the printed circuit board and its connections to other components on the chassis. At right can be seen the completed amplifier and behind it one of the large detailed drawings on which the wiring is checked off as it is accomplished.



Left. This is a printed circuit board which is furnished with the Knight FM Tuner. To complete the wiring it is merely necessary to push the leads from the various components through the board which is printed on the reverse side and solder them to this side. Below, the technique used for soldering printed circuits is a bit different than for connecting components to components. If too much heat is applied to the printed circuit board it may result in the circuit pulling loose from the insulated base. Soldering should be done as shown in the lower drawing where the lead is pushed through the board and the soldering iron applied to the lead. When the lead has become hot the solder is touched to the point where the lead passes through the board and it melts and then hardens. The excess lead is clipped off and the job is complete. In mounting sockets the solder is flowed between the socket contacts and the printed wiring as shown in the upper part of the drawing.

you what is known as a "cold solder joint." These can be very pesky and might result in you having to do some trouble shooting afterward.

Remember to heat the metal of the joint and then apply the solder to the metal. Don't melt it on the surface of the iron and expect it to stick to cold wires and terminals—it won't.

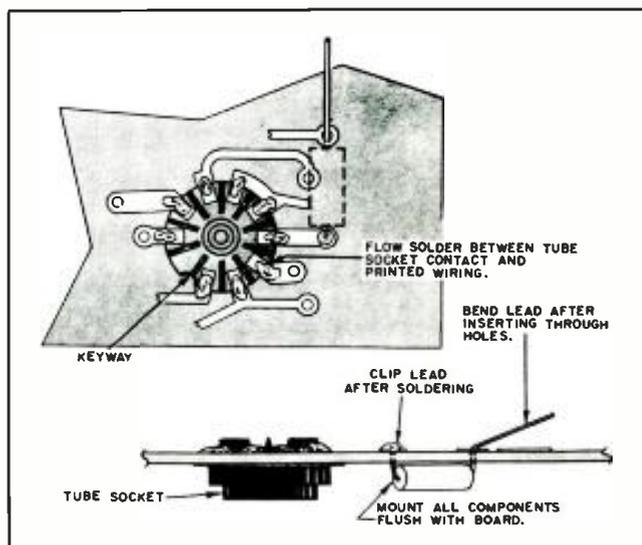
Keep all leads as short as you can. Just because a resistor or capacitor has a two or three inch lead protruding from each end is no reason you must use all of it. Twist the leads around the terminals and then cut off the excess.

Bare wires should be covered with the spaghetti insulating tubing furnished with the kit and where "pushback" wire is used, the insulation is merely pushed back using a pair of long-nosed pliers instead of being stripped off. Then after you have made the connection and soldered the joint, the insulation can be put back in place again right up to the joint.

Follow the diagrams furnished with the kit and you will have no difficulties. In some instances it is important that the wires follow the courses shown on the chart to eliminate hum or hold down capacitance, so follow the plan.

Before we leave the subject of soldering completely, be sure to use only rosin core solder. Acid core solder is fine for drain pipes but is ruinous to audio kits. In fact, if acid core solder is used it voids the warranty given by the kit manufacturer.

It might seem that the owner of a tape recorder might not be very interested in kits because his recorder is a



"package" unit. But there are a number of kits that are of great interest to recorder owners.

For instance, the most obvious is the tuner, either AM, FM or both which will enable the recorder owner to make clean, clear off-the-air recordings of his favorite music for his own amusement.

Then there is the audio generator which will produce tones from way down there to away up here. With this device, plus a VU meter or a vacuum tube voltmeter he can check his recorder performance for himself and keep it in tip-top shape.

The oscilloscope, while not necessary, can be a lot of fun in making visible the music or voice as it is played from the tape. And, of course, the amplifiers and speakers can be used to provide the second channel for stereo reproduction or to extend the range of the recorder by providing greater amplification and larger speakers. It is sometimes a revelation to hear a recorder that you might think is quite ordinary, played through a good speaker system. You won't believe your ears.

So like I mentioned earlier, plan to put yourself down for a kit this Christmas or pass around the hints. Kits make excellent gifts for others too and if you have some special friends whom you want to please I could suggest nothing better.



A soldering gun and rosin core wire solder is the most effective combination in assembling one of the regular kits. Making the soldered connection is easier than pasting pieces of paper together. Wives or sweethearts enjoy soldering components in a chassis.

TAPE RECORDING IN THE CHURCH

BY

REV. ROBERT L. GRUPP

... Your recorder can be of service to your church — and the church should own one too —

This pulpit microphone carries the sounds of worship to the tape recorder and to speakers in other parts of the building.



MEMBERS of a certain church were mortified one evening when the needle got stuck and for five long, embarrassing minutes their tower amplifier repeated the same three notes, over and over. That church is now investigating the possibility of adapting tape to their system.

Already an active "member" of many churches, the future promises an even greater place for tape in the life and work of our churches.

Available religious tapes cover a wide range, from bells and chimes for tower amplifiers to dramatizations of Bible stories for the Sunday School.

The permanence and fidelity of tape greatly increase the dignity of such presentations.

Commercial sources for tape are becoming more numerous, with quality as well as quantity definitely on the upswing. Churches will want to take advantage of non-commercial sources, too, such as libraries, denominational boards, government agencies, colleges and universities.

"Canned music flatness", which heretofore tended to limit the church use of audio systems, is being chased out of the picture by the new stereophonic reproducers. Taped organ selections and other sacred music can now be used in situations where monaural systems would be inadequate, if not actually distracting.

Stereophonic realism will assist more and more in the early preludes for worship services, as background music for sacred presentations and outdoor services. Churches

which are open certain hours of the day for private worship will find these taped sacred selections ideal.

Churches should give serious consideration to the purchase of such high fidelity installations, regardless of their present equipment. The additional cost is not too significant when compared with the realism and dignity of this new medium.

In a number of churches fine tape recording equipment is gathering dust in closets reserved for oddities and seasonal items. Enthusiasm somehow did not outlive the initial curiosity appeal.

In other churches, including that of the writer, the tape recorder has taken its rightful place as an important tool, and its careful use is making significant contributions to the life and work of the church.

There are many novel uses which the recorder can serve. One example concerns the minister who had to absent himself from an important board meeting. Before leaving town he taped personal comments which his wife switched on at strategic moments in the meeting.

But the real value of the tape recorder is found in the consistent and well-planned uses to which it is readily adapted in the total life of the church.

The recorder cannot make professionals out of the choir, but if used wisely it can assist in bringing about many improvements.

One choir director totes the machine to every rehearsal

and records the last forty-five minutes on LP tape. The next day, in the comfort of her living room, she spots flukes and flaws she had not noticed in rehearsal. By using a good microphone and the $7\frac{1}{2}$ i.p.s. speed she has little difficulty in identifying individual offenders.

Replaying passages during rehearsal has also been found to be helpful.

The choir's participation in worship should be recorded every Sunday for the benefit of the critical ear of the director. These tapes can be put to other uses, too, such as hospital and shut-in visitation. The best could be edited and saved.

A satisfying treat at any choir social is a twenty minute concert of the cream of the anthems. Those who wish could order discs cut from the master tape.

Of course, the above comments also apply to junior choirs, smaller vocal groups, soloists, and instrumentals. The hard-working organist should be remembered, also. Too often those lovely preludes, offertories, and postludes are considered just so much filler.

Details of the Sunday morning recording should be worked out carefully between pastor, choir director, and anyone else concerned. Since both music and speech are involved the $7\frac{1}{2}$ i.p.s. speed is the most desirable. The thinner based tapes come in handy here, for the standard 1200' reels would not be adequate for the material in an average church service.

The location of the recorder is important. It should be situated for the maximum efficiency and the minimum of distraction.

One church places it in a small room back of the chancel, completely out of sight. In larger churches the location of the amplifying equipment is the deciding factor, and a patch cord is used to transfer the signal to the recorder.

The last pew holds the machine in another church. Power and microphone cables are all concealed and permanently installed, which disposes of any possibility of someone tripping over cables. A trained volunteer is at the machine each Sunday morning, and with the aid of a marked program records specific portions of the service.

Editing is done by means of a motor switch since the recorder doubles as amplifier to the speakers in the nursery and basement. This arrangement allows the operator to participate in the service.

With such more or less permanent installations the recording of funerals, weddings, and other special events is easily done.

In most churches one will find a number of high school students ready to volunteer as operators. Since emergencies and unforeseen difficulties sometimes arise, these young people should be carefully trained.

Some ministers like to save tapes of at least their better homilies. One pastor has developed a system whereby he can record and permanently keep his Sunday messages for not much more than thirty cents each. What minister would say his last Sunday's discourse was not worth thirty cents?

Portions of the service are recorded on an 1800' reel at $7\frac{1}{2}$ i.p.s., using only one track so the tape can be edited. If the choir director wants the anthem saved, it is cut out and placed on a separate reel.

Roaring lions and chattering monkeys bring to life the story of Noah's Ark for this attentive Sunday School class. The reel of sounds of animals distributed by Phonotapes comes in handy for this purpose.





On the left, choir members gather around the recorder to hear an after-worship playback of the anthem. The use of the recorder in choir practice makes for much smoother singing. Lower left, the author, also a camera fan, checks his tape commentary on a set of personal slides of the Holy Land. His audio visual lectures have been presented to many groups in the midwest. Right, the back pew holds the tape recorder in one church. The operator, a high school student, keeps a watchful eye on the proceedings to record portions of the service marked out on the worship program.

If the minister decides the sermon is to be retained he records it via a second machine onto less expensive plastic-based tape at $3\frac{3}{4}$ i.p.s. In this manner he can record as many as six sermons on one 1200' reel of tape, using both tracks. For less than \$20.00 he can record and save a whole year of his sermons as they were delivered to his congregation. This constitutes a wonderful, living homiletical file.

The advantage of taping only select portions of the service is quickly seen when one considers taking such recordings to hospitals, nursing homes, and individual shut-ins. A thirty to forty minute recording is in most cases quite adequate.

If such tape-visitation is extensive a second recorder or one of the lighter tape players would be helpful.

The various organizations within the church will find many uses for the tape recorder.

Two youth groups in midwestern churches are carrying

on systematic correspondence by tape with similar organizations in Africa and Europe.

The young married couples of another church are busy with their 35mm cameras documenting the life and work of their church. An accompanying tape is being prepared and will include dubbings of actual sounds of their church in action. Everything from the church bell to the Sunday School picnic is being put on tape.

Forums, discussion groups, panels, special speakers, concerts, interviews — all of these are naturals for the tape recorder.

The whole church benefits from the judicious use of tape equipment. This exciting and versatile medium presents almost limitless possibilities for industry, government, education, *and* the church.

Put tape to work in your church, and you will find that it can be a mighty helpful and inspiring "member."

RELIGIOUS TAPES FOR CHURCH

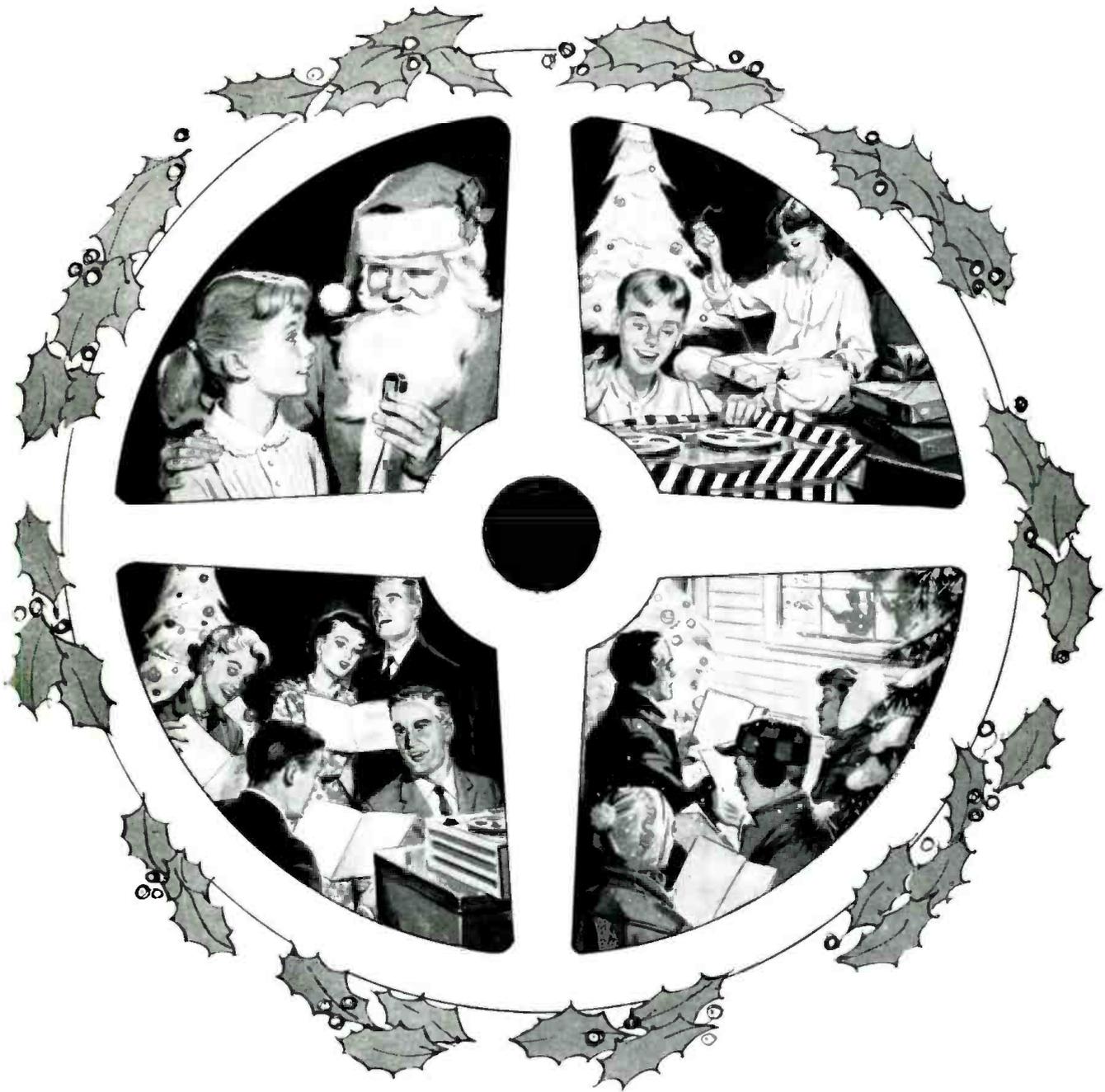
There is quite a bit of material already on tape which can be used for religious instruction in the church or the home. This ranges from the animal noises mentioned in the caption on the Sunday School picture to reels intended for the use of the clergy, covering such items as the preparation of sermons, etc.

The EMC Recordings Corp. has a num-

ber of reels of stories from the Bible in their "Told from the Book of Life" series of tapes. These are all Old Testament readings and are on monaural tape.

There are three religious tape libraries: the Biblical Research Society, 4005 Verdugo Road, Los Angeles 65, Cal., which has a library of talks by Dr. Cooper for loan or dubbing. The Reigner Memorial Library of

the Union Theological Seminary, Richmond 27, Virginia has a very extensive collection of tapes which are loaned free and among which are tapes by the famous Peter Marshall. They have an extensive catalog which should be in the hands of every church leader. The Evangelical Foundation, 1716 Spruce Street, Phila., Pa., rents tapes of complete church services and Bible studies



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

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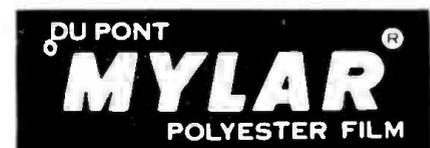
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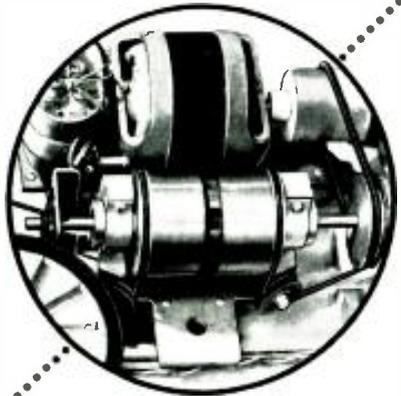


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TAPE IN EDUCATION

BY JOHN J. GRADY, JR.



FROM our 49th state, the beautiful and glamorous islands of Hawaii, there comes an encouraging report relative to the status of tape recording in the schools of the islands. Through the courtesy of John J. Harding of Honolulu, distributor for audio and electronic lines—including this magazine, *Tape in Education* thankfully acknowledges the receipt of notes and comments from various island educators, who are associated closely with the experimentation and the expansion in the use of magnetic tape in both the public and the private schools of a very happy area of the United States. It is a delightful area which is winning deserved fame as a year-around playland chiefly because of the development, during recent years, of safe, speedy and economical air transportation from the Pacific Coast. In less than a day planes carry loads of eager tourists of the mainland to a tropical and exotic group of islands. Waving palm trees, a wealth of flowers, soft, appealing music, and graceful dancing contribute charm to a happy way of life that is really none-of-our-business, so we better get back—right now—to the business of tape recording. Pardon us, for digressing, but an assignment, that seems long-long ago, to naval gunnery training at Honolulu was truly something—and unforgettable. Aloha, nui, Waikiki.

Deprived of close contact with the expanding practice in the schools of the mainland of teaching various subjects more efficiently by use of magnetic tape, the general application of audio to classroom use, in Hawaii, is in an elementary state in the public schools. A tape library is not maintained, which would help teachers to avail themselves and their students of inspirational instruction that is well-established in numerous states. A territorial tape library would seem to be a truly great project for the University of Hawaii. A study of the popular installation at the University of Minnesota could be of advantage to the administrators at the growing soon-to-be state university at Honolulu.

There is general recognition of deficiency in present physical and curricular features of the school system of Hawaii. Recently, a team of educational experts, headed by William R. Odell, Professor of Education, Stanford University, California, completed a survey and submitted a frank report of findings and recommendations. *Tape in Education* is advised that the report failed to recommend uses of audio that are standard practice in many of the educational institutions in the U.S.A. A rather severe criticism of the report included the suggestion that the Stanford survey group could absorb some valuable ideas on modern instruction via audio by conferring with researchers—their neighbors at the Ampex plant, at Redwood City, California.

There are numerous tape recorders in the elementary and high schools of Hawaii, but ambitious faculty members indicate a desire for a course of orientation in the use and application of these teaching tools. There seems to be a need for an Audio-Visual coordinator, with facilities to fully inform ambitious teachers about procedures in successful operation at other schools. Mrs. Helen Griggs, in the Superintendent's office, is seeking alliance with functioning A-V study groups in the States. The aim is to expand the use of valuable instructive equipment. Mr. Frank Drees, head of the Adult Education Department of Hawaii, sponsors the use of magnetic tape, but facilities are lacking for wide usage and for training instructors. With present measures, a most valuable form of education is being supplied adult students at numerous schools throughout the islands.

In Hawaii, the Punahou School is a revered institution of learning. A private school, it is truly popular. For 116 years it has been an important unit in the life of Honolulu and the adjacent islands. It was founded in 1841 by missionaries. The student body of 2800 includes pupils in kindergarten and in high school. Among the graduates are many men and women of distinction and leadership. For over a century a large proportion of students have continued on to colleges and universities.

The faculty consists of accomplished instructors. It is natural, therefore, that this great school endorses instruction by magnetic tape, and considers the preparation of educational tapes to be an exciting field of unlimited possibilities. Use of tape was initiated seven years ago, in the Academy division of the school, including grades 9 through 12. Immediate success in speech and dramatics led to further expansion. Now, tapes are available from kindergarten through high school. Tape proved an immediate boon in languages. This year a "language laboratory" was launched. Students spend after-school hours with headphones on, listening and then perfecting their oral pronunciation.

Punahou's Music School puts tape to extensive use, both for recording student progress and for popular faculty recitals. A complete tape of the Music School's brilliant "Contemporary Festival of Music and Art" with students, faculty, and guest artists participating is an outstanding seasonal event. A Music Appreciation program for grades 1 through 5 is proving of value. Daily exposure to good music, whether a child listens or not, leads to eventual appreciation.

In the Junior school's social studies' work, tapes of folk songs of nations being discussed add liveliness and warmth to textbook facts. And narratives by teachers, natives of France and Germany, explaining folk songs, also add to the interest of such programs.

NEW PRODUCTS

NEW TAPE REEL



A new tape reel has been introduced by The Saint Cecilia Company, Ltd., Westwood, N. J., manufacturers of Bel-Cleer magnetic recording tape. It is molded with extra-heavy flanges which give a balanced fly-wheel-like action to tape transport, thus minimizing wow. Precision-molded of opaque plastic which is warp-proof, the reel virtually eliminates wobble and eccentricity. Large window openings in the flanges afford constant observation of tape during record and playback. Frosted areas are provided on each flange for labeling or written identification of program material.

The reel is finished in battleship gray, and at present is available only in the 7" size. Contact the manufacturer for additional details.

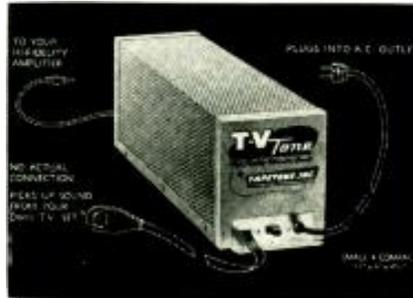
WEBCOR RECORDER



Webcor has announced the addition of a new three speed tape recorder, called the Regent. It is available as a standard monaural (2810), a monaural remote control (2819), or as a stereofonic recorder (2820). Frequency response is 50-12,000 cps; wow and flutter is less than .1%; has a numerical type tape counter; cathode ray tube recording level indicator; a professional type editing key that permits instantaneous stopping and starting the unit in Record or Playback; Monitor and Tone Control; Fast Forward and Rewind Control; Stop-Record-Play Control and a Push Record Safety Lever; Master Off-On and Volume Control; and an input jack and a two-way output jack for an external amplifier or external

speaker. The Regent Stereofonic recorder sells for \$199.95. For complete details, contact the manufacturer.

TV ADAPTER



Tapetone, Inc., of Webster, Mass., has announced its latest product, the TV-Tone adapter. This adapter takes the rich quality of the television set's input direct to the existing hi-fi amplifier and speakers. The input of TV-Tone consists of a small loop antenna, embedded in plastic, which may be placed inside or under the television chassis through one of the small back panel openings. The plastic moulded antenna of the TV-Tone picks up the frequency modulated 4.5 megacycle signal which unavoidably leaks out very feebly from every intercarrier TV set. Location of the TV-Tone antenna is important in that it should be placed in the position that gives the best audio sound from the amplifier speaker system. The fine tuning control knob of the TV set will automatically tune the best sound for the TV-Tone. For further information, write to Tapetone.

BELL & HOWELL 770



Bell & Howell, 7100 McCormick Road, Chicago, Illinois, has introduced the new model 770 recorder. It has speeds of 3-3/4 and 7-1/2 ips; twin 5-1/4 inch speakers; push-button operation; an input jack and an output jack are located on the front of the recorder for easy access; reels can be dropped on and lifted off the 770's spindle heads easily, and there is a readily-visible drop-in slot for threading the tape; and drop-off hinges permit complete removal of the case lid; and a storage area at the rear of the case accommodates standard equipment. This machine sells for \$169.95, and additional information is obtainable from Bell & Howell.

(Continued on Next Page)

RASON HI-FI TAPE ACCESSORIES



JIFFY-RASE

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- Completely demagnetize your heads
- Demagnetize tape guides

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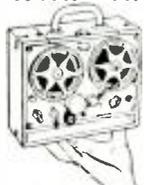
- 1145—Christmas Carols
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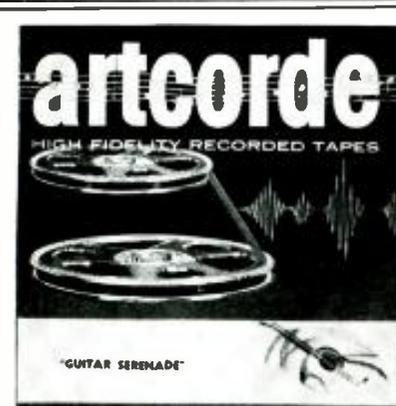


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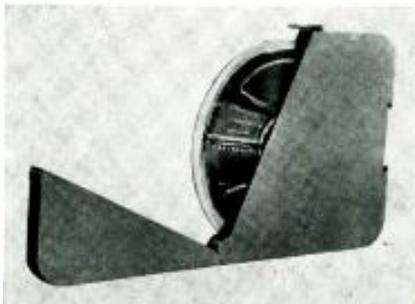
HUNTINGTON, N. Y.

NEW MICROPHONE



Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Ill., has introduced a new microphone series, the Commando. The Model 430, shown above, is a dual impedance unit featuring an on-off switch and a swivel adapter. The microphone is of impact-resistant plastic, the handle of die-cut zinc, and the Commando can be used in the hand or on a floor or desk. It is available also in a Lavalier model and a Standard model. It is priced at \$38.50. Contact Shure for complete details.

NEW TAPE PACKAGE



Ferrodynamics Corporation, Lodi, New Jersey, has introduced a new, permanent plastic package for its line of Sonotamic recording tapes. This new container is a shatter-proof, high-impact polystyrene box with a hinged front that snaps open at the flick of a finger, pushing the reel forward for easy access. The box closes tightly to protect tapes against dust and dirt. The package includes a tape-time ruler to permit accurate measurement of elapsed and remaining time. The boxes fit snugly and neatly into bookshelves, stack on a table, or may be hung on a wall by means of a dovetail slot in the back and a fitted strip. Stored in any manner, they form an attractive addition to a room's decor. Pressure sensitive index labels permit the user to keep tabs on all of his recordings, and prevent misplacement or loss. For further information, contact Ferrodynamics.

NEW PHILCO

Philco Corporation has introduced its Model TR-200 tape recorder, which features stereophonic playback. This machine has speeds of 3 1/2 and 7 1/2 ips, and frequency responses from 40 to 15,000 cps.

Good News-Hack Is Back!

on a new and startling kind of tape

ADD-THE-MELODY TAPE

(Pat. Pending)

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

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

ADD-THE-MELODY TAPE #1

The Yellow Rose of Texas—Let Me Call You Sweetheart—I Want A Girl—Girl of My Dreams—Home on the Range—Shine on Harvest Moon—Put on Your Old Gray Bonnet—Carry Me Back to Old Virginia—When Irish Eyes are Smiling—Down by the Old Mill Stream—Wiffenpoof Song and Till We Meet Again.

All the tunes you know and love. If you can whistle, play an instrument or sing you'll get a million dollars worth of pleasure from this tape.

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Hi-Fi TAPE RECORDING

Severna Park, Md.

TAPES TO THE EDITOR

When sending tapes to the editor please use the 3" reel and indicate the speed at which it was recorded and whether it is dual or single track. We will listen to your tape, make notes from it for use in this column and then reply on your tape. Please keep tapes reasonably brief.

If you do not own a recorder, a letter will be acceptable. Address tapes or letters to: The Editor, Hi-Fi TAPE RECORDING, Severna Park, Md.

To the Editor:

The following experience may prove of interest, as it would be the first place one might look for trouble.

The other evening I was taping from a console radio with clips on the speaker terminals, when, after recording, I got no playback. The recording light had flashed when I checked by inserting the mike into the input. I got out the service manual and began to look for the "symptoms," and brought over a desk light as I was going to check the tubes. Then I found the difficulty was caused by the tape twisting in some manner—the shiny side against the heads. How the tape twisted I don't know but noticing that the dull side was out gave me the clue and, of course, I corrected the trouble. You might run a couple of lines as a hint to others regarding the foregoing so that one who has similar difficulties will check before taking the recorder to a serviceman or tearing it down.—*Carl T. F. Newman, Bronx, N. Y.*

To the Editor:

The November issue of Hi-Fi Tape Recording was extra good. I look forward eagerly each month for my copy and would not be without it for anything.

I have already followed your instructions regarding building a bulk eraser. I went to my favorite radio dealer and told him, word for word what it said in the article—that is, that I should offer him a dollar for an old transformer but that he would likely give it to me—which he did. However, I did buy a switch and a metal cabinet to house it in and right now I have a real professional looking eraser, thanks to you.—*Lloyd H. Alford, London, Ontario, Canada.*

To the Editor:

Concerning the query if "C.C., Los Angeles, California," on page 21 of your September 1957 issue of Hi-Fi Tape Recording: Some time during 1956, as I recall it, I saw announcement of a speech compressor which had been developed. Its chief appeal, as announced would be to radio and/or TV stations, e.g., if they had a 12 minute speech or recording which had to be squeezed into a 10 minute slot, this machine would step up the tempo just enough to squeeze it into the desired time interval.

At the time I read of it I gave notice of it to the director of our College Choir and Glee Club and then promptly forgot about the machine in question. I am not so sure but what the machine was so set up that it could be used to "stretch out" a bit of speech or a bit of music also.

So near as I can recall, the item appeared in the magazine *Business Week* (330 West 42nd Street, New York 36, N. Y.) or in the magazine *Quote: The Weekly Digest* (Droke House, Indianapolis 6, Indiana. If the person tries these two sources they may run it down; if that is unavailing, I might be able to run it down by further search.—*Rev. V. B. Maloney, S.S.E., St. Michael's College, Winooski, Vermont.*

Thank you very much for the information. We are sure that the reader C.C. who originally asked about the device will be able to locate further details from one of the sources you have named. We believe the device was a development of the Bell Telephone Laboratories in New York City.

Speech clipping would have its advantages as Reverend Maloney points out, however we do believe that it cannot be applied very successfully to music as any change in the speed would necessarily alter the tempo of the music and perhaps affect the tone also. Speech clipping, in many cases, actually adds to the intelligibility of speech and this is what the telephone company seeks.

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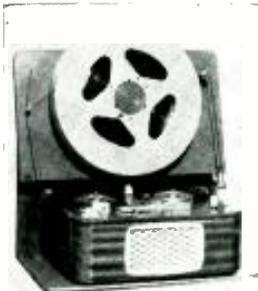


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NEW PRODUCT REPORT



THE NORELCO CONTINENTAL

. . . three speeds, push button operated, compact, light in weight.

The Norelco Continental recorder is a three speed dual track machine operating at $1\frac{7}{8}$, $3\frac{3}{4}$ and $7\frac{1}{2}$ inches per second.

It is attractively housed in a blue case and weighs only 30 pounds, making it easily transportable.

Norelco makes the statement that anyone who can operate a radio can operate the Continental—and the statement is true.

The recorder is of European manufacture being made by the Philips Com-

pany of the Netherlands. With typical Dutch thoroughness, the machine has been built well and ruggedly.

The operation is entirely by means of pushbuttons, nine of them being provided for fast forward, fast rewind, stop, record, pause, play and one for each of the three speeds.

Pressing one of the speed buttons also turns on the recorder. To turn it off after recording or playing, a small "Off" button is depressed. The record button is interlocked to prevent acci-

STAFF TESTED

*Product: Norelco
Continental Model E63516*

Price: \$269.50

*Distributed by: North
American Philips Co., Inc.
230 Duffy Ave., Hicksville,
Long Island, N. Y.*

dental erasure.

The reels can be left on the machine when the lid is closed. Most unusual is the fact that the machine should be *played with the lid closed*. The engineers who designed the recorder very cleverly have used the space within the case as a baffle and chamber for the speaker. There is a distinct and noticeable difference when the lid is closed during playback.

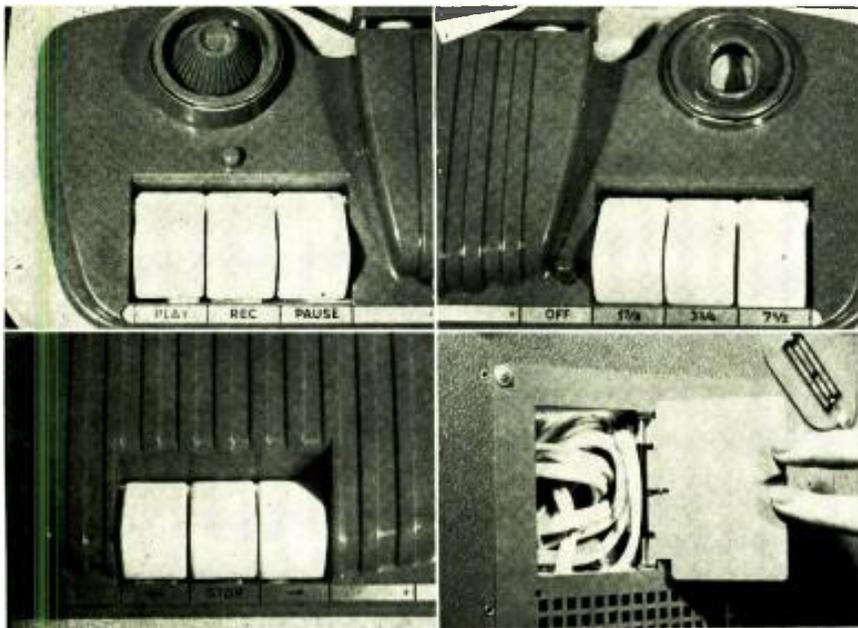
The recorder was not only tested in the lab but out in the field as well. It was used as a second recorder in making a wedding recording where a good job was a must.

The original intention was to have the Continental as a backstop for a large professional machine . . . just in case anything went wrong. The surprise came when the tapes were played back—the Norelco tape was every bit as good if not better!

The machine has been subject to all the carrying about and abuse usually accorded a recorder and has not developed any mechanical or electrical difficulties. Recordings made off the air and from disc records at all three speeds



The recorder with the case closed. Only one catch secures the lid which is entirely removable for use. Reels may be left in place.



Upper left: the left hand row of pushbuttons contains the play, record, and pause buttons, above which is the volume and tone control. Upper right: the right hand side of the recorder contains the speed controls of 1 7/8, 3 3/4 and 7 1/2 inches per second. The off button may be seen at the left. Pushing one of the speed control buttons automatically turns the recorder on. The magic eye is used as a volume recording control. Lower left: in the center of the recorder is the stop button flanked on either side by the fast forward and fast rewind buttons. Lower right: the cord is tucked away in a compartment found in the bottom of the recorder.

were uniformly excellent both in the recording and playback.

Recording level is monitored by means of a magic-eye tube and the pause button allows for stopping the tape motion without affecting the amplifier.

Automatic shutoff at the end of the reel of tape can be had if a metallized strip is placed on the back of the tape about two feet from the end of the reel. Aluminum foil, such as is used for cooking, may be used or metallized



The input and output panel on the side of the recorder contains a phonojack for radio and phono recording and the standard phone jack for the output and the external speaker connections.

paint that is made for the purpose.

Lab tests of the recorder revealed that, using the bass and treble control, the recorder met the specifications claimed. At the 7 1/2 ips speed it would meet AAA program requirements. Norelco states that the gap in the head, which is the prime factor in frequency response range, is only .002 inch. The loudspeaker is a Norelco twin-cone of wide range design.

The engineer reported that in his opinion there is no question about the excellence of the design, both mechanically and electronically.

The microphone supplied with the unit is a high impedance dynamic which has its own desk stand. This is packaged in a small zipper case which does not fit into the recorder case. Three connecting cords are supplied. These are of fine quality and should meet all recording needs.

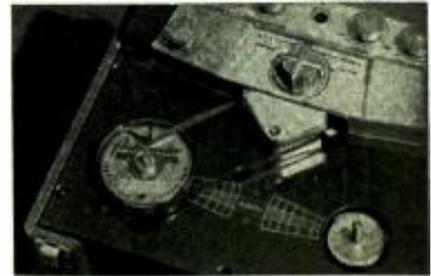
The line cord tucks away in a compartment with a spring door on the bottom of the recorder.

Signal to noise ratio was satisfactory as was the wow and flutter, even at the low speed.

The inputs include radio-phono and microphone. The outputs are for external speaker and external amplifier.

We feel that this recorder is worth the price asked and is worthy of your consideration if you contemplate purchasing a machine.

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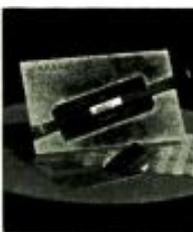
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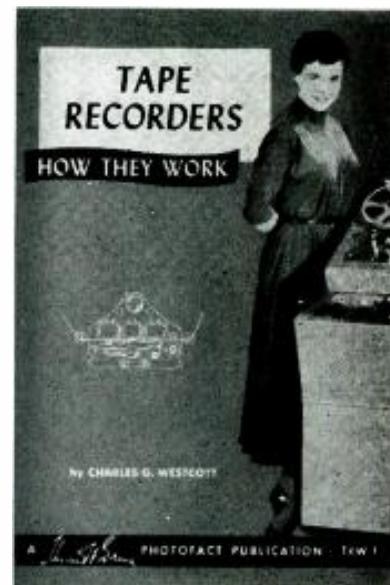
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TAKE 1 by the Editors

Mr. Arthur Landall of Brooklyn, New York, sent us a short note the other day. Here is the note:

"Gentlemen:

I went to the New York High Fidelity show today and it looks as though stereo DISCS are going to push tape out of the picture if something isn't done by the industry in the way of reducing prices.

It's true that stereo sound is wonderful but it would be a shame if tape lost out."

We agree with Mr. Landall in the main except on one point—that stereo discs are going to push tape out of the picture.

There was a great deal of talk at the New York show in regard to stereo discs, however the only public demonstration of it was at the Audio Engineering Society meeting where the Westrey system was publicly displayed and talked about from the platform.

London Records held private demonstrations for members of the industry, as did Westrex.

The London and Westrex demonstrations were very effective and elicited favorable comment from those who were privileged to hear them.

However, both systems are at least a year away and we understand these lab prototypes are not yet ready for production. For one thing the two systems are not compatible. The London method uses the hill and dale technique. In this, one cut is made laterally on the grooves and the other made vertically. A needle with a T shaped arrangement transfers the sound to the two channels. The Westrex system, on the other hand, employs separate recordings on each side of the one groove.

Both will play a conventional disc without difficulty, which is a plus value.

The disc record industry which has been joining in the production of stereo tapes—RCA, Westminster, Urania, Columbia, Capitol, etc., to name a few, realize that there is a definite and distinct place for tape that can never be usurped by any stereo disc. The ever increasing outpouring of stereo tapes will continue—and to mention Mr. Landall's other point—the cost will come down. The pioneering stage of stereo tape is over—in the latest edition of the Hi-Fi Recording Catalog there are 656 stereo tapes listed, an increase of about 300 in the last three months. As more and more stereo recorders are sold and with them a greater market for the tapes, it will become possible for the stereo tape producers to lower their prices.

Disc stereo is at least a year away, after they decide which system will be the standard. It will require special cartridges to play it and most truntables now in use are not good enough to play it on.

Because of its obvious advantages, tape will always be the better medium. We feel the tape industry will still retain the edge, if stereo discs are produced commercially. . . . and remember—you can record on a tape recorder. While it may be cheaper to punch out stereo discs than to produce stereo tapes we believe that there will be far less difficulty playing the tapes.

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

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EXPERT Tape recorder repair services; we buy and sell tape recorders. Tape Recorder Sales Co., 433 South Wabash Avenue, Chicago, Illinois.

TAPE RENTALS—Join the growing group of smart hi-fi fans who are renting the world's finest pre-recorded tapes at reasonable rates. For full details and lists, plus introductory rental, send \$2.00 to National Rent-A-Tape, Drawer 1, Winnetka, Illinois.

SOVIET SATELLITE RECORDINGS, to complete your tape library. Three inch reel recorded Satellite signals with informative commentary, sent to you by First Class mail, \$2. Recorded on high quality tape at a Guided Missile Tracking Station in the Bahamas. Mallor Tapes, PAA/RCA, P. O. Box 4187, Grand Turk AAFB, Patrick AFB, Florida.

CUSTOM RECORD CUTTING SERVICE Tape to disc. Write for information and prices. Electronic Associates, Box 91, Merion, Pa.

FOR SALE: Stereo-system, consisting of Bell binaural amplifier, Viking deck, 2 Electrovoice S.P. 12B's in Argos enclosures and 5 stereo-tapes—\$240. Dr. N. H. Taylor, 103 Professional Bldg., Montague, Mich.

WEBCOR 210-LA Tape recorder, two speed, perfect condition, spotless, includes 30 reels Scotch plastic tape, extra cords, plugs, \$125; German Hi-Fi four speaker table radio, 15-16,000 cycles, FM-AM, short wave, long wave. Cost \$179, asking \$75 FOB, might trade. R. Lackner, 2029 Bradley, Chicago 18.

STEREOPHONIC RECORDED TAPES for Christmas! "Of Sound and Light," drama and music for the entire family, 1/2 hour—\$5.95, COD or check. Demo tape, \$2.50. Christmas Carols Group, \$3.50. Catalog, 10¢. Specify in line or staggered. John Paul Jones, 655 Main, Lafayette, Indiana.

HAVE YOU SEEN the Edal 100? See page 22.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

HI-FI TAPE RECORDING published Monthly at Severna Park, Md. for 1957

1. The names and addresses of the publisher editor, managing editor, and business managers are:

<i>Name</i>	<i>Address</i>
Publisher: Mark Mooney, Jr.,	Severna Park, Md
Editor: Mark Mooney, Jr.,	Severna Park, Md.
Managing editor: None	
Business manager: None	

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

<i>Name</i>	<i>Address</i>
Mooney-Rowan Publications, Inc.,	Severna Park, Md.

Robert W. Lapham,
925 N. Charles Street, Baltimore, Md

Thomas Grogan, Jr.,
Baltimore Life Bldg., Baltimore, Md.

A. J. Morin, 274 Madison Ave., New York, N. Y.
Mark Mooney, Jr., Severna Park, Md.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

<i>Name</i>	<i>Address</i>
	None

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

MARK MOONEY, JR.
(Signature)

Sworn to and subscribed before me this 19th day of September, 1957.

JEAN MARIE COVER
Notary Public

(My commission expires May 4, 1959)

Did Someone Say "Switch?"



When the art of recording was just taking shape
And it seemed to the experts that tape was just tape,
It made sense to try switching from this brand to that—
Until **irish** pulled **FERRO-SHEEN** out of the hat!

Now the **FERRO-SHEEN** process, the experts agree,
Has made **irish** tape different in *kind*, not degree,
So there's no earthly reason for switching your brand,
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tape of excellent characteristics)
... and want all the advantages of
FERRO-SHEEN ...

...switch to
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FERRO-SHEEN GREEN BAND**
(it costs no more than old-
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... if you then want the ulti-
mate in professional tape ...

... switch to
**irish
FERRO-SHEEN SHAMROCK**
(specially made with premium
oxides and film)
... if you then want 50% more play-
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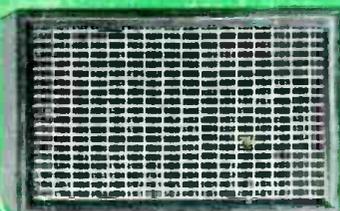


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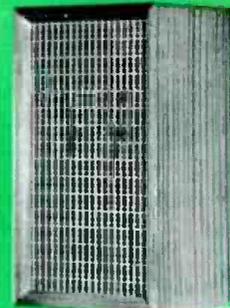
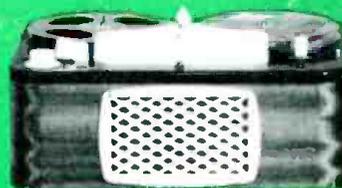
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