

SPECIAL TAPE RECORDER ISSUE

HiFi / Stereo

MARCH 1961 • 50 CENTS

review

TAPE RECORDERS '61

WHAT TO CHECK BEFORE YOU BUY

BEST BUYS IN STEREO TAPE

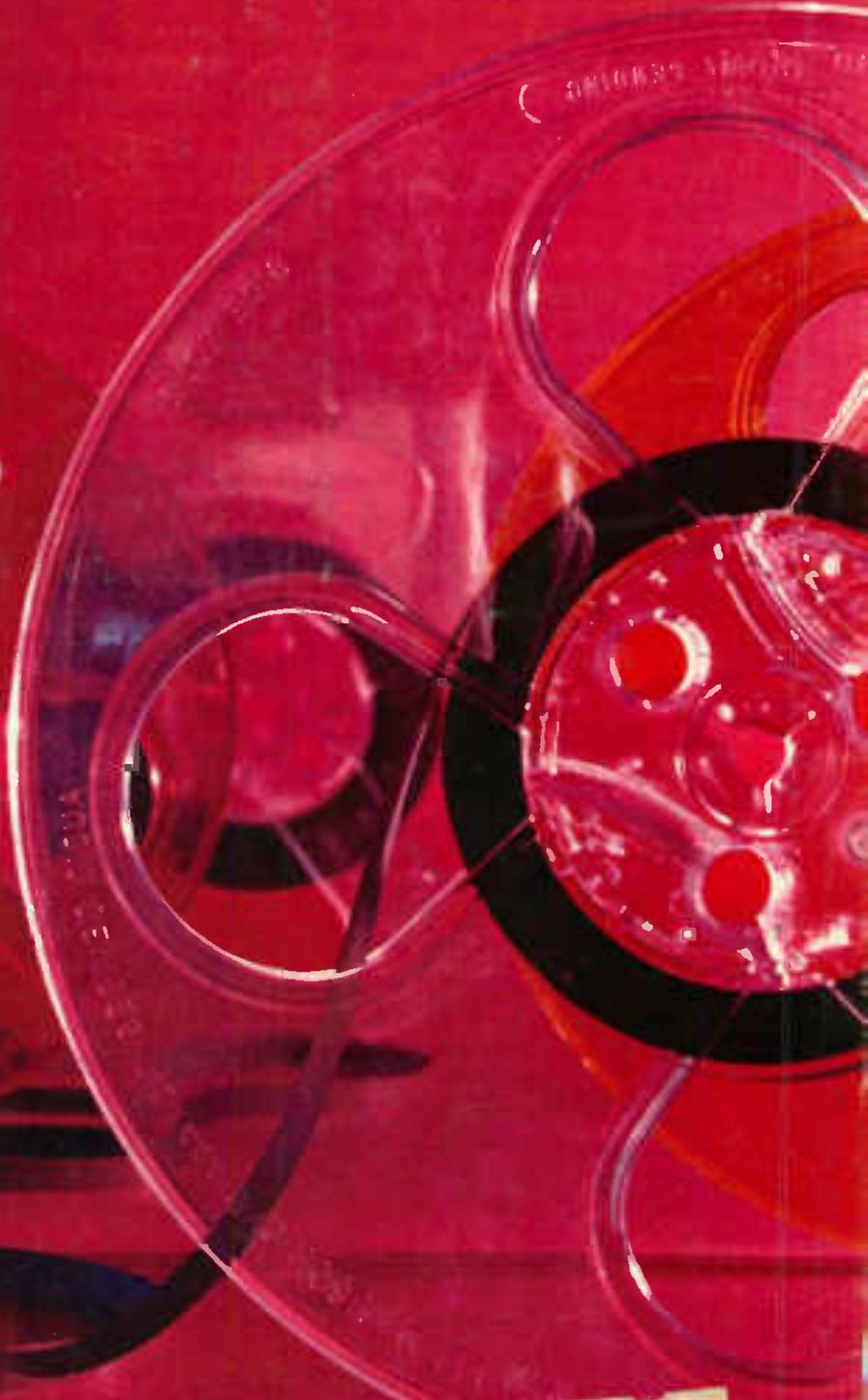
THE CREAM OF THE FOUR-TRACK CROP

HOW TO EDIT TAPE

COMPLETE LISTING OF
FOUR-TRACK RECORDERS

THE FIRST STEREO TRISTAN

THE GLORIOUS AGE OF
THE PLAYER PIANO



IS ENGLISH A MUSICAL LANGUAGE?

HOLLIBROOK 10123
R E THOMAS
2219 HIGHLAND AVE
UTICA & N Y

MARY MARTIN in
RODGERS & HAMMERSTEIN'S
THE SOUND OF MUSIC
COLUMBIA



Original Broadway Cast

10. Complete score. "Perfectly wonderful!" — Ed Sullivan

TCHAIKOVSKY:
1812 Overture
Capriccio Italien
COLUMBIA



ANTAL DORATI
MINNEAPOLIS SYMPHONY ORCH.

1. "Most exciting reading I've ever heard" — High Fidelity

THE BUTTON-DOWN MIND
OF **BOB NEUHART**
COLUMBIA



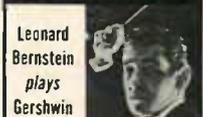
7. "One of the funniest of modern comics" — HiFi Stereo Review

THE BROTHERS FOUR
GREENFIELDS
EDDYSTONE LIGHT - YELLOW BIRD
plus 9 more
COLUMBIA



47. "Lighthearted approach, winning informality" — HiFi Review

Rhapsody in Blue
An American in Paris
COLUMBIA



Leonard Bernstein plays Gershwin

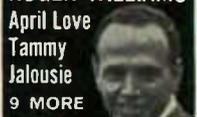
18. A new recording. "Mr. Bernstein does it expertly" — N.Y. Times

On Camera
PATTI PAGE
Favorites from TV
COLUMBIA



11. When Day is Done, It's a Good Day, Crazy Rhythm, 9 more

TILL ROGER WILLIAMS
April Love
Tammy
Jalousie
9 MORE
KAPP



55. Also: Arrividerci Roma; Oh, My Papa; Moonlight Love; etc.

WAGNER:
"DIE MEISTERSINGER" Overture
"THE FLYING DUTCHMAN" Overture
Prelude and Good Friday Spell
from "PARSIFAL"
COLUMBIA



BRUNO WALTER
COLUMBIA SYMPHONY ORCH.

15. "Altogether memorable experience!" — Amer. Record Guide

LET'S DANCE AGAIN!
COLUMBIA



DAVID CARROLL
AND HIS ORCHESTRA

34. Pretty Baby, Swamp Fire, Bouncing Ball, Irene, plus 9 more

PING PONG PERCUSSION
Muskrat Ramble
High Society
plus 11 more
an exciting experience
in sound
EPIC



2. Also: Sneak of Arab, When the Saints Go Marching In, etc.

BOUQUET
PERCY FAITH
STRINGS
Tenderly
Laura
Speak Low
plus 9 more
COLUMBIA



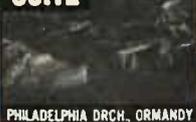
28. Also: The Song from Moulin Rouge, Ebb Tide, Intermezzo, etc.

ELLA FITZGERALD
sings **GERSHWIN**
VOL. I
Verve



46. The Man I Love, But Not for Me, They All Laughed, 9 more

GRAND CANYON SUITE
COLUMBIA



PHILADELPHIA ORCH. ORMANDY

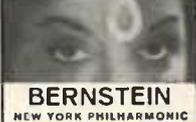
12. A score as colorful as the natural wonder that inspired it

FOLK SONGS
SING ALONG WITH MITCH
COLUMBIA



16. Blue Tail Fly, On Top of Old Smoky, Skip To My Lou, 15 in all

SCHEHERAZADE
COLUMBIA



BERNSTEIN
NEW YORK PHILHARMONIC

3. "Amazingly persuasive and sensuous performance" — Listen

EILEEN FARRELL
SINGS
PUCCINI ARIAS
MADAME BUTTERFLY
LA BOHEME
TOSCA
and many more
COLUMBIA



6. You will "find her impressive in sound" — Washington Post

REX HARRISON
JULIE ANDREWS
MY FAIR LADY
ORIGINAL CAST RECORDING
COLUMBIA



27. I Could Have Danced All Night, Rain in Spain, 13 more

RAY CONIFF SINGERS
Rosalie
Buttons and Bows
10 more
COLUMBIA



IT'S THE TALK OF THE TOWN

58. Let's Put Out the Lights, It's Been a Long Long Time, etc.

DORIS DAY
COLUMBIA



HOORAY FOR HOLLYWOOD

19. Cheek To Cheek, Blues in the Night, Night and Day, 9 more

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SHELLEY BERMAN
A Verve Record



39. A popular adult comedy record. "Side-splitting" — Billboard

TCHAIKOVSKY
MENDELSSOHN
Violin Concertos
COLUMBIA



ISAAC STERN
Philadelphia Orchestra
Ormandy

44. "A recording that cannot be faulted . . . brilliant" — High Fidelity

THE FABULOUS
JOHNNY CASH
COLUMBIA



DON'T TAKE YOUR GUN TO TOWN
RUN SOFTLY, BLUE RIVER
PLUS 10 OTHERS

61. I Still Miss Someone, That's All Over, One More Ride, etc.

OFFENBACH:
Gaite Parisienne
BIZET:
CARMEN HIGHLIGHTS
COLUMBIA



Andre Kostelanetz

32. Two classical favorites. "Glittering performance" — Billboard

PIPES, PEDALS AND FIDELITY
COLUMBIA



BUDDY COLF, Organ

50. The Peanut Vendor Song, Willow Weep for Me, Caravan, 8 more

GOLDEN VIBES
LIONEL HAMPTON
with reeds and rhythm
COLUMBIA



26. "Hamp" plays 12 solos: Funny Valentine, High and Mighty, etc.

SAMMY KAYE and Orch.
COLUMBIA



BALLROOM DATE

22. No Greater Love, Wanderin', Ain't She Sweet, Daddy, 13 more

ROUMANIAN Rhapsodies 1 & 2
HUNGARIAN Rhapsodies 1 & 2
COLUMBIA



PHILADELPHIA ORCH. ORMANDY

59. "Superbly played, exciting listening" — Amer. Record Guide

ELLINGTON
INDIGOS
COLUMBIA



63. Mood Indigo, Where or When, Solitude, plus 6 more

SCHUBERT:
"GREAT" C MAJOR SYMPHONY
THE CLEVELAND ORCHESTRA
GEORGE SZELL, CONDUCTOR
EPIC



54. "It soars, it flazes, and it is a marvel!" — The Atlantic

MARCHING ALONG WITH SOUSA
COLUMBIA



Stars and Stripes Forever
Semper Parvelli—10 more!

48. Also: King Cotton, The Thunderer, Washington Post, etc.

BRAHMS:
SYMPHONY NO. 1
COLUMBIA



CLEVELAND ORCH. SZELL

21. "Szell interprets it wonderfully" — Review of Recorded Music

FRANKIE YANKOVIC
All-Time Great Polkas
COLUMBIA



52. Beer Barrel Polka, Hoop-Dee-Do, Tic-Tock Polka, Helena, 8 more

HANDEL
Water Music Suite
Royal Fireworks Suite
COLUMBIA



PHILADELPHIA ORCH. EUGENE ORMANDY

64. "Familiar, charming music, delightful" — Philadelphia Inquirer

LORD'S PRAYER
MORMON
TABERNACLE CHOIR

BATTLE HYMN OF THE REPUBLIC
THE LORD'S PRAYER—9 MORE

30. Also: Londonderry Air, Blessed Are They That Mourn, etc.

GERRY MULLIGAN QUARTET
what
Is there
to say?

5. Just in Time, My Funny Valentine, News From Blueport, 5 more

MORE JOHNNY'S GREATEST HITS

Small World
A
Certain
Smile
plus 10
more

JOHNNY MATHIS

8. Also: Stairway To the Sea, Let It Rain, Flame of Love, etc.

LISTENING IN DEPTH

AN INTRODUCTION
TO COLUMBIA
STEREOPHONIC SOUND

9. Sixteen selections. An exciting introduction to stereo sound

HITS FROM THE MOVIES

featuring PERCY FAITH's original
THEME FROM
"A SUMMER PLACE"
DORIS DAY—Pillow Talk
plus 10 more

17. Also: The Best of Everything, Smile, On the Beach, Gigi, etc.

BOBBY BOBBIDGE

ORIGINAL
BROADWAY
CAST

4. "The audience was beside itself with pleasure"—N.Y. Times

THE PLATTERS
Encore of Golden Hits

Twilight Time
My Prayer
Only You
9 more

20. Also: The Great Pretender, Magic Touch, Enchanted, etc.

THE FOUR LADS

BREEZIN' ALONG

40. That Old Feeling, Breezin' Along with the Breeze, 10 more

Tchaikovsky: NUTCRACKER SUITE
Ravel:
BOLERO · LA VALSE

YAN BEINUM · ANSTERHAM CONCERTGOERS

38. "Exciting La Valse, first-rate Bolero, sunny Nutcracker," High Fid.

SHOSTAKOVITCH SYMPHONY No. 5

LEONARD BERNSTEIN
NEW YORK PHILHARMONIC

62. "Best performance of this work we ever heard"—Newsweek

ROY HAMILTON

With all
my
love

51. Time After Time, My One and Only Love, Speak Low, 9 more

VERDI OVERTURES

Antal
Dorati
LONDON
SYMPHONY
ORCH.

25. "A most stirring listening experience"—High Fidelity

MILES DAVIS

KIND OF BLUE

41. "An album of extreme beauty and sensitivity"—Downbeat

"NEW WORLD"
SYMPHONY NO. 5
CLEVELAND ORCH.
SZELL

57. "Glowing intensity, has snap and brilliance"—High Fidelity

CHOPIN
The 24 Preludes

BRATLOWSKY
Pianist

49. Alexander Brailowsky is "a poet of the piano"—N.Y. Times

Kostelanetz LURE OF PARADISE

Bali Ha'i
Sweet
Liliani
Moon of
Manakoroa
12 MORE

42. Also: Hawaiian War Chant, On the Beach at Waikiki, etc.

THE SOUND OF JAZZ

COUNT BASIE · BILLIE HOLIDAY
JIMMY RUSHING AND
JIMMY GIUFFRÉ TRIO AND OTHERS

53. Wild Man Blues, I Left My Baby, Fine and Mellow, Nervous, etc.

BEETHOVEN SYMPHONIES No. 4 and 5

BRUNO WALTER
Columbia Symphony Orchestra

33. "Depth of understanding"—New York Herald-Tribune

MAHALIA JACKSON

Great
Gettin' up
Morning

35. God Put a Rainbow in the Sky, How Great Thou Art, 9 more

TCHAIKOVSKY PIANO CONCERTO NO. 1

Eugene Istomin, Piano
Ormandy · Philadelphia Orch.

36. "Istomin has what it takes for Tchaikovsky"—Phila. Inquirer

DAVE BRUBECK QUARTET

GONE WITH THE WIND

24. Swanee River, The Lonesome Road, Basin Street Blues, 5 more

THE MAGIC OF SARAH VAUGHAN

BROKEN HEARTED
MELODY
THAT OLD
BLACK MAGIC
CARELESS
plus 9 more

31. Also: I've Got the World on a String, Are You Certain, etc.

MUSIC FOR ORGAN AND BRASS

E. Power
BIGGS
at the organ

23. "Imposing, delectable . . . a delight"—Dallas Morning News

THE NORMAN LUBOFF CHOIR BUT BEAUTIFUL

14. Pennies From Heaven, Moonglow, I Should Care, 9 more

LISZT PIANO CONCERTOS No. 1 and 2

PHILIPPE ENTREMONT, piano
Philadelphia Orchestra
Eugene Ormandy

43. "Entremont has a real feeling for romantic music"—McCall's

STRAUSS WALTZES

ANORE KOSTELANETZ

13. Vienna Woods, Emperor Waltz, The Blue Danube, 7 more

Torchin's FRANKIE LAINE

37. Here Lies Love, A Cottage for Sale, Body and Soul, 9 more

FLOWER DRUM SONG

ORIGINAL
BROADWAY
CAST
RODGERS & HAMMERSTEIN

56. "Cheerfully confident . . . score is ingratiating"—Kerr, Tribune

Records from Columbia and many other great labels

RACHMANINOFF SYMPHONY No. 2
Philadelphia Orch.
Ormandy

45. "Scored in a rich, rewarding manner"—Philadelphia Inquirer

PORGY AND BESS

ORIGINAL SOUNDTRACK RECORDING
From The Samuel Goldwyn
Motion Picture Production

60. Summertime; Bess, You Is My Woman Now; 19 selections in all

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9 More

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March 1961

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Number 3

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THE SONGS IN THIS MEMORABLE COLLECTION

ALPHA
 ALWAYS IN MY HEART
 AMERICAN PATROL
 ANGEL CHILD
 BABY ME
 BLESS YOU
 BLUE MOON
 BLUE ROOM
 BLUEBERRY HILL
 BOULDER BUFF
 BUGLE CALL RAG
 CARELESS
 CARIBBEAN CLIPPER
 CHATTANOOGA CHOO-CHOO
 CHIP OFF THE OLD BLOCK
 DEVIL MAY CARE
 DON'T SIT UNDER
 THE APPLE TREE
 DOWN FOR THE COUNT
 FAREWELL BLUES
 FLAGWAVER
 FOOLS RUSH IN
 FRESH AS A DAISY
 GLEN ISLAND SPECIAL
 HERE WE GO AGAIN
 THE HOP
 I CAN'T GET STARTED
 I GUESS I'LL HAVE TO
 CHANGE MY PLAN
 IDA
 IMAGINATION
 INTRODUCTION TO A WALTZ
 IT MUST BE JELLY
 JAPANESE SANDMAN
 JUST A LITTLE BIT SOUTH
 OF NORTH CAROLINA
 KING PORTER STOMP
 LADY BE GOOD
 LET'S DANCE

THE LAMPLIGHTER'S
 SERENADE
 LITTLE BROWN JUG
 LOVE WITH A
 CAPITAL "YOU"
 MAKE BELIEVE
 MELANCHOLY BABY
 A MILLION DREAMS AGO
 MISTER MEADOWLARK
 MOON LOVE
 MOON OVER MIAMI
 MY DARLING
 MY DEVOTION
 NAUGHTY, SWEETIE BLUES
 OH SO GOOD
 ON A LITTLE STREET
 IN SINGAPORE
 ONE O'CLOCK JUMP
 PERFIDA
 RAINBOW RHAPSODY
 RHAPSODY IN BLUE
 RUG CUTTER'S SWING
 SAY SI SI
 SLEEPY TOWN TRAIN
 SLIP HORN JIVE
 STOMPING AT THE SAVOY
 STRING OF PEARLS
 SUN VALLEY JUMP
 SWEET ELOISE
 THERE'LL BE SOME
 CHANGES MADE
 TWENTY-FOUR ROBBERS
 UNDER A BLANKET OF BLUE
 WEEKEND OF A
 PRIVATE SECRETARY
 WHAT'S THE
 MATTER WITH ME
 WISHING WILL MAKE IT SO
 WONDERFUL ONE

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250. The original version of the famous theme. "An outstanding score with much melody."—*The Billboard*



251. Rocking hi-fi/stereo remakes of *Beat Me Daddy, Boogie Woogie on St. Louis Blues*, etc. A dancing-listening knockout.



252. Communal performance of his top hits in bright new sound. Dance and romance to *Sunrise Serenade, Falling Leaves*.



220. Best-selling modern-jazz album of NBC-TV series. Composed, conducted by Henry (Peter Gunn) Mancini.



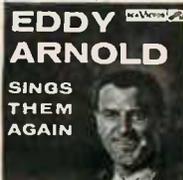
14. Fresh versions of 12 harmony hits: *Paper Doll, Love Is a Many Splendored Thing, To Each His Own*, others.



253. Smoky piano hits by the Nashville star. Album also includes, *Heart and Soul, Tennessee Waltz* and 9 others.



214. Her best-selling album! *The Lady Is a Tramp, Someday, I'll Get By, Thou Swell, Goody Goody, Blue Skies*, etc.



254. Brand-new recording of Eddy's 12 tops. *Doquet of Roses, Lovebug Ith, Tezakana Baby, I Wanna Play House*, etc.



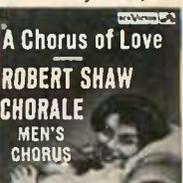
4. Original soundtrack recording from Rodgers and Hammerstein film hit. 15 hardy perennials. M. Gaynor, K. Brazzi.



100. Two super-stars render 12 Gershwin treasures in fresh, modern manner. *Summertime, It Ain't Necessarily So*.



245. The Sing-Along Spectacular! 33 all-time top tunes, song sheets for home harmonizers. *Heart of My Heart*, etc.



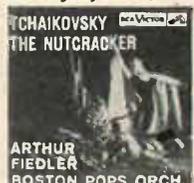
256. First time in stereo for the velvet-voiced male chorus. Gorgeously sung mood music. Sumptuous wall-to-wall sound.



265. Sunny, swinging vocal, a dozen radiant ditties. *Everything's Coming Up Roses, Oh What a Beautiful Morning*, more.



261. A decade of hits by the meteoric singing sensation. *Hey There, Too Young, Song from Moulin Rouge, Venus*, 8 more.



16. Key highlights from Tchaikovsky's enchanting masterpiece for ballet (and the whole family). *Waltz of the Flowers*, etc.



1. Singing strings, soothing moods. *Autumn Leaves, Star Dust, By the Sleepy Lagoon, While We're Young, Estrellita*.



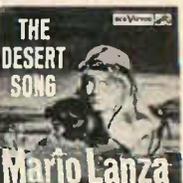
260. Biggest sound since D-Day! Rip-roaring musical salute by R. R. (*Victory at Sea*) Bennett. Full of fun and fancy.



7. Stunning new recording of the dramatic 9-section suite from the award-winning TV score by Richard Rodgers.



243. Tenor sings hits from Romberg opera: *Drink, Drink, Drink; Serenade; Deep in My Heart, Dear*; more favorites.



258. Lanza's glorious tenor plus huge orchestra and chorus in Romberg's splendid score. *One Alone, Riff Song*.

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ALL ALBUMS ARE 12-INCH 33 1/3 R.P.M.



259. Warm, wonderful harmonies by top vocal trio. *Lonely Little Robin, Lavender Blue, Have You Ever Been Lonely*, 9 more.



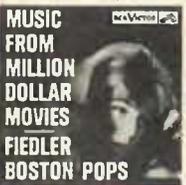
221. Their 12 all-time hits, freshly recut in hi fi and stereo! *Twilight Time, Don't Take Your Love From Me, Jealousie*.



212. Mr. Guitar's first dance album. *Till There Was You, Night Train, Sleep Walk, One Mint Julep, Hot Toddy*, etc.



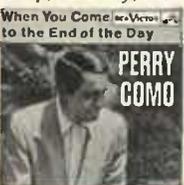
236. Entire night-club act. Outrageous corn-fed humor, insane parodies of hit songs, etc. Their very funniest album!



247. Sound extravaganza. *Love Is a Many-Splendored Thing, Laura, Around the World, Song from "Moulin Rouge"*.



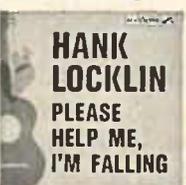
124. *Prisoner of Love, Till the End of Time, Temptation, Wanted, Because, Catch a Falling Star. Monaural only.*



36. 12 warmly sung inspirational songs: *He's Got the Whole World in His Hands, Whither Thou Goest, Scarlet Ribbons*.



5. All-time best-selling classical album by the extraordinary pianist who took Moscow and the world by storm.



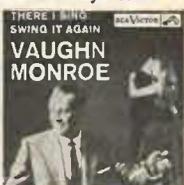
255. Pop-country star sings his biggest hit. Also, *Why Don't You Haunt Off and Love Me, Send Me the Pillow You Dream On*.



21. Cha-cha, hot and cool by Prado's crackling big band. *Lullaby of Birdland, Flight of the Bumblebee* and 9 more.



9. Operetta film stars remake their 12 biggest hits. *Indian Love Call, Will You Remember?, Rosalie, Wanting You*.



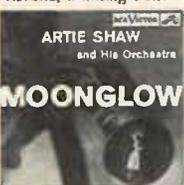
69. His biggest hits re-recorded in hi fi. There, *I've Said It Again; Riders in the Sky; Raring with the Moon; Ballerina*; etc.



267. Smash-hit album—guaranteed to be the life of your party. Southern-fried humor done to a rib-tickling tune.



215. Long-awaited new Pops recordings of the *Rhapsody, plus American in Paris, Earl Wild, piano, Spectacular new sound!*



183. Artie's 12 biggest hits. *Begin the Beguine, Star Dust, Frenesi, Nightmare, Temptation, Lady Be Good. Monaural only.*



216. Hank sings *The One Rose, Any Old Time, Moonlight and Skies, Blue Yodel #10, Roll Along Kentucky Moon*, 6 more.

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103. "Muted-jazz" trumpeter and quartet—in hi fi. *It's All Right with Me, All of You, Basin St. Blues. Monaural only.*

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37. Pianist's trio plays *Summertime, The Man I Love, All of You, Cherry, Pennies from Heaven, I Cover the Waterfront.*

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219. Varied vocal program by country-pop star. *Till the End of the World, Someday, A Fool Such As I* and 9 others.

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263. Lustrous strings, dazzling sound, 12 operetta favorites. *Indian Summer, Gypsy Love Song, Kiss Me Again*, etc.

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89. Exciting, exotic African rhythms and themes, sometimes blended with jazz. "Fascinating"—*Variety.*

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HiFi Soundings



by DAVID HALL

A New Deal for Old Artists and New Music

“DISDAIN NOT the masters but respect their art”—so we are admonished by Hans Sachs in Wagner's *Die Meistersinger*. This reproof notwithstanding, the enormous growth of interest in stereo, and in high-fidelity reproduction of music generally, has also led to a wholesale depreciation, so far as the public is concerned, of great recorded performances of the past. The attitude that “If it's not stereo it can't be any good” has become common. Even an artist of the stature of the late Arturo Toscanini has come to be considered rather an historical relic than a contributor to the vital artistic experience of our time.

The so-called technological obsolescence of many of the finest pre-stereo, not to mention pre-LP, recorded performances by no means solely accounts for this state of affairs. Those who have been associated with the record industry over a long period of years are familiar with the pattern whereby all efforts are concentrated on promoting the big success of the moment, at the expense of other recordings in the catalog. During the past decade, this pattern has come to be more and more evident in the concert-record field. If we are to judge by major deletions from the *Schwann Long Playing Record Catalog*, the artistically true has all too often had to give way to the technologically new.

A few record companies have tried to resist this trend. Some efforts have been sporadic, as witness RCA Victor's Treasury of Immortal Performances, its Vault Series, and its low-price reissues on the Camden label. London, too, has tried to save some of its better monophonic LP recordings from oblivion by transferring them to its \$1.98 Richmond series.

More luxuriously, Angel's Great Recordings of the Century series is slowly but surely making available the finest pre-stereo and pre-LP recordings from the EMI catalog—packaged, priced (\$5.98), and annotated as the important cultural-discographic documents that they are. And Columbia, with its newly announced Connoisseur Series, is about to embark on a similar long-term project.

From the standpoint of over-the-counter sales, Angel may well be moving in the right direction. For treating the Great Recordings of the Century releases as wholly distinctive is in itself a tacit acknowledgement that they cannot be distributed properly in the usual way. There is a further step, however, that we will consider shortly.

Meanwhile, it is enough to say that there does appear to be a trend towards the restoration of the finest monophonic recordings to their rightful place in the scheme of things. One indication is that historic recordings from the German Electrola and Deutsche Grammophon catalogs are turning up in a few shops that specialize in importations. But what is more important, those record companies that have vast treasuries of pre-stereo masters are beginning to realize that they do not have to write off all this material as obsolete—that reprocessing can go far toward making old recordings acceptable to the stereo-minded listener.

Back in the 1930's, when electrical recording was the wonder of the day, RCA Victor had the bright idea of renewing the interest of the

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A cardinal feature of the plan is GUIDANCE. The Society has a Selection Panel whose sole function is to recommend "must-have" works. The panel includes DEEMS TAYLOR, Chairman; composer and commentator; JACQUES BARZUN, author and

music critic; SAMUEL CHOTZINOFF, General Music Director, NBC; JOHN M. CONLY, music editor, *The Atlantic*; AARON COPLAND, composer; ALFRED FRANKENSTEIN, music editor, *San Francisco Chronicle*; DOUGLAS MOORE, composer and Professor of Music, Columbia University; WILLIAM SCHUMAN, composer and president of Juilliard School of Music; CARLETON SPRAGUE SMITH, former Chief of Music Division, New York Public Library; G. WALLACE WOODWORTH, Professor of Music, Harvard.

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EVERY month three or more 12-inch 33 $\frac{1}{3}$ R.P.M. RCA Victor Red Seal records are announced to members. One is singled out as the record-of-the-month and, unless the Society is otherwise instructed (on a simple form always provided), this record is sent. If the member does not want the work he may specify an alternate, or instruct the Society to send him nothing. For every record members pay only \$4.98—for stereo \$5.98—the manufacturer's nationally advertised price. (A small charge for postage and handling is added.)

RCA VICTOR Society of Great Music V146-3
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Dancers' choice... your favorite orchestra, Jan Garber... your favorite songs. It Had To Be You, Baby Face, I'll Get By, The Poor People Of Paris, and many more. DL 4066 DL 74066 (Stereo)



Music of and about Hawaii... Recorded in Hawaii. Songs include: The Hawaiian Wedding Song, Hana Maui, Lotus Land, The Naked Sea, and many others... performed by Hawaii's own Gene Rains. DL 4064 DL 74064 (Stereo)



The swinging sound of jazz... Erskine Hawkins style. Tuxedo Junction, Blue Embers, The Birth Of The Blues, Deep Purple, Midnight Stroll, and many others. DL 4081 DL 74081 (Stereo)

listening public in the magnificent vocal art of Caruso by superimposing new, electrically recorded orchestral accompaniments over the scratchy, thin-sounding old ones.

Not many months ago, English Decca (London over here) made a bid for renewed interest in the wonderful singing of the late Kathleen Ferrier by providing newly recorded stereo accompaniments for her 1952 disc recital of Bach and Handel oratorio arias.

Now RCA Victor has taken the boldest step of all in reprocessing three major 1951-53 recordings by Arturo Toscanini and the NBC Symphony. In the best of these, a stereo effect has been so successfully achieved that any listener who did not know that the originals were monophonic would scarcely suspect these electronically reprocessed recordings of being anything but true stereo (for detailed reviews, see p. 66).

The taste and devotion with which this reprocessing has been accomplished leads us to hope for an extensive "stereo enhancing" program by RCA Victor, not only on behalf of Toscanini but also on behalf of such other greats as Serge Koussevitzky and Leopold Stokowski.

A combination of technical up-dating and distinctive over-the-counter presentation should help restore to circulation many great recordings of the past. But such reissued recordings must still compete with new releases by current favorites. Therefore, it seems to us that these classics of the recording art need the additional circulation they might gain through a sort of specialty record club, one that would bear the same relationship to present major-company clubs that enterprises like the Mid-Century Book Club bear to the Book-of-the-Month Club.

Several such subscription plans have been advanced within the past two years. There are First Edition records, offering new works commissioned by the Louisville Orchestra, and there are the releases of the Shakespeare Recording Society and the Library of Recorded Masterpieces, which plans to make available the orchestral works of Vivaldi, Corelli, Bach, and Haydn. The response to these has been such as to offer new hope.

As matters now stand, it begins to look as though a combination of imaginative marketing and imaginative technology can provide a new deal for old artists and new music. ●

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■ 36-watt dual-channel amplifier, with its own Stereo Master Audio Control. Preamplifier has 14 inputs for every type of cartridge, tape equipment, and tuner on the market. Function-Group controls on front panel for easy selection of program source and adjustment of volume, balance and tonal characteristics. Amplifier uses EL-84's in matched pairs, gives performance superior to many amplifiers with higher power ratings. Hum, noise and distortion completely inaudible. THE FISHER X-100 is ideally suited for use with the K-10 Space Expander. \$159.50

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Letters

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Hum Problem

● In reviewing a recording by Rudolf Serkin, David Hall says in the December issue: "Mr. Serkin's humming propensities intrude occasionally into the musical texture."

Evidently Mr. Serkin's absorption in the music leads him to hum along with his playing without being aware of it. I have nothing but highest praise for his art, particularly his wonderful Mozart concerto recordings for Columbia, but I wish he would curb his unintended vocalism, which the microphones pick up so faithfully. Mr. Hall has done well to call attention to Mr. Serkin's peculiar problem.

David Anthony Wakin
Castle Rock, Wisconsin

Where's the Tune?

● I read the titles on modern jazz recordings, but I seldom find the tune. I often wonder why a recording company is willing to pay royalties for a song when it's never really played. It's nice to know that a man has sufficient technique to doodle on his instrument way beyond the speed limit, but this hardly constitutes music.

Ronald Wanser
Brooklyn, New York

Modern jazz generally employs the "theme and variations" form, and when the improvisation gets too free, we just get another case of "Enigma" Variations.

Transistor Progress

● Development in transistor electronics is so fast that some of the problems mentioned by Ken Gilmore in his article "Transistor Hi-Fi: When and Why" (HiFi/STEREO REVIEW, January, 1961) have since been solved. The article, as a whole, was excellent, and the following comments are intended not as criticism but as updating.

A recent breakthrough in the cost of transistors has enabled us to price our transistorized audio components competitively with corresponding tube-type equipment. For instance, our TEC S-15, a stereo amplifier rated as 20 watts music power per channel, sells for \$129.50. This is actually lower than most tube-type units of the same wattage.

As for the overload problem mentioned by Mr. Gilmore, transistors are no worse in this respect than many other components used in standard circuitry, and in many cases they are superior. It should be pointed out that transistors are used precisely in those installations where the greatest reliability is required: computers, missiles, and telephone equipment. Of

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Sonotone Ceramic "Velocitone"

No stereo cartridge—not even the finest magnetic in the world—outperforms it!

Listen!...with your own magnetic...or with any magnetic you can buy today—at *any* price. Then replace it *directly* in your component system with Sonotone's new "VELOCITONE" STEREO CERAMIC CARTRIDGE ASSEMBLY. Listen again! We challenge you to tell the difference. Experts have tried...in dozens of A-B listening tests. And, in every single one, Sonotone's "VELOCITONE" performed as well as or better than the world's best magnetic.

Listen!...perfectly flat response in the extreme highs and lows (better than many of the largest-selling magnetics).

Listen!...excellent channel separation—sharp, crisp definition.

Listen!...highest compliance—considerably superior tracking ability.

Listen!...absolutely no magnetic hum—quick, easy, *direct* attachment to any magnetic inputs.

Listen!...remarkable performance characteristics unexcelled anywhere. (Write Sonotone Corporation for specifications.)

Now listen to the price. Only \$23.50...about one-half the price of a good stereo magnetic cartridge. Yet Sonotone's "VELOCITONE" stereo ceramic cartridge system cannot be outperformed by any magnetic—regardless of price.

Sonotone[®] CORP.

ELECTRONIC APPLICATIONS DIVISION, ELMSFORD, N. Y., DEPT. C7-31
IN CANADA, CONTACT ATLAS RADIO CORP., LTD., TORONTO

LEADING MAKERS OF CARTRIDGES • SPEAKERS • TAPE HEADS • MIKES • ELECTRONIC TUBES • BATTERIES



course, any electronic component will fail if subjected to loads beyond its rated capacity for prolonged periods of time. The solution to this in designing transistor circuits is the same as for tube circuits: generous rating and conservative use of all circuit elements.

Mr. Gilmore also stresses the deterioration of transistors under the influence of heat. This danger is often overrated because in the early days of the art transistors were often placed next to red-hot tubes and naturally came to grief. Modern all-transistor design circumvents this difficulty. The transistors used in our equipment fail at 185° F. Even in the climate of Southern California, this leaves plenty of leeway.

Larry Hermann
Transis-Tronics, Inc.
Santa Monica, Calif.

Parental Praise

● Blessings on you for your article on children's records in the December issue. We have had a terrible time trying to buy suitable records for our six-year-old daughter, and your article solved the problem perfectly.

Roger MacDermott
Wilmington
Delaware

Holt Hailed

● Many thanks to Gordon Holt, the genius who writes "Sound and the Query." This column has helped me clear up many of the problems that had plagued my sound system.

Raymond G. Berube
Salem, Mass.

American Discography

● Your magazine frequently deplores the serious shortage of recorded American music. I have no remedy for the basic causes of the problem, but I have done something to make better known what is available. I have compiled a second supplement (1958-1960) to *American Music on Records* (a publication available from the American Music Center in New York City).

Unfortunately, no financing for this supplement is currently available. The work, however, is ready for publication. Like the previous supplement and the main volume of *American Music on Records* it will be distributed to schools, libraries, and community organizations when, and if, it is published.

Richard J. Wolfert
Racine Public Library
Racine, Wisconsin

By calling attention to the potential availability of Mr. Wolfert's work we hope to bring about sufficient support for its publication.

IT MAY BE A TURNTABLE OR IT MAY BE AUTOMATIC BUT IT CAN'T POSSIBLY BE BOTH

Before you spend a sizeable sum of money, consider these basic differences between an authentic turntable such as the **REK-O-KUT** Stereotable, and the so-called "automatic turntable" which is nothing more than an ordinary record changer! Your high fidelity dealer will readily confirm and demonstrate the following facts.

TURNTABLE: Check the rotating table on which the record is placed. In the **REK-O-KUT** Stereotable this table is a heavy, cast-aluminum, precision-machined unit. Its record spindle is part of the table and rotates with the record! This construction eliminates wow and flutter (undesirable pitch variations).

"AUTOMATIC": In the "automatic", this table may be nothing more than a large weighted shell covering and camouflaging a thin metal stamping. Its spindle is stationary and inevitably wears the record centerhole. This results in quavering piano tones and vibrato in vocals.

TURNTABLE: Check the tonearm. With the **REK-O-KUT** Stereotable you use an independent tonearm. This tonearm is in no way linked to the turntable and is completely free to faithfully track the record groove. An independent tonearm, such as the **REK-O-KUT** Tonearm, which is perfectly balanced, assures even and minimum pressure against both tracks of a stereo groove. The stylus point remains vertical to the record at all times — a must for minimum record wear and optimum fidelity.

"AUTOMATIC": Now, look underneath the so-called "automatic turntable". It reveals

its true identity—nothing more than a record changer! Note that the arm is tied to the table with a complex of multiple linkages which imposes additional weight and pressure on the arm, causing it to drag against one side of the groove. This reduces the stereo effect materially and causes excessive and rapid groove wear.

TURNTABLE: Observe the motor. This is the heart of any record player. The **REK-O-KUT** Stereotable employs a hysteresis synchronous motor—a remarkably quiet unit which operates at a constant rate of speed regardless of any variations in current from your electrical outlet.

"AUTOMATIC": Here again, the "automatic turntable" exposes its true identity by utilizing an induction motor. The difference? As vast and as marked as the difference between a modern high compression automobile engine and its less powerful counterpart. The undesirable rumble noises present in the operation of the ordinary induction motor will be reproduced through your speakers. As record piles upon record, the added weight slows the speed of this motor and the rotating table—to say nothing of the harmful abrasive grinding action between precious record surfaces.

Remember, **you** pay the bill and you **should** receive a product that is all it represents itself to be. **REK-O-KUT** has earned a world-wide reputation for providing the finest possible equipment at a price in keeping with its true value . . . and factually presented to the public. Ask your dealer to show you the fine selection of **REK-O-KUT** Stereotables, Tonearms and Audax Speaker Systems. Write for free catalog.



REK-O-KUT STEREOTABLES



Rek-O-Kut Co., Inc., Dept. HR-31, 38-19 108 St., Corona 68, N.Y.
Export: Morhan Exporting Corp., 458 Broadway, New York
Canada: Atlas Radio, 50 Wingold Avenue, Toronto 19



FA-4



THE ONLY TAPE FORMULATION THAT CAPTURES THE FULL DYNAMIC RANGE OF MUSIC AT NO EXTRA COST!

In the year since their introduction, Soundcraft Tapes with FA-4 frequency adjusted formulation have won unprecedented acclaim from professional and home recordists. The ability of these tapes to capture more of the full dynamic range of sound . . . to reproduce subtler "highs" with full clarity, was instantly hailed as a major improvement in tape recording — and a particular boon in 4-track and slower speed applications. Whether your equipment is new or old — you will never enjoy its full capabilities until you hear your first reel of Soundcraft Tape with FA-4!

**FA-4 formulation exclusive with
SOUNDCRAFT TAPES**

FA-4 frequency adjusted

REEVES SOUNDCRAFT CORP.

Great Pasture Rd., Danbury, Conn. ■ Chicago: 28 E. Jackson Blvd. Los Angeles: 342 N. LaBrea ■ Toronto: 700 Weston Rd.

just LOOKing

. . . at the best in new hi-fi components

● **Bell**, having established a reputation with amplifiers and tuners, is now branching out into loudspeakers. The first speaker to bear the Bell name is a compact bookshelf type, Model SS-1, containing an 8-inch woofer and a 3½-inch tweeter. The duct-loaded bass-reflex enclosure is made of ¾-inch birch with walnut-shade finish. Dimensions: 24 x 11 x 10 inches. Price: \$60.00. (Bell Sound Division, 555 Marion Road, Columbus 7, Ohio.)

● **EICO** announces two new amplifiers, one rated at 35 watts per channel (ST70), the other at 20 watts per channel (ST40).



Both are available in kit form as well as factory-wired.

Controls include a "balance check" switch for cross-feeding the two channels out of phase to establish proper stereo balance by cancellation.

Price: ST-40, \$79.95 (kit), \$124.95 (factory-wired); ST-70, \$94.95 (kit), \$144.95 (factory-wired). (EICO Inc., 33-00 Northern Blvd., Long Island City 1, N. Y.)

● **Fisher** has now added a lower-priced unit to its line of stereo receivers. The new Model 500-S combines AM and FM tuners as well as a complete stereo amplifier on a single chassis.

Rated by the "music power" standard, the amplifier delivers 22½ watts per channel, using EL84 output tubes. Harmonic distortion is less than 1% at full output, and frequency response is from 20 to 20,000 cps. Hum and noise are rated 63 db below full output on the



magnetic phono input and 53 db below full output on the tape channel. Channel separation is better than 42 db at 1000 cps. In addition to conventional rumble and scratch filters, a subsonic filter is included to provide sharp roll-off below

20 cps, preventing overload from low-frequency turntable rumble.

The FM section has a sensitivity of 1.6 μv for 20 db quieting (which corresponds to a sensitivity rating of 2.4 μv as measured by the IHFM standard). FM distortion is 0.8% at 400 cps for 100 μv input. The circuit includes three IF stages.

Dimensions: 17 x 4½ x 13¾ inches. Price: \$349.50. (Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.)

● **Janszen** enters the speaker kit market with a combination of an electrostatic tweeter and matching cone-type woofer. Both units are premounted on a 19½ x 16-inch panel designed for installation in existing furniture, walls, or custom cabinets. The power supply for the electrostatic tweeter is included in the assembly.

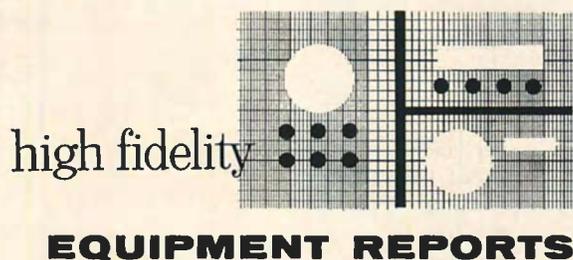
Termed the JanKit 41, the unit eliminates the problem of finding a proper woofer to match an electrostatic tweeter. The two-element tweeter takes over at 700 cps and has a range beyond 30,000 cps. The 11-inch woofer retains bass response down to 30 cps in enclosures as small as two cubic feet. Price: \$99.95. (Neshaminy Electronic Corp., Neshaminy, Penna.)

● **Jensen** keeps the satellite speaker concept alive with their new Galaxy III, a complete stereo speaker system consisting of a center bass unit and two small satellite speakers that provide the directional effect at higher frequencies. A 12-inch woofer in a ported bookshelf enclosure handles bass from both channels up to 350 cps, at which point the separate satellites take over to handle each channel separately.

Each of the small satellite units contains an elliptical mid-range speaker for the range from 350 to 4000 cps. Above the latter frequency a horn tweeter operates to beyond audibility. The satellites may either be set on shelves or hung from the wall. The entire system is available in a variety of styles. Price: \$195.50 to \$229.50, depending on finish. (Jensen Mfg. Co., 6601 South Laramie Ave., Chicago 38, Ill.)

● **Knight's** concern for the budget-minded is expressed in a new integrated stereo amplifier kit (Stock No. 83YU933) rated at 16 watts sine-wave power per channel. Frequency response is within ±1 db from 20 to 20,000 cps at half power; harmonic distortion remains less than 1% at full output. Direct current on all filaments keeps hum and noise 65 db below full output on high-level inputs, and 50 db

**Quoted from*

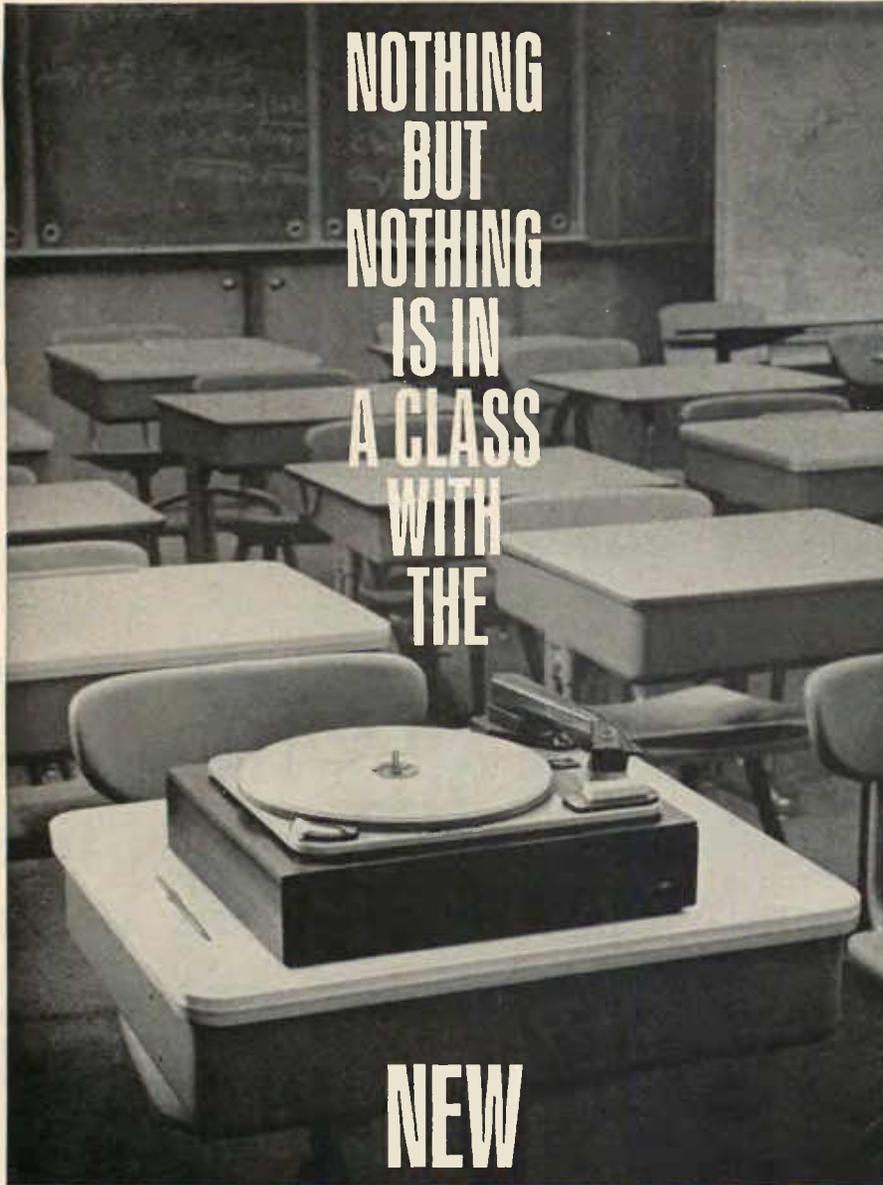


terial will soon reveal the almost total absence of coloration introduced by the AR-3. The sounds produced by this speaker are probably more true to the original program than those of any other commercially manufactured speaker system we have heard. On the other hand, the absence of

*A reprint of the complete Hirsch-Houck Laboratories' report on the AR-3 speaker system, as it appeared in *High Fidelity* magazine, will be sent on request.

AR-3's (and other models of AR speakers) are on demonstration at AR Music Rooms, at Grand Central Terminal in New York City, and at 52 Brattle Street in Cambridge, Massachusetts.

ACOUSTIC RESEARCH, INC., 24 Thorndike Street, Cambridge 41, Massachusetts



NEW DUAL-1006 CUSTOM turntable/changer

Long acclaimed by high fidelity experts as the finest machine of its type, the Dual-1006 in its new Custom model embodies a number of significant developments in engineering design and materials . . . with *all parts guaranteed for an unprecedented five full years* against manufacturing defects. All emphasizing once again Dual's position as the pacemaker in its field. In its operation, the Dual-1006 Custom is the most versatile machine in all high fidelity. It's a *truly* automatic turntable — with automatic start as well as stop. It's an unrestricted *manual* turntable. It's an automatic *changer*. And it offers such exclusive features as the amazing roller-feeler indexing action that unerringly locates the lead-in groove of any size record . . . the self-stabilizing elevator action changer spindle that obsoletes pusher arms and offset spindles . . . the completely freefloating tonearm that tracks and trips with high compliance stereo cartridges as low as 1½ grams for true professional turntable/arm performance. Compare the Dual with any other machine at any price. You'll quickly see why it is so distinctly in a class by itself. Price: \$79.95

united Audio

WIGO • PRODUCTS OF DISTINCTION • DUAL
12 West 18th St., New York 11, N.Y.

below full output on the magnetic phono input. Four 7189 tetrodes serve as output tubes.

Operating features include ganged treble and bass controls and separate volume and balance controls. A center-channel output



is provided to feed extension speakers with a blend of both channels. Dimensions: 14¾ x 11¾ x 4½ inches. Price: \$59.95. (Allied Radio Corporation, 100 N. Western Ave., Chicago 80, Ill.)

• **Lafayette** has combined a quality turntable and tone arm in a single unit designated as Model PK-449. A heavy 4-pole induction motor mounted with vibration-filtering shock mounts drives a rim-weighted 12" aluminum turntable at 16, 33½, 45, or 78 rpm. An auxiliary speed control allows for ±7% vernier adjustment in each of the four speed ranges. Noise and rumble are 50 db below average recorded level; wow and flutter are less than 0.2%.

The use of ball-bearing suspensions minimizes vertical and lateral friction on the tone arm, and an automatic start-stop



switch is provided. The unit comes complete with shielded hook-up cables. Dimensions: 16¼ x 12¼ inches. Required clearance below motor board: 4 inches. Price: \$49.50. (Lafayette Radio Corp., 165-08 Liberty Avenue, Jamaica 33, N. Y.)

• **Polar Electronics** joins the still rather thin ranks of manufacturers of transistorized high-fidelity equipment with an integrated all-transistor stereo amplifier rated at fifteen watts per channel. The frequency range extends from 20 to 20,000 cps; distortion is less than 1%. Each channel has its own bass, treble, and volume controls, and both channels can be combined for 30-watt mono operation.

A unique feature of this unit is complete encapsulation of the circuit, protecting it against dust and moisture. The amplifier is guaranteed for 30 months. Dimensions: 12 x 7 x 3 inches. Price: \$96.50. (Polar Electronics, Ltd., 1514 Oak Street, South Pasadena, California.)

HiFi/STEREO



*a quality stereo tape recorder
built in America
to sell for under \$200*

The New Viking 76 Compact



Viking OF MINNEAPOLIS, INC.

3600 Aldrich Avenue South, Minneapolis 20, Minnesota

BUILT IN AMERICA—by Danes, Swedes, Irishmen, Germans, Poles,
Frenchmen, Canadians and a host of others.

A major achievement! Viking quality and dependability in a stereo recording/playback unit for home use and priced below \$200.

The new Viking 76 Compact is the simplest, most rugged of all tape mechanisms with complete stereo recording electronics.

ALL THESE FEATURES PLUS A BUDGET PRICE:

Records and plays monaural and stereo quarter-track tapes (3¼ and 7½ ips).

Uses your existing music system for top playback fidelity (As with the 85 Series "Stereo-Compact," you buy only a high-quality transport and recording amplifiers.)

A single motor for maximum signal-to-noise ratio. Motor hum 50 db below normal tape output.

Wow and flutter, less than .2% rms.

80 kc bias for smooth, extended range recording—25 to 16,000 cycles ± 3 db.

Tremendously flexible. One quarter-track stereo model which can be used for all types of monaural and stereo recording and duplicating records and tapes.

Recording and playback quality to meet or exceed professional standards.

You'll find the new Viking 76 Compact at most major hi-fi stereo dealers now. Stop in and ask for a demonstration. For catalog or technical information, write Customer Service Department, Viking of Minneapolis.

SOLD ONLY THROUGH VIKING DEALERS

Tape Recorder Owners!

CUT TAPE COSTS IN HALF



with a 4-Track

STEREO CONVERSION KIT

by *Nortronics*

WR-60 STEREO KIT



Be up-to-date, and save on tape costs, whether you use raw tape or tape records. Don't obsolete your present monophonic or 2-track Stereo tape recorder . . . Convert it at low cost to 4-track stereo playback or stereo playback/record. Install the Kit yourself easily in about one-half hour—or see your service dealer.

WOLLENSAK-REVERE

- WR-60 Converts all 2-track models to 4-track stereo. Includes 3 position head dash shifter for 2-track stereo and 4-track mono operation. Allows stereo recording with additional amplifier (not included). . . . \$49.50
- WR-35 Converts 2-track stereo machines to 4-track stereo playback . . . \$25.50
- WR-40 Converts monophonic machines to 4-track stereo playback . . . \$32.50

WECBOR

W-6 Converts monophonic and 2-track stereo machines to 4-track playback (includes head-shifter). For all 2800, 2900, and 2000 series, except 2020 series \$36.00

VM

- V-6 Converts machines to 4-track stereo playback . . . \$25.50
- V-7 Stereo erase kit for machines. Works with V-6 kit described above to permit 4-track stereo recording . . . \$15.00

PENTRON

- P-6 Converts all machines to 4-track Stereo playback . . . \$29.70
- P-7 Stereo erase kit for machines. Works with P-6 kit described above to permit 4-track stereo recording . . . \$15.00

OTHERS

If your tape equipment is not covered by the kits listed above,

WRITE FOR OUR FREE STEREO CONVERSION CHART

which will assist you in converting your machine, or see your dealer



THE Nortronics CO., INC.

"Pacasoftware in Sound Electronics"

1017 South Sixth St., Minneapolis 4, Minn.
Please send me more information on the conversion of my _____
Recorder to 4-track Stereo

Name _____
Address _____
City _____ Zone _____ State _____

THE spectrum NEWS AND COMMENT BY THE EDITORS

SELDOM in the history of invention has any device spread its influence so rapidly and so widely as the tape recorder. Although in its present form it is barely a dozen years old, the scope and versatility of its uses overwhelm the imagination. Attached to radio telescopes, the tape recorder helps to probe the secrets of unseen stars, keeping watch over the outer-most limits of the universe. As the memory of giant computers, it orders fact and inference in a world grown too complex for adequate categorization by the human mind. It may guide a lathe as surely as the hand of a skilled machinist. It may send missiles to the moon or messages from outer space. But its most widespread use has been in the service of music.

In the years before tape, first-rate recording facilities—which is to say, studios equipped to record directly on master discs—existed only in a few of the world's largest cities. Although many recordings of lasting artistic merit were made during that period, the scarcity and relative immobility of recording equipment severely limited both the repertoire and the number of artists and orchestras to be heard on discs.

By the early 1950's, this situation had been changed radically. Professionals and amateurs alike found the tape recorder a relatively inexpensive and compact instrument that enabled them to record freely almost anything, almost anywhere they chose.

In their search for talent, the many new impresarios of commercial recording gave international careers to many musicians who had previously been known, except by name, mainly in their home territories. Such major conductors as Hermann Scherchen, Ernest Ansermet, Ferenc Fricsay, and Josef Krips, though well-established in professional reputation, suddenly became world figures through the medium of recordings first made on tape. The list of singers and instrumentalists who owe a good part of their renown to the tape recorder would include most of today's younger musical celebrities.

THE question has been raised whether the effect of tape technology on musical standards has been altogether salutary. Some critics feel that the very ease with which recordings can be made "correct" has led to slack-

ness in execution. They believe that performers tend to rely on the cosmetic aid of tape editing to hide musical blemishes, and that piecing recorded performances together from a number of separate takes robs the interpretations of essential unity. These are serious charges and should be answered.

There is, of course, nothing wrong in correcting mistakes. To say that clinkers should be heard on records simply because they can't be avoided during concerts seems a twisted kind of reasoning. And as for the pernicious effects of tape editing on structural unity, it must be recognized that even the greatest artists rarely achieve a performance that projects a piece of music as a wholly unified, organic entity. Admittedly, it would be inexcusable for any tape editor to break into such a performance to make a pedantic correction of some passing mistake. Even so, the onus would fall not on the techniques of tape editing as such but on their artistically blind abuse.

The assertion that pre-tape discs tend to be musically superior must also be examined in another perspective.

It is undoubtedly true that in the early days of the phonograph, artists sometimes surpassed themselves before the microphone. They were, after all, the first musicians ever to document the actual sound of their playing for all time to come. Today, recording has become commonplace, and is approached more casually. There is no denying that tape-editing techniques have contributed greatly to this change in attitude, but it must be remembered that the musical quality of a recorded performance is basically independent of technical circumstances. It is determined, in the last analysis, by the artist's conscience, by his disciplined will to do nothing less than the best permitted him by his skill and talent. If there has been any decline, it cannot fairly be blamed on the tape recorder.

On the contrary, many musicians tell us that the tape recorder is to them no indulgent accomplice in musical indiscretions but rather a relentless mentor.

To music makers and music listeners alike, the tape recorder has given the means of holding fast the fleeting substance of sound. Through it, music, the most transitory of arts, is achieving permanence, not merely in the mummified form of paper notation but in the vital reality of sound itself.

NOW! Make and Play Back Your Own 2-TRACK AND 4-TRACK STEREO AND MONAURAL TAPES!



New Webcor Regent Coronet Stereo Tape Deck outperforms the field...new budget price!

- 2- and 4-track stereo and monaural record and playback • 3 speeds.
- Operates vertically or horizontally • Easily installed in any position.
- 2 pre-amplifiers built in, one for each channel. Cathode follower outputs to operate with most amplifier-speaker systems • Professional type editing key.
- Digital tape counter • VU meter indicates correct recording level for either channel • Separate Bass, Treble Controls.
- Ch. 1 and Ch. 2 volume controls.
- Top choice for any installation.

Webcor "Custom" Economy Hi-Fi Stereo Diskchanger

MODEL 1041-50

**Here's a Low-Priced
Stereo Diskchanger that
operates like a Champion!**

Make your choice from three different models! There's one to exactly fit your needs, whether you're constructing a new system or converting your present monaural phonograph to stereo.



FREE! Send for Webcor Tape Deck and Stereo-Diskchanger folder. Plus list of where to buy Webcor components.

Webcor, Inc.
5610 W. Bloomingdale Ave.
Chicago 39, Illinois



50-WATT STEREO AMPLIFIER

Get the most from your stereo tapes, records, tuners, etc., with this top-of-the-line stereo amplifier and control center! Power-packed 50-watts (25 watts per channel); complete tone, balance and stereo /mono function controls; five stereo inputs plus separate monophonic magnetic phono; mixed-channel center speaker output for stereo "fill-in" or wiring sound to patio or other rooms. Superbly styled with luggage-tan vinyl clad steel cover. 31 lbs.

Kit Model AA-100.....\$84.95
 Assembled Model AAW-100.....\$144.95



COMPLETE STEREO PHONO CONSOLE

Less than 3' long and end-table height; fits both space and dollar budgets! Four-speed automatic stereo /mono record changer has turnover diamond /sapphire styli. Full-range stereo sound is sparkingly reproduced by two 12" woofers, two 8" mid-range speakers and two 5" cone-type tweeters. Solid genuine walnut frame, walnut veneer front panel and matching "wood-grained" sliding top. All cabinets assembled and finished. 70 lbs.

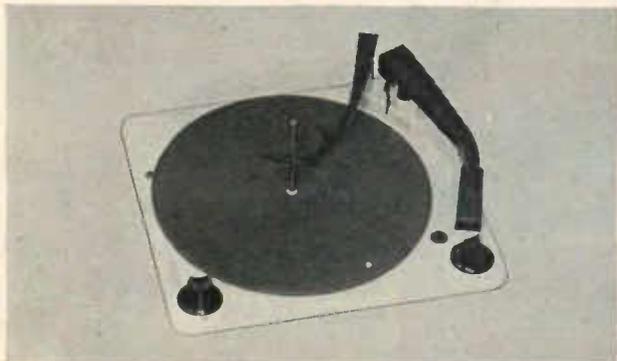
Kit Model GD-31.....\$129.95
 Assembled Model GDW-31.....\$149.95

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- 2. HEATHKIT factory-built, ready to use.
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NEW LOW COST STEREO RECORD CHANGER KIT

For a fine record changer at a budget price, choose this feature-loaded, brown and beige beauty. It has an oversize 11" turntable for better record support, "anti-skate" device to protect your records, jam-proof mechanism for dependable performance, and plug-in cartridge head for easy changing. Plays all four speeds automatically or manually with automatic shut-off after the last record. Assembles easily, quickly with no special tools. Complete with your choice of three different famous-name diamond styli stereo cartridges. 15 lbs.

Model AD-80C, Sonotone 8TA4-SD cartridge.....\$37.95
 Model AD-80A, GE-VR-227 cartridge.....\$41.95
 Model AD-80B, Shure M8D cartridge.....\$42.95

HiFi/STEREO



REVERBERATION SYSTEM

Add a thrilling "cathedral" dimension to listening! The GD-61 adds reverberation "echo" acoustically . . . does not disrupt your present system . . . may be placed *anywhere*. Can be connected to speaker terminals of any radio, hi-fi, TV set, etc. Consists of Hammond-type IV reverberation unit, amplifier, 8" speaker, and preassembled, birch cabinets in mahogany or walnut finishes. 30 lbs.

Kit Model GD-61M . . . (Mahogany) **\$69.95**
 Kit Model GD-61W . . . (Walnut) **\$69.95**



6-TRANSISTOR PORTABLE RADIO KITS

Your all-summer entertainment companions! Both models feature vernier tuning; 6-transistor circuit; 4" x 6" speaker; prealigned transformers. 6 flashlight cells furnish power.

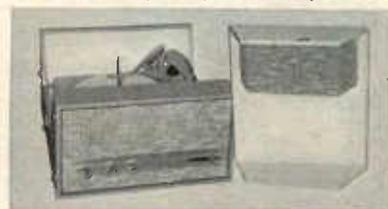
Model XR-2P (plastic) . . 6 lbs. . . **\$29.95**
 Model XR-2L
 (sim. leather & plastic) **\$34.95**



PORTABLE 4-TRACK STEREO TAPE RECORDER

Plays and records 4-track stereo tape . . . can even be used as hi-fi center to amplify and control tuners, record players, etc. Has 3 3/4 and 7 1/2 ips speeds, tone, balance and level controls, monitoring switch, "pause" button and two "eye-tube" indicators. All amplifiers and speakers included. Speaker wings are detachable. Cabinet and tape deck pre-assembled.

Kit Model AD-40 . . 49 lbs. **\$179.95**



STEREO/MONO PORTABLE PHONOGRAPH

Completely preassembled automatic changer plays your favorite stereo and mono records at speeds of 16, 33 1/3, 45 and 78 RPM. Controls give you command of volume, stereo-balance and tonal quality.

Kit Model GD-10 . . 28 lbs. **\$69.95**



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HEATH COMPANY / Benton Harbor 40, Michigan

ORDERING INSTRUCTIONS Fill out the order blank. Include charges for parcel post according to weights shown. Express orders shipped delivery charges collect. All prices F.O.B. Benton Harbor, Mich. A 20% deposit is required on all C.O.D. orders. Prices subject to change without notice. Dealer and export prices slightly higher.

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Order Direct by Mail or See Your Heathkit Dealer

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MARCH 1961

there is **NO** equal to
marantz

From time to time, a component has appeared on the market which was "as good as Marantz". Fortunately for our morale, subsequent investigation has always proved our position secure, and strengthened our reputation for making the finest custom preamplifiers and amplifiers in the world. We invite you to compare the performance of other makes with Marantz characteristics described below:

- **MOST DEPENDABILITY** Repairs are so rare that Marantz devotes less than 8 man-hours per week to service. Compare!



Model 7
Stereo Console

- **LOWEST DISTORTION** I.M. Distortion @ 10 v. equiv. pk. RMS... maximum permissible—0.15%, typical, — 0.1%. Reduces to a few hundredths of 1% below about 5 volts output. Distortion does not increase significantly at frequency extremes.
- **LOWEST HUM & NOISE** Equivalent total noise input, 20-20,000 cps... 1 microvolt max., 0.8 microvolt typical (80 db below 10 millivolts input).
- **HIGHEST GAIN** At 1000 cps, RIAA equalization,— 0.4 millivolts (400 microvolts) for 1 volt output.
- **FINEST CONSTRUCTION** Instrument-type, precision construction throughout. Basic circuit on heavy, fully shock-mounted turret-terminal board. Wiring neatly cabled. Noise-selected film resistors. Power transformer double-shielded with mu-metal before "potting". Triple-filtered D.C. filament supply. Fully finished chassis. Front panel, 1/8" thickness brushed aluminum, pole gold anodized, with precision-machined matching knobs.
- **GREATEST ACCURACY** Equalization and tone control curves matched in both channels to 0.5 db.— typical, 0.2 db.



Model 8
Stereo Amplifier

- **30 WATTS RMS**, per channel (conservatively rated) ± 0.2 db 20-20,000 cps.
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Is English a Musical Language?



by Henry Pleasants

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EVERY year one or more of the American or British critics devotes a Sunday column to the question, "Is English a musical language?" The question is usually prompted by some new impulse in the persistent movement for opera in English, or by the appearance of a new British or American opera.

But since British and American music critics have never seen fit to take American music seriously, what they are asking, in actuality, is: "Can English be reconciled with European, or classical music?" And the answer to this question is probably "No." It is "No" because British composers have not, since Purcell's time, produced any really indigenous classical music. Americans have never composed any. American and British classical music has, for some two centuries, been shaped by European models—in other words, by music originating in other languages than English.

It is often pointed out that in Europe opera is given in the language of the country where it is being performed, regardless of the original language of the opera given. This is true, and on the basis of the European precedent operas

have recently been given in English translation in Great Britain and the United States with increasing frequency.

But the fact that translation is apparently successful in Europe, plus the fact that nobody is ever fully satisfied with opera translated into English, should not be assumed to prove that English is therefore less musical than other languages. One has only to hear "*I Maestri Cantori*" or "*Die Macht des Schicksals*" to ask "Is Italian a musical language?" or "Is German a musical language?" The result in either case is usually clumsy, awkward, and ill-sounding.

What is overlooked in most discussions is the origin of music in language, the extent to which the melodic characteristics of any musical style are determined by the linguistic peculiarities of the country or language area in which the style originated. This inseparability of music and language may be observed in the folk songs of any country, in Italian opera and choral music, in German chorales, *Singspiel*, opera and *lied*, in French and Russian song and opera, and in every phase of American popular music. It may be observed, not only in a people's vocal

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music, but also, if less obviously, in its instrumental music.

As Donizetti once put it: "Music is only speech accented by sounds, and therefore every composer must create music that rises out of words. The man who is so unfortunate as to fail in this will produce only superficial music lacking in any emotion."

In the past century, the inseparability of music and language has become obscured by the dominance in European music of instrumental concepts, even in the vocal forms, by the gradual estrangement of European music from the simpler concepts of song, and by the growing tendency of instrumental writers to work free of vocal models.

Most modern opera, for instance, is readily translatable without producing conspicuous stylistic inconsistencies and incongruities. But the estrangement of music from song is one of the most fundamental failings of contemporary classical music, and it is also emerging as a failing of much modern jazz. It would be dangerous to conclude that the susceptibility of modern opera to translation points to the happy appearance of a more universal musical language. It should be interpreted, rather, as an indication that classical music is becoming less musical.

English translations of the standard operas sound about as bad as Italian, German, and French translations, but no worse. That they sound so incongruous to British and American ears is simply because British and American ears, unlike German, Italian, and French ears, have never become accustomed to the incongruity. Many a laugh in an opera given in English translation happens not because a line of text is actually funny but rather because the combination of the new English words with the old musical phrase is amusingly impossible.

There is nothing of this incongruity in old British or new American music, for in each we have the normal, healthy phenomenon of a musical style born of language, the intimate relationship of music and language being traceable down to the characteristic melodic inflections shaped by dialect, as in the spirituals and the blues.

There is no better way to follow the interrelationship and interdependence of music and language than to observe the fate of the English language, first in a translated opera, then in an opera originally in English, say by Menotti or Benjamin Britten, and then in a musical revue, or even in Gilbert and Sullivan. Most instructive of all are those endeavors where the European and American styles appear side by side, as, for example, in *Porgy and Bess* and Leonard Bernstein's *Trouble in Tahiti*.

Musically, *Porgy and Bess* is brilliantly successful only in its tunes, all of them in the best idiomatic American show tune tradition. They rank among the loveliest examples of American balladry, the music proceeding naturally and, it seems, inevitably from the language, which is in this case colored by regional and racial influences. One has only to think of "Summertime," "I Got Plenty O' Nothin'," and

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"Bess, You Is My Woman Now" to appreciate the linguistic base of these fine musical achievements.

The opera is often less successful in the recitative and *parlando* episodes, where Gershwin's stylistic spontaneity was inhibited by what he thought to be the requirements of the operatic form. That which is sung sometimes has an incongruous ring, not because the text as such is awkward, but rather because Gershwin, in patterning his work on European models, was inevitably influenced by European musical conventions. Where the composer is easily and naturally his American self, as in the songs, the language and melodic line are all of a piece. But where he is being Europeanly operatic, they lose some of their coherence and strength.

These conflicts of style, and the problems deriving from the relationship between style and language, are even more vividly illustrated in *Trouble In Tahiti*. The opera proper is punctuated intermittently by a commentary sung by a mixed trio. This commentary is a jazzy, revue-type of satire. The lyrics are cleverly done, the music smart and lively. Text and music pour inseparably from the same tap. The effect is natural and charming.

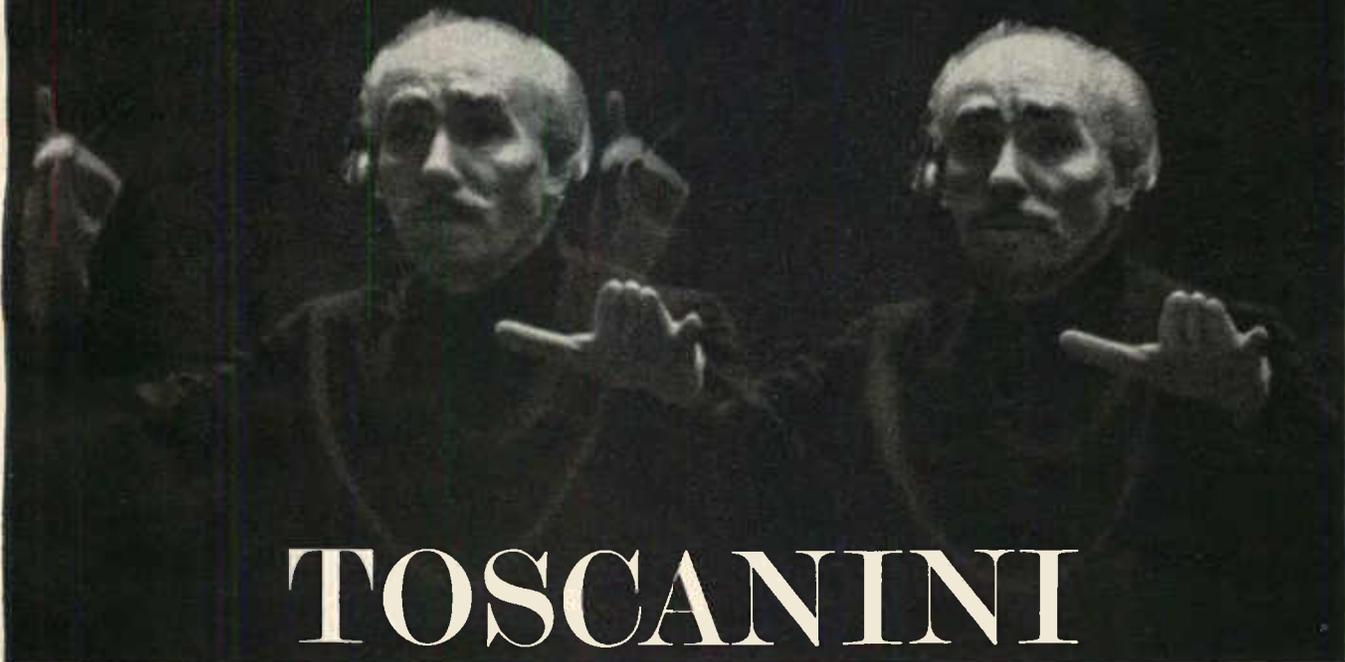
But the drama itself, the butt, so to speak, of the satirical commentary, is straight opera. And as soon as Bernstein starts to write European-style recitative and *parlando*, his language troubles begin. The whole thing becomes stilted and contrived. Only in the remarkable episode where the heroine tells the plot of a moving picture she has just seen is there any relief, and here only because Bernstein gets back for a moment to something like a musical revue style.

In each case—*Porgy And Bess* and *Trouble In Tahiti*—we have a talented and successful American composer constraining himself to write classical music, prompted, of course, by the assumption that this is the way to achieve something "better" than American music. Each has overlooked, or, more probably, been unaware of the fact that classical music is essentially European. In this respect both have reflected the general trend of musical thought in our time.

The result is inevitably a stylistic hash, or, at best, an often uncomfortable juxtaposition of two separate and essentially irreconcilable styles. When American composers write American music, they have no language problems. When they write European music, their language problem is insuperable. This is why the operas of even as relatively successful a composer as Menotti will never take root as the musical shows of Kern, Gershwin, Rodgers, Porter, and Berlin have taken root. It is not, certainly, that Menotti is ungifted. His talent is beyond question. But he doesn't write American music.

Thus, the question, "Is English a musical language?" is nonsense. The only question that could have critical relevance would be "Has English, or specifically American, produced a musical style in the sense that Italian, German, and French have produced musical styles?" And the answer to this is "Yes!"

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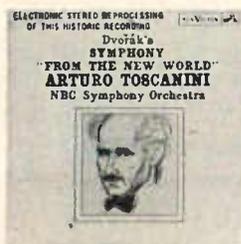


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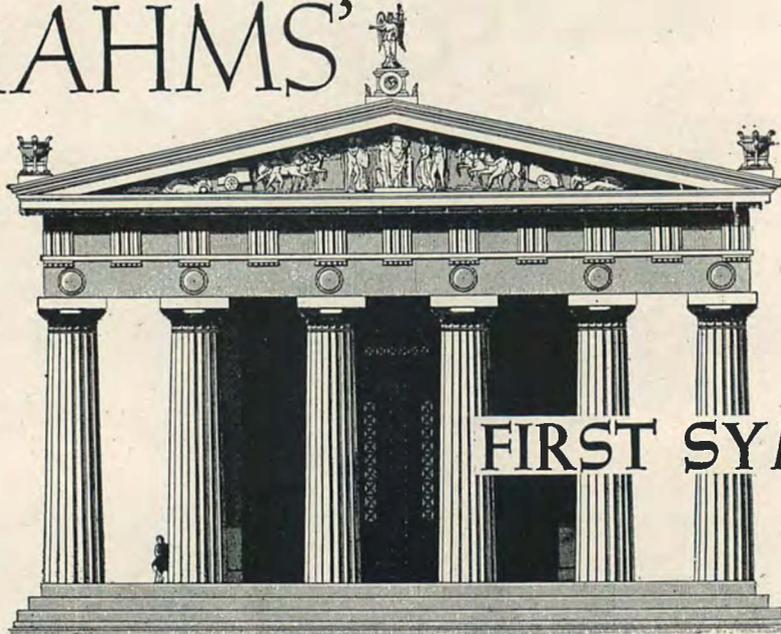
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A SENSATIONAL pronouncement appeared on October 23, 1853, in the pages of one of Germany's most respected musical periodicals, the *Neue Zeitschrift für Musik*. Robert Schumann was the author, and he was writing after ten years of virtual retirement from the literary arena. Under the heading *Neue Bahne* (New Directions), Schumann wrote that a young composer had appeared "who should reveal his mastery, not by gradual development, but should spring, like Minerva, fully armed, from the head of Jove. And now he has come, the young creature over whose cradle the Graces and heroes have kept watch. His name is Johannes Brahms." Schumann went on to venture the hope that Brahms would soon "point his magic wand to where the might of mass, in chorus and orchestra, lends him his power."

Schumann's prophecy seems premature when one remembers that the Johannes Brahms of 1853 was a raw stripling barely into his twenty-first year. If the world of music was not prepared for Schumann's pronouncement, the object of his enthusiasm was appalled at the heavy responsibility thus placed on his inexperienced shoulders.

A corollary and altogether awesome responsibility for the twenty-year-old Brahms was the general, if tacit, acceptance of him as the heir-apparent to the heroic symphonic mantle of Beethoven. Other composers, such as Schubert, Schumann, and Mendelssohn, may have composed symphonies whose lyrical cast showed them to be unintimidated by the long shadow of Beethoven, but not Brahms. "You

have no conception of how the likes of us feel when we hear the tramp of a giant like him behind us," he once confided to Hermann Levi, the conductor.

According to D. Millar Craig, the work we now know as Brahms's First Symphony was completed and ready "for about fourteen years" before it was heard. Craig says that "Professor Lipsius of Leipzig University, who knew Brahms well and often entertained him, told me that from 1862 onwards, Brahms almost literally carried the manuscript score about with him in his pocket, hesitating to have it made public." Friends urged Brahms over and over again to let it be heard, but not until 1876 could his diffidence about it be overcome.

When Brahms was finally ready to reveal his First Symphony to the world, the event took place not in one of the large and cosmopolitan music centers of Germany or Austria. Instead, Brahms chose the comparatively small town of Karlsruhe for the premiere—"a little town," he called it, "that holds a good friend, a good conductor, and a good orchestra." After the Karlsruhe premiere in November, 1876, which was conducted by Otto Dessoff, Brahms himself conducted performances of the score in Mannheim, Vienna, Leipzig, and Breslau. It cannot be said that the symphony was an immediate success. Its first audiences listened to it with respect, perhaps even admiration, but with no real love. Only years later, after the silly factional rivalry between the pro-Brahmsians and the neo-Germans (i.e., the Wagnerites) had subsided, did Brahms's First



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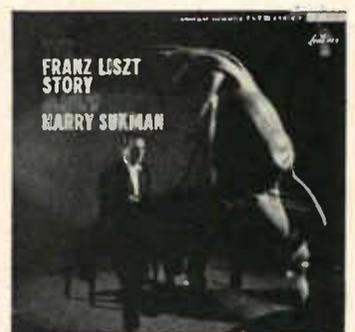
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THAT this symphony is also one of the most frequently recorded goes without saying. A recent Schwann catalog lists almost two dozen available versions, and more are being released all the time. Back in 1929, there was a recording of the music by Stokowski with the Philadelphia Orchestra that presented a reading of electric excitement, but this has long been unavailable.

Two highly regarded performances of the past are still listed in the current catalog, however, though they show their ages rather badly. That by Toscanini with the NBC Symphony Orchestra (*RCA Victor LM 1702*) is shrill and exceedingly deficient in bass, and that by Furtwängler with the Vienna Philharmonic (*Electrola 90992*) is distant-sounding, tubby, and veiled. Both performances, nevertheless, are characteristic of their respective interpreters. Nobody has quite matched the Toscanini performance in its high-strung, nervous intensity, and Furtwängler's mystical, probing account of the music weaves a magic spell that is unique.

Among contemporary accounts of the music, four, it seems to me, are in the Toscanini tradition. These are by Ormandy (*Columbia MS 6067/ML 5385*), Dorati (*Mercury SR 90268/MG 50269*), Steinberg (*Capitol SP/P 8340*), and Szell (*Epic BC1010/LC3379*). There is amazing agreement among the four concerning the basic tempo of each movement, and each of the four presents a reading of tightly disciplined orchestral playing mated to a conception of powerful dramatic impact. If I state a preference for the Ormandy performance, it is because the playing of the Philadelphia Orchestra and Columbia's recording of it are absolutely luxurious; here, indeed, is some of the finest orchestral playing and recorded sound to be found anywhere. Furthermore, Ormandy really identifies himself with this score and is absorbed in it. At one time or another he has recorded all the Brahms symphonies, but this is his most successful.

There is another tradition in the performance of the Brahms First Symphony: this is the weighty, Teutonic approach of which Furtwängler's was, to some extent, an example. But it takes a conductor with Furtwängler's mesmeric powers to make this approach acceptable to American ears. Horenstein (*Vox STPL 10690*), Kempe (*Capitol SG/G 7208*), Kubelik (*London CS 6016, CM 9221*), and Munch (*RCA Victor LSC/LM 2097*) are latter-day devotees of this style, but none of the four rises above a level of plodding and routine dullness.

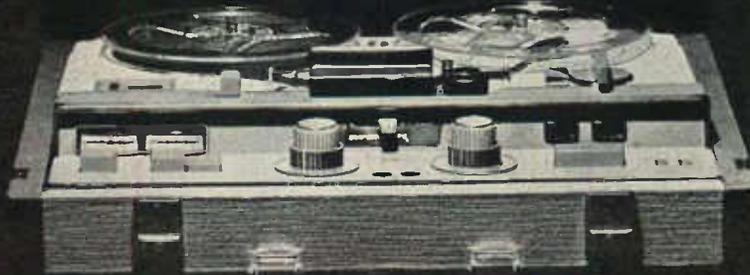
Böhm (*Deutsche Grammophon 138113/18613*), Karajan (*RCA Victor LDS/LD 2351*), Krips (*London CS 6110/CM 9180*), and van Beinum (*Epic BC 1035, LC 3603*) all offer performances that essentially combine the best features of both the Toscanini and Furtwängler styles. These four recordings present orchestral playing of surpassing excellence and excitement, and each conductor finds a stimulating intellectual challenge in the music. If I single out Krips's performance here, it is for many of the same reasons that make Ormandy's Toscanini-style reading so outstanding for me: the Vienna Philharmonic plays magnificently for Krips and is glowingly recorded, and Krips conveys the warmth and nobility of the music.

There remains one more recording of the symphony to talk about, and this is my favorite of them all: the version by Otto Klemperer and the Philharmonia Orchestra (*Angel S 35481*). On several past occasions I have remarked on Klemperer's unique ability to create a mood of rapt and exalted grandeur. In Brahms's First Symphony he has a work that is the perfect expression of this kind of feeling, and he gives a performance of rare spiritual communication. One comes away from the Klemperer performance with a sense of absolute catharsis. In listening to the recording recently, however, I was struck with its rather shallow sound. It was apparently made before Angel's engineers had learned how to capture the full glory of the Philharmonia Orchestra on a recording. Even so, the Klemperer reading is one of the glories of recorded music and is the most enthusiastically recommended of currently available disc versions.

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OF EICO STEREO



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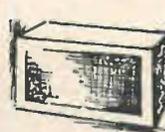
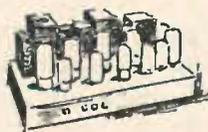
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TAPE RECORDERS '61:

Designed for Service

by Warren DeMotte

Today's home tape recorders offer more compactness, more convenience, and more fidelity for the money than ever before. And with the easy availability of high-quality recorders has come a change in the aims and ideals of the user. Quality tools inspire quality workmanship, and many people who were once tape-tinkers (continued overleaf)

TODAY'S TAPE RECORDER IS A VIRTUOSO'S INSTRUMENT

are now developing more and more of the potentialities of a creative artist in sound. Hand in hand with the development in creative skill has come the desire for aesthetic satisfaction—the desire to own a really good stereo recorder for playing back pre-recorded stereo tapes. Today the buyer of a tape recorder wants to hear musical performances reproduced with the superb clarity and naturalness of which the best stereo tapes are capable.

If the prospective buyer already owns a stereo system, he will probably want to integrate his tape equipment with it. It is possible to do this in several ways. The least complicated and cheapest way is to buy a tape deck. At its simplest, this device is merely a tape transport, with tape heads but no electronic circuits. It will play through the system if connected to the tape-head inputs of the amplifier.

This basic type of tape deck cannot be used to record; for that, a bias-oscillator must be added. But since the tape deck is the heart of any tape system, let us take a closer look at it.

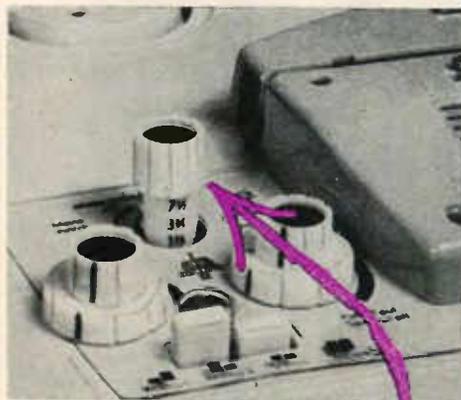
Perhaps the most important elements of the tape deck are its tape heads. A tape head, depending on how it is connected to various electronic circuits, can do three things. First, it can record, by converting electronic sound patterns into magnetic patterns and imposing them on the tape as

it passes by. Second, it can play back, by converting magnetic sound patterns on the tape into electronic patterns, which can be amplified and made audible. Third, it can demagnetize tape and so erase all sound patterns, leaving it free for fresh recording.

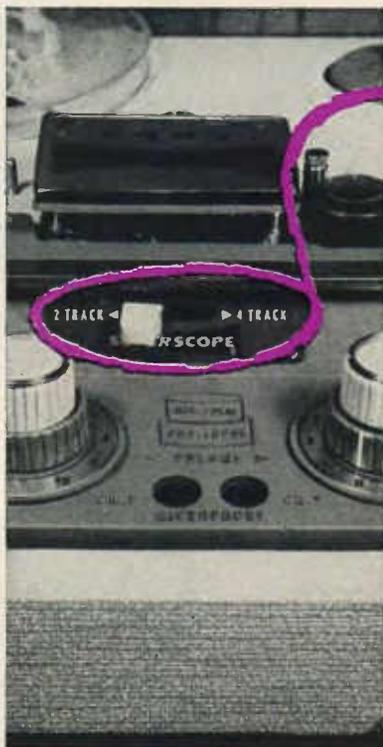
Through ingeniously arranged switches and circuits, the typical home tape recorder operates with two tape heads. One records and plays back; the other is used only for erasing. Professional recorders have three heads, one for each function. This adds to the cost of the machine, but it permits the use of more efficient tape heads, each designed for its own particular use.

In addition, separate record and playback heads enable the user to monitor his recording by playing the tape with the playback head immediately after the sound has been imposed on the tape by the recording head. Some machines have a switch that can be flipped back and forth between the playback signal and the signal being fed to the recording head, so that the qualities of the two can be compared.

A tape head is, in essence, an electromagnet. It consists of a rather small ring of metal that is wound with coils of wire. When an alternating electric current is sent through these coils, a fluctuating magnetic field is produced across an extremely narrow, precisely cut lateral gap in the



SPEED CHANGE should be simple and quick. On the Uher Stereo Record III, the speed is selected by means of a pull-out switch.



PAUSE FUNCTION is a great help in editing, allowing precise location of certain passages on the tape. The "pause" key of the Norelco 400 is topped by a release button to end the pause when desired.

HEAD SHIFT provides vertical head positioning to match up with either two-track or four-track tapes. In the Sony Superscope CS-300, the shift control is conveniently located near the other controls.

OUTPUT SELECTOR alternates the monitor take-off point between the incoming signal and the recorded tape. The output control on the American Concertone 505 thus allows instant comparison between sound source and final result.



... AND IT MUST BE SELECTED WITH CARE

ring. This gap is at the point at which the head comes in contact with the tape, and it is the magnetic force produced in the gap that puts a magnetic pattern on the tape or takes it off. The width of the gap is critically important. The narrower the gap, the truer the sound is likely to be.

It is largely because of these narrow-gap heads that today's slow-speed tapes can reproduce sound as faithfully as high-speed tapes did not long ago. Only a few years back, tapes recorded at less than 15 inches per second were thought to be inherently incapable of meeting high-fidelity standards. But today's pre-recorded 7½-ips tapes are often outstanding in quality, and even 3¾-ips tapes can produce respectable sound.

Since the width of the gap is so critical, even a minute increase in its size will cause a deterioration in fidelity, and precautions must be taken to prevent friction between the tape and the metal. Modern tape is highly polished, and the face of the tape head itself is polished to mirror smoothness to minimize abrasion and consequent loss of high-frequency response.

Although a definite, even contact between the tape and the head is necessary for good recording and playback, contact pressure must be kept light. Recorders that employ pressure pads to hold the tape against the head should be

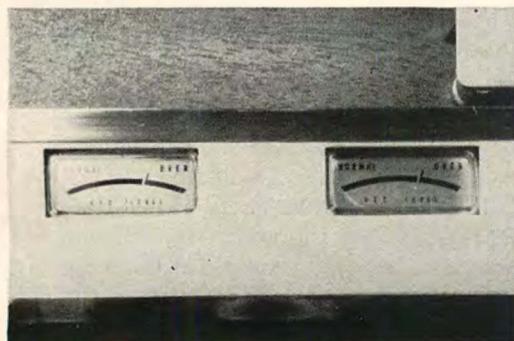
adjusted very carefully. It is particularly important to avoid abrasive pressure between tape and tape head when the tape is being wound or unwound at high speed, and to achieve this, some recorders employ tape lifters instead of pressure pads. Tape lifters are usually arrangements of metal fingers that hold the tape securely against the heads during recording and playing back; during rewinding the tape lifters pull the tape away from the heads to keep it from wearing away the metal surfaces. Tape lifters are great conveniences in editing, since they allow freer access to the tape heads than do pressure pads.

Serving a complementary function to that of the tape heads is the tape transport. This is the mechanical section of the deck, and its most important component, of course, is the motor, whose primary purpose is to rotate the capstan so that it moves the tape past the tape heads at a correct, constant rate. Even tiny variations in speed can become audible on the tape as wow, which is a rising and falling of pitch, or flutter, which is a rapid fluctuation of pitch. A good motor, however, will show speed variations so slight that they will not produce audible distortion.

In many of the finer recorders the motors are of the hysteresis synchronous type. Their speed is determined by the frequency of the power-line current, and since this fre-

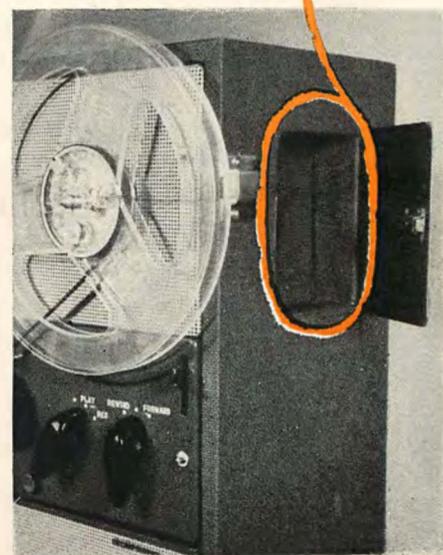


EASY ACCESS to input and output terminals is desirable. The Norelco 400 has recessed panels that enable connections to be made conveniently.



METERS indicate proper recording level. On the Bell T-337, large dials, marked in contrasting colors, are easily readable even at a distance.

MONITORING arrangements make it possible to hear the tape as it is recorded. The Ampex 960 tape deck incorporates a "monitor" position into its main function-selector switch.



BUILT-IN SPEAKERS are handy for instant playback. The Roberts 990 has side-mounted speakers with hinged doors that serve as reflector panels to increase stereo separation.

quency is generally very stable, variations in speed are minimal. Unfortunately, heavy-duty hysteresis synchronous motors are quite costly. A less expensive type of motor that is found in many tape recorders is the induction motor. While its speed is affected by voltage changes in the power line, if it is designed and fabricated with care it can provide thoroughly dependable service.

Assuming that the motor is reliable, the way in which it is coupled to the capstan determines, to a great extent, whether the capstan spindle will rotate smoothly or with the little bumps that become translated into flutter. The problem here is to avoid transmitting the motor's vibration to the capstan. Most often, the coupling is either a seamless belt or a rubber idler wheel. The former is the more satisfactory arrangement, in theory, since a belt is less rigid and can absorb more vibration than an idler wheel. If the motor is really good, however, an idler-wheel coupling can be quite satisfactory. A few tape recorders may even use the motor shaft itself as a capstan. This type of drive, of course, demands superior precision in the design and manufacture of the motor and in its mounting. Such precision, needless to say, does not come at low cost.

In operation, the tape is held against the capstan by a round rubber pressure roller or pinch wheel, and is thus drawn past the tape heads, while one of the reels supplies the tape and the other takes it up. The tension on the take-up reel must be adjusted so the tape is neither slack nor overstressed. The supply reel must be adjusted similarly. And in fast winding, the tension between the reels should be neither strong enough to break or stretch the tape nor so weak that the tape spills out. The two reels may be powered by the capstan motor through mechanical linkages; each may be powered by its own motor; or both may be coupled to a motor separate from the capstan drive. The power requirements for winding and rewinding are small, and the extra load is easily handled by the capstan motor. There is, however, the theory that more efficiency is attained when a component performs only the task for which it is best suited, and this is the chief argument in favor of two- and three-motor designs.

Most recorders today have straight-line tape travel, making loading a simple operation. Those machines that do not have straight-line travel usually require that the tape be wound either around a tension regulator or an automatic-stop arm.

Essentially, both are safety devices. The tension arm regulates the tension on the tape, preventing it from reaching the point where the tape will be stretched or broken. The automatic-stop arm is most useful in the event the tape does break—something that should not happen if the machine is functioning properly—or when a bad tape-splice comes apart. There are other types of stopping devices that do not require an arm. The most common of these utilizes a metallized section at the end of the tape which trips a switch and shuts off power; but this device, of course, is useless if the tape breaks.

PERHAPS the most important safety device on a tape recorder is the one that prevents accidental erasure of a recording. If designers had planned for the ultimate in operating simplicity, they would have made it possible to record with the mere pressing of one button. But then if the "record" button were to be pressed when "play" was intended, that would be the end of a perhaps precious recording, for everything already on the tape is erased in the process of recording. To keep this from happening, every home recorder forces the operator to perform at least two actions in order to record, on the principle that while one action may easily be inadvertent, two are unlikely to be.

Another safety feature that goes with good basic design is smooth operation of the tape transport. Beware of a machine that lets the tape go slack and then starts with a jerk. It is a sure tape-breaker. And a machine that permits tape spillage is an awful nuisance as well as a menace. Backlash and lethargic starting and stopping are annoyingly inconvenient when editing has to be done.

Such faults as these are easy to spot when shopping for a tape recorder. Even a few minutes' operation will disclose them. Listen very closely, too, for the amount and type of noise the transport mech-

(continued on page 42)

BUILD'EM YOURSELF

Three firms—Heath, EICO, and Knight—offer tape recorders in kit form. Since assembly accounts for a large part of tape recorder cost, a consumer can economize by contributing his own labor.

At present, Heath offers the widest choice of kit-built recorders offered by a single manufacturer. Heath's units are also priced lower than Knight's or EICO's, partly because the builder assembles the entire unit, including the tape transport mechanism. Thus, it is possible to buy a four-track recorder in kit form for as little as \$149.95 (Heath Model TR-1AQ).

Both EICO and Knight furnish their recorder kits with fully assembled tape transports. The builder has only to wire the electronic sections. Since part of the

assembly has been done at the factory, the prices of these units are higher than are Heath's. The combination of the factory-built Knight KN-4000 tape transport with the Knight-Kit 83-YX929 electronics kit costs \$214.45. The EICO RP100K is priced at \$289.95, and is also furnished with a tape transport that has been built and checked out at the factory.

As in any other kind of kit project, success depends more on the temperament of the builder than on any special skill. Patience and accuracy in following step-by-step instructions are the primary requirements. To those who enjoy working with their hands, the process of building a tape recorder from a kit can be as pleasant as the enjoyment of the final result.

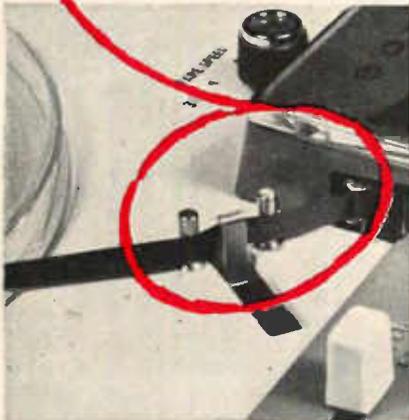


BIAS ADJUSTMENT enables the technically adept user to vary the amount of bias current for optimum performance with various types of tape. The rear apron of the Viking Stereo Compact has slotted control shafts for adjusting both the erase and the record current.

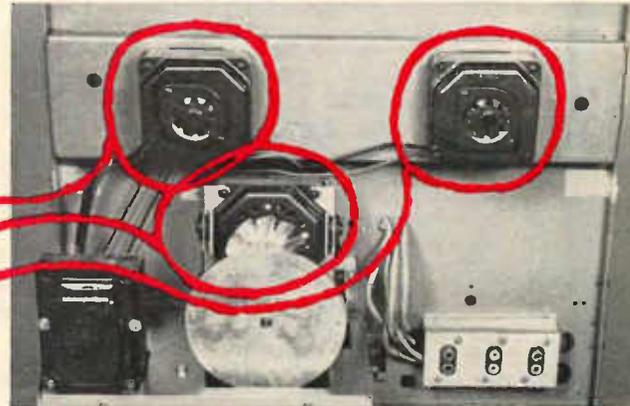


PORTABILITY is a great help if you have to carry your recorder on location. The Tandberg Model 6 is one of the smallest and lightest current models.

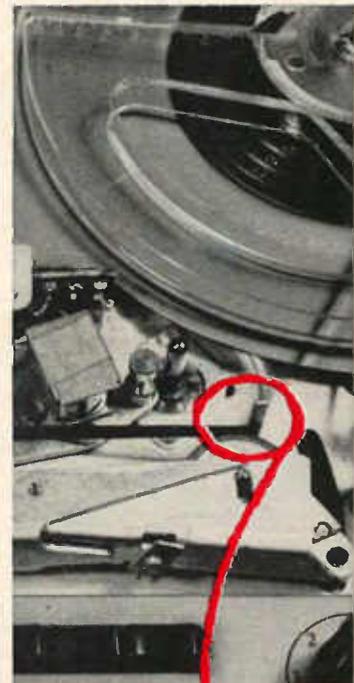
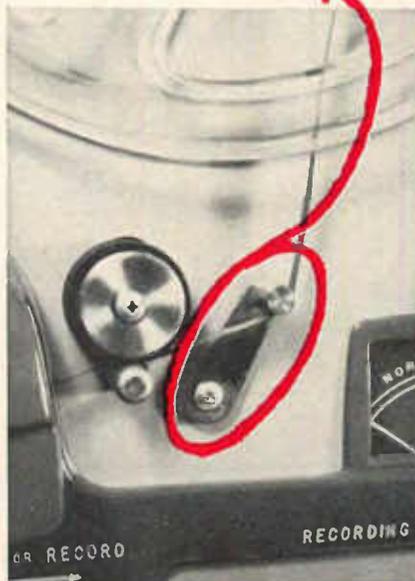
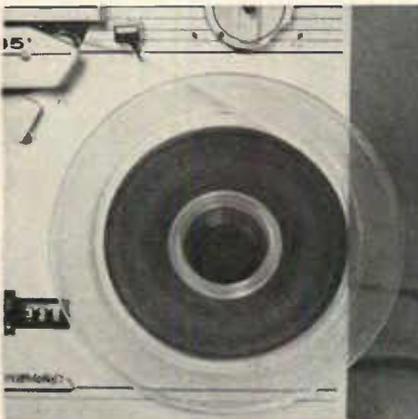
AUTOMATIC STOP turns off tape transport at the end of the reel or if the tape breaks. The Sony Superscope CS-300 uses a feeler lever between two closely spaced posts to activate shut-off.



THREE-MOTOR DRIVE is one possible indication of quality in the transport mechanism. In the Knight KN-4000 tape player, the capstan and each of the two reels are driven by separate motors.



TENSION LEVERS are employed in some models, including the Ampex 960 shown here, to equalize the load on the capstan and prevent snapping of the tape. Simultaneously, they act as "feelers" to sense the end of a reel and activate the automatic shut-off.



TAPE LIFTERS hold the tape away from the head surfaces during rewind and fast forward. The Tandberg Model 6 employs this type of mechanism.

FAST REWIND and forward speeds are needed to arrive quickly at any desired portion of the recording. The Viking Stereo Compact shown here rewinds in a hurry.

STEREO RECORD/PLAYBACK TAPE RECORDERS—1961

Name	Model	Price	Dimensions (inches)	Weight (pounds)	Preamps Included	Power Amps Included	Speakers Included	7½ ips	3¾ ips	1½ ips	2-Track Mono Record	4-Track Mono Record	2-Track Mono Playback	4-Track Mono Playback	2-Track Stereo Record	4-Track Stereo Record	2-Track Stereo Playback	4-Track Stereo Playback	Number of Heads	Number of Motors	Level Indicators ¹¹	Monitoring	Fast Winding Time (1200 feet)	Counter	Automatic End Stop	Pause
American Concertone	505	\$495.00	18¼ x 14½ x 6¾	36	2 channels	No	No	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	4	3	Meters	After	45 sec.	Yes	Yes	No
American Concertone	505-4	495.00	18¼ x 14½ x 6¾	36	2 channels	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	4	3	Meters	After	45 sec.	Yes	Yes	No
Ampex	960	495.00	17½ x 15 x 9	36	2 channels	No	No	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	3	1	Meter	After	80 sec.	Yes	Yes	No
Ampex	970	595.00	25½ x 15 x 9	46	2 channels	2 channels	2 channels	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	3	1	Meter	After	90 sec.	Yes	Yes	No
Ampex	934	189.50 ²	15¼ x 13¼ x 7¾	22	No	No	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes	Yes	1	1	No	No	90 sec.	No	Yes	No
Ampex	936	249.50 ²	15¼ x 13¼ x 7¾	25	2 chan ¹²	No	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes	Yes	1	1	No	No	90 sec.	No	Yes	No
Arr-pligraph	66	330.00 ²	16 x 12¼ x 7	20	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	No	Before	70 sec.	Yes	Yes	No
Arkay-Harting	HM4/MS5	129.95 ²	14½ x 12 x 7	17	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	No	Before	2 min.	Yes	Metal	No
Bell & Howell	785-4TS	259.95	16 x 15 x 10	38	2 channels	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Neon Bulb	Before	80 sec.	Yes	No	Yes
Bell Sound	T-321	159.95 ²	15¼ x 13½ x 7	14	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No	Yes	Yes	27	3	No	No	40 sec.	Yes	Yes	No
Bell Sound	T-323	184.95 ²	15¼ x 13½ x 7	14	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	37	3	No	Before	40 sec.	Yes	Yes	No
Bell Sound	T-333	199.95 ²	15¼ x 13½ x 7	14	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	37	3	No	Before	40 sec.	Yes	Yes	No
Bell Sound	T-337	334.95 ²	15¼ x 13½ x 7	18	2 channels	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	37	3	Meters	Before	40 sec.	Yes	Yes	No
Crown	714C	730.00 ²	19 x 17½ x 7½	46	2 channels	No	No	Yes	Yes	No ⁹	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	3	Meters	Before	40 sec.	No	Yes	No
Eico	RP-100K ⁴	289.95 ²	15¾ x 13½ x 7¼	28	2 channels	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	3	3	Meters	After	1 min.	Yes	No	No
Ekotape	350	455.50	18 x 13¾ x 11½	44	2 channels	2 channels	1 channel	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Meter	Before	2 min.	Yes	Yes	Yes
Ekotape	362	144.00 ²	12¾ x 9 x 7½	18	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2	1	No	Before	2 min.	Yes	Yes	Yes
Ekotape	360	124.00 ²	12¾ x 9 x 7½	18	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2	1	No	Before	2 min.	No	No	Yes
Ferroglyph	Stereo E08	585.00	18½ x 17½ x 9¾	51	2 channels	No	No	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	3 ⁵	3	Meter	Before	1 min.	Yes	Yes	Yes
Harting	HM 8 S	175.50	18½ x 15 x 8¾	30	2 channels	2 channels	2 channels	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Electron Eye	Before	2 min.	Yes	Metal	Yes
Heath	AL-70	74.95 ²	15½ x 9½ x 5½	9¼	No	No	No	Yes	Yes	No	No	No	Yes	Yes	No	No	No	Yes	2	1	No	No	75 sec.	No	No	No
Heath	AD-40 ³	179.95	9¼ x 22¼ x 14½	36	2 channels	2 channels	2 channels	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	No	Yes	2	1	Electron Eyes	Before	2 min.	No	No	Yes
Heath	TR-1AQ ³	149.95 ²	15½ x 9½ x 5½	30	2 channels	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2	1	Electron Eyes	Before	75 sec.	No	No	No
Heath	TR-1E ³	169.95 ²	15½ x 13½ x 10¾	22	2 channels	No	No	Yes	Yes	No	Yes	No	Yes	No	No	No	No	Yes	3	1	Meter	After	2 min.	Yes	No	Yes
Knight	KN-4075	239.95	18 x 14½ x 9¾	23	2 channels	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	3	1	Meters	After	2 min.	Yes	Yes	No
Knight	KN-4000	134.50	15¼ x 13¾ x 7	18	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	3	3	No	After	2 min.	Yes	Yes	Yes
Knight	KN-4100	104.50	15 x 11¾ x 8	19	2 channels	1 channel	1 channel	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Neon Bulb	Before	2 min.	Yes	No	No
Knight	KN-4300	249.95	18 x 14½ x 9¾	30	2 channels	2 channels	2 channels	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	2	1	Meters	Before	2 min.	Yes	Yes	No
Lafayette	RK-169	159.85	21 x 10 x 14	45	1 channel	2 channels	2 channels	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Neon Bulb	Before	90 sec.	Yes	No	No
Magnecord	748-44X	915.00 ²	17¾ x 12¾ x 12	50	2 channels	No	No	Yes	Yes ¹⁰	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	4	3	Meters	After	50 sec.	Yes	Yes	No
Magnecord	102-1	449.95 ²	17 x 12¼ x 8	43	2 channels	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	37	1	Meters	Before	60 sec.	No	No	No
Movic	A-2/4	695.00	18 x 16 x 8½	45	2 channels	2 channels	1 channel	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	5	3	Meters	After	75 sec.	No	Yes	No
Newcomb	SM310-4	499.50	16¾ x 12¾ x 9½	34	2 channels	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Meters	Before	45 sec.	Yes	Yes	No
Norelco	400	399.50	18½ x 15½ x 11½	48	2 channels	2 channels	2 channels	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Electron Eye	Before	2 min.	Yes	Metal	Yes
Norelco	300	269.50	15¾ x 13 x 6¾	30	1 channel ⁸	1 channel	1 channel	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No	Yes	2	1	Electron Eye	Before	2 min.	Yes	Metal	Yes

Pentron	AR-82S	239.95	13 3/4 x 12 1/4 x 8	20	2 channels	1 channel	1 channel	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Electron Eye	Before	80 sec.	Yes	Yes	Yes
Pentron	XP-60S	249.95	12 7/8 x 12 1/4 x 8 1/2	18	2 channels	1 channel	1 channel	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Electron Eye	Before	80 sec.	Yes	Yes	Yes
Pentron	GR-15S	159.95	17 x 14 x 11	29	2 channels	1 channel	1 channel	Yes	Yes	No	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Neon Bulb	Before	90 sec.	No	No	No
Realistic	E34CX998	169.95	16 x 15 x 10	34	2 channels	2 channels	2 channels ⁶	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Neon Bulb	Before	2 min.	Yes	Yes	Yes
Recordio	892	229.95	16 1/2 x 14 1/2 x 10	37	2 channels	2 channels	2 channels	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Neon Bulbs	Before	2 min.	Yes	No	No
Revere	T-2200	239.50	14 x 14 x 7 1/2	25	2 channels	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Neon Bulbs	Before	2 min.	Yes	Yes	Yes
Revere	T-204-4	237.50	13 1/2 x 13 x 8 1/2	32	2 channels	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Neon Bulb	Before	2 min.	Yes	Yes	Yes
Revere	T-11-4	284.50 ²	19 x 14 x 9	30	2 channels	1 channel	No	Yes	No	No	No	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Neon Bulb	Before	3 min.	Yes	Yes	Yes
Roberts	990	399.50	20 x 14 x 9	46 1/2	2 channels	2 channels	2 channels	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Meters	Before	90 sec.	Yes	No	Yes
Roberts	440	695.00	26 x 16 3/4 x 7	55	2 channels	2 channels	2 channels	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	3	3	Meters	After	40 sec.	Yes	Yes	Yes
Sony	CS-300	399.50	19 x 15 x 10	42	2 channels	2 channels	2 channels	Yes	Yes	No	Yes	2	1	Meters	Before	90 sec.	Yes	Yes	Yes							
Sony	DK-300	349.50 ²	16 1/2 x 12 3/4 x 7 7/8	35	2 channels	2 channels	No	Yes	Yes	No	Yes	2	1	Meters	Before	90 sec.	Yes	Yes	Yes							
Sony	262-SL	199.50	14 x 11 x 7	20	2 channels ¹³	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Electron Eye	Before	90 sec.	Yes	No	Yes
Sony	262-D	89.50 ²	13 x 10 x 5 3/8	10	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	No	Before	90 sec.	Yes	No	Yes
Tandberg	6	498.00	16 x 12 x 6	25	2 channels	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	3	1	Electron Eyes	After	52 sec.	Yes	Metal	Yes
Tandberg	5-3	493.50	18 1/2 x 12 1/2 x 8	32	2 channels	2 channels	1 channel	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Electron Eyes	Before	1 min.	Yes	Metal	No
Tapesonic	70-DSF	535.00 ²	24 1/2 x 19 x 7	53	2 channels	No	No	Yes	Yes	No ⁹	No	Yes	Yes	Yes	No	Yes	Yes	Yes	3	3	Meters	After	40 sec.	Yes	Yes	No
Telectro	900-1	99.00 ²	14 3/4 x 13 x 7 3/4	14	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	2	1	No	Before	2 min.	Yes	Yes	Yes
Telectro	900-2	115.00 ²	14 3/4 x 13 x 7 3/4	14	No	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	3	1	No	After	2 min.	Yes	Yes	Yes
Telectro	900-3	109.00 ²	14 3/4 x 13 x 7 3/4	14	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	No	Before	2 min.	Yes	Yes	Yes
Telectro	900-4	89.95 ²	14 3/4 x 13 x 7 3/4	14	No	No	No	Yes	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes	1	1	No	No	2 min.	Yes	Yes	Yes
Telectro	900-5	139.00 ²	14 3/4 x 13 x 7 3/4	14	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	3	1	No	After	2 min.	Yes	Yes	Yes
Telectro	SA-121	129.95	14 x 12 7/8 x 8 1/4	17	2 channels	1 channel	1 channel	Yes	Yes	No	No	No	Yes	No	No	No	Yes	Yes	2	1	Neon Bulb	Before	2 min.	No	No	No
Telectro	SR-441	239.95	14 1/2 x 13 1/2 x 8 1/2	34	2 channels	2 channels	2 channels	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Neon Bulbs	Before	2 min.	Yes	Yes	Yes
Telectro	SS-461	349.95	21 1/2 x 14 1/2 x 8 1/2	42	2 channels	2 channels	2 channels	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	3	1	Meters	After	2 min.	Yes	Yes	Yes
Uher	Stereo III	399.50	15 x 16 x 7 1/4	29	2 channels	2 channels	2 channels	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	2	1	Electron Eyes	Before	1 1/4 min.	Yes	Metal	Yes
V-M	722	259.95	16 5/8 x 14 3/4 x 9 7/8	38	2 channels	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	37	1	Electron Eye	Before	90 sec.	Yes	Yes	Yes
V-M	720	225.00	16 x 14 1/2 x 9 1/2	41	2 channels	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	Yes	37	1	Electron Eye	Before	90 sec.	Yes	Yes	Yes
Viking	85RMQ	179.50 ²	13 x 9 1/2 x 5 1/2	13	No	No	No	Yes	Yes	No	No	Yes	3	2	No	After	90 sec.	Yes	Yes	Yes						
Viking	85ESQ	179.50 ²	13 x 9 1/2 x 5 1/2	13	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	3	2	No	After	90 sec.	Yes	Yes	Yes
Viking	Stereo-Compact RMQ	297.50 ²	13 x 13 x 9	23	2 channels ¹¹	No	No	Yes	Yes	No	No	Yes	3	2	Meters	After	90 sec.	Yes	Yes	Yes						
Viking	Stereo-Compact ESQ	297.50 ²	13 x 13 x 9	23	2 channels ¹¹	No	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	3	2	Meters	After	90 sec.	Yes	Yes	Yes
Viking	Super-Pro RMQ	374.50	20 3/4 x 13 3/4 x 10 1/4	40	2 channels	No	No	Yes	Yes	No	No	Yes	3	2	Electron Eyes	After	90 sec.	Yes	Yes	Yes						
Viking	Super-Pro ESQ	374.50	20 3/4 x 13 3/4 x 10 1/4	40	2 channels	No	No	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	3	2	Electron Eyes	After	90 sec.	Yes	Yes	Yes
Webcor	EP-2008	249.95	14 1/2 x 14 1/2 x 8	23	2 channels	2 channels	2 channels	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Electron Eye	Before	90 sec.	Yes	Yes	Yes
Webcor	EP-2108	249.95	13 3/16 x 11 1/16 x 7 5/8	19 1/2	2 channels	2 channels	2 channels	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	2	1	Electron Eye	Before	90 sec.	Yes	Yes	Yes
Webcor	EP-2107	349.95	17 x 14 3/4 x 9	32	2 channels	2 channels	2 channels	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	2	1	Meter	Before	90 sec.	Yes	Yes	Yes
Wollensak	T-1515-4	229.50	11 3/4 x 10 1/4 x 6 1/2	20	2 channels	1 channel	1 channel	Yes	Yes	No	No	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Electron Eye	Before	90 sec.	Yes	No	Yes
Wollensak	T-1616	329.50	11 3/4 x 10 1/4 x 8 1/2	21	2 channels	1 channel	1 channel	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	2	1	Electron Eye	Before	90 sec.	Yes	Yes	Yes

1. Playback kit; may be converted for recording. 2. Chassis only. 3. Kit. 4. Kit; available wired at \$395.00. 5. Separate Record/Playback heads for stereo and monaural. 6. External second speaker included. 7. Separate R/P heads for 2-Track and 4-Track. 8. Requires second channel electronics and speaker. (e.g.—Tapehead input of hi-fi preamp) for stereo playback. 9. Includes 15 ips. speed. 10. Available with 15 ips. speed instead of 3 3/4 ips. as Model 728-44X. 11. Record preamps only; uses Tapehead inputs of hi-fi preamp or added playback preamp for playback function. 12. Playback only. 13. 2-channel playback preamplifier; 1-channel record preamplifier. 14. Part of preamp; not present in basic deck.

anism makes both during uninterrupted operation and during switching from one function to another. If it produces loud clanks and plunks, chalk up a demerit. Such noises may show up in your recordings, and you can do without their alien obbligate. Also, when you play pre-recorded tapes, it will be to the accompaniment of whirring and grinding sounds. Silence is golden in the moving mechanisms of tape recorders.

If you already have a good stereo system in your home, and your interest is in playing pre-recorded tapes, then a simple tape deck is adequate for your needs. If, however, you also want to be able to record your own tapes, either off the air or through microphones, you will need some additional electronic equipment.

At this point, you should consider the advisability of choosing a self-contained, portable recorder, instead of a unit designed for permanent installation. Assembled in a case, the tape deck and its related electronic components are easy to transport to other locations, and if you enjoy recording, there are many opportunities away from home to challenge your abilities. Once you have gone this far in considering portability, you should weigh the possible advantages of going a step further and including power amplifiers, and perhaps speakers, in your portable tape recorder.

THE purchase of your tape recorder is a serious project. To avoid disappointment, it would be advisable to visit an audio salon so you can have various recorders demonstrated for you. Above all, don't just wander into a crowded store and expect the salesman to devote hours to you while neglecting other customers. If you can, shop during off-hours. Better, make an appointment in advance with a particular salesman. Make sure that he has on hand the machines in which you are interested. Ask him to set up the demonstration (e.g., dubbing facilities) ahead of time. Everything will then go more smoothly, and both his time and yours will be more profitably spent.

After you decide approximately how much you wish to spend and what you require of your machine, the field will be narrowed to a relatively few models. Perhaps the salesman will suggest others and explain why you should consider them, even though they may cost a few dollars more than you have budgeted or even though they may include a feature or two you don't particularly need. Give his suggestions consideration; they may prove to be valuable.

Hidden factors of workmanship are often the reasons for apparent discrepancies between the price and the stated specifications of a tape recorder. Even if a low-priced machine makes good its claims initially, there is no telling how long the specified level of performance will be maintained. Here, then, lies one of the primary differences between quality and economy machines. Variations from one manufacturer to another in attention to costly precision machining and rigid inspection at the factory largely account for the price spread among tape recorders of similar stated capabilities. In this area, the advice of a knowledgeable salesman is invaluable.

To start off, have the salesman demonstrate the best tape recorder he has in the house, regardless of price. After he puts it through its paces you will have an excellent point of reference.

If you plan to use associated equipment—such as power amplifiers and speakers—with the recorder you are purchasing, have the salesman hook up similar equipment to the machine. Note how quietly and smoothly the recorder operates. Have the salesman play a few minutes of different types of music and listen carefully to the clarity and definition of the sound. Take particular notice of piano tones. On a good machine, they are firm and stable. They can tell you in a moment how good the tape transport is. If they waver, forget about using that particular machine as a standard of excellence.

Now have the salesman hook up the equipment to one of the machines you are considering. Ask him to play the same tapes. Note how they sound in comparison with the way they sounded before. Go through the same routine with each of the other recorders. Listen carefully; don't lose patience. After all, it is your money you are spending. The salesman, if he is worth his salt, will recognize you as a sincere customer and will respect your systematic approach to the problem of selection.

If you are considering a machine that records, have the salesman record something on the reference machine—from a record, preferably—and then play it back, switching back and forth between the record and the tape, so you can judge the tape as to naturalness and fidelity. Then tape the same record on each of the machines under consideration and compare the results. Pay particular attention to the amount of hum and hiss; you want your recorder to be as quiet as possible. Notice the level indicators while recordings are being made; the indicators should be accurate and easy to read.

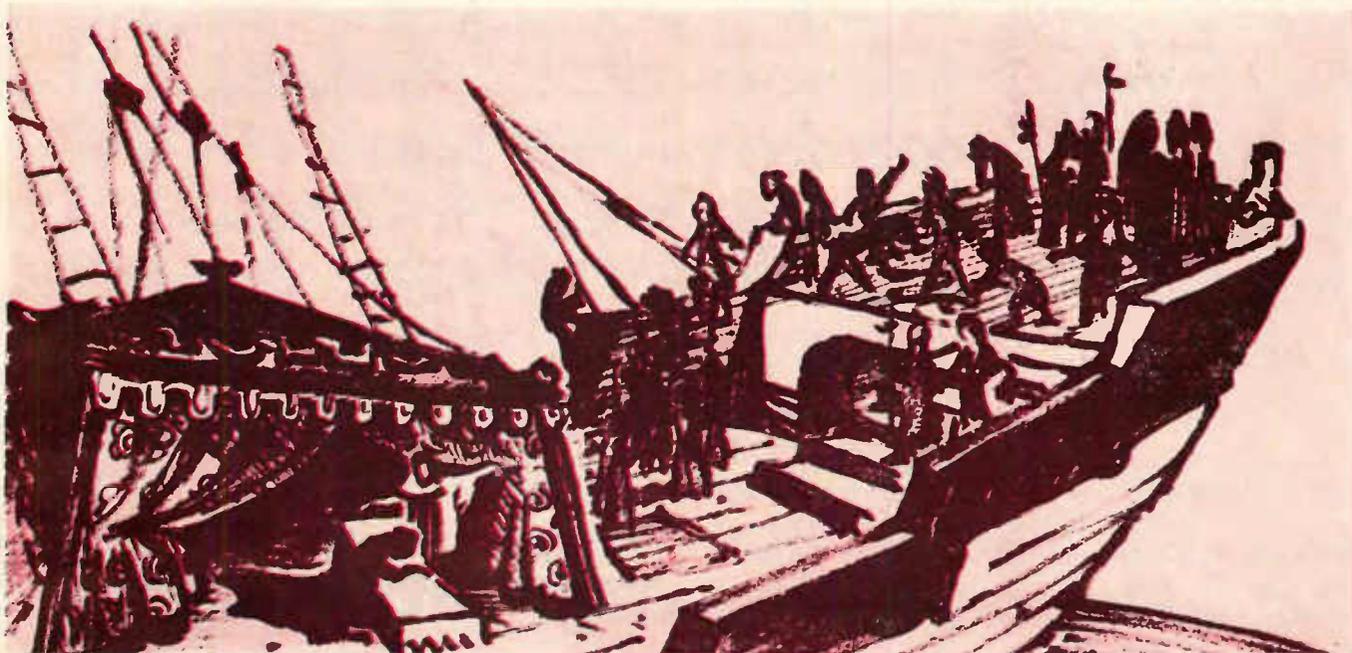
If the salesman is using the microphones that come with recorders, ask him to tape a short recording with a high-grade microphone. This will show the true potential of the recorder better than the microphone that comes with the unit, for these are usually very inexpensive and do not altogether enhance the performance of their recorders.

By this time, you've probably narrowed the field to no more than two or three instruments. Selection still remains a matter of listening and comparing, with perhaps a glance at relative prices. But you are close to home now, and unless the unforeseen happens, you should be able to choose a tape recorder that will provide enjoyment and gratification for a long time to come.

Warren DeMotte has been utilizing tape recorders since their infancy while recording recitals of his pianist wife, Ida Hartman. As her manager, he keeps in close touch with the concert world, and his regular stint as a HiFi/STEREO REVIEW record reviewer makes him equally at home in the realm of recorded music.

by JOHN CULSHAW

Staging the First Stereo *Tristan*



—AN ADVENTUROUS EXPERIMENT

Two of the most widely acclaimed stereo recordings yet produced, the London releases of Wagner's *Das Rheingold* and Verdi's *Aïda*, were produced by a team headed by thirty-five-year-old John Culshaw, the manager of London's classical recording section. Mr. Culshaw has achieved an international reputation not only for his superlative work in the recording

field but also for his several books on music, including *Rachmaninoff, the Man and his Music* (Oxford University Press, New York, 1950). Here Mr. Culshaw describes the challenge that was met by London in recording Richard Wagner's *Tristan und Isolde*. (A review of this recording will appear in next month's *HiFi/STEREO REVIEW*.)

WHEN we first began to shape plans for a stereophonic recording of *Tristan und Isolde*, the solutions to the problems of aural staging and microphone placement seemed very simple. In *Tristan* we would not have to deal with anvils, thunderclaps, swimming Rhinemaidens, or disappearing dwarfs, as we did in recording *Das Rheingold* in 1958. Nor would we have to deal with changing perspectives such as those in *Aïda*, which we recorded a year later, with its entombed lovers, onstage and offstage choruses, and auxiliary brass band. Apart from some shifts of chorus placement in Act I and the departing hunting horns and Brangäne's warning from the battlements in Act II, there are no really complicated aural effects in *Tristan*.

But even as we were congratulating ourselves on not hav-

ing to cope with another stereo-action score, we became increasingly and uncomfortably aware that we had, instead, another problem, opposite in nature to those implicit in the staging of *Das Rheingold*. For *Tristan* is all but devoid of stage action throughout its four-hour length. The question, then, was how to devise enough apparent movement and variation in perspective to give so long and static a work dramatic life in the stereophonic medium without imposing on it arbitrary movement or effects as ends in themselves.

No matter how we answered this question we would risk controversy. It is possible, I suppose, to approach *Tristan* as if it were like any other opera—which, even among the mature works of Wagner, it most emphatically is not. To set up the studio as for a recording of, say, Gounod's

Roméo et Juliette would have been the easy way out. But we decided to try to record *Tristan* in stereo as the composer might have imagined it. The idea farthest from our minds was to attempt to reproduce on records a performance of the music-drama as it is heard in the opera house.

To have any hope of success, we had to consider first things first; and the hard fact about *Tristan* is that here the orchestra is not only first but fundamental. More than in any other opera—more, even, than in *Götterdämmerung*—the line and power of the orchestral writing carry the drama forward.

The orchestra paints the ambiguity of Isolde's emotion in Act I—the fury, the irony, the desire. The orchestra caresses and surrounds the lovers in Act II, shadows the betrayal of King Mark, and, in Act III, projects the agony of Tristan with an intensity that has an almost physical effect in short-circuiting the usual processes of emotional response to music.

Surely Wagner did not intend *Tristan* to sound like conventional opera. Even more surely he did not intend it to sound as it does in opera houses other than Bayreuth and perhaps one other. And surely he knew what he was doing in composing music of so rich and sustained and symphonic an orchestral texture. We took these convictions as our points of departure in recording *Tristan*.

ABOVE all, we tried to get the dynamics as correct as possible, to make climaxes come out with the maximum power in the right places. The three loudest passages in *Tristan* are at the landfall near the end of Act I, which is loud because of the forces involved (soloists, full orchestra, chorus, and stage band); the entrance of the lovers in Act II; and the passage leading up to and immediately following the arrival of Isolde in Act III. (Contrary to a general impression, the instrumental climax of the *Liebestod* is not fortissimo; when Isolde reaches her climactic G-sharp the orchestra has built a slow crescendo only to forte.) Dynamically, everything else in the opera is scaled with reference to these peaks.

Any performance of *Tristan und Isolde* is, of course, fearfully exhausting for the singers. A hundred years ago, Wagner was willing to cut 142 bars of the Act III monologue in order to save one Aloys Ander from the possibility of actual instead of simulated death on the stage. And even the great Ludwig Schnorr von Carolsfeld, who, at twenty-nine, sang the first performance as Tristan to Wagner's complete satisfaction, died some short time later from, it is said, a combination of physical exhaustion brought on by singing the role at all and pneumonia caused by the draughty stages on which, virtually motionless, he had to sing Act III.

During the month that it took to make the new recording, we were constantly amazed by the stamina of Birgit Nilsson and Fritz Uhl (he, by the way, is thirty-two, or three years older than the first Tristan). Their resources seemed virtually inexhaustible, and they were always ready when retakes were suggested. They stand among that small and

select company of opera singers who are able, physically and psychologically, to share in such a project.

And in Georg Solti we had a conductor so completely in sympathy with the idea that a recording should attempt to re-create rather than reproduce, and who worked with such energy and enthusiasm, with such devotion to the music, that I cannot believe there has ever been a closer cooperation between a recording crew and a conductor.

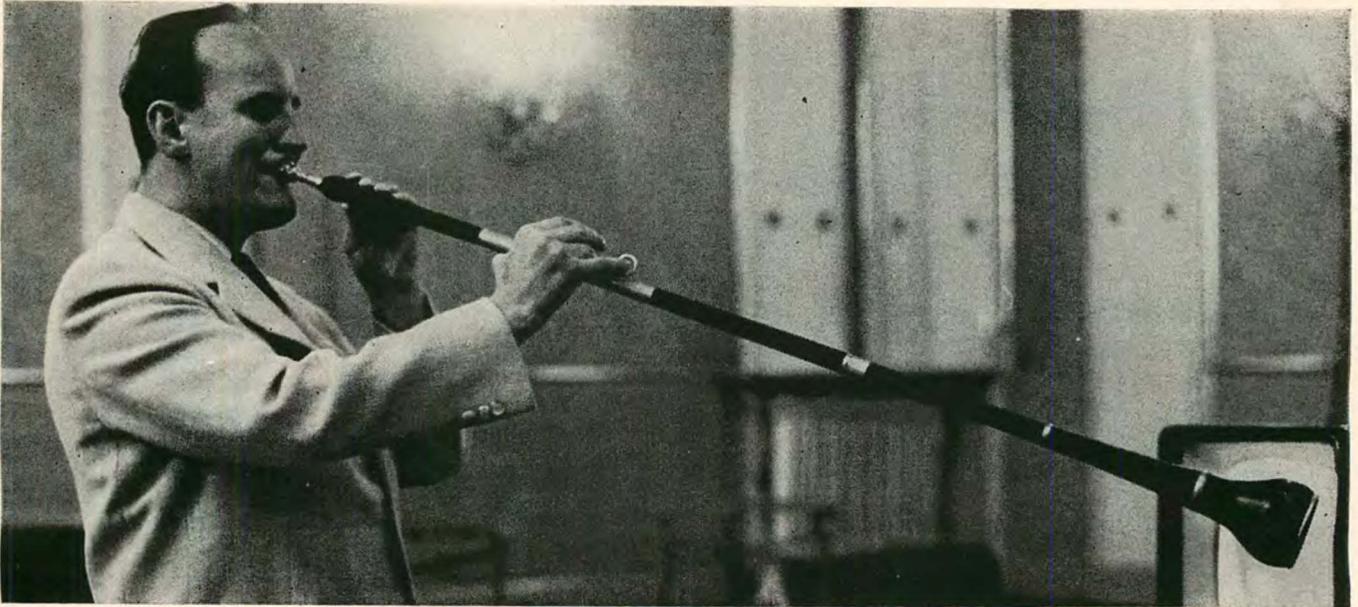
Even so, certain questions of aural staging could not be avoided by sole resort to musical considerations. A special problem was that of how to devise an effective stereo frame for the shipboard events of Act I. I think the majority of stage settings for this act are either hideous or ridiculous, or both. I have in mind those in which the ship is cut across the beam amidships, with Isolde's cabin placed right across the forestage, separated by a railed curtain from the poop deck, upstage center, where Tristan stands.

Whether visually ridiculous or not, an aural projection of this sort of setting would seem hopelessly ambiguous to the stereo listener, since almost all of the action would be confined to the center line. We therefore decided to rotate the whole imagined setting about forty-five degrees. In recorded perspective, the ship's deck would seem to lie diagonally across the stage, with Isolde's cabin occupying the space from the listener's extreme left to about stage center, and with the stern of the ship slightly upstage to the listen-

Georg Solti warns his sailors' chorus to be on their toes for the Act I finale.

LONDON RECORD 5





LONDON RECORDS

The Alphenhorn-like trumpet for the offstage shepherd's tune in Act III was obtained from Bayreuth through the kindness of the Wagner grandsons.

er's extreme right. Our setting for Act I is shown on page 43.

Whether or not ours would be a good setting for the stage, it certainly makes sense for stereo. Within the cabin on the left there is a sense of intimacy and presence, while for action that takes place on the right there is a difference of perspective that is dramatically apt. This visual conception of Act I also solves the problem of where to place the chorus of sailors. During most of the act they are certainly outside the cabin, though not necessarily below decks. As in the sketch, we have imagined them as being grouped on the stern and on the main deck—neither very obtrusively present and forward nor actually offstage, but just lounging about as indolent witnesses. When the ship comes into harbor at the end of the act, they are everywhere, of course. What we felt we must capture here was a sense of great confusion, with Tristan and Isolde lost in the blindness of love and utterly oblivious to all the activity that swirls around them. It is all in the score.

THE setting we imagined for Act II is more conventional, with the castle on the extreme left, and the forest all around. We felt that Brangäne would probably keep watch from within a circular stone tower, and that her voice should rightly take on a little of the coloration of her surroundings. We also studied the effects that Wagner wanted from the hunting horns at the beginning of the act, and realized that here stereo could improve on the theater, at least in accuracy of perspective.

The horn music is written in six parts, for three groups of instruments, which Wagner asks to be doubled in any case and "strengthened still more when practicable." We settled for eighteen players, making three groups of six each. The horns have three separate entrances, which are meant to have carefully graded aural perspectives. The first is very loud and close, as if the hunt had just assembled in

the immediate neighborhood of the castle; the second is farther away; the third has the sounds of the hunt eventually receding the point of inaudibility in the distance.

In the recording, the horns fill the stage at their first appearance, with the deep horns calling from the left and receiving their answers from right and center, and then, towards the end of this first episode, they begin to move off to the right. The second time they are heard they are obviously out of sight; the deep horns are now heard from the



LONDON RECORDS

Recording director John Culshaw breaks the tension for Birgit Nilsson before a re-take.

center, but in the distance. At their final call, the entire hunt is far away to the right, and individual groupings are no longer directionally perceptible. All this, except the arbitrary selection of the listener's right as the direction in which the hunt disappears (Wagner leaves this point open) is strictly according to the score.

In our setting for Act III, shown on page 46, Tristan's couch is almost at stage center, and the approach from the



A sketch of the stereo visualization for the opening of Act III—the wounded and the faithful Kurvenal awaiting the arrival of the ship bearing Isolde.

harbor is through the gate on the listener's left. Through the arch, upstage center, is the path taken by the shepherd when he goes out to seek a vantage point among the cliffs to watch for Isolde's ship, and the steps at audience right afford a lookout point for Kurvenal when the ship is eventually sighted. At this point in the score Wagner has indicated that the "joyful" theme should be played not by the English horn but on a sort of Alpenhorn, or wooden trumpet. In other words, he wanted a completely individual sound.

We finally located what seemed to be the original instrument (it had not been played for years) in the museum at Bayreuth, and the Wagner brothers were kind enough to lend it to us for the recording. It is a strange, slightly stubborn instrument, played with a trumpet mouthpiece, and it certainly has a luminous, jubilant sound. We visualized the shepherd as keeping his watch among the towering cliffs to the listener's right, and we felt that the sound of his pipe should rebound from the rocks, loud but somewhat

Fritz Uhl and Georg Solti—concentration during playback.



distant—the one sound in the world that Tristan wants to hear, short of Isolde's call to him.

We had intended to include the shouts and clashes of the battle in the latter part of Act III, since they are mentioned in the score. But after days of experiments we abandoned them, because the battle is so vividly described in the orchestra, and nothing seemed to be gained by the sustained clatter of swords and the shouts of the wounded.

There is one final question: Is *Tristan und Isolde* a work suitable for home listening? Does it not demand the theater, where, whatever the disadvantages, one is at least free from the telephone, the knock at the door, the sudden interruption? *Tristan und Isolde*, *Parsifal*, and *Pelléas et Mélisande* are the three operas likely to suffer most from these distractions—and yet, conversely, likely to benefit most from the advantages of home listening under good conditions. It seems to me that the stage performances of these operas that I most want to remember have an idealized quality, as if some safety valve had spared my memory from remembering the awkwardness of physical appearances. They are not so much memories of performances attended as of experiences experienced.

IN 1914, at the end of his book *Wagner as Man and Artist* (Alfred A. Knopf, New York, 1924) Ernest Newman wrote: "Can we not imagine something like the second act of *Tristan* with silent and only dimly visible actors, the music telling us all that is in their souls, while they are too remote from us for the crude personality of the actors and the theatrical artificiality of the stage setting to jar upon us as they do at present? Cannot some story be taken as so well known to everyone that only the shadowiest hints of the course of it need be given to the spectator, the real drama being in the music? Or, to go a step further, cannot we dispense altogether with the stage and the visible actor, such external coherence as the music needs being afforded by impersonal voices floating through a darkened auditorium?"

It is something in this direction that we have tried to do. Perhaps only a minority of the public, and a minority of critics, ever think of the possibility of recorded stereo opera as an experience in its own right. If our *Tristan* fails, it may be the end of experiments of this sort for a while; if it succeeds, we may be a step nearer to Ernest Newman's—and possibly to Richard Wagner's—dream.

SOUND and the QUERY

a forum for dispensing with the most common—and often most exasperating— problems of stereo hi-fi

by J. Gordon Holt

Too Much Oil

The instruction manual for my tape recorder makes a strong point of the fact that it should not be over-oiled, that I should add the specified two drops of oil here and three drops there, and no more. I would like to ask what would happen if I should inadvertently put too much oil on the bearings?

J. R. Williams
Chicago, Ill.

Under-oiling can cause wow, flutter, excessively rapid wear of moving parts, and possibly improper running speed. Over-oiling can cause wow, flutter, excessively rapid deterioration of rubber drive surfaces, and erratic running speed. Take your pick.

The proper amount of oil will adequately lubricate the bearing without dripping or spinning free under the centrifugal force of the bearing's rotation. It's best to follow the manufacturer's recommendations to the letter, but if these are not specific enough, the following rules of thumb may help. Use fine, non-detergent, non-gumming machine oil, and apply as follows: Idlers and pulleys of average size—1 drop; Flywheel, capstan, and pinch wheel—2 drops on each bearing; Drive motors—3 drops on each bearing. Brakes and clutches should be oiled only on the specific recommendation of the recorder manufacturer.

Real Cool Pops

Every time my refrigerator goes on or off when I'm listening to my system, I get a loud "pop" from the speakers.

Apart from the deleterious effect this has on my nerves, I am afraid it might damage my loudspeakers. What causes these noises, and what can I do to stop them?

W. H. Van de Camp
San Francisco, Calif.

First, the cause: When a power switch that carries appreciable current is switched on or off, the making or breaking of the circuit sets up an impulse in the household AC supply. The impulse appears at every AC outlet in the house and, if it manages to get through the power supply section of a hi-fi amplifier, it will be reproduced as a single "pop."

Most such problems of AC line interference can be remedied by bridging a capacitor in the range of 0.05 to 0.10 μ f across the AC extension that leads to the appliance that's making the noise. If line interference is originating from another, unidentifiable house in the neighborhood, a similar capacitor across the hi-fi amplifier's line may help.

Directional Dissent

Last September, this column published a letter from a Mr. W. M. Mays, who took exception to advertisements which assert that bass tones are nondirectional.

In your reply, you told him that bass tones aren't directional and cannot be located by ear.

You may be interested to learn that, to the best of our knowledge, no scientific information exists to support the common misconception that bass tones are nondirectional. To the contrary, several recent scientific studies have shown that all frequencies between at least 100 and 10,000 cycles contribute to stereophonic localization.

Harwood Moore
Sauquoit, N. Y.

Investigations of this matter from both points of view have shown the following: (1) Single, pure tones of below 300 cycles become increasingly difficult to localize by ear until, at around 200 cycles, the ability to localize their direction ceases altogether. (2) Attempts to relate this observation to stereo perception have yielded inconsistent results, although the most common conclusion is that bass blending does cause some detectable change in the stereo effect until the frequency below which blending takes place is dropped to around 70 cycles.

The inconsistency between steady-state pure-tone tests and program material tests may be due to some factor which has not yet been pinned down. But it is more likely due to the fact that the blending filters used for the program tests have some effect on frequencies considerably above their nominal blending point.

To date, the only thing that can be stated with any degree of certainty is that loss of stereo separation in the vicinity of

250 cycles does affect the stereo illusion, so a common-bass (blended-bass) stereo system's effectiveness will depend on getting its bass-blending frequency low enough so as not to affect the frequencies above 200 cycles.

Cutting Styli

If diamond styli are so much harder than sapphires, why is it that all recording studios use sapphire styli to cut their discs?

Don Williams
Fort Lauderdale, Fla.

Because a sapphire will take a smoother polish than will a diamond, so it can cut a smoother, quieter groove.

Durability of the cutting stylus is not an important consideration to recording studios. As long as the stylus can get through a couple of sides without severe wear, professional users will choose the stylus that gives the lowest surface noise, and the sapphire still holds this distinction.

For playback purposes, however, the most important consideration is that the stylus tip retain its hemispherical shape for as long as possible, and the diamond best meets this requirement.

FM Predictability

I am perplexed by the strange behavior of my FM tuner.

I recently moved from the suburbs to the outer exurbs, roughly doubling my distance from the city (Philadelphia). Yet my old FM tuner, which gave me barely adequate reception in my old location, pulls in all the metropolitan stations better than it ever has, and is even picking up a couple of out-of-state ones that I never used to get at all.

I'm using the same antenna and rotator as before, and have not had the tuner realigned since I moved. How come its performance has improved so drastically?

Walter B. King
Westchester, Pa.

FM reception is so unpredictable that we wouldn't even bother to call this case unusual. Geographical location and topography, wave cancellation and augmentation effects, and transmitting antenna location and directionality are just a few of the things that can affect a tuner's performance within a given distance from the broadcasting station(s).

Your previous location was evidently very poor for FM reception, whereas your present one appears to be excellent. The difference between receiving conditions was apparently more than enough to offset the normal drop in signal strength when you moved farther away from the city.

67 TOP

Presenting the outstanding

FROM a state of near extinction eighteen months ago, the pre-recorded stereo tape makers have now achieved their place in the sun. There are nearly half a hundred of them, and they have built up the tape repertoire to a point where there are close to a thousand items to choose from—classics, pops, jazz, Broadway musicals, and Hollywood sound tracks, plus a scattering of folk-music releases. These thousand items are but a drop in the bucket compared with what the *Schwann Long Playing Record Catalog* offers on monophonic and stereophonic discs, but it is a healthy start for a first year of renewed activity.

The turning point in this development came with the decision of London Records to make their vast catalog of stereophonic classical recordings available on four-track tape reels through United Stereo Tapes (UST). Up until then, the UST repertoire was largely built up from catalogs of independent record companies. Soon thereafter, RCA Victor went into the four-track reel field itself, and has been followed by Capitol/Angel, Columbia, and Epic. Decca/Coral is part of the UST group, which includes, in addition to London, almost all of the significant independent record producers that have made material available on tape, Bel Canto being the one major exception.

Before the entry of London into the four-track tape field,

the repertoire available on tape was almost wholly of the mood and pop type, with Everest and Concertapes providing most of the classics to be had. Now, with London, Concertapes, Everest, Columbia, Epic, RCA Victor, Kapp, Vanguard, Vox, United Artists, and Westminster releasing major classical repertoire on tape, it is possible for tape-machine owner to build up a substantially complete basic library of concert music on four-track reels.

THANKS TO London, the great operas of Wagner, Puccini, Verdi, and Mozart are becoming available, and we can look forward to RCA Victor adding its best stereo-recorded operas to the repertoire during 1961. Perhaps the most intriguing new technical wrinkle has been the development of the so-called twin-pack, which allows the contents of two complete LP discs to be accommodated on a single reel of tape. Thus London's three-disc recording of *Das Rheingold* fits on two reels of tape. Beethoven and Brahms symphonies, which are interrupted between the second and third movements for turnover of the disc, come two-to-the-reel when bought in twin-pack form, and each can be heard all the way through without interruption. The London coupling of the Dvořák Symphony No. 2 and Symphony No. 5 is an outstanding example. Furthermore, the twin-pack



Classics

* Available on four-track 3¾-ips cartridge.
† Available on two-track 7½-ips reel.

BACH: *Tocatta and Fugue in D Minor; Tocatta in F Major; Tocatta, Adagio, and Fugue in C Major.* Michael Schneider (organ). Bel Canto ST 93* \$6.95. Big-scale, sturdy performances of favorite Bach masterpieces on an instrument said to have been used by J.S.B. Impressive stereo sonics.

BARTÓK: *Music for Strings, Percussion, and Celesta; Hungarian Sketches.* Chicago Symphony, Reiner. RCA Victor FTC 2024 \$8.95

BARTÓK: *Music for Strings, Percussion, and Celesta;* **MOUSSORGSKY-RAVEL:** *Pictures at an Exhibition.* Suisse Romande Orchestra—Ansermet. London LCK 80054 \$11.95. Bartók buffs will like Reiner's excitement and RCA's brilliant sound; but Ansermet's lyrical version is a best buy, since it is coupled with a first-rate Moussorgsky Pictures at an Exhibition.

BEETHOVEN: *Piano Concertos—No. 3 in C Minor, Op. 37; No. 4 in G Major, Op. 58.* Backhaus, Vienna Philharmonic, Schmidt-Isserstedt. London LCK 80007 \$11.95. Rugged readings of two top Beethoven concertos in first-class stereo sound. Outstanding value.

BEETHOVEN: *Symphony No. 5 in C Minor, Op. 67; Coriolan Overture, Op. 62.* Chicago Symphony, Reiner. RCA Victor FTC 2032* \$8.95. A super-brilliant Beethoven Fifth Symphony with sound to match. The most satisfactory Beethoven symphony recording on tape.

BERLIOZ: *Symphonie Fantastique, Op. 14a.* Vienna Philharmonic, Monteux. RCA Victor FTC 2033* \$8.95. The fire of the celebrated Monteux reading is somewhat attenuated by age, but the VPO playing is beautiful, the stereo sound superb.

BOITO: *Mefistofele (complete opera).* Tebaldi, Del Monaco, Siepi, Rome Santa Cecilia Academy Chorus & Orchestra, Serafin. Lon-

don LOR 90011 (2 reels) \$21.95. Siepi is magnificent and the choral episodes spectacular in this Italian treatment of the Faust story. Magnificent sound.

BRUCKNER: *Symphony No. 4 in E-flat ("Romantic").* Bamberg Symphony, Hollreiser. SMS S 41 \$8.95. The only stereo recording in any form of the most winning of all the Bruckner symphonies. Good performance, excellent sound—a sleeper.

COPLAND: *Billy the Kid; Statements.* London Symphony, Copland. Everest 43015† \$7.95. Copland's finest folk-inspired score and a fascinating cryptic piece. Splendid performance, superlative sound.

DEBUSSY: *Three Nocturnes;* **RAVEL:** *Mother Goose.* Suisse Romande Orchestra, Ansermet. London LCL 80011 \$7.95. Nicely turned Debussy and delectable Ravel in silky-smooth stereo.

DVOŘÁK: *Symphonies—No. 2 in D Minor, Op. 70; No. 5 in E Minor, Op. 95 ("New*

TAPES

four-track stereo tapes

tape version sells for \$11.95—practically the same price as for the two stereo discs of the same recordings, which sell for \$5.98 each.

To say that at this point we are fast approaching the millenium in home listening by way of the four-track tape route would be something of an exaggeration; but progress is being made bit by bit and year by year. In those areas of the repertoire where stereophonic sound shows to special advantage, such as opera, choral-orchestral music, and Broadway musicals, four-track tape at its best can produce even finer results than stereo discs can, for with tape there is, obviously, no problem of inner-groove deterioration.

However, in terms of mass output, the tape producers have yet to achieve a consistency in freedom from defects comparable to that achieved by the best of the disc manufacturers. Background hiss; print-through, with its attendant pre- and post-echo; cross-talk from adjacent tape tracks, with resultant bass distortion and "mumbling" filtering through low-level musical passages; background hiss; warped reels; overloaded transient peaks—all of these have shown up more often than they should on the four-track tapes released during the past year. The tape makers say that every effort is being made to remedy these annoying defects. And while they are at it, they might do something about the

miniscule type in which most of their program notes appear. If they are unable to provide multi-page pamphlets with decent-sized type, then they had better supply magnifying glasses. Discomfort becomes particularly acute when one is faced with the problem of deciphering an opera libretto.

But these shortcomings are not beyond remedy, and four-track tape is already an important medium for the repertoire it serves best. To illustrate this concretely, we have set down in the pages that follow a list of 75 four-track reel-to-reel stereo tapes that we feel to represent the best work being done today by many different companies. In almost every instance, a tape that is listed is superior in quality of sound to its disc counterpart; and we have made a special effort to select tapes that we know to be free from the various defects mentioned above—that is, save for small-print program notes. Musical considerations have played a large part in our selection of classical repertoire; and, as a result, a number of tapes have been omitted because the recorded performances they hold are lacking in genuine musical distinction. The list as it stands represents the best of what has actually been heard by our review staff. We speak from experience, and we hope your experience with the tapes on this list has been, or will be, as happy as ours.



World"). Vienna Philharmonic, Kubelik. London LCK 80008 \$11.95. Another of London's two LP's on one reel, offering Kubelik's passionately lyrical readings of two great Dvořák symphonies. A best buy for both sound and music.

GERSHWIN: *Rhapsody in Blue*; *An American in Paris*. Wild, Boston Pops, Fiedler. RCA Victor FTC 2004* \$8.95. Sleek and brilliant treatments of Gershwin's finest symphonic-jazz masterworks, with sound to match.

HANDEL: *Messiah* (complete oratorio). Vienna Academy Chorus, Soloists, State Opera Orchestra, Scherchen. Westminster WTW 134 (2 reels) \$23.95. An authentically Handelian *Messiah*, less spectacular than some, but full of lyrical feeling and very well recorded.

HAYDN: *Symphonies*—No. 94 in G Major ("Surprise"); No. 99 in E-flat. Vienna Philharmonic, Krips. London LCL 80018 \$7.95. A nice blend of elegance and vigor character-

izes the Krips way with two of Haydn's late symphonic masterpieces. Lovely recorded sound all the way.

GILBERT & SULLIVAN: *H.M.S. Pinafore* (complete operetta). D'Oyly Carte Co., Godfrey. London LOH 90024 \$12.95. A beautiful stereo production of this nautical favorite, complete with dialogue. First-rate singing, wonderful stereo staging.

HINDEMITH: *Kleine Kammermusik*, Op. 24, No. 2; DANZI: *Wind Quintet in E Minor*, Op. 67, No. 2. N. Y. Woodwind Quintet. Concertapes 3015† \$6.95. The tart little Hindemith piece and the leisurely Mozart-Haydn styling of Danzi make for fine listening contrast. The performances are flawless; the recording is a fine example of intimate stereo.

MENDELSSOHN: *Piano Concertos*—No. 1 in G Minor, Op. 26; No. 2 in D Minor, Op. 40. Serkin, Philadelphia Orchestra, Ormandy.

EUGENE ORMANDY
For Mendelssohn, brilliant conducting



COLUMBIA RECORDS

“... It is now possible ... to build up a substantially complete basic library

Columbia MQ 308† \$7.95. What would normally be a pair of outworn period-pieces, Serkin and Ormandy transform into thrilling music through sheer romantic panache and virtuoso brilliance. Superb stereo sound—a great tape.

MOZART: *String Quartet in B-flat (K. 458) ("Hunt")* HAYDN: *String Quartet in D Major, Op. 76, No. 5. Claremont Quartet.* Ferrodynamics FD 1005 \$8.95. A fine coupling of two great chamber-music classics in performances of stunning brilliance and vitality. Outstanding stereo sound.

RACHMANINOFF: *Piano Concerto No. 2 in C Minor, Op. 18. Katin, London New Symphony, Davis.* Richmond RCH 40002 \$4.95. Two gifted young British artists turn in a finely polished and convincingly vital version of this Rachmaninoff war horse, recorded in spectacularly good stereo sound. Definitely a top buy.

RIMSKY-KORSAKOV: *Capriccio Espagnol, Op. 34; TCHAIKOVSKY: Capriccio Italien, Op. 45.* RCA Victor Symphony, Kondrashin. RCA Victor FTC 2009* \$8.95. Russia's Kiril Kondrashin makes this recording notable by breathing new life into the much-abused Rimsky-Korsakov show piece. Brilliantly effective recording.

RODRIGO: *Guitar Concerto; FALLA: Nights in the Gardens of Spain.* Yepes, Soriano, Spanish National Orchestra, Argenta. London LCL 80010 \$7.95. The guitar concerto by the contemporary Spanish composer Joaquín Rodrigo gives this recording its special distinction. A superlative microphoning job by London shows what can be done by stereo for little sounds.

SAINT-SAËNS: *Symphony No. 3 in A Minor, Op. 78 ("Organ").* Boston Symphony, Munch. RCA Victor FTC 2029 \$8.95. This is shock technique with a vengeance, in performance and recording. The results are stunning, both figuratively and literally.

SCHUBERT: *Symphony No. 9 in C Major ("Great").* London Symphony, Krips. London LCL 80043 \$7.95. Krips and his London players give a beautiful and altogether thrilling performance of this mighty masterpiece. Rich stereo sound enhances the powerful communicativeness of the whole.

SIBELIUS: *Violin Concerto in D Minor, Op. 47.* Heifetz, Chicago Symphony, Hendl. RCA Victor FTC 2011* \$8.95. Heifetz' high-voltage fiddling, Hendl's forceful accompaniment, and RCA's topnotch recording make this tape a real thriller—one of the finest stereo concerto recordings yet.

SOUSA: *Stars and Stripes Forever & 13 other marches.* Goldman Band, R. F. Goldman. Decca ST7 8807† \$7.95. Richard Franko, the brilliant bandmaster son of the great Edwin Franko Goldman, comes up with a first-rate selection of both favorite and lesser-known pieces from the pen of the March King. Absolutely top stereo sound, far better than the stereo disc.

STRAUSS: *Vienna Carnival—Waltzes and Polkas of Johann and Josef Strauss.* Vienna Philharmonic, Boskovsky. London LCL 80039 \$7.95. Here is the Viennese dance style done to absolute perfection, and preserved in the finest of stereo recording. A blues-chaser if there ever was one.

PRINCE: *N. Y. Export—Opus Jazz; BERNSTEIN: Ballet Music from West Side Story.* Robert Prince Orchestra. Warner Bros. BST 1240 \$7.95. A searingly brilliant and powerful treatment of two magnificent modern theater scores. The opportunities offered by stereo are exploited with stunning effect.

TCHAIKOVSKY: *Mantred Symphony, Op. 58.* London Symphony, Goossens. Everest 43035† \$7.95. One of the least-known but most striking Tchaikovsky scores gets an uncut performance, played with great conviction and presented in some of the most impressive recorded sound to be heard anywhere.

TCHAIKOVSKY: *The Nutcracker, Op. 71 (complete ballet).* Suisse Romande, Ansermet. London LCK 80027 \$11.95; London Philharmonic Symphony, Rodzinski. Westminster WTP 138† \$11.95. Both of these fine recorded performances have their special merits—lyrical-refinements in Ansermet's case, rhythmic vitality in Rodzinski's. London has more recent and warmer sound, but choice is a matter of taste.

VAUGHAN WILLIAMS: *Symphony No. 9 in E Minor.* London Philharmonic, Boult. Everest 43006 \$7.95. This swan song of England's greatest twentieth-century composer was recorded on the day of his death. The results are great music-making and a touching document. The sound could hardly be bettered.

VERDI: *Aïda (complete opera).* Tebaldi, Simeonato, Bergonzi, MacNeill, Vienna Philharmonic, Karajan. London LOR 90015 (2 reels) \$21.95. This ranks with the London Das Rheingold as one of the great operatic recordings of the stereo era. Its transfer to tape has been accomplished with conspicuous success, and it is on tape that one should own this Aïda.

VIVALDI: *Concertos for Strings, Op. 8, Nos. 1-4 ("The Four Seasons").* I Solisti di Zagreb, Janigro. Vanguard VTC 1611 \$7.95. The combined lyrical warmth and zestful vitality that the Zagreb players bring to this lovely music gives their recording a unique place in the stereo repertoire. The Vanguard sound does full justice to music and performance.

WAGNER: *Das Rheingold (complete opera).* Flagstad, London, Svanholm, Neidlinger, Vienna Philharmonic, Solti. London LOR 90006 \$21.95. The most spectacular of all opera recordings (and recorded performances, for that matter) has been transferred to tape with almost total success. For four-track tape-machine owners, these reels are a must.

KEYBOARD MUSIC OF THE FRENCH COURT—Organ and harpsichord works of L. & F. Couperin, Grigny, Le Begue, Dandrieu,

Chambonnieres, De la Guerre, Balbastre. Paul Maynard. Ferrodynamics FD 1006 \$8.95. Here is a remarkable tape that should not be passed up by those who love seventeenth- and eighteenth-century keyboard music. The works are delightful, the performances full of warmth and vitality, and the instruments lovely in sound. The recording itself is just about the finest of harpsichord and baroque organ we have ever heard.

Jazz

SING ALONG WITH BASIE—Lambert-Hendricks-Ross & Joe Williams with Count Basie Orchestra. Roulette RTC 512 \$7.95. Ten great Basie hits, given brilliantly imaginative vocal treatment in Jon Hendricks arrangements. Exciting stuff for every jazz fan, and a better recording than the disc counterpart.

ON BOURBON STREET WITH THE DUKES OF DIXIELAND. Audio Fidelity AFST 1860-4† \$8.95. The Dukes' brand of commercial Dixieland derives at least half of its appeal from the brilliantly effective Audio Fidelity recording job.

GIL EVANS ORCHESTRA. World Pacific WPTC 1011 \$7.95. One of the great modern jazz arrangers brings his touch to such classics as Chant of the Weed, Django, and others. Superior modern jazz, beautifully played, and expertly recorded.

PETE FOUNTAIN'S NEW ORLEANS. Coral ST7 57282 \$7.95. A fine, swinging re-creation of traditional jazz, recorded with remarkable stereo presence.

SIDE BY SIDE — Duke Ellington/Johnny Hodges. Verve VSTC 237 \$7.95. Chamber-style Ellingtonia, with Ellington, Hodges, and confreres in top form. An absolutely lovely tape.

THE KING AND I (Modern Jazz Interpretation)—The Mastersounds. World Pacific WPTC 1001 \$7.95. One of the few truly convincing jazz treatments of a major Broadway musical, notable for the vibes of Buddy Montgomery.

KID ORY PLAYS W. C. HANDY. Verve VSTC 228 \$7.95. A veteran of the early New Orleans days does a fine re-creation of great standards. The fine and natural stereo presence is worthy of special note.

COLORS IN SOUND—Sal Salvador Quartet with Brass. Decca ST 7-9120† \$7.95. Kenton alumnus Salvador creates a modern jazz of his own that has true musical distinction, and he is aided by flawless stereo sonics.

Theater

CAROUSEL—(Rodgers and Hammerstein)—Sound-track recording. Gordon MacRae, Shirley Jones, and others. Capitol ZW 694 \$7.98. One of the classics of musical-show recordings in an absolutely first-rate transfer to four-track tape.

of music on four-track reels."

DESTROY RIDES AGAIN (Harold Rome)—Original-cast recording. Decca ST 9075 \$7.95. Rome's horse opera has plenty of get-up-and-go in recorded form. Top stereo production, fine sound.

FINIAN'S RAINBOW (Harburg)—New York City Center 1960 cast. RCA Victor FTO 5003 \$8.95. Harburg's delightful show fares even better here than in its original Columbia recording. Fine singing, excellent sound.

THE KING AND I (Rodgers and Hammerstein)—Sound-track recording. Deborah Kerr, Yul Brynner & others. Capitol ZW 740 \$7.98. The stereo is without movement, but performance and recording are superb in this tape transfer of the great R & H musical.

THE MUSIC MAN (Meredith Willson)—Original-cast recording, starring Robert Preston. Capitol ZO 990 \$7.95. Meredith Willson's great show turns out splendidly in its tape incarnation. A great recording of a great musical.

MY FAIR LADY (Lerner and Loewe)—London cast starring Rex Harrison, Julie Andrews, Stanley Holloway. Columbia OQ 310† \$9.95. The greatest musical of them all comes out even better on tape than on the disc. No tape devotee should miss this one.

ONCE UPON A MATTRESS (Mary Rodgers and Marshall Barer)—Original-cast recording. Kapp KT 40102 \$7.95. This amusingly satirical musical benefits from stereo motion and directionality.

PORGY AND BESS (Gershwin-Heyward-J. Gershwin)—Ella Fitzgerald, Louis Armstrong. Verve VST 4-206 \$11.95. A highly individual treatment of Gershwin's poignant folk opera turns out to be one of the great musical-dramatic experiences of its kind. First-rate recording, fine taping.

THE SOUND OF MUSIC (Rodgers and Hammerstein)—Original-cast recording, starring Mary Martin and Theodore Bikel. Columbia OQ 311† \$7.95; Trapp Family Singers. Warner Bros. WST 1377 \$7.95. There can be no comparison between these two recordings. One represents Broadway showmanship at its most brilliant, while the other represents the very special charm of the Trapp Family, who inspired the show in the first place. Both tapings are absolutely first-rate.

Pops

NOW—Fred Astaire. Kapp KT 41025 \$7.95. Astaire, not merely a great dancer and gifted actor, can put over a song with wonderful stylistic sensitivity. This splendidly recorded tape is an ideal document of Astaire as a vocalist.

SALUTE TO TOMMY DORSEY—Big Bay Band. Omega ST 4006† \$9.95. Most convincing of the Big Bay Band tributes to the great dance bands of this past is this nineteen-number Tommy Dorsey set. Very brilliant and high-powered recording.

PAT'S GREAT HITS (Vol. 2)—Pat Boone.

Bel Canto ST 108 \$7.95. A fine mixture of blues, ballads, and other pops, done to a turn and recorded in flawless stereo.

LIFE IS JUST A BOWL OF CHERRIES—Maurice Chevalier. MGM STC 3801 \$7.95. The Chevalier vocal style after fifty years on the stage still sounds as fresh as ever on this tape. Top backing by Ray Ellis Orchestra the MGM engineers.

ANITA DARIAN. Kapp KT 41026 \$7.95. The stuff that makes a great singing star is to be heard in this collection of pop hits and Armenian songs by Miss Darian. Elegant and tasteful arrangements and recording.

TABOO—The exotic Sounds of Arthur Lyman. Hitape R 806† \$7.95; **PRIMITIVA**—Martin Denny Group. Bel Canto 7023 \$7.95. No stereo library should be without a sampling of the special tropical-sonic exotica represented by those two rivals in the field Arthur Lyman and Martin Denny. These two tapes show them in fine form and make fine tests for transients, highs, and lows.

SWING SESSION IN HIGH STEREO—Ted Heath Orchestra. London LPK 70031 \$11.95. England's gift to big-band jazz and pop music shows to brilliant advantage on this stunningly recorded tape.

MUSIC FROM THE MODERN SCREEN/ THEME SONGS FROM THE GREAT SWING BANDS—Leroy Holmes Orchestra. MGM ST 3708-53 \$11.95. A fine twin-pack collection of big-band hits, played in the very best style and recorded in stereo of the highest quality.

FRANK SINATRA SINGS FOR ONLY THE LONELY. Capitol ZW 1053 \$7.98. The great ballad singer is at his very best in such songs as Ebb Tide and Angel Eyes. Superb recording of pop music at its finest.

ELLA FITZGERALD SINGS THE GEORGE GERSHWIN SONG BOOK. Verve P 244 \$11.95. This twin-pack covers the first half of Ella Fitzgerald's magnificent five-volume set of Gershwin songs, and it is an all-time best buy. No lover of Gershwin or of great pop-jazz singing should be without it.

Folk

SABICAS—FESTIVAL GITANA. Elektra ETC 1506 \$7.95. Fiery flamenco singing and guitar work by one of the best in the business. The stereo has real you-are-there presence and quality.

SOVIET ARMY CHORUS AND BAND. Angel ZS 35411 \$7.98. Recorded in London's Festival Hall, this tape is by far the best recorded representation of the celebrated Russian male choir. The program ranges from Russian and English folk tunes to a thrilling chorus from a Shaporin opera.

TRAVELLING ON WITH THE WEAVERS. Vanguard YTC 1603 \$7.95. A delightful folk-song grab-bag from various countries done with sensitivity and zest by the most popular of the genuine folk-song groups. Top-notch taping.



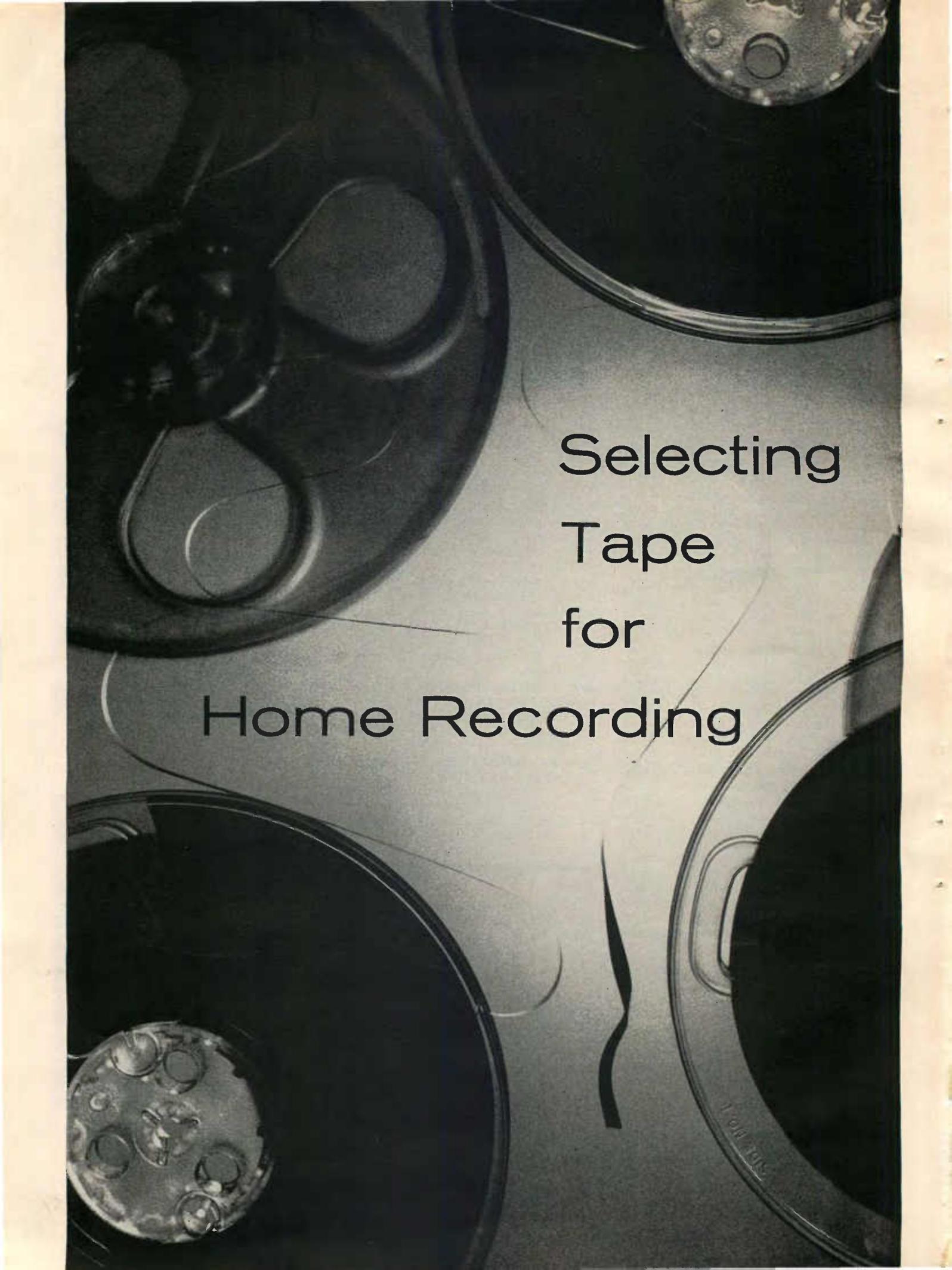
DUKE ELLINGTON
With Johnny Hodges on Verve, the ultimate in jazz styling



JULIE ANDREWS
Immortalized as Liza Doolittle in Columbia's My Fair Lady



GEORGE LONDON
A thrilling Wotan for London's "Rheingold"



Selecting
Tape
for
Home Recording

DIFFERENT TAPES DO DIFFERENT JOBS. WHICH TYPE IS BEST FOR YOU?

by J. GORDON HOLT

EARLY in the era of magnetic recording—which is to say, fourteen years ago—choosing a tape was no problem. Only one kind was available. Today the owner of a tape recorder faces a bewildering assortment of Mylar, acetate, normal-play, extra-play, double-play, tensitized, low-print, and high-output tapes—name brands, strange brands, and unbranded tapes of indeterminate origin. Out of all this assortment, only one or two kinds of tape will best suit his particular needs, and he has to find out which. He can approach the problem most effectively by the oldest method of logical choice: the process of elimination.

In shopping for magnetic tape, price per unit is generally a reliable index of quality. The tape with the highest price per running foot is usually the best, but whether or not it is worth its price to an individual buyer depends on the use he makes of it.

If he owns an inexpensive recorder and uses it only to rehearse a sales talk, embarrass guests at a party, or prepare documentary evidence of junior's growing vocabulary, his demands for tonal fidelity are easily satisfied. All he needs is tape with sufficient physical strength to withstand the rigors of casual handling. However, if he owns high-quality equipment and takes his hobby seriously, he will want to choose tape that meets more exacting requirements in terms of playing time, storage life, and basic fidelity. What is more, he will want to compare prices as well as qualities.

THE primary consideration in choosing a tape is the playing time available per reel. A tape that runs out before the program is over is all but a total loss.

Available time should be computed for an uninterrupted

run at any given tape speed. This will be limited by the length of tape that can be wound onto the largest reel that the recorder will accommodate. The thickness of a tape's magnetic coating cannot be much reduced, since this affects output and frequency response. The base material, however, is inert; it serves only to support the magnetic oxide layer. Tape bulk can therefore be reduced by making the base thinner. And the thinner the tape, the more of it can be wound on a reel.

The base material for standard-play tape is $1\frac{1}{2}$ mils (thousandths of an inch) thick. Twelve hundred feet of this will fit nicely onto a 7-inch reel, giving slightly more than half an hour of continuous recording time at a speed of $7\frac{1}{2}$ ips. Reducing the base thickness to 1 mil allows the same size reel to take 1,800 feet of tape, giving 45 minutes of recording time. A reduction to $\frac{1}{2}$ or $\frac{3}{4}$ mil doubles the reel's original capacity to one hour of continuous recording at $7\frac{1}{2}$ ips. (The apparent inconsistency of these ratios is because the magnetic coating adds only about $\frac{3}{10}$ of a mil to the total thickness of the tape.)

STANDARD $1\frac{1}{2}$ -mil acetate is quite strong enough to stand up to almost anything, but when acetate is thinned down to a mil or less, recording machines and their owners had better treat it gently. DuPont's Mylar (a film version of Dacron) is almost twice as strong as acetate of the same thickness, making it possible to produce a $\frac{1}{2}$ -mil tape that is very nearly as strong as 1-mil acetate.

Mylar also has the advantage of being impervious to extreme fluctuations of temperature and humidity, which are ruinous to acetate. Moreover, Mylar remains unaffected

by age. The plasticizer that gives acetate its flexibility is volatile and evaporates gradually over a long period of time, leaving the tape stiff and brittle. Mylar, which contains no plasticizer, does not deteriorate in long-term storage.

However it does have one drawback: it stretches before it breaks. When overstressed, it pulls out like taffy, and the stretch is permanent. If deformation is not too great, it merely causes momentary lowering of pitch. But if Mylar tape is yanked hard enough to break it, the torn ends become like long strands of thread and won't reproduce any sound at all. In neither case is there any way of salvaging the program material on the stretched section; it must be snipped out altogether. This is why professional recording studios prefer acetate; it may be easier to break than Mylar, but it breaks clean, and no irreplaceable material is lost when it does.

There is available tempered, or "tensilized," Mylar, which



has the advantages of ordinary Mylar, plus a certain degree of stretch resistance. This material still requires more care than 1½-mil acetate, but it will give quite acceptable service unless it is grossly misused by a recorder or its operator.

As we have seen, the first two steps in selecting tape concern playing time and durability. If you intend to record tapes for storage or re-use over periods of more than about five years, Mylar is recommended. Also choose Mylar if you are planning a recording junket into either tropical or desert regions, where the extreme climates would raise hob with acetate. And if you or your equipment are rather hard on tapes, or if you need double-play tapes, tempered Mylar should be worth its extra cost.

IN addition to providing support for the oxide coating, the base material serves to separate the oxide layers when tape is wound on the reel. If there were no such separation, adjacent layers of coating would cross-magnetize each other, especially in loud passages, which create stronger magnetic fields. One passage of the music thus would become superimposed on another, resulting in a sonic mish-mash.

Even though the layers of oxide do not touch each other, a minor amount of print-through occurs on all tapes. It is obvious that the thinner the base material the less anti-magnetic shielding it offers, and the more print-through it allows. On 1½-mil tapes, print-through is usually not audible. But on a thin-skinned double-play tape, loud passages may print through badly enough to spoil some of the quieter parts of the music. If you are recording anything with wide dynamic range, choose the thickest tape that will give you the necessary playing time.

Several of the major tape manufacturers make special low-print tapes, but these are currently available only in the 1½-mil thickness. They are intended primarily for the professional user who would be taken to task by record critics if his recordings had any audible pre-echo on them, but they may also appeal to the critical amateur who expects to record music with extremely loud passages.

Also intended for the professional, but of interest to the serious amateur, is high-output tape. This differs from all other tapes in that it has a greenish-colored magnetic coating that yields about eight decibels higher playback level for a given value of input signal. Because of its high sensitivity, it can significantly lower distortion and background hiss when it is used on topnotch machines. However, the magnetic characteristics of high-output tape are so different from those of conventional tapes that equipment must be specifically adjusted for it. Such tape will not give satisfac-

tory results on a tape recorder set up for conventional tapes, and a machine that is adjusted for high-output tape won't work properly with ordinary tapes.

By selecting a suitable base material and thickness, you can eliminate all but about four to six of the several dozen types of tape available. To narrow the choice still further, let us assume that among apparently similar tapes some might perform better than others. So the next logical step is to buy one reel of each and try all of them out.

Professionals who work with elaborate studio equipment have observed that certain recorders seem to have special affinities for particular brands of tape. This is because tapes made by different companies differ slightly in the composition of their oxide coating. This does not necessarily mean that one brand of tape is better than another. It simply means that a tape with a certain coating happens to match up with the characteristics of a certain machine—its bias adjustment, frequency response, etc.

So, to determine which tape matches your recorder best, splice together several lengths of tape from various manufacturers and see whether there is any noticeable difference in the performance of each on your machine. Pay particular attention to such factors as treble response, bass response, distortion, and hiss. (Incidentally, if all of your tapes hiss objectionably, chances are that your heads need demagnetizing.)

While your composite tape reels off, observe the mechanical behavior of the various tape brands strung together for comparison. Watch whether the tape passes through the recorder without either binding or weaving up and down over the head faces. Excessively wide tape will hasten the

wear of guide edges, and may even stall the transport mechanism near the end of the tape. Tape slightly on the narrow side functions well enough on a full-track recorder, but it can lead to trouble on four-track machines. The tracks on a four-track recorder are so close together that the slightest up-and-down weaving of the tape throws the tracks out of line with the heads, causing severe intertrack cross-talk.

AFTER initial comparisons of the spliced-together test samples, you can investigate such factors as adhesion, shed-resistance, and uniformity of output level. The first two of these can be evaluated by visual observation. Note how a particular brand of tape feeds off its supply reel the first time it is run through the recorder. If the layers stick to one another, this may cause flutter, drop-outs, and burbles in your recordings. If the tape squeals, even though the recorder's heads and pressure pads are not in need of clean-



ing, then the tape may be poorly lubricated. Most tapes are treated at the factory with a lubricant of some kind to reduce their surface friction and thus minimize wear on heads and tape guides. A well-lubricated tape, thanks to its smoother motion across the head, yields cleaner sound.

As for shed-resistance, examine the heads and the capstan for deposits of oxide material after running through one full reel of a given tape. A certain amount of the coating rubs off from any tape, but some are better than others in this respect. Even small deposits can foul the head gaps, causing fuzzy sound. Of course, it is easy to clean the heads with a suitable solvent, but a good tape should be sufficiently shed-resistant to allow two or three reels to run through the recorder without the need for cleaning.

If, on the basis of these comparisons, you single out a certain tape brand as your best bet, you may want to check its consistency. The principal factors to be considered are the uniformity of both output and frequency response between different reels of the same brand. These depend, in turn, on the uniformity of the oxide coating. If it varies, the recorded signal will fluctuate. These fluctuations range from barely noticeable wavers to conspicuous drop-outs, during which the signal virtually disappears for a moment.

Consistency is far easier to maintain within a single reel than between successive production runs of tape. Moderate differences between reels will be of little concern to the average user, but anyone who makes a habit of editing between different reels should determine whether his tapes have sufficient output uniformity to permit his doing this.

To check for uniformity, buy several reels of a particular brand of tape from different dealers (to get different production batches) and, using the same recording level, com-

pare their playback level and their frequency response.

Such systematic tape-testing programs should narrow your choice to one or two brands best suited to your particular purpose. Since name-brand tapes are priced competitively, there is not much point in looking for bargains. At present prices, any tape that consistently meets quality standards may be regarded as a good buy.

If your tape budget is a serious factor, however, you may consider the house-brand tapes offered by some of the larger high-fidelity supply houses at lower prices. Such tapes often carry the dealer's own name or none at all.

How do these compare with standard brands? Nearly all such tapes are made by quality manufacturers, and many of them are perfectly good. But some are factory rejects that flunked out because of varying output, incorrect width, poor oxide adhesion, or some other defect. They are also liable to nonuniformity from batch to batch, and occasion-

ally you will find a sticky splice, large volume variations, or a complete drop-out. The fact that the dealer often guarantees such tapes on a money-back basis is encouraging, but it is no assurance that there won't be an occasional lemon in a batch of five or six good tapes. The seller simply assumes, and rightly, that many minor defects that disqualify the tapes for demanding professional jobs won't be evident to the average user. And although faulty tapes can be returned, this may be cold comfort if you have ruined an important recording because of a serious defect.

Many house-brand tapes are excellent, but unfortunately there is no way of telling the gold from the dross unless the dealer is willing to state in writing that the tapes are made by such-and-such a manufacturer and are guaranteed to be new and not factory rejects.

Once you have found a brand of tape that suits you, stick with it. Don't take a chance on untried tape for an important recording no matter who the maker may be. Oxide formulas often vary between different tape types made by the same firm. Since no two types of tapes are completely interchangeable, trial and error is still the only way to assure yourself of optimum results. The tape-user of today has a right to be choosy about his tape, if only because he has so many kinds to choose among.

Gordon Holt was one of the first hi-fi fans in Australia where, equipped only with a rather random assortment of electronic parts, he was made a competent engineer by sheer necessity. Today, a resident of the U. S., he practices his technical skill for Dyer-Bennet Records, having recently completed a new series of recordings by Aksel Schiøtz. He also dispenses advice to our readers in his regular column, Sound and the Query.



Creative Tape Editing

Frasquita Mercedes.

Carmen. To-re-a-dor. en gar - de! To-re-a-dor!
re-a-dor. make read - yl To-re-a-dor!

by EDWARD TATNALL CANBY

ONCE YOU KNOW THE TRICKS, TAPE EDITING CAN BECOME A REWARDING ARTISTIC EXPERIENCE

ONE of the most useful techniques for the owner of a home tape recorder is that of tape editing. It is of tremendous value in making professional-sounding tape recordings, and can be an inspiring and creative hobby in itself.

Perhaps the greatest satisfaction to be gained from learning to edit tape well comes when you play back a smoothly spliced tape, one that is free from the false starts, the pops, squawks, and other extraneous noises that clutter up so many homemade tape recordings.

There is also satisfaction, not to say amusement, in putting into practice the many useful tape-editing tricks that are possible. You can join together on tape the separate sides of your valuable 78-rpm records into a continuous long-play performance. Or you can assemble numerous odds and ends from different reels of tape into one program. And after you become adept at tape splicing, you can try some fancier tricks, such as altering the meaning of a recorded speech merely by transposing some of the speaker's words.

All tape editing, no matter how sophisticated, involves one simple act repeated again and again: the joining together of two pieces of tape. Once this technique is mastered, you will begin to find editing truly exciting. As you discover the tricks of sound-joining, you can enter limitless areas of experiment.

The initial step in tape editing is to find the proper place on the tape for the splice. First locate the playback head (the last head in the direction of tape movement) so you can mark the desired spot on the tape precisely as it passes over the head. (Use a black grease pencil for marking.) Look into the tape slot to locate the playback head, then mark its location on the covering cowl above. When you have determined the splicing place by ear, you can lift the tape straight up out of the slot and mark it at the indicated point. For maximum accuracy, however, it is better to remove the cowl and mark the tape directly at the playback head.

On larger, professional-type machines the tape lifters are manually controlled, and you can play the tape slowly by hand to locate the sounds you wish to edit. In fact, most modern home-type recorders have a "pause" position, which allows you to rock the reels back and forth by hand. Machines that do not have this "pause" position raise problems because they only allow you to listen to the tape at normal playing speed. On such machines you have to resort

to quick and deft use of the stop control. Experiments will indicate how you should solve this important problem in your own case. The greater your precision the more you can do in the way of useful and effective editing, and the fewer mistakes you will make.

The beginning tape editor should concentrate at first on editing speech. Although this is a less exacting area than music editing, it is probably more fun. You can join different passages, even in the very middle of a word. You can edit out words, whole sentences or paragraphs, or insert new material in place of the old. You can remove grammatical mistakes, hesitations, speech faults, repeats, and hems and haws. You can insert or shorten pauses and thus change the speaker's apparent mood and emphasis.

HERE is a basic rule for editing speech (and anything else): Edit by joining silences. Look for gaps in the flow of speech, whether at the end of a sentence, in the middle of a thought, or between syllables of a word. You will find what will seem at first an astonishingly large number of these. Some take up perhaps no more than an eighth of an inch on the tape. But that is plenty. Locate the silent place as accurately as you can, mark the spot with your black grease pencil, straight across the tape. Locate another silent place—it may be at the end of a sentence or a word—then slice your tape diagonally (passing the blade through the center of the black marks) at these two points, match up the ends, join them together, and play the tape back. After a few tries, you'll hit a perfect splice—so smooth you cannot hear it—and that's when the fun begins.

As an amusing beginner's exercise, start by making word salads. Take a stretch of spoken recording (or make one on the spot) and hash it up into nonsense. Take out words, join unrelated bits of sentences, transpose sections—always, of course, trying for a natural and convincing effect. When you have completed this bit of frequently riotous lunacy to your satisfaction, try some sober, responsible editing in the same fashion, and you'll be startled at the ease with which you can improve a speech after it has been made.

With no more than this simple silent-place technique—the joining of silences between speech sounds—you can develop surprising skill. The same technique, incidentally, can be applied to recordings of music. Its effectiveness depends on the large amount of silence that is inherent in all speech and in many types of music. The length of the

silences may vary from a mere instant to a lengthy pause, and you will soon discover that the quality and length of these silences fulfill a subtle but important function in the conveyance of meaning.

By manipulating these silences, you can alter the sense of speech in astonishing ways. The very syntax of a sentence can be altered by the tampering with the pauses and breathing points. Feelings of urgency and nervousness, relaxation and calm can be evoked, and moments of climax or anti-climax may be shifted, all by a simple device of adding or subtracting silences.

But here are two warnings: First, never use blank tape for the insertion of silences. The silences in a recording are never really silent. They are colored by the natural background noise of the recording location. Splicing in a piece of blank tape will merely give the effect of a momentary power failure. Instead, use silent places clipped from the recording itself; save up bits of silence that include faint but natural background noise to be spliced in wherever they may be wanted.



Second, never forget that people breathe when they speak. Allow for the intake of breath when you join phrases. Don't remove the breathing unless you want an unnaturally rushed, all-in-one-breath effect. Above all, don't accidentally join two intakes of breath in a row. The person speaking will seem to swell up like a balloon. You will discover that the manipulation of breathing and assorted tongue sounds is a big part of all speech editing.

In addition to splicing in silences, you need only one more basic speech-editing technique: the joining of "sound bumps" (for that is what they sound like when you move the tape slowly across the playback head). You can join a whole assortment of sounds with precision and exactness if you will study the principle of the sound bump, more properly called a transient or percussive sound element. Not all words contain such bumps. You will find, probably to your amazement, that some common sounds that seem definite enough as you listen to them at normal speed—the sounds of the letter *r* or *l*, for example—become utterly vague and meaningless at slow speed, their length spread out as a hideous groan over a long stretch of tape. You simply cannot locate a sharp beginning or ending. They merge into other sounds; hence you cannot edit them precisely.

If you do try to cut into these sounds, you will discover a curious thing: your tape will seem to create new percussive consonants of its own. Slice into an *r* and inexplicably it becomes *tr* at the splicing point. A liquid *l*, if you cut into the middle of it, becomes *pl*. These sounds are editing traps. And you will find more of them. Leave them alone.

But let's get back to the sound bumps. They are like road signs to the tape editor. Look for hard consonants,

especially the explosive *t*, *p*, and *k* sounds. They are sharply defined, and they are almost always preceded by a tiny gap of silence. Thus you can locate them, often within a sixteenth of an inch, for perfect editing.

Don't think you are restricted to the handling of words as whole units; indeed, perhaps the most fascinating place to edit by the sound bump method is right in the middle of a word. Take a phrase like "time to retire." You can break right into the middle of "retire," and you will find a clear silence after the first syllable, followed by a knife-edge *t* sound, running on into an *i* and a liquid *r*. It should be no trouble at all to mark the exact location of the gap and join it to a similar gap at another point on the tape.

Nor are you restricted to joining syllables into exactly the words they originally came from. You can graft together some quite sensible words out of odd syllables on the loose. You can, for instance, join the first part of "time to retire" to an entirely different phrase to make "time to retaliate in force." And the leftover "-tire" can be spliced in elsewhere to make, perhaps, "I would soon tire of her." or "I had a

flat tire." An adroit hand can manufacture such never-spoken phrases in the speaker's own voice, making them sound as natural as life.

If a mistake is made during a recording session, and you decide to try again, start your second take a sentence or so before the break rather than right at it. Listen to the earlier ending just before you start re-recording, in order to duplicate the tone and pace of the voice in the overlapping repeat. Then, when you splice the two together, you will have a choice of a dozen or so silences or sound bumps at which to make the splice.

MUSIC, needless to say, is edited in much the same way as speech, and you should provide generous overlaps at all points where two passages are later to be joined. By using this overlap technique you can put together a unified performance from as many separate takes as you care to make. Here, too, you begin by looking for silences and for sharp, percussive sounds with clear-cut beginnings and endings that can be precisely located on your tape.

There is one important principle that is peculiar to music editing. The rule is simple, though often disregarded: Never cut into an echo. An echo prematurely cut off is a most obtrusive and unpleasant sound.

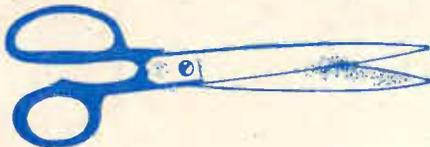
You can manipulate and transpose echoes, but you have to be careful. You won't want an A Major chord with an echo in G Major; you can try it for kicks, but it will sound very odd indeed. It is possible to join the echo of a chord to the body of a different performance that includes the same chord. However, this kind of patching always carries the risk of creating one of those false percussive effects, a

moment of drop-out, or a noticeable "bloop" that may render a theoretically workable joint quite useless. It is safer to allow all echoes to run their full course, safely attached to their parent sounds.

Many a poor joint has been made when the editor, torn between the claims of musical rhythm and aural naturalness, has cut off an echo too soon in order to bring in a new section of music on the beat. If an echo is too long, you must wait—you can do nothing else. The music may lag in tempo, but at least the joint will not be noticeable.

Many times you will have to choose between the lesser of two wrongs, and the decision can be agonizing. The fate of a precious performance often depends on wise judgement. You can involve yourself deeply in such work, if you wish, and it may fascinate and frustrate you into the small hours of the night. But one really successful splice in a difficult spot can give you a sense of accomplishment that will make up for many hours of frustration.

It is enormously difficult to set up specific rules for music editing because of the variousness of music itself. Listen to



the music critically at normal speed, then at half-speed, keeping your ears open for possible editing spots, for breaks or echo-free silences and percussive sound bumps. Then play these passages by hand, moving the reels slowly, until you familiarize yourself with their character. Try marking the tape here and there, just to see if you can localize editing points precisely. You can hope to find silences only occasionally. You may have to take advantage of partial silences, as in editing an instrumental solo that begins or ends against an underlying web of sound.

Piano, drums, triangles, sharp string attacks, trumpet sounds, and guitars are your friends. They produce sound bumps that can be marked and cut neatly, providing the musical material allows it.

WITH increasing practice, you may tackle more daring operations. For instance, try converting a piano sound into an oboe sound. Join the beginning of a piano tone onto an oboe tone of the same pitch, and the two will seem to be one sound. You can manufacture all sorts of hybrid instruments and musical phrases in this way. Or you can do tricks with different recordings of the same music, joining them into a continuous performance, but shifting back and forth from one to the other without perceptible transition. You may even run one composition directly into another, imperceptibly mixing two different works, providing you can match up their harmonies.

Given a sure technique, you will find that your success depends largely on your knowledge of the particular music you are editing. If you know how a symphony is put together, where the choruses in a jazz piece begin and end,

WHAT ABOUT THE OTHER TRACK?

Home tapes usually carry different recordings on a single reel—one or more in each direction. Obviously, you cannot slice through one track without cutting the other as well. There are three ways out of this dilemma:

1) Make all your tapes strictly one-way. This sacrifices playing time, but the results, in terms of finished, edited tapes, are worth it.

2) If your existing tapes already carry programs in both directions, you may be willing to sacrifice indifferent material in favor of good material. If so, just go ahead and edit the good material and ignore the other.

3) If the tape you want to edit contains good material in both directions, and you are unwilling to give up any part of it, team up with someone else who owns a tape recorder and copy tape from one machine to the other. This will provide you with a one-track recording, suitable for editing. Depending on how much quality is sacrificed with each transfer, you can then copy the edited tape on a multiple-track recorder. Naturally, the master tape and the editing copy can be erased and used again.

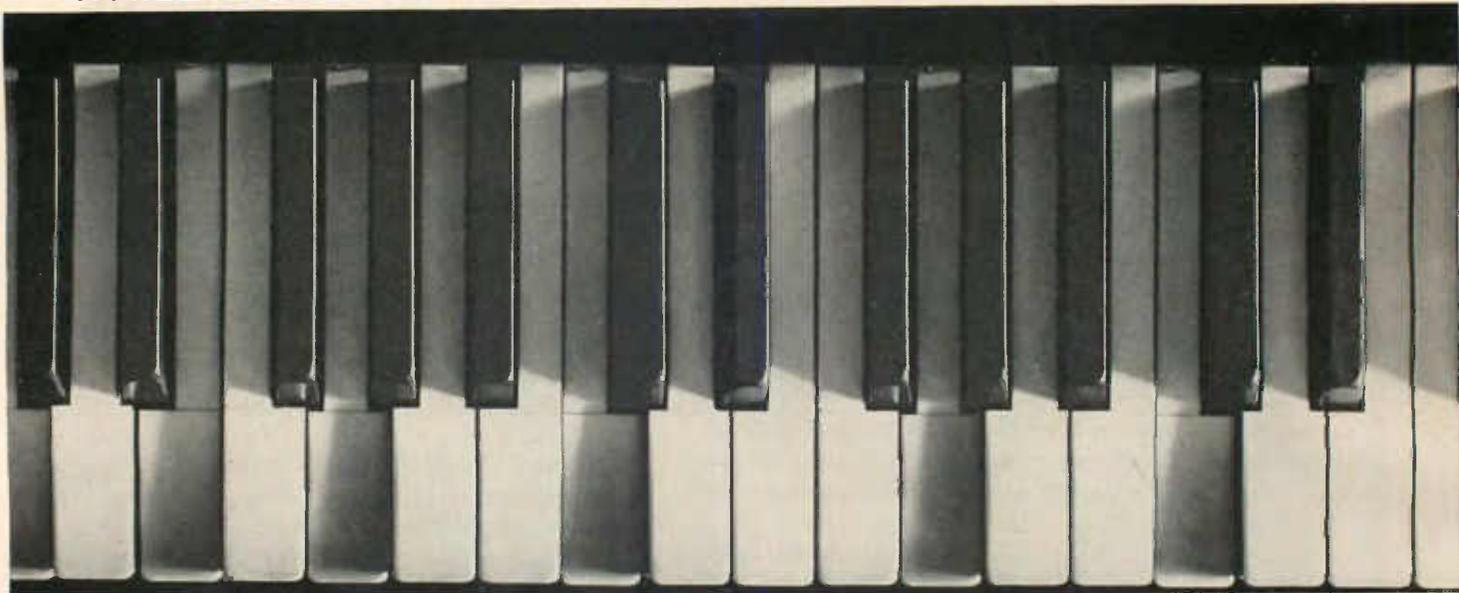
you can do all kinds of foreshortening, or even lengthening, of the musical structure.

It is remarkable how quickly you can sense the editability of a certain type of music. Beethoven, with his abrupt phrases, is sure-fire for editing; so is Mozart, with his clean-cut melodic figures. Carl Orff, with his rapid percussive patterns, his many repetitions, and frequent breaks in sound, is wonderful for editing. Wagner is very difficult; sound bumps are rare in his music, and silences ever rarer. The slow-motion editing technique transforms most Wagnerian music into an unidentifiable mass of sustained howls and groans. Popular music has plenty of percussive sounds, but beware of the big echo. Folk music can often be edited as speech—between stanzas. Blues are easy, but fast jazz is tricky. And so on.

Tape editing is comparable to film editing. Yet, in many ways, the tape editor's means of shaping the final artistic product are more varied and more subtle. Remember, however, that technique is merely a means to an end. The real challenge of tape editing lies in its expressive possibilities. Here is an invitation to a highly personal and truly artistic pastime.

Edward Tatnall Canby teacher, author, lecturer and conductor, often stimulates his listeners on New York's station WNYC with examples of his own creative tape editing ability. Montages blending different performances of the identical piece are frequently featured on his program. When conducting *The Canby Singers*, who specialize in Baroque and Renaissance music, he also acts as his own recording engineer, and some of his tapes have been made into commercial discs.

WHILE WOULD-BE PADEREWSKIS PLAYED WITH THEIR FEET,



THE GLORIOUS AGE OF THE

TIME WAS, and not so long ago, when the trade name *Pianola* was as well known to the man in the street as the trade name *Kodak* is today. In those days every young American bride and groom setting up house-keeping yearned for a brand new player piano in the parlor, just as today they yearn for the latest type of electric dishwasher and garbage disposal unit in the kitchen.

Between the turn of the century and the Great Crash of 1929, our parents and grandparents bought player pianos by the hundreds of thousands. The appeal of these instruments was universal. You found them wherever spirits needed uplifting by the sound of music—in the homes of the rich and the noble, in tenements and schoolrooms, in amusement parks, dance halls, shooting galleries, nickel-odeons, music conservatories, bordellos. And yet, today an entire generation has grown up that has never seen, much less heard, a player piano.

If you are old enough to remember the outbreak of World War I, you may well remember the thrill of operating an early player piano. First, you leaned down and pushed aside two sliding panels just above the piano's regular pedals, thus exposing the footpedals of the player mechanism. Then you slid aside a similar panel in front of you, just above the keyboard. This brought into view the brass tracker bar, which contained eighty-eight tiny square holes, one for each note on the piano. Above it were two pinions that would hold a paper music roll in place, and below it was a big, black ebony roller onto which the paper roll would wind.

Defly you inserted the roll of your favorite musical selection between the two pinions; you drew the tapered end of the roll over the tracker bar, and attached a small ring on the end of the roll to a hook in the center of the black roller. This accomplished, you tramped on the pedals once or twice, thus starting the roller to turning and pulling the paper roll slowly over the tracker bar. A moment later

the name of your selection appeared, printed on the roll, and then a vital statistic—"Tempo 75." This was your cue to move the tempo lever, located just below the keyboard, to its proper place on a graded scale. Tempo marks might range from 60 for an *adagio lamentoso* to 80 or more for a fast *galop*.

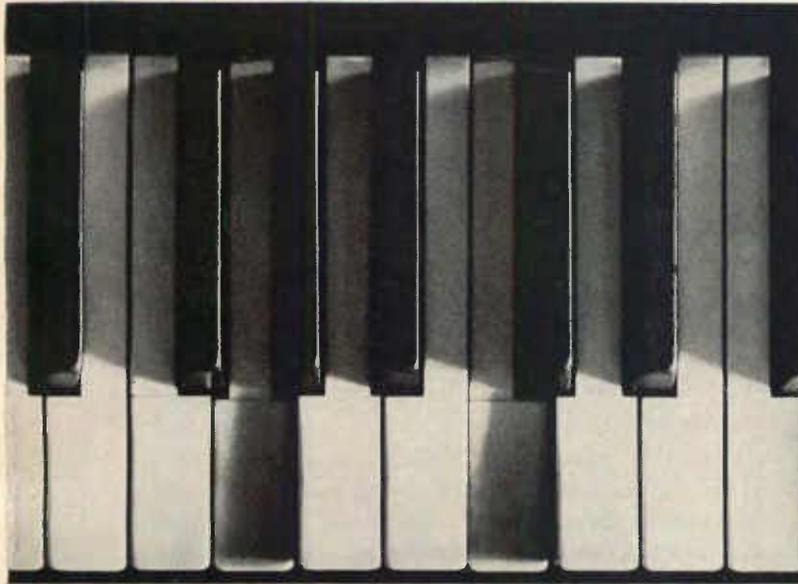
Now you were ready to give it the gas in earnest with your footpedals, tramping up and down with an easy, regular motion. Seconds later the perforations began to appear, descending with the paper roll, and the instant they reached the tracker bar—wham! Glorious piano sound gushed forth.

As you pumped away with your feet, your hands could guide the expression levers, also located just below the keyboard. These permitted you to vary the dynamics of the treble or bass, thus approximating the loud and soft shading of a live performance. Another device, called the "Metro-style," guided you in varying the tempo. Simply enough, you moved the tempo lever to follow a wavy line on the unfolding music roll. Thus you could pump some of your own soul into the music. Every man, so to speak, could be his own Paderewski.

ONE of the first clearly recognizable ancestors of the modern player piano was created in 1863 by Fournaux of Paris, and was called the "Pianista." This was a cabinet containing a clockwork mechanism, which, when placed in front of a piano and set in motion by means of a crank, pressed down pneumatically a set of mechanical fingers, which in turn struck the piano keys. Perforated cardboards, fed into the machine, reproduced various pieces of music. This instrument wowed the spectators at the Philadelphia Exposition of 1876, and a number of models were sold.

All through the next quarter of a century it seemed that the machine and bicycle shops of the nation were peopled by two main types of supposedly crazy inventors—first, the

A GIANT INDUSTRY BOOMED...



PLAYER PIANO

nuts who thought there was a future in carriages propelled by internal combustion engines instead of horses; and second, the madmen who hoped to make pianos play by themselves. The latter were also divided into two groups. Some concentrated on player mechanisms of the Fourneau type, which were contained in a separate box or cabinet and could operate on any existing piano. The others tried to stuff their complex machinery inside the piano itself.

Many of the piano makers of the day stoutly resisted any plans to put players inside their instruments. To them a piano that bulged in odd places because it was pregnant with machinery was an affront to the aesthetic senses, and not to be tolerated. Nevertheless, the buying public very soon made its decision—against the separate cabinets and for the pregnant pianos.

The instrument that finally hit the most successful formula was perfected in 1896 by Edwin S. Votey. At first a cabinet type, it later became a combination—that is, a “straight” piano that could be played as usual by hand, or mechanically by means of perforated paper rolls. The machinery was pneumatically operated by footpedals. Votey’s instrument also had a magic name: *Pianola*. Within a few years that adhesive proper noun had stuck in the language as the universal synonym for a piano that would play by itself.

Early in Votey’s career, he met a young man named Henry B. Tremaine, whose father, William B. Tremaine, who had been a piano and organ maker, had organized the Aeolian Organ & Instrument Company. This was the forerunner of the Aeolian Company which, in 1900, patented Votey’s *Pianola* and started it on its amazing career.

YOUNG Harry Tremaine was not just a firm believer in the future of the *Pianola*. He was a fanatic on the subject. His very soul vibrated with the faith that every home in

by Richard Anthony Leonard



FIG. 1.—GALLY'S AUTOPHONE OR SELF-PLAYING MUSICAL INSTRUMENT.

America should have one of these God-given instruments and that it would be bilked out of its cultural heritage if it lacked one. Like young Henry Ford single-mindedly pushing his early flivver, Tremaine set about making America *Pianola*-conscious from coast to coast.

As a result of Tremaine’s aggressive sales and advertising techniques, *Pianolas* began to sell in astonishing numbers, and soon the Aeolian Company ballooned into a manufacturing giant, absorbing half a dozen venerable piano firms, including Weber and Steck. Meanwhile, Votey and other inventors greatly improved their early models by giving them “expression,” which meant that the operator had more control over dynamics and tempo.

All this success was delightfully sweet to the piano industry, but to Harry Tremaine it was still not wholly satisfying. He was a well-educated, cultured man, and one of his driving ambitions was to raise the player piano out of any cheap, honky-tonk status and give it a cultural standing beside that of the finest music. He pulled off a real *coup* when he persuaded the great house of Steinway & Sons to permit his *Pianola* mechanism to be built into their instru-

Perhaps the earliest example of "Music-Plus-One"—playing the violin to the accompaniment of an automatic organ.



CULVER SERVICE

ments, an exclusive arrangement that paid off handsomely for both companies. He also erected on 42nd Street in New York City a twenty-story building, called Aeolian Hall, which housed the company's offices, its magnificent showrooms, and a concert hall that shared with Carnegie Hall the outstanding musical events of the city.

And then, as if in answer to Tremaine's prayer for player piano prestige, a German manufacturer, Edwin Welte, of Freiburg-am-Breisgau, came up with an idea that gave the entire burgeoning industry a further boost. In those early days all player piano rolls were made by a purely mechanical process. Welte's notion was to use the actual playing of a pianist to create the master roll. A special piano was made with electrical contacts under each key. This instrument was wired to an adjoining machine, so that every time a key was pressed down on the piano a mark was made on a moving paper roll. Thus, every note that a pianist struck could be precisely recorded in proper length and sequence, giving a perfect record of his tempo, rhythm, and phrasing.

At first dynamics were a problem, since there was no known way to record the exact weight of each finger stroke. But the inventors quickly surmounted that obstacle by evading it. Another musician would stand by with a copy of the music or a mechanical chart. As the pianist played, a hasty but fairly approximate record was made of his dynamics, later to be transferred to the master roll. The finished music roll now had an extra set of perforations on the side governing the dynamics, and the tracker bar of the player piano had a corresponding set. The finer player mechanisms could deliver a wide range of dynamics, from soft to very loud; moreover, melody notes could be made to receive a heavier jet of air than the accompaniment notes received. The net results were astonishingly lifelike.

The Welte Company moved quickly to get down on perforated rolls a number of short pieces played by some of the most famous pianists of the day. With an eye on history they also persuaded various composers—Grieg, Debussy, Saint-Saëns, Scriabin, Richard Strauss, Fauré, Glazounov, Leoncavallo, Ravel, and others—to record.

Meanwhile, back in Aeolian Hall, Tremaine and his associates had been working on the same lines, and in 1913 the Aeolian Company came out with its own new instrument, the *Duo-Art*. This was in reality a highly perfected *Pianola*. No longer a mere player piano, it now became a "reproducing piano."

With his long-sought goal of glittering prestige at last in sight, Tremaine moved with swiftness. He signed up the biggest gun in the piano arsenal, I. J. Paderewski, to a long-term contract to make *Duo-Art* rolls exclusively. He also snared Josef Hofmann, Harold Bauer, Gabrilowitsch, Cortot, and a host of others.

Reproducing pianos could give an almost perfect illusion of a live performance. The demonstration of their prowess was startling when made with several symphony orchestras around the country—among them the Philadelphia Orchestra under Stokowski and the New York Symphony under Damrosch. An entire movement of a piano concerto would be performed, the orchestra accompanying a *Duo-Art* reproducing piano—with the pianist's chair empty.

As for the ultimate consumer of all this musical feast, the American music lover, he ate it up and cried for more. No longer did he have to exert himself even to the extent of pumping pedals or pushing levers. An electric motor now reduced his chores to zero. He merely sat back, relaxed, and dreamed, while his piano, entirely on its own, delivered performances by the giants of the keyboard, from Pachmann and Godowsky to Vincent Lopez, right in his own living room. No czar, sultan, or begum could command more.

Salesmen for the Aeolian Company could guess what every new purchaser of a *Duo-Art* would want as the first music roll in his library. Invariably, it would be Paderewski's famous *Minuet*, as played by the composer himself. Over at the *Ampico* salesrooms it would be Rachmaninoff's performance of his C-sharp Minor Prelude. After that nod in the general direction of culture, the average buyer would, in all likelihood, get down to solid enjoyment with *Just a Baby's Prayer at Twilight*, *Smiles, I Didn't Raise My Boy to be a Soldier*, and *The Darktown Strutters Ball*.

These, and the new songs from the current Broadway shows, were the bread-and-butter sellers in the early 1920's. A music dealer did not care much if a Beethoven sonata languished forever on his shelves—not while the grand heavyweight champion of all the ballads, *The Rosary*, sold by the gross. In one of its peak years, the QRS company, the largest makers of pop and ballad numbers, turned out sixteen million rolls.

EVEN so, Tremaine and his rivals continued to back culture. In the mid-1920's, the *Duo-Art* catalogue of music rolls boasted a respectable amount of fine music played by the greatest pianists of the day; and in another decade the total would have been impressive. Paderewski, for example, had recorded some thirty works, including Beethoven's "*Moonlight*" *Sonata*, and various waltzes, mazurkas, and polonaises by Chopin. Hofmann had recorded an equal number, including the B-flat Minor Sonata by Chopin.

Igor Stravinsky was fascinated by the possibilities of the player piano, and in the 1920's he recorded not only a number of his piano pieces but some of his more famous orchestral works in arrangements that he made specially for the player piano. The piano pieces included his Four Studies for Piano, two groups of Easy Pieces for Piano, Piano Rag-Music, Study for Pianola, The Five Fingers, and the Sonata for Piano. The special arrangements included *The Fire Bird*, *Petrouchka*, and *The Rite of Spring*.

Most of the pianists liked making player piano rolls, and not only because of the pleasant new source of income. Mistakes in playing, often a nerve-wracking problem in early phonograph recording, were no problem at all for the mechanical pianos. After a pianist finished recording, an editor took the master roll, played it at slow speed, and compared it note for note with a copy of the music. When he came upon a wrong note, he merely taped up the perforation on the roll and punched in the correct one.

All through the early 1920's, as the American economy rode merrily up the ski-lift, the sales of player pianos zoomed. In 1923 nearly 200,000 were sold in this country alone. But precisely at that moment there appeared on the horizon a tiny cloud — radio.

Ironically, it was from the roof of Tremaine's Aeolian Hall that the first transmitter antenna rose above the skyline of New York, and the new phenomenon of airborne music poured over the city. But Tremaine failed to see the import of the electronic contraption on his own roof. He turned down an offer to buy the station for \$50,000, remarking that radio was "a mere toy." Within a few years, the station, WJZ, became the hub of the National Broadcasting Company, whose growing radio network rapidly syphoned off the player piano market. The ascendancy of radio came so fast that the player piano companies never fully realized what hit them. They reeled through a series of liquidations, mergers, and bankruptcies. The stock-market crash of 1929, with the subsequent Great Depression, dealt the player piano the final blow.

Interest flickered briefly during the last war when families house-bound by gas rationing dusted off their parlor pianolas and demanded new rolls to play. But the technology of the post-war era brought to maturity a more versatile conveyor of music: electronic sound reproduction.

But the player piano never died in the hearts of the roll collectors. A small but devoted fraternity survives, dedicated to rescuing from oblivion the great player piano rolls of a bygone time. Musicologists of the future, in all likelihood, will dig intently among these documents of a musical era that has faded into the dusk of yesterday.

In this article, Richard Anthony Leonard speaks from first-hand experience, for it was shortly after graduation from college, while on the advertising staff of the Aeolian company, that he witnessed the spectacular fall of the player piano industry. Notable for having directed the Toscanini-NBC Symphony broadcasts, Leonard also has written many music articles, as well as two books, The Stream of Music and A History of Russian Music.



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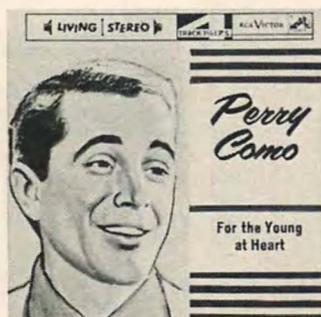
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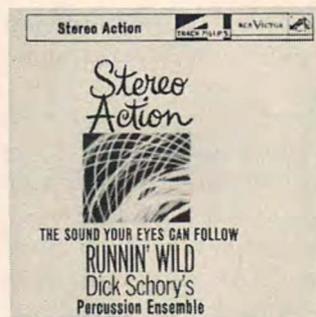
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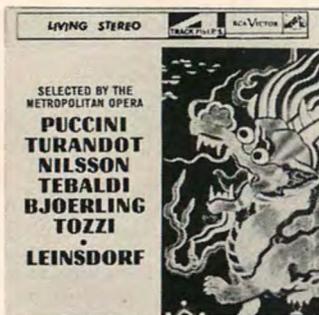
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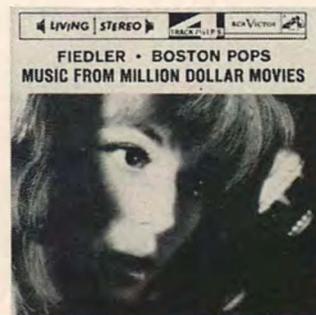
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▼ **DVOŘÁK:** Symphony No. 5 in E Minor, Op. 95 ("From the New World"). NBC Symphony Orchestra, Arturo Toscanini cond. RCA Victor LME 2408 \$4.98

Interest: Dvořák masterwork
Performance: Top-drawer Toscanini
Recording: Tops for Toscanini
Enhancement: Remarkably well done

▼ **RESPIGHI:** The Pines of Rome; The Fountains of Rome. NBC Symphony Orchestra, Arturo Toscanini cond. RCA Victor LME 2409 \$4.98

Interest: Rome in technicolor sound
Performance: Coruscating
Recording: Brilliant
Enhancement: Very effective

▼ **MOUSSORGSKY-RAVEL:** Pictures at an Exhibition. NBC Symphony Orchestra, Arturo Toscanini cond. RCA Victor LME 2410 \$4.98

Interest: Colorful tonal art exhibit
Performance: High-powered
Recording: Mostly very good
Enhancement: Marred by distortion

TOSCANINI in stereo? It doesn't seem possible, considering *The Fountains of Rome* was taped at Carnegie Hall in December of 1951, while *The Pines of Rome*, *Pictures at an Exhibition*, and the Dvořák symphony were done during the first quarter of 1953. His last appearance before the recording microphones was in June of the following year. At that time, RCA Victor, with the Chicago Symphony Orchestra; London, with the Vienna State Opera; and Remington, with the Cincinnati Symphony, were just making their first tries at stereophonic recording for future commercial release.

The inversion of the black triangles by which we customarily designate a stereo recording gives the game away. What we have in these three discs are fascinating—and in two instances brilliantly successful—attempts to bring to three of Toscanini's finest monophonic recordings the illusion of stereophonic sound. "Electronic Stereo" is RCA Victor's name for its process. To my ears, these represent—at least in the Dvořák symphony and Respighi tone poems—the most successful examples I have heard thus far of stereophonic illusion produced from monophonic sound sources. This conclusion is based on three separate criteria:

1. A-B comparison of recent pressings of the corresponding monophonic recordings with their "Electronic Stereo" ver-

sions; 2. A-B comparison of the enhanced Respighi recordings with the Reiner—Chicago Symphony discs in true stereo (RCA Victor LSC 2436); and 3. Comparison of the new versions with my own vivid memories of six years of regular attendance at Toscanini rehearsals, including quite a few at Carnegie Hall. The question is, in brief: To what degree has RCA Victor's "Electronic Stereo" processing brought us closer to the actual sound of a Toscanini performance as heard in Carnegie Hall?

The Dvořák symphony recording is by far the most successful of the three. Of course, the fact that the original mono tape was technically one of the best of all Toscanini recordings is an important factor. The performance, furthermore, has all the firmness of line, justness of proportion, rhythmic vitality, and dynamic contrast that characterize Toscanini's finest work.

The first difference that strikes the ears when comparing the versions of this performance is the greater spaciousness and warmth of the enhanced recording. Then, listening critically for the familiar directional characteristics associated with stereo, we find everything very much in order—violins to the left; woodwinds and trumpets center and right of center; timpani, trombones, and lower strings predominantly to the right. A crude frequency-dividing technique of distributing highs to the left and lows to the right would, of course, result in the important triangle tinkles of Dvořák's Scherzo sounding from the left-hand speaker. Here they are to be heard exactly where they should be—from the right-hand speaker, hard by the timpani. However, the most impressive demonstration of the refinement and flexibility of RCA's enhancing technique is to be heard in the development section of the Dvořák finale, in which there are continually shifting interchanges among the violins, woodwinds, and lower strings. The sense of motion across the frontal listening area is beautifully realized.

Careful listening analysis of this and its two companion discs seemed to indicate that the RCA "Electronic Stereo" technique involves a combination of frequency-division procedures, judicious use of added reverberation, very clever band-pass filtering, and painstaking use of channel-shifting controls ("panning pots," as they are known in the audio trade). This was subsequently confirmed in conversation with Jack Somer, the bright young RCA

engineer who is responsible for the "Electronic Stereo" project. "Furthermore," he added, "it took us two years of work to come up with these three usable masters."

The glittering Roman tone poems of Respighi also come out with sonics notably improved over those of their monophonic originals. There is more reverberation evident here, but it is handled with such fine taste that we have a superbly effective element of aural *sfumato*, just the impressionist magic this music needs.

It is in *Pictures at an Exhibition*—where one might expect the most spectacular results—that the enhanced sound comes out second best. The disappointment is a result of distortion in the original mono recording of the closely spaced trumpet chords toward the end of "Gnomus" and at the climax of "Catacombs." This is barely noticeable in mono; but by the time they have gone through stereo processing the sections in question become all but unbearable to the ear.

These defects may be eliminated in future masterings; but meanwhile it seems pretty clear that stereo enhancing of this type is likely to work only when the original mono tapes are of the highest quality.

The broader implication of this new RCA development are discussed in this month's "HiFi Soundings" (see page 8). As indicated there, a substantial number of recordings by other conductors are likely to be issued in "Electronic Stereo" during the months to come.

For more than a decade it has seemed entirely possible to develop a method whereby monophonic program material could be enhanced to a point of being virtually indistinguishable from true stereo. Where records were concerned, this could have come about either through the development of a "magic black box" with auxiliary speakers—this to be added to home audio systems for use with either records or broadcasts. The alternative has been special re-processing of the recordings themselves, so the "stereo" characteristics would be built-in, so to speak. In demonstrating its "Electronic Stereo" re-processing technique, RCA Victor has proved that such pre-processing of discs can be done with striking success as well as with good taste. What is more important, these reprocessed Toscanini discs demonstrate beyond any shadow of a doubt that the musical-aesthetic result is well worth the effort. *David Hall*



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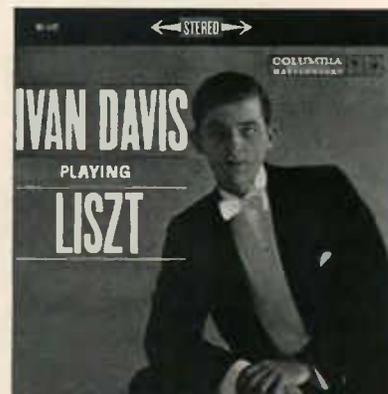
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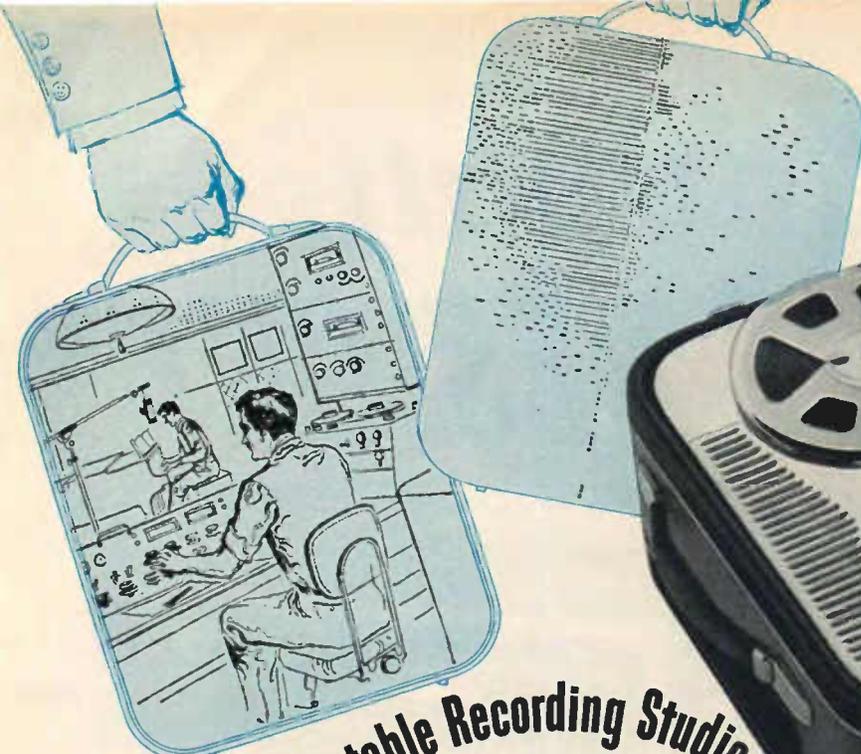
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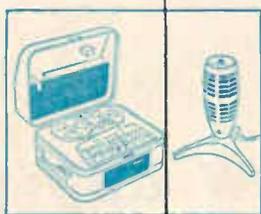
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(Continued from page 70)

Texts and translations are essential for *Lieder* recitals; their absence, when it comes to the songs of Hugo Wolf, is particularly damaging.

Suzanne Danco, always an intelligent and dependable singer, has her limitations in range and evenness of tone. Her shortness of range causes her a few uneasy moments in the descending phrases of some of the Brahms songs, particularly in *Feldeinsamkeit*. It is a tribute to Miss Danco's resourcefulness, however, that she can sometimes turn her unevenness of tone to advantage in obtaining a greater variety of color. She is seldom profoundly penetrating, but she approaches each song in a straightforward manner, singing with tasteful phrasing and stylistic accuracy.

Three of the Wolf songs are contained in Fischer-Dieskau's superlative recital (Angel 35838), which is to be preferred in every way. No less than seven songs are duplicated by Seefried and Wächter on DGG 18591, which presents seventeen songs from the *Spanisches Liederbuch*. To my ears, at least, Miss Danco's warmer communication is preferred to Seefried's cool, detached approach. G. J.



▲ **BRAHMS:** Hungarian Dances—Nos. 1, 5, 6, 7, 12, 13, 19, 21; **DVORAK:** Slavonic Dances, Op. 46, Nos. 1, 3, 8; Op. 72, Nos. 1, 2. Vienna Philharmonic Orchestra, Fritz Reiner cond. London CS 6198 \$5.98

Interest: Great
Performance: Stunning
Recording: The same
Quality: Superb

Here, in his first recording for London, Reiner produces some absolutely stunning performances of these familiar scores. Under his direction, the Vienna Philharmonic responds with matchless discipline.

European critics have often compared visiting American orchestras to their own ensembles, and the general consensus has been that the Americans are superior in brilliance of orchestral execution but that



FRITZ REINER
Adds fireworks to London's fliss

the European orchestras seem to have more subtlety and tonal warmth. In this recording Reiner blends the best of both. He makes Vienna Philharmonic play with all the uncommon precision of his Chicago Symphony, yet it retains all its marvelous timbre and magnificent tone. What a pity
MARCH 1961

he did not record all of the Dvořák dances instead of these tantalizing few.

The engineering is altogether splendid, producing a handsomely spacious sound without sacrifice of detail. J. T.

▲ **BRAHMS:** Quintet in F Minor for Piano and Strings, Op. 34. Sviatoslav Richter (piano) and the Borodin Quartet. Artia MK 1516 \$5.98

Interest: Tops
Performance: Grand
Recording: Clear

The Brahms Piano Quintet is a massive work whose four movements are almost symphonic in sonority and thematic substance. As in many other Brahms compositions, the performers must possess technical virtuosity as well as interpretive insight.

These Russian performers have the instrumental skill and musicianship to recreate the score on a heroic scale. Their concept is broad and deep, and the Brahmsian glow is dark in hue. But the playing is deliberate, and it lacks, at times, in grace and lightness.

The recording balance defers somewhat more than it should to Richter. While his piano does not ever drown out any of the other instruments, it is nevertheless well to the fore. However, the ensemble is interpretively in fine balance. The sound is clearly defined and the Russian record surfaces are admirably silent. W. D.

▲ **CHOPIN:** Fantasie in F Minor, Op. 49; Mazurka in B-flat Minor, Op. 24, No. 4; Mazurka in A Minor, Op. Posth.; Scherzo No. 1 in B Minor, Op. 20; Scherzo No. 4 in E Major, Op. 54. Adam Harasiewicz (piano). Epic BC 1108 \$5.98

Interest: Major Chopin
Performance: Understanding
Recording: Clear
Stereo Quality: Good

Mr. Harasiewicz was the winner of the 1955 International Chopin Competition at Warsaw, and since then recordings have made him relatively well known, though he is still in his twenties.

In this, his third disc issued by Epic, he continues to play only Chopin. He interprets that composer's music in the manner we have come to accept as modern. This manner adheres more closely to the printed score than that of the previous generation of pianists. Those performers would inject more of their own personalities into their interpretations, and while Chopin's music sometimes suffered, still it was often illumined by insight and temperament.

The straightforward reading of the Fantasie on this disc projects much of its poetry and excitement, but it does not glow with the incandescence that Cortot once gave to a 78-rpm recording, and it is pale beside the colorful renditions of Rubinstein (RCA Victor LM 2277) and Novacs (Vox PL 7810).

In the scherzos and mazurkas, the young pianist fares better. The former are dashed off with admirable finish, and the latter are played with authentic feeling for the mazurka spirit. W. D.

DVORAK: Slavonic Dances (see **BRAHMS**)

▲ **ENESCO:** Roumanian Rhapsodies—No. 1 in A Major, No. 2 in D Major; **LISZT:** Hungarian Rhapsodies—Nos. 5 and 6. Vienna State Opera Orchestra, Vladimir Golschmann, Anatol Fistoulari cond. Vanguard SRV 119 SD \$2.98; Mono SRV 119 \$1.98

Interest: Bargain favorites
Performance: Good
Recording: Some problems
Stereo Quality: Good

Fistoulari obtains a broader, richer texture in the strings, but Golschmann's tight control and brighter sound makes for a fascinating performance comparison.

From the viewpoint of stereo quality, this Vanguard demonstration disc is excellent most of the way, but it runs into problems of distortion in heavy transients toward the center of the record. The mono version is better. J. T.

▲ **REBEKAH HARKNESS:** Barcelona Suite; Gift of the Magi. Symphony Orchestra, Sylvan Levin cond. Vanguard VSD 2071 \$5.98; Mono VRS 1058 \$4.98

Interest: First recordings
Performance: Good
Recording: Good
Stereo Quality: Excellent

This first disc by Miss Harkness was realized through the collaboration of West Projects Inc. and Vanguard Records. It presents the start of a series on American music. The project will give special attention to works by unknown composers and neglected works by eminent composers. Such an undertaking is deserving of the highest praise, for certainly too many of the larger companies of the record industry fail in a general sense to focus serious attention on American music.

In the *Barcelona Suite*, Miss Harkness writes much in the style of Turina. There is a close architectural similarity between her newly written suite and his *Sinfonia Sevilliana*, although the latter shows a finer and more experienced hand in the use of orchestral color. The point is: How "American" is the Harkness *Barcelona Suite*? If West Projects means to record the music of young American composers who write music that is divorced from so-called American sources, then this recording makes good sense. The explanatory notes, however, seem to indicate that its interest is supposed to be based on a nationalistic platform.

Gift of the Magi shows more imagination, though the composer, who studied with Nadia Boulanger, Nicholas Stein, and Frederick Werle, does not yet seem to have developed much individuality of style. In *Girl's Dance* she produces her warmest and loveliest piece, composed boldly but with refinement.

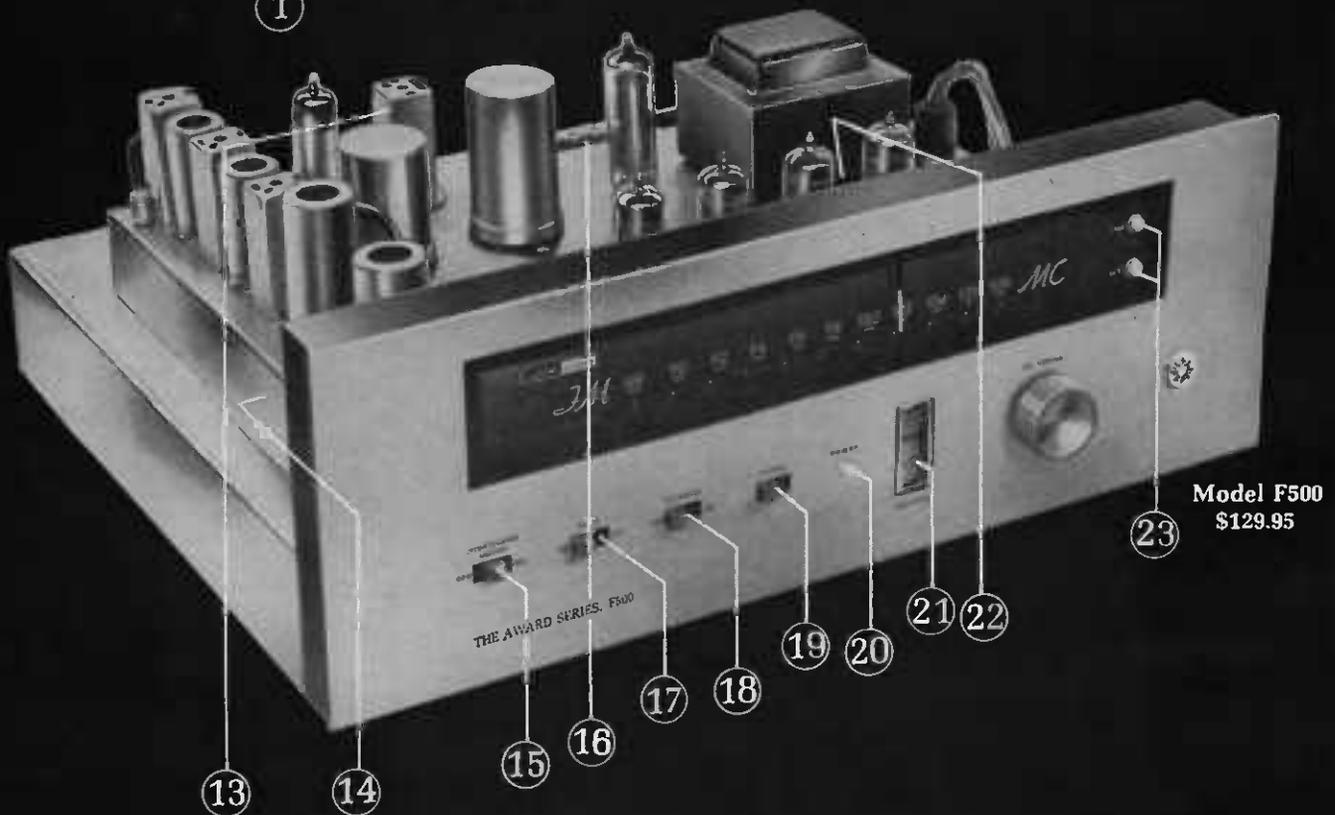
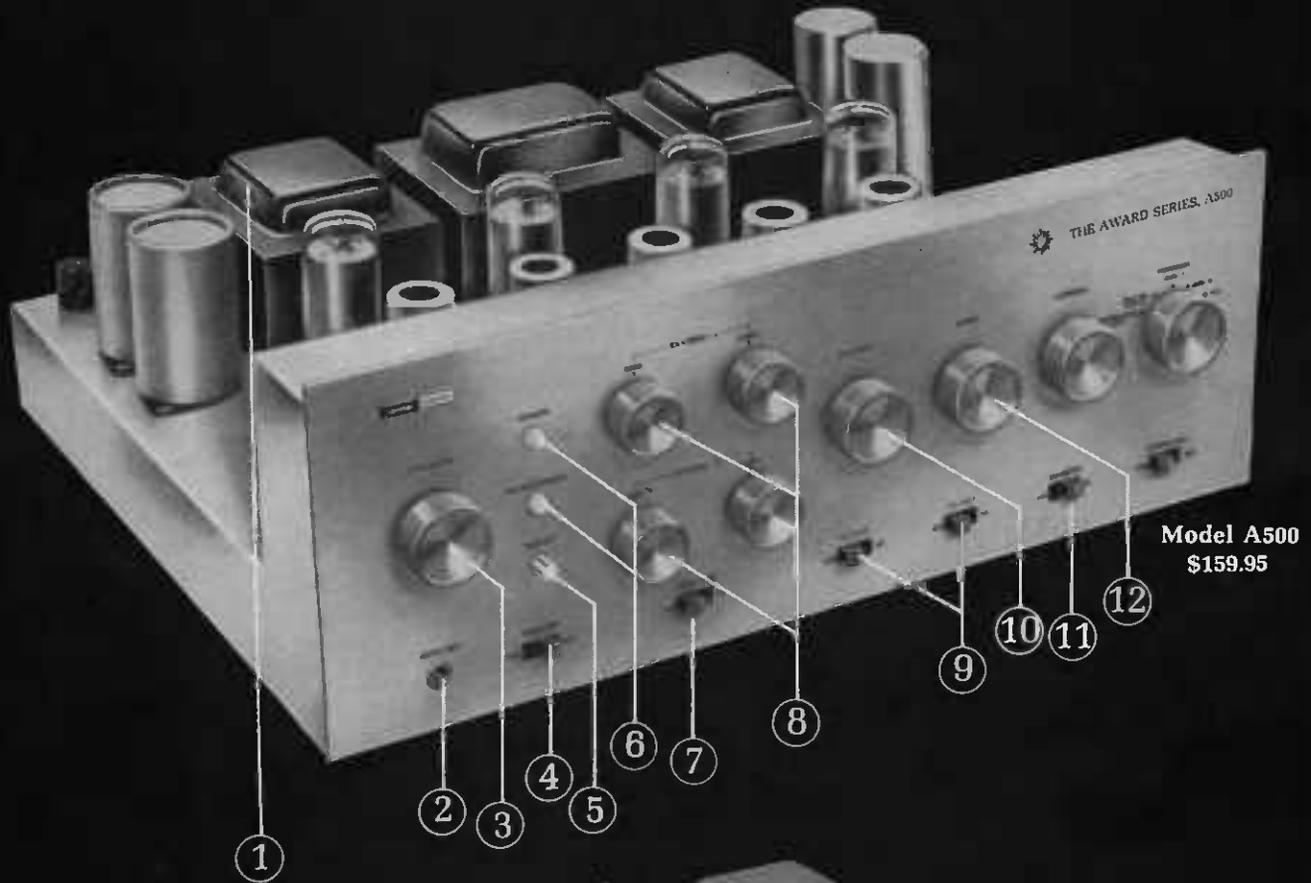
The sound, as such, is excellent. J. T.



▲ **HAYDN:** Mass in Time of War. Vienna State Opera Orchestra and Vienna Chamber Choir with Netania Devrath (soprano), Hilde Rössl-Majdan (alto), Anton Dermota, (tenor), Walter Berry (bass). Mogens Wöldike cond. Vanguard VSD 2075 \$5.95; VRS 1061 \$4.98

Interest: Beautiful rarity
Performance: Devoted
(Continued on page 76)

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crack. It is more austere and more subtle, and flawless performance is essential for the communication of its content.

Ansermet and his players come through handsomely in the Symphony in Three Movements, but the playing gets a little uneven in the knottier pages of the earlier work. The recorded sound is good, and stereo is effective in clarifying the texture of both scores. While there is no competition, either stereo or mono, for this particular coupling, Stravinsky's own mono recordings for Columbia are not to be bypassed lightly; he still has the last word with the Symphony in C. Furthermore, Sir Eugene Goossens has been given more luxuriant stereo sound in his Everest recording of the Symphony in Three Movements. *D. H.*

▲ **TCHAIKOVSKY:** Violin Concerto in D Major, Op. 35. Arthur Grumiaux with the Amsterdam Concertgebouw Orchestra, Bernard Haitink cond. Epic BC 1109 \$5.98

Interest: Virtuoso vehicle
Performance: Musical
Recording: Good
Stereo Quality: Fine

△ **TCHAIKOVSKY:** Violin Concerto in D Major, Op. 35. Valery Klimov with the Moscow State Philharmonic Orchestra, Kurt Eliasberg cond. Artia MK 1502 \$5.98

Interest: See above
Performance: Secure
Recording: Sub-par

Grumiaux gives us a technically secure, stylistically impeccable performance; yet the whole thing is rather colorless. In this respect Klimov's is the more interesting performance, for he seems to have more temperament. He certainly plays with more abandon and élan. On the other hand, the recorded sound on Artia's import from Russia sounds rather feeble next to the full-bodied sound of Epic's disc.

But Heifetz and Stern still remain the leaders in the recorded versions of the Tchaikovsky Violin Concerto. *M. B.*

▲ △ **VIVALDI:** Concertos for Violin and Strings, Op. 8, Nos. 1-4 ("The Four Seasons"). Wolfgang Schneiderhan with the Lucerne Festival Strings, Rudolf Baumgartner, leader. Archive ARC 73141 \$6.98; Mono ARC 3141 \$5.98

Interest: Vivaldi masterpiece
Performance: Imaginative
Recording: Excellent
Stereo Quality: Fine

Here is the umpteenth recorded version of this most popular of Vivaldi's works. However, this is no run-of-the-mill reading. Baumgartner leans toward lively tempos, with the result that this familiar music takes on vitality. Schneiderhan as soloist is fully equal to the task, and he turns in some superlative playing. The only place where I find the music a little hurried is in the beautiful slow movement of the fourth concerto, which loses some of its grace. The recording is fine in both stereo and mono. *D. R.*

▲ △ **VIVALDI:** Twelve Concertos for Violin and Orchestra, Op. 9 ("La Cetra").

78

Paul Makanowitzky, violin, with the Chamber Orchestra of the Vienna State Opera, Vladimir Golschmann cond. Vanguard Bach Guild BGS 5033/35 2 12" \$11.90; Mono BG 607/9 \$9.96

Interest: Venetian gems
Performance: Exquisite
Recording: Spacious and clear
Stereo Quality: Very good

This three-disc album contains a fine sampling of Vivaldi at his most appealing, in performances that are in every way admirable. Makanowitzky's playing leaves nothing to be desired. It is technically secure, tonally gratifying, and interpretatively apposite. The orchestral playing, too, is beautifully integrated. All of this, together with the realistic recording, makes this a truly notable disc. *D. R.*

WOLF: Songs (see **BRAHMS**)

COLLECTIONS

▲ △ **MOZART:** Oboe Quartet in F Major (K. 370); Oboe Concerto in C Major (K. 314); **HANDEL:** Oboe Concerto No. 8 in B-flat; Oboe Concerto No. 9 in B-flat; **ALBINONI:** Oboe Concerto in D Major, Op. 7, No. 6. André Lardot with the Boskovsky Quartet and the Chamber Orchestra of the Vienna State Opera, Felix Prohaska cond. Vanguard VSD 2074 \$5.95; Mono VRS 1060 \$4.98

Interest: Delightful works
Performance: Sparkling
Recording: Bright and clear
Stereo Quality: Excellent

This is Volume 2 of a series aptly named "The Virtuoso Oboe." The relatively familiar quartet is given a fine performance, as are, indeed, all the other works on the disc. Handel's Concerto No. 9 contains some wonderfully vigorous music, and it is played to the hilt by both soloist and orchestra.

The recording is excellent throughout. *D. R.*

▲ △ **MUSIC FOR TWO PIANOS.** **BUSONI:** Duettino Concertante after Mozart; **CHOPIN:** Rondo in C Major, Op. 73; **SAINT-SAËNS:** Variations on a Theme by Beethoven, Op. 35; **SCHUMANN:** Andante and Variations, Op. 46. Kurt Bauer and Heidi Bung (pianists). Deutsche Grammophon SLPem 136018 \$6.98; Mono LPEM 19158 \$5.98

Interest: Unusual repertoire
Performance: Balanced
Recording: Clear and balanced
Stereo Quality: Very good

The music in this program is consistently attractive, if not often heard; and in the case of the Schumann, it is quite moving. The anonymous program notes fail to mention that the Busoni is a reworking of the finale of Mozart's F Major Piano Concerto, K. 459, or that the "Beethoven Minnet" theme of the Saint-Saëns is from the E-flat Piano Sonata, Op. 31, No. 3. These omissions are surprising, particularly since Deutsche Grammophon has gone to the trouble and expense of including, in addition to the sketchy notes in four languages printed on the back of the album cover proper, a separate and full sheet of program notes in English.

Bauer and Bung are a young German husband-and-wife team who play with

sensitivity and musicality as well as with excellent ensemble and clean technique. Their performances are crisp and propulsive, and in the Schumann they are engagingly warm. The showy Chopin piece is played brightly; the Saint-Saëns is done with much variety of color; and the Busoni is done with sparkle and fleetness. The clarity of the recording, particularly in stereo, adds to the effectiveness and communicativeness of the playing. *W. D.*

▲ **OPERATIC ARIAS—INGE BORKH.** **DVOŘÁK:** Rusalka:—Song to the Moon; **GLUCK:** Alceste—Divinités du Styx; **MASCAGNI:** Cavalleria Rusticana—Voi lo sapete; **VERDI:** Macbeth—La luce langue; **Vieni, t'affretta . . . Or tutti, sorgete; La Forza del Destino:** Madre, pietosa Vergine; **Un Ballo in Maschera—Ma dall'arido stelo divulsa;** **DEBUSSY:** L'Enfant Prodigue—Air de Lia; **GIORDANO:** Andrea Chenier—La mamma morta; **CILEA:** Adriana Lecouvreur—Io son l'umile ancella. Inge Borkh (soprano) with orchestra, Anatol Fistoulari and Rudolf Moralt cond. London OS 25195 \$5.98

Interest: Well-chosen arias
Performance: Strongly dramatic
Recording: Good
Stereo Quality: Not outstanding

Inge Borkh's international fame rests on fearsome and even superhuman roles—Salome, Elektra, and Turandot. Here she tackles a different repertoire with varying



INGE BORKH
A laudably chosen repertoire

degrees of success. Her program, at any rate, is laudably chosen. The relatively unfamiliar Dvořák, Debussy, and Cilea excerpts are most welcome, and the *Macbeth* and *Alceste* arias are also far from having been done to death.

Miss Borkh is gifted with a voice of more brilliance than warmth. One is impressed but seldom enchanted by it. Her intonation is nearly always good; the upper range of the voice ranks with the best in the business; and she brings considerable dramatic flair to her interpretations. But these are not performances to make one forget Flagstad or Traubel in *Alceste*, Callas in *Macbeth*, or Tebaldi in *La Forza del Destino* or *Adriana Lecouvreur*. Miss Borkh is heard to best advantage in the arias from *Un Ballo in Maschera* and *Andrea Chenier* and in the lovely *Rusalka* excerpt. Her "Voi lo sapete," on the other hand, is completely unconvincing.

(Continued on page 82)

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Maio, Piano. April in Paris (Duke), Spring is Here (Rodgers), September Song (Weill), The Last Time I Saw Paris (Kern), Autumn in New York (Duke), September in the Rain (Warren), Autumn Leaves (Kosina), A Foggy Day (Gershwin), Under Paris Skies (Giraud), Summertime (Gershwin), I'll Remember April (Raye, de Paul and Johnson), Around the World (Young).
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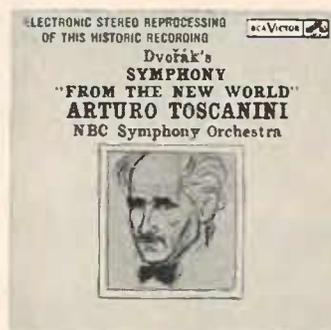
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△ EVA TURNER—OPERATIC ARIAS.

VERDI: Aida—Ritorna vincitor; O patria mia; IL TROVATORE—D'amor sull' ali; MASCAGNI: Cavalleria Rusticana—Voi lo sapete; PUCCINI: Tosca—Vissi d'arte; Turandot—In questa reggia. Eva Turner (soprano) with orchestras, Sir Thomas Beecham, Stanford Robinson cond. Angel COLO 114 \$5.98

Interest: Leading ladies of yesteryear
Performance: As good as we
remembered them
Recording: Faded but serviceable

It is this corner's fervent hope that Angel's "Great Recordings of the Century" series meets with the audience support it deserves. There is much artistic treasure in EMI's European vaults, worthy not only of rediscovery but of frequent and pleasurable listening.



CONCHITA SUPERVIA

In Spanish specialties, an earthy art

MARCH 1961

The three vocal LP's that make up Angel's newest additions to the series take us back to the first decade of electric recording (1926-1935). The choice of the artists is excellent, and, what is even more noteworthy, evident care has been shown in the selection of the recorded programs. To top off the undertaking, Angel's accompanying booklets are a mine of pertinent information. Apart from the expected background material, they also include personal reminiscences by Lotte Lehmann and Eva Turner, and excellent essays on the late Conchita Supervia and her repertoire by Desmond Shawe-Taylor, Ivor Newton, and Walter Starkie.

Easily the most provocative and rewarding of the three discs is the recital devoted to Lotte Lehmann. Some of the same selections enjoyed brief circulation several years ago on Decca, but here they are formed into a more attractive sequence, adding up to a panorama of German operatic romanticism from Beethoven (b. 1770) to Korngold (d. 1957). (The Letter Scene from Massenet's *Werther* stands as the inevitable square peg in the round hole.) The D'Albert and Korngold arias are unfamiliar Lehmann specialties representative of what was contemporary opera a generation ago—not great music, to be sure, but certainly singable and effective enough to attract the enthusiastic support of a Lotte Lehmann. Many of today's great voices would undoubtedly respond to the operatic music of their own age the way Lehmann did to hers—if only this age would yield more music that is appropriate to lyric art.

In these excerpts, which are reproduced with adequate fidelity to the original Parlophone sound, the reflected image of Lehmann's vocal personality, the natural beauty of the voice, its inherent poetry and romanticism, and, above all, its ever-present humanity, fill the atmosphere with the awareness of superlative art. The rapture of Ariadne, the earthy gusto of Frau Fluth of Windsor, the sophistication of Rosalinde, the nobility of Leonore-Fidelio (one of Lehmann's greatest parts), and the intensity of Isolde (a role she never sang on stage)—all these are vividly brought to life. There have been voices of even greater beauty and more imposing technique, certainly of more extensive range and power. But very few, if any, have ever combined so many attributes to make up the ideal interpretative artist for the repertoire at hand.

When Lehmann's international career was at its highest mark, Eva Turner reigned as Covent Garden's leading dramatic soprano. There was little overlapping in their repertoires—Sieglinde, Tosca and, interestingly, Turandot, which Lehmann sang reluctantly and Turner triumphantly. Turner's specialties were the dramatic Italian roles in which she achieved recognition at La Scala, in Chicago, and in South America. Her English Columbia 78's—never too prominent in

international circulation—have often been cited by connoisseurs as touchstones of vocal opulence.

Here they are now, on one LP, and we are lucky. It must be remembered that Turner matured considerably as an interpretative artist after 1928, when these selections were recorded. The present program, therefore, is more in the nature of a vocal exhibition. Turner does not bring the dramatic insight of Lotte Lehmann to these arias. But if you like a voice that is plush, clear in intonation, and beautifully equalized; if you enjoy the sound of a solidly supported, fully focused high C soaring over Sir Thomas Beecham's orchestra; if you are interested in what was perhaps the first recording (and still one of the best) of Turandot's mercilessly taxing "*In questa reggia*," you will want to hear Eva Turner.



EVA TURNER

A legendary voice with young Beecham

The musical content of the Supervia collection is of a specialized interest. But as Desmond Shawe-Taylor so aptly observes, "perhaps the only singer in recent times who equalled her power of making a great artistic experience out of an inherently slight song was John McCormack." Thus, everything with the Supervia stamp on it commands attention. This particular program is divided between zarzuelas and Spanish art songs. In the former group the artist's captivating vitality and highly individual singing style emerge with even more abandon than they do in the celebrated *Carmen* excerpts (Odéon 121). The songs are of great variety, ranging from strongly folk-tinted Catalan and Andalusian specialties to popular expressions of undistinguished cosmopolitan character. Several of them are unfamiliar to all but the most avid collectors; in fact, *Hojas muertas* has never been released prior to this recital. The Supervia art, with its earthy naturalness and exuberance on the one hand, and an uncanny technique placed at the service of intimate and insinuating communication on the other, enriches every moment of this welcome and unhackneyed program.

George Jellinek

London's statement, and one can only applaud the gesture. Without question, the sixteen divas whose likenesses and short biographies are included with this presentation deserve such homage. This homage, however, carries the implication that Joan Sutherland somehow embodies all that these legendary ladies have represented. Perhaps London did not mean it that way, but such is the impression conveyed by the grandiloquent title.

Apart from pretentiousness, there is really nothing wrong with this panoramic display of soprano dazzle. If anyone is qualified by vocal gifts to undertake such a taxing program, it is Miss Sutherland. But since the repertoire she tackles is not only difficult but also enormously wide-ranging, it follows inevitably that she carries off her tasks with varying degrees of success.

At this stage of her career, Joan Sutherland is a superlative singer but, at least vocally, a mediocre dramatic artist. In selections that call for agility above all else—the Mad Scene from *Hamlet*, Juliette's Waltz Song or "*Son vergin vezzosa*" from *I Puritani*—her singing is as brilliant as any to be heard today. The voice is well-focused, limpid, secure, remarkably effortless in the high register, and it is implemented by a nearly flawless technique. (Among the many high E's and E-flats brilliantly executed, the E in the *Semiramide* aria is particularly stunning.)

But purely vocal accomplishments do not complete the art of the prima donna. Although a recital of virtuoso arias is a difficult medium for showing character insight, Miss Sutherland makes noteworthy attempts in this direction in the excerpts from *I Puritani*. This happens to be an opera she sang in London very effectively. The same convincing quality, however, is lamentably absent in her lackluster "*Salce, salce,*" in her polished but superficial "*Caro nome,*" and in her "*Casta Diva,*" where she not only lacks Norma's proper majesty but fails even to convey the music's invocational character.

The main problem seems to be the singer's indifference to textual meaning. Her enunciation is uniformly indistinct in German, French, and Italian, and it is hardly better in the Arne and Handel arias, which are sung in her native English. Violetta's recitative, "*E strano . . .*" which should be full of tension and drama, is delivered with such lack of conviction that it almost nullifies the good vocal effort expended on the aria that follows it.

One awaits the series of complete operas Miss Sutherland will record for London with the hope that they will reveal a wider range to her gifts. This collection, brilliant though it is in certain ways, might more appropriately have been named "Part of a Prima Donna."

Molinari-Pradelli and the orchestra and chorus of Covent Garden make rather undistinguished contributions throughout. The set contains elaborate notes on Miss Sutherland and the sixteen divas, but—except in a few cases—they fail to relate the musical selections to their famous interpreters. In fact, the notes seem hardly concerned with the music at all. G. J.

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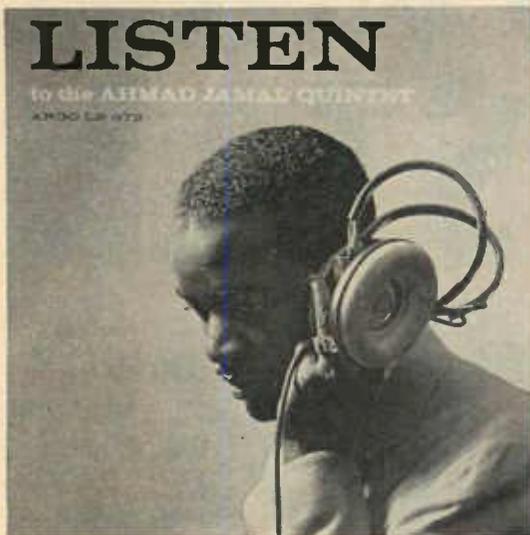
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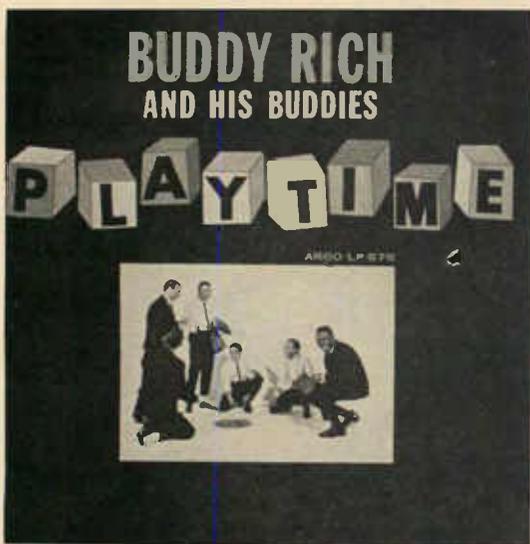
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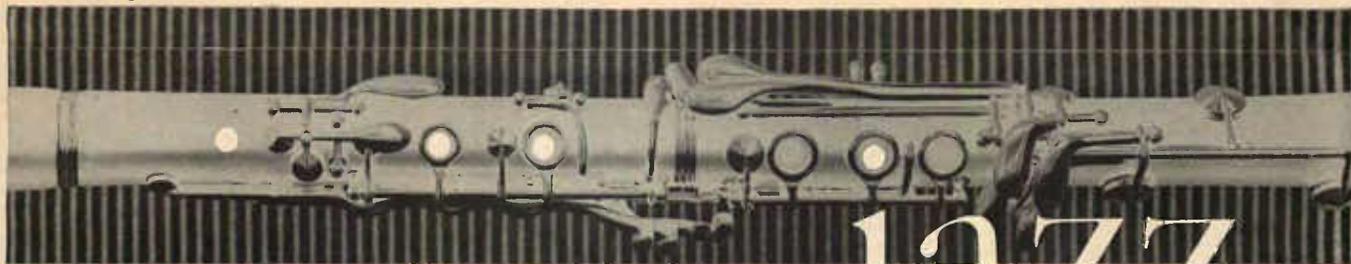
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Jazz

Reviewed by
RALPH J. GLEASON • NAT HENTOFF

BEST OF THE MONTH

▲ Fantasy, the live-wire small label from San Francisco, has a prize winner in its Music from New Faces featuring baritone horn man Gus Mancuso and Friends. “. . . A cohesive and unpretentious album. The overall mood is gently swinging. . . . The rhythm section is delightful . . .” (see p. 86)



▲ Mercury's jazz-singing stalwart, Dinah Washington, is in top form throughout her latest album, I Concentrate on You. “. . . She sings the blues long associated with Billie Holiday, 'Goodmorning Heartache,' with a passion and feeling not heard since Lady Day in her prime.” (see p. 88)



△ HiFiJazz, a vital West Coast Label, has turned out a delightful Wigg'in' Out, with Jerry Wiggins on organ, Harold Land on tenor, and Jackie Mills at the drums. “They improvise on several original tunes and ballads and do a perfectly charming job. It is solid jazz all the way . . .” (see p. 89)



Records reviewed in this section are both stereo and monophonic. Versions received for review are identified by closed (▲) and open (△) triangles respectively. All records are 33 $\frac{1}{3}$ rpm and should be played with the RIAA amplifier setting or its equivalent. Monophonic recordings (△) may be played also on stereo equipment with resulting improvement in sound distribution quality. Stereo recordings (▲), however, must not be played on monophonic phonographs and hi-fi systems.

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆
Borders precede recordings of special merit

△ THE CANNONBALL ADDERLEY QUINTET AT THE LIGHTHOUSE. Including Nat Adderley (cornet), Sam Jones (bass), Louis Hayes (drums), Victor Feldman (vibes). Sack o' Woe; Big "P"; Blue Daniel; Azule Serape, & 2 others. Riverside RLP 344 \$4.98

Interest: Gospel jazz
Performance: A bit hokey
Recording: Good

It may be, as all the people who play this way keep insisting, that what they are doing is natural, logical, and sincere. Let us grant them this, but I think a point of diminishing returns has been reached by the Adderleys. On this LP, with the exception of Frank Rosolino's intriguing tune *Blue Daniel*, there is nothing that I care to hear again, in spite of the fact that I have only the greatest admiration for all the performers concerned. Julian Adderley is one of the very best saxophone players of recent years, but he does not seem to be maintaining his earlier standards. His brother, Nat, who still is one of the most promising of the young trumpeters, seems also to be hung up between the Scylla of style and the Charybdis of fashion. Still, the group as recorded here does swing mightily all the time. What they play is modern jazz on top and solid down-home blues and spirituals underneath. When this "soul" music was first heard, it had a great deal of impact, but that impact has now diminished. R. J. G.

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆
▲ THE BLUES MESSAGE—THE TENOR AND ORGAN OF CURTIS AMY & PAUL

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Audio Magazine



CHESTER SANTON

Light LISTENing



This special series by Riverside is the best one yet. The first feature you'll notice in these stereo discs is the fact that they play from the inside out. But that's only a very small part of the story. The tone arm starts right next to the label with a short band containing a 400-cycle test tone for channel balancing. Once the locked groove at the end of this band is hurdled, the pickup then proceeds toward the outer edge of the record.

Cutting the master disc from the inside out has long been advocated as a solution to the problem now encountered in classical recordings wherever a symphonic work closes with a loud finale at the end of a lengthy side. Unfortunately, the four initial releases in this series do not contain classical material. We won't know how the theory works until some one puts out a stereo disc with an "1812 Overture" that starts next to the label. The Fortissimo series anticipates playback equipment considerably better than what we have today. Their master tapes are recorded at 60 inches per second with the heads oriented

horizontally. Of even greater significance to the record fan are the measures that have been taken to improve the transfer from tape to disc. These include a 92,000 cps tone superimposed over the regular signal while cutting the master disc. It seems that the conventional hot stylus technique cannot do as good a job in the harder material they are using for this series. The finished pressings contain a new and harder compound called Polymax. All these steps produce a stereo disc unlike any I've heard before.

Of the four translucent discs released so far, these two records offer the most convincing evidence of the changes this series could make within the industry. Conventional surface noise is totally absent and response is phenomenal. The pipe organ played by Paul Renard is the second Wurlitzer located in the Radio City Music Hall building. This smaller version of the main theatre organ is located in a studio atop the building that was originally intended for radio broadcasts. Miked at extremely close quarters, the sound of the studio organ has a gleam impossible to capture in the vast auditorium. The music is sure-fire stuff by George M. Cohan. The 27-year old Paul Renard doesn't have the polish and poise of the veteran theatre organists but he sails into these show stoppers with a complete quota of enthusiasm. This record won't be studied for the performance of the music. The attraction is the sound just as it is in the companion release of jet planes and a helicopter recorded at Eglin Air Force Base in Florida. In high and low fly-by, take-off and landing, these jets have the "live" quality formerly available only on 15 ips professional tapes. Once the word gets around, these will be the test records in the months ahead.

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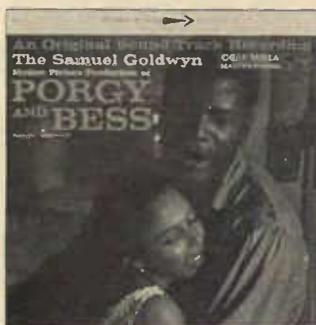
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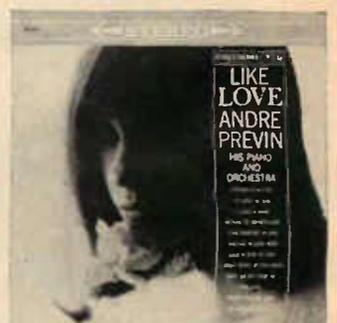
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Interest: Very high
 Performance: Old world, stolid
 Recording: Good
 Stereo Quality: Excellent

At times Kubelik can be as fiery as any conductor today. But here he leads the Vienna Philharmonic in stolid, emphatic, deliberate interpretations. His tempos are much like Klemperer's, and he occasionally calls for tempos that are even slower than Klemperer's.

Consequently, the performances develop in darkly colored procession, with the melodic and harmonic lines deeply etched, but with little sunlight, little contrast. London recorded these symphonies some time ago, and the sound is not as brilliant as in its most recent releases. J. T.



▲ **DELIBES: COPPELIA** (complete ballet). Suisse Romande Orchestra, Ernest Ansermet cond. London LCK 80001 \$11.95

Interest: Ballet charmer
 Performance: Impeccable
 Recording: Good
 Stereo Quality: Good

Ansermet's series of complete ballet recordings for London is considerably enriched by the addition of Delibes' light and fanciful *Coppelia*. There is, so far, no tape competition, unless Mercury decides to release Dorati's performance with the Minneapolis Symphony. Of the two performances, Dorati's is much more energetic, as compared with the delicately



ERNEST ANSERMET
Tender loving care for Coppelia

molded reading by Ansermet. Where Dorati is inclined to faster tempos and a full-bodied sound, Ansermet is more deliberate. This should not be taken as a criticism, for Ansermet's pace is not pedantic, and his reading definitely has more humor. He maintains a glossy texture and produces a deft and brilliant account of a score that has been shamefully neglected. The engineering is fine in every respect. J. T.

▲ **DVOŘÁK: Symphony No. 4 in G Major, Op. 88.** Cleveland Orchestra, George Szell cond. Epic EC 806 \$7.95

Interest: Czech masterwork
 Performance: Clean as a whistle
 Recording: Marred by tape hiss
 Stereo Quality: Good enough

Szell's is the best stereo disc version of this
 92

passionately songful masterpiece, but it has come a sad cropper in its transfer to stereo tape. Otrusive background hiss and hum make this recording practically unlistenable.

Let us hope for a reprocessing that will do justice to this fine performance. D. H.

▲ **HAYDN: Symphony No. 94 in G Major ("Surprise"); Symphony No. 101 in D Major ("The Clock").** Vienna Philharmonic Orchestra, Pierre Monteux cond. RCA Victor FTC 2030 \$8.95

Interest: Admirable pairing
 Performance: Restrained
 Recording: Below par
 Stereo Quality: Evenly balanced

The difference between Monteux's conducting of Tchaikovsky's Fourth Symphony, with the Boston Symphony, and his conducting of this pair of Haydn symphonies, with the Vienna Philharmonic, is quite astonishing. In the former, he inspires the Bostonians, allowing the music to flow at its natural momentum. In this album, the same technique, however skillfully applied, seems to shadow the brilliance of Haydn's music. The engineering does not help matters, and the sound throughout is lacking in sheen.

This is an honest account of two great Haydn masterworks, but it is not an exceptional effort, by any means. J. T.

▲ **LEONCAVALLO: Pagliacci** (complete opera). Mario del Monaco (tenor)—Canio; Gabriella Tucci (soprano)—Nedda; Cornell MacNeil (baritone)—Tonio; Renato Capocchi (baritone)—Silvio; & others with Rome St. Cecilia Chorus and Orchestra, Francesco Molinari-Pradelli cond. London LOH 90021 \$12.95

Interest: Slice-of-life opera
 Performance: Effective
 Recording: Good
 Stereo Quality: Very effective

Refined performance can make the operas of Puccini sound like better music than they are, but there's no disguising the vulgarity of *Pagliacci*. Therefore, it's better to play things to the hilt for all the excitement that's possible. So it is with London's recorded performance, at least where Mario del Monaco is concerned. As the hapless, paranoid, high-strung Canio, the tenor is wholly in his element, and if Miss Tucci lacks in passion, she does make a fine lyrical foil for Canio's outbursts.

Similarly effective in stereo are the crowd scenes at the arrival of the troupe of players as the opera opens. The handling of the play within a play is done so superbly that one can imagine himself an actual spectator.

The tape processing is excellent in every respect. D. H.



▲ **RIMSKY-KORSAKOV: Scheherazade** (Symphonic Suite); Christmas Eve Suite, Sadko—Musical Picture, Op. 5; The Flight of the Bumblebee, Dubinushka. Suisse Romande Orchestra, Ernest Ansermet cond. London LCK 80058 \$11.85

Interest: Compelling
 Performance: Very, very good
 Recording: Excellent quality
 Stereo Quality: Fine

Ansermet's *Scheherazade* ranks with the

recorded interpretation of Reiner, Beecham, and Bernstein. The Swiss conductor presents a relaxed, polished reading that is in strong contrast to the disciplined strength of Reiner's and the poetry of Beecham's. He seems more concerned with clean line than with excitement, and he is aided by London's excellent engineering. His tempos are on the slow side, and he puts the percussive elements in proper perspective instead of exploiting them.

Also included in this twin-pack release are the lovely suite from the opera *Christmas Eve*, the unimaginative *Sadko*, Op. 5 (not to be confused with the opera), *The Flight of the Bumblebee*, and *Dubinushka*. These short works are presented by Ansermet as glittering and colorful miniatures. The tape has some print-through, but otherwise the engineering is superb. J. T.

▲ **RIMSKY-KORSAKOV: The Tale of the Tsar Saltan Suite, Op. 57; May Night Overture; Russian Easter Overture; Overture on Liturgical Themes, Op. 36.** Suisse Romande Orchestra, Ernest Ansermet cond. London LCL 80004 \$7.95

Interest: Excellent Rimsky mixture
 Performance: Mostly stunning
 Recording: Good
 Stereo Quality: Wide separation

Rimsky-Korsakov's *Tsar Saltan Suite*, taken from the opera produced in 1900, holds some of his most colorful writing, in orchestral organization similar to many parts of *Sadko*.

The *Russian Easter Overture* is much more skillfully wrought and much more exciting in orchestral impact. It is given a glowing and energetic reading by Ansermet. The overture to *May Night*, the earliest of the three pieces, is quite formal by comparison, with most of the music assigned to the strings. Technically, the recording is good, but with some tape cross-talk. J. T.



▲ **SAINT-SAËNS: Symphony No. 3 in C Minor, Op. 78 ("Organ").** Boston Symphony Orchestra with Berj Zamkochian (organ), Charles Munch cond. RCA Victor FTC 2029 \$8.95

Interest: For hi-fi bugs
 Performance: Frenetic
 Recording: Brilliant
 Stereo Quality: Fine

The Saint-Saëns "Organ" Symphony, with its grandiose instrumental panoply and rationalized romanticism, has not lacked for excellent recorded performances over the past decade. Munch with the New York Philharmonic, Toscanini with the NBC Symphony, and Ormandy with the Philadelphia Orchestra all gave us superb monophonic recordings of this music.

We already had available on stereo tape in the catalog an exciting version by Paul Paray and the Detroit Symphony with the eminent Marcel Dupré at the organ. But Charles Munch, with his own Boston Symphony Orchestra, has now outdone all competition in terms of sheer excitement, rhythmic tension, and dynamic contrast. The brilliant and spacious acoustics of Boston's Symphony Hall also play a major role in the over-all effect.

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on the proportions of a major discovery. It is an almost flawless blend of lyrical ardor and rhythmic tension, comparable to what Bruno Walter achieved with the New York Philharmonic in his Columbia recording of hallowed memory.

At any rate, this tape allows one to throw his critical scruples to the winds and just sit back and be taken over utterly by the spell of Schubert's music. The performance and the recording are that good.

D. H.

▲ **STRAUSS:** Also sprach Zarathustra—Tone Poem, Op. 30. Vienna Philharmonic Orchestra, Herbert von Karajan cond. London LCL 80023 \$7.95

Interest: Sonorous Strauss
Performance: Disappointing
Recording: Poor
Stereo Quality: Not very effective

I had hoped that the technical shortcomings that had plagued the disc version of this recording would be overcome on this new four-track tape. Unhappily, there is no improvement. After listening to the disc and the tape, I am convinced that for this particular recording, at least, London changed their microphoning methods and were caught up in an unfortunate experiment.

The over-all recorded level is down at least 4-5 db from normal; the stereo balance is oriented to the right, requiring a 2-3 db correction boost on the left channel; directional effects are barely distinguishable; and depth illusion is poor. As a result of restricted level, tape hiss is evident to an annoying degree. There is virtually no presence, and the general impression is one of lifelessness.

Karajan's reading is too slow-paced and deliberate, and he tends to overdramatize the music by mannered phrasing. I find the old two-track Victor tape with Reiner and the Chicago Symphony infinitely more thrilling from both sonic and musical points of view.

B. W.

▲ **SUPPÉ:** Overtures—Light Cavalry; Poet and Peasant; Morning, Noon, and Night in Vienna; Pique Dame. Vienna Philharmonic Orchestra, Georg Solti cond. London LCL 80033 \$7.95

Interest: Steaming Suppé
Performance: Dramatic
Recording: See below
Stereo Quality: Good

Georg Solti conducts this quartet of Suppé favorites in ultradramatic fashion. If the tape had been as perfectly processed as the stereo disc, one could recommend it without reservation, but print-through seriously handicaps the performances.

Still, when these militantly stirring bars are played fortissimo by the Vienna Philharmonic, the sound is enough to stir any music lover's blood. If you like crackling orchestral excitement, this is your dish.

J. T.

▲ **TCHAIKOVSKY:** Symphony No. 4 in F Minor, Op. 36. Boston Symphony Orchestra, Pierre Monteux cond. RCA Victor FTC 2031 \$8.95

Interest: Favorite Romantic work
Performance: Powerful
Recording: Superb
Stereo Quality: Effective

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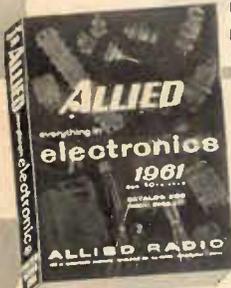
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Here Pierre Monteux conducts the Boston Symphony Orchestra in a powerful reading. In the militant first movement, Monteux guides the Boston players in a manner that suggests the tempo and approach employed by Koussevitsky, whose performances of this symphony must go down in concert history as the most electrifying in the history of the orchestra.

Monteux takes a slower pace in the Andantino second movement and establishes an even, firm beat for the famed Scherzo. Here the recording brings out new details, and it is fascinating to follow the scoring. For the rousing, brilliantly conceived Allegro con fuoco, Monteux holds the orchestra under firm control.

To some, it may appear that Monteux's conducting of this celebrated score is too measured. But when the F Minor Symphony is subjected to too much "interpretation," it simply sounds turgid and tonally overweight. Monteux's razor baton technique, his musical perception, and his inherent good taste combine to make this one of the most powerful performances on record.

The sound is vividly impressed on the tape, and the tape version of this performance is far superior to the disc. J. T.



▲ **WAGNER:** Das Rheingold (complete opera). George London (bass)—Wotan; Kirsten Flagstad (soprano)—Fricka; Gustav Neidlinger (bass)—Alberich; Set Svanholm (tenor)—Loge, & others with the Vienna Philharmonic Orchestra, Georg Solti cond. London LOR 90006 two reels \$21.95

Interest: Wagnerian spectacular
Recording: The greatest!
Performance: Superb
Stereo Quality: First-rate

A defective review copy made it impossible to comment on this tape when it was first released some months ago, but on the basis of the replacement at hand, we can answer the pertinent question: Does the tape version of London's epoch-making recording of *Das Rheingold* offer a substantial improvement over the stereo disc? It does, but chiefly in terms of elimination of inner-groove distortion. Otherwise the quality of the stereo tape and the stereo disc are surprisingly close when the two are compared on good equipment.

Thanks to the twin-pack format, there is no significant difference between the prices of the disc set and the tape set. If you have a good four-track tape machine with amplifiers and speakers to match, I'd say the tape is the better buy. D. H.

4 TR. ENTERTAINMENT



▲ **MIRIAM MAKEBA.** The Naughty Little Flea; Where Does it Lead; Novéma; House of the Rising Sun; Saduva, & 9 others. Miriam Makeba with the Belafonte Folk Singers. RCA Victor FTP 1049 \$7.95

Interest: Exciting new star
Performance: Very interesting
Recording: Excellent
Stereo Quality: Excellent

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am Makeba has excited critics from coast to coast. She is indeed amazing. She is able to bring forth the quality of native music in a manner and style to satisfy the Western ear—no mean feat.

Her great account of *Suliram* could make that throat-catching number a national hit if people could get a rest from the twaddle they hear most of the time. To be sure, purists will not take to the refinement of the songs of African origin, but everything is handled on a high level of musicality. There is no doubt that Miriam Makeba is a singer who will be here for a long time to come. J. T.

▲ **ODETTA—MINE EYES HAVE SEEN.** Poor Little Jesus; Motherless Children; Jumpin' Judy, & 12 others. With Bill Lee (string bass), Chorus conducted by Milt Okun. Vanguard VTC 1627 \$7.95

Interest: Great spirituals
Performance: Idiomatic
Recording: Fair
Stereo Quality: So-so

Odetta has built up a considerable following for her folk-singing talents. On this tape she sings Negro spirituals, either accompanying herself on the guitar or working in combination with string bass and chorus. Her voice is a richly resonant, powerful instrument, and she uses it with great flexibility. The result is singing that is supercharged with drama.

Unhappily, the recorded sound on this tape is not very satisfactory. Almost all of it is plagued with print-through, with consequent pre- and post-echo. At high volume, the voice becomes very metallic, especially so in the upper register. There is also some cross-talk between channels and fairly noticeable tape hiss. B. W.



▲ **LATIN CONTRASTS:** Harlem Samba; North of the Border; Sunset Baion; 'Round About Midnight; Toro Dance; & 5 others. Bud Shank (alto and flute), Laurindo Almeida (guitar), Gary Peakcock (bass), Chuck Flores (drums). World Pacific WPTC 1013 \$7.95

Interest: Unique arrangements
Performance: Excellent
Recording: Very good
Stereo Quality: Good

Laurindo Almeida is already known for many successful Capitol recordings, both as a soloist and in combination with Salli Terri. He has established a large reputation for classical guitar concertizing, and he now appears set to carry his talents over into perhaps more lucrative fields. In *Latin Contrasts* Almeida arranges the classic guitar against alto, flute, drums, and bass. Generally, this combination would imply an electric guitar, and the substitution of the real thing is refreshing.

The arrangements are intimate but brisk and they make pleasant listening, being essentially similar to Almeida's more refined classical efforts. J. T.



▲ **RODGERS AND HART, PERCUSSION AND STRINGS—**Where Or When, My Funny Valentine, Blue Moon, Bewitched, Falling in Love with Love, & 7 others. Arranged and conducted by George Siravo. Time ST 2015 \$7.95

Interest: New arrangements, old tunes
Performance: Very fine

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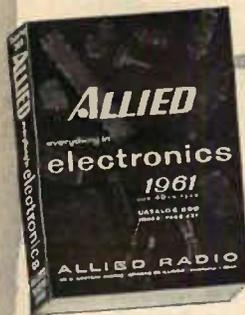
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Recording: The same
Stereo Quality: Good

George Siravo, who helped organize the Glenn Miller band in the late 1930's, here puts together an unusual album, with bright new arrangements of old tunes. It's a tough job to make these songs sound fresh, but he often manages to do it.

Despite the album title, not a great deal is made of the percussion elements of the ensemble. More attention is focused on the body of about thirty violins, five cellos, and five violas.

As with other Time tapes, the arrangements are especially designed for two-channel reproduction, and the notes explain what comes in, when, and where.

J. T.

▲ **SONGS OF KURT WEILL—FELICIA SANDERS.** Speak Low, September Song, Foolish Heart & 9 others. Arranged and conducted by Irving Joseph. Time ST 2007 \$7.95

Interest: Gems from a master songsmith
Performance: Good of its type
Recording: Gimmick special
Stereo Quality: Gimmicky

This tape employs the supercharged stereo so popular these days. It is strictly a two-channel, left-right affair with no middle placement whatever.

Felicia Sanders is stationed to the left and is firmly anchored there. She has one of those low, husky, night-club voices, very intimate and whispery, and wholly dependent for its projection on ultra-close mike pick-up. She handles her phrasing well, and, for the most part, is expressive and intelligible. The backing is good, but without real distinction. Balance is generally satisfactory, but there are times when the voice is covered by the orchestra.

As for the music, few have ever matched Kurt Weill in the field of the romantic ballad. Almost without exception his songs are not only listenable but memorable.

B. W.

▲ **THE SUBTERRANEANS** (sound-track recording). Andre Previn, Gerry Mulligan, Carmen McRae. MGM STC 3812 \$7.95

Interest: Imaginative film score
Performance: Tops
Recording: Very good
Stereo Quality: Good

All of the music here was written by Previn, except *Coffee Time* and *Should I*. His soloists include Gerry Mulligan, baritone sax; Art Pepper, alto sax; Jack Sheldon, trumpet; and vocalist Carmen McRae; with Shelly Manne, Art Farmer, Bill Perkins, Red Mitchell, Dave Bailey, Russ Freeman and Bob Enevoldsen. Previn, naturally, works at the piano.

Previn displays a good imagination, but he relies on two-instrument dialogue too often. He could do much better if he would divorce himself from thinking so much of providing voice support in the numbers that include the big ensemble. Most of the music reflects Previn's keen musicianship in the jazz form, but when he writes something like *Analyst* he indicates he has a natural flair for writing for masses of instruments, a far cry from the intimate style of composition in which he has almost no Hollywood rival. *The Subterraneans* must be considered one of the best of Previn's vehicles, and it may prefigure even better things to come.

J. T.

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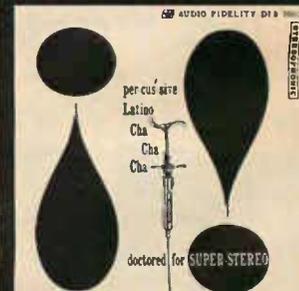
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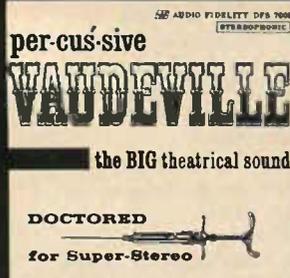
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is little spontaneity or emotional substance in his performances. The arrangements are so carefully polished that they're self-consciously taut. The trio (piano-bass-drums) has a potential for fresh impact, but Cole has to learn to be much less mannered.

N. H.

▲ **BLOSSOM DEARIE, SOUBRETTE, SINGS BROADWAY HIT SONGS**, with orchestra, Russell Garcia cond. Rhode Island Is Famous for You; Always True to You in My Fashion; Napoleon, & 9 others. Verve MG VS 62133 \$5.98

Interest: Offbeat showtunes
Performance: Offbeat stylist
Recording: A bit close-to
Stereo Quality: Satisfactory

The soubrette in musical comedy is customarily the saucy second female lead who gets the clever songs. Not all the items in Blossom Dearie's collection are, strictly speaking, soubrette material, but they are undeniably great show—and even show-stopping—tunes.

Although in most instances the lyrics are more important than the music, it is always interesting to notice how the melodies point up the words while still retaining their own individuality and appeal. This is a fine sampling of the art of "dear" Blossom, whose distinctive gift, apparently, is being able to sound like a four-year-old woman of the world.

S. G.

▲ **JOHNNY DESMOND—BLUE SMOKE**. I'm Thru with Love; Blue Smoke; Imagination; Why Shouldn't I, & 8 others. Columbia CS 8268 \$4.98

Interest: Unfathomable

Performance: Dull
Recording: Excellent
Stereo Quality: Good

A first-rate recording job, with nice stereo balance, is utterly wasted on this monumentally dull group of ballads, which are sung by Mr. Desmond in a quavering voice that causes one to wonder how he ever became a recording star in the first place. Guitarist Tony Mottola and bassist Bob Haggart, two fine musicians, have seldom lent their talents to a more hopeless enterprise.

R. J. G.

▲ **TENNESSEE ERNIE FORD INVITES YOU TO COME TO THE FAIR**. Back Home Again in Indiana; Sixteen Tons; If I Can Help Somebody, & 8 others. Capitol ST 1473 \$4.98

Interest: Souvenir stuff
Performance: Slick folksiness
Recording: Good
Stereo Quality: Competent

Recorded at the Indiana State Fair, this is a portrait of Tennessee Ernie down among the folks who watch his TV series and who buy his records. Ford sings pleasantly if unimaginatively. However, he is also given to long jokes that really aren't particularly funny.

N. H.

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▲ **JUDY! THAT'S ENTERTAINMENT—JUDY GARLAND**, with orchestra, Jack Marshall cond. Who Cares; If I Love Again; Yes; It Never Was You, & 8 others. Capitol ST 1467 \$4.98

Interest: Yes indeed.
Performance: At her best

Recording: Fine
Stereo Quality: Sufficiently high

Almost as if to challenge those who have been claiming that Judy Garland is no longer the singer she once was, this new album turns out to be one of her all-time best. The notes are hit more on the bulls-eye, the vibrato is somewhat less pronounced, and the rhythmic drive seems more genuinely inspired than in any other performances I have heard from her recently. But her special quality, and one that she has happily never lost, is her total involvement in whatever she is singing. All these songs sound as if they were hers alone.

Miss Garland has chosen her material with care. In addition to the rousing title song, there are such delectable rarities as Vincent Youmans' and Otto Harbach's *I've Confessed to the Breeze*; the graceful *If I Love Again*, by Ben Oakland and Jack Murray; a tender plaint by André Previn and his wife, Dorrie Langdon, called *Yes*; and Jesse Greer's and Ray Klages' propulsive *Just You, Just Me*.

S. G.

▲ **PEGGY LEE—OLÉ A LA LEE**, with orchestra, Joe Harnell cond. Non Dimenticar; From Now On; Olé, & 9 others. Capitol ST 1475 \$4.98

Interest: Lee below the border
Performance: Rhythmic breathing
Recording: Bright sound
Stereo Quality: Suitable

Peggy Lee, bless her, is a breather, not a singer. She is a very musical breather, to be sure, but a breather nonetheless. Consequently, her inability to bring to her

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songs any special vocal distinction leaves her arranger with most of the burden of creating mood and atmosphere in these dozen Latinized numbers. Fortunately for her, and for the listener, conductor Joe Harnell does manage to keep things hopping and popping in imaginative style. S. G.

▲ THE BEST OF JOE LOCO. Anna; Star Dust; El Baion, & 9 others. Joe Loco (piano) and rhythm section. Fantasy 8048 \$4.98

Interest: Background music
Performance: Glittering
Recording: Good
Stereo Quality: Very good

Joe Loco has treated eleven popular standards to Latin-American settings. (The twelfth is the more legitimate *El Baion*.) Loco's playing is romantic, often florid, but seldom fiery, and rarely unpredictable. The music is good for dancing, but it is not arresting enough for serious listening. N. H.

▲ THE SOUND OF HOLLYWOOD—THE MEDALLION STRINGS, Emanuel Vardi cond. Never on Sunday; Midnight Lace; Green Leaves of Summer, & 9 others. Medallion MS 7513 \$5.98

Interest: Reasonable
Performance: Good
Recording: Tops
Stereo Quality: Very good

Blessed with excellent sound and tasteful, lush arrangements, these dozen Hollywood themes make for a rather pleasant mood-music package. The accent here is on the current crop of cinema spectacles, though *Spellbound* and *Picnic* have also been resuscitated. The popularity of the *Summer Place* theme (did anyone actually see the movie?) has made it imperative that a rock-and-roll beat be contrasted with the shimmering strings on a number of other movie melodies such as *Midnight Lace*, *Green Leaves of Summer*, and *The Unforgiven*. Incidentally, "Hollywood" is used more generically than geographically in the album title, as the assortment contains music from *Never on Sunday*, the haunting theme from *Black Orpheus*, and the disturbingly reminiscent theme from *Sons and Lovers*. Could it be nothing more than a variation on *Tammy*? S. G.

▲ JEROME KERN, FLUTES AND PERCUSSION—HAL MOONEY AND HIS ORCHESTRA. Who?; Ol' Man River; Why Do I Love You & 9 others. Time S/2012 \$5.98

Interest: Kern's turn
Performance: Lively
Recording: Expert
Stereo Quality: High

With liquid flute tones contrasted to the pop-popping of the bongos, Mr. Mooney has provided a generally bright recital of some of Jerome Kern's most endearing melodies. I guess I could have done without the rather lumbering organ, but not too much harm has been done. S. G.

△ SPECTACULAR BRASS—ROGER KING MOZIAN. Small World; Just in Time; Blue Brass; No Moon at All, & 8 others. MGM E 3844 \$3.98

Interest: Pleasant pops
HiFi/STEREO



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Performance: Professional
Recording: First-rate

This is a collection of familiar ballads and
show tunes played by trumpeter Roger
King Mozian and a big band. It's bright,
crisp, and pleasant-sounding, but lacks any
particular distinction. R. J. G.

▲ **ROBESON — PAUL ROBESON**, with
orchestra & chorus. The Skye Boat Song;
I'll Walk Beside You; Trees, & 9 others.
Verve MG VS 64044 \$5.98

Interest: Little
Performance: Wooden
Recording: All right
Stereo Quality: Adequate

This is all pretty sad. The once formi-
dable vocal power of Paul Robeson is ap-
parently a thing of the past. The charm,
the humor, the dramatic projection that
once marked his singing have given way to
plodding, embarrassingly heavy, and whol-
ly uncommunicative interpretations. The
collection includes spirituals, folk songs,
and such variably popular fare as *Some
Enchanted Evening* and *Trees*. S. G.

△ **BARBARA RUSSELL—SWING WITH
ME**, with Orchestra, Don Costa cond. Too
Late Now; He's My Guy; Misty, & 9 others.
United Artists UAL 3088 \$3.98

Interest: Moderate
Performance: Effortful
Recording: Bright

Miss Russell has a strong, throaty contral-
to which she has not as yet learned to
control. Basically a torch singer, she finds
it necessary to catch her breath whenever
essaying an up-tempo number, and her
slower pieces are not helped by her tend-
ency toward whining. Don Costa's arrange-
ments are so intrusive that they occasion-
ally made me wonder if this wasn't a bat-
tle to determine who was accompanying
whom. S. G.

▲ ▲ **CHARLIE SHAVERS TRUMPET
AND ORCHESTRA—HERE COMES
CHARLIE**. All of Me; Taboo; You've
Changed; Loch Lomond, & 8 others. Everest
SDBR 1108 \$3.98; Mono LPBR 5108 \$3.98

Interest: Pleasant pops
Performance: Good
Recording: Excellent
Stereo Quality: Excellent

Although the jacket advertises this as
"trumpet and orchestra" it is actually a
quartet led by trumpeter Charlie Shavers.
The music is in imitation of the Jonah
Jones style: rhythm plus melody, plus
swing. The result is pleasant but not par-
ticularly intriguing in any sense, even
though Shavers is a good, reliable trumpet
player who now and then has a considera-
ble amount of wit and humor in his solos.
The tunes are all familiar standards. His
accompaniment is unidentified. R. J. G.

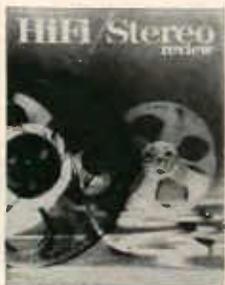
▲ **RODGERS AND HART, PERCUS-
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AND HIS ORCHESTRA**. My Funny Valen-
tine; I Married an Angel; The Lady is a
Tramp, & 9 others. Time S/2015 \$5.98

Interest: Minimal
Performance: Tastelessly stereophonic
Recording: Very good
Stereo Quality: Admirable

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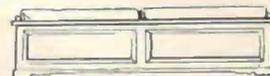
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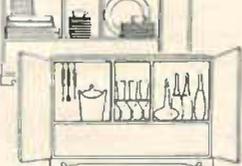
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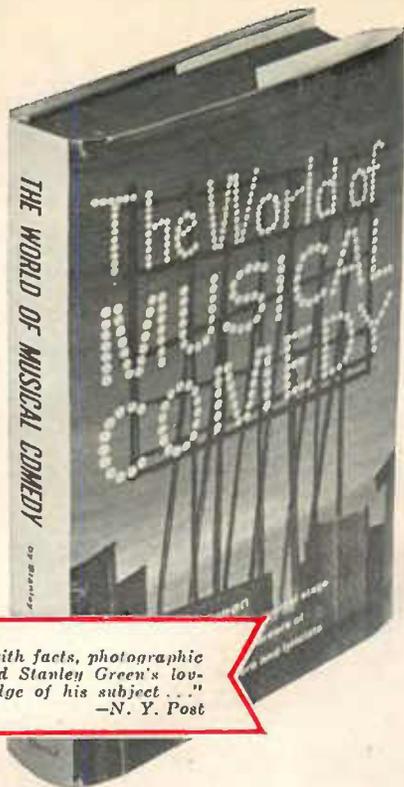
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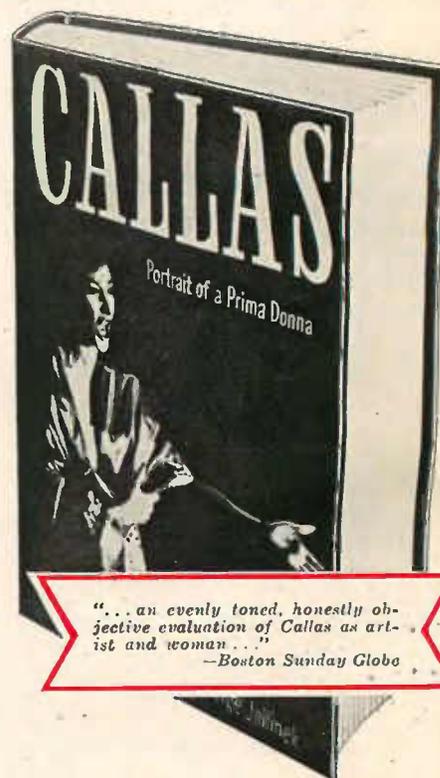
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HiFi/STEREO REVIEW

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STEREO DISC MISCELLANY

MORE NEW ITEMS RATED AT A GLANCE

Title	Interest	Performance	Recording	Stereo Quality	Score
AFTER THE BALL —Frank D'Rone with Billy May and His Orchestra After The Ball, My Melancholy Baby, You'd Be So Nice To Come Home To, Now I Know & 8 others. Mercury SR 60246 \$4.98	✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓	15
MUSIC, MARTINIS AND MEMORIES —Jackie Gleason and His Orchestra I Remember You, Shangri La, It Could Happen To You & 8 others. Capitol SW 509 \$5.98	✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓	15
PROVOCATIVE PIANO —Dick Hyman and His Orchestra Warsaw Concerto, Cumana, Sunrise Serenade, Near You, Autumn Leaves & 7 others. Command RS 811 SD \$5.98	✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓	15
A LITTLE TRAVELIN' MUSIC —Susan Barrett A Little Travelin' Music, Moonlight In Vermont, Old Cape Cod, Manhattan & 8 others. Capitol ST 1412 \$4.98	✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓	14
MARTIN DENNY'S BROADWAY —Martin Denny (piano celeste) The Sound of Music, Hernando's Hideaway, My Funny Valentine, Love For Sale & 9 others. Liberty LST 7163 \$4.98	✓✓✓	✓✓	✓✓✓✓	✓✓✓✓	13
GERMANY ARMY CHORUS Westerwaldlied, Ein Schifflein sah ich fahren, Funckerlied & 21 others. London SW 99007 \$4.98	✓✓	✓✓✓	✓✓✓	✓✓✓✓	12
JEALOUSY —Percy Faith and His Orchestra Jealousy, Temptation, More Than You Know, Begin The Beguine, Sophisticated Lady & 7 others. Columbia CS 8292 \$4.98	✓✓✓	✓✓✓	✓✓✓	✓✓✓	12
DANCING WITH ROS —Edmondo Ros and His Orchestra Cuban Love Song, Toku, Brazil, Lua do Brazil, Te Quiero y Ole & 10 others. London PS 205 \$4.98	✓✓	✓✓✓	✓✓✓✓	✓✓✓	12
POPULAR PIANO CONCERTOS OF THE WORLD'S GREAT LOVE THEMES Be My Love, Love Letter, If I Loved You, Moon Love, Tonight We Love & 4 others. Warner Bros. WS 1387 \$4.98	✓✓	✓✓✓	✓✓✓	✓✓✓	11
THE NEW SOUND AMERICA LOVES BEST —John Klein (carillon) and Sid Ramin Third Man Theme, In The Still Of The Night, Poor People Of Paris & 9 others. RCA Victor LSP 2237 \$4.98	✓✓	✓✓✓	✓✓✓	✓✓✓	11
THE MAGIC OF THE CARIBBEAN —Herbert Spencer and His Orchestra The Peanut Vendor, Enflora, Sly Mongoose, Day-O, Port-Au-Prince & 7 others. Decca DL 79080 \$5.98	✓✓	✓✓	✓✓✓	✓✓✓	10
THE MUSIC OF HAWAII —Dick Kesner (violin) and Orchestra Blue Hawaii, My Little Grass Shack In Kealakekua, Beyond The Reef & 9 others. Coral CRL 757352 \$4.98	✓	✓✓	✓✓✓	✓✓✓	9
WILDE ABOUT MARTY —Marty Wilde and Orchestra Cuttin' Loose, Johnny At The Crossroads, Alone, The Fight, Amapola & 7 others. Epic BN 575 \$4.98	✓	✓✓	✓✓✓✓	✓✓	9
MY MILLION SELLERS —Larry Clinton and His Orchestra Dipsy Doodle, My Reverie, Johnson Rag, Shadrack, Our Love, Deep Purple & 6 others. Everest SDBR 1096 \$3.98	✓	✓	✓✓	✓✓✓	7
ECHOES OF RUSSIA —Peter Howard (piano) with Rhythm Accompaniment Dark Eyes, Katusha, Swan Lake, Scheherazade, Serta, Volga Boat Song & 18 others. Vox STVX 426 000 \$4.98	✓	✓	✓✓✓	✓✓	7
AMERICAN BAND MARCHES (for the Salvation Army) —The Salvation Army New York Staff Band On The Mall, Praise, Spirit of Praise, Golden Jubilee, His Royal Banner & 8 others. Westminster WST 15056 \$5.98	✓	✓✓	✓✓	✓✓	7
ALL POINTS EAST —Gus Vali and His Casbah Ensemble Yelakaiki, Findinaki, Trichibidies, Oglan Oglan, Zexpa & 6 others. United Artists UAS 6083 \$4.98	✓	✓	✓✓✓	✓✓	7
LIKE FRANK MAROCCO —Frank Marocco (accordion) Southern Fried, Frank's Tune, Tiny's Blues, Road To Marocco & 6 others. Verve MG VS 6141 \$5.98	✓	✓✓	✓✓	✓	6

Interest:	Outstanding ✓✓✓✓	Moderate ✓✓✓	Fair ✓✓	Dull ✓
Performance:	Superb ✓✓✓✓	Good ✓✓✓	Adequate ✓✓	Disappointing ✓
Recording:	Excellent ✓✓✓✓	Good ✓✓✓	Fair ✓✓	Poor ✓
Stereo Quality:	Outstanding ✓✓✓✓	Effective ✓✓✓	Uneven ✓✓	Poor ✓

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- ✓ Is my turntable running at the right speed? Is it free of rumble, wow, and flutter?
- ✓ What sort of standing waves do I get in my listening room?
- ✓ Are my speakers hooked up correctly? Are they phased properly, and is the correct speaker connected to the right stereo channel?
- ✓ How perfectly is my system equalized?
- ✓ What about separation? Is it adequate?

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HiFi/Stereo
review

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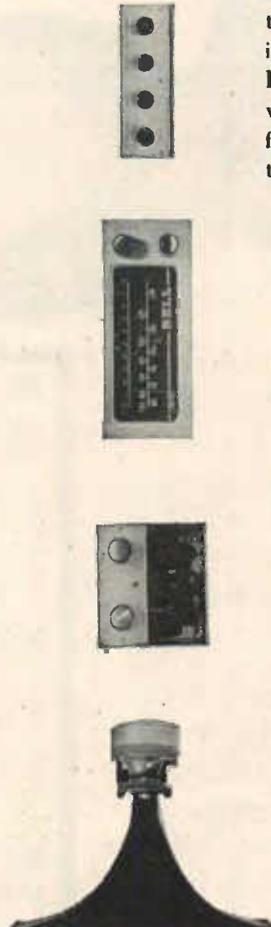
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