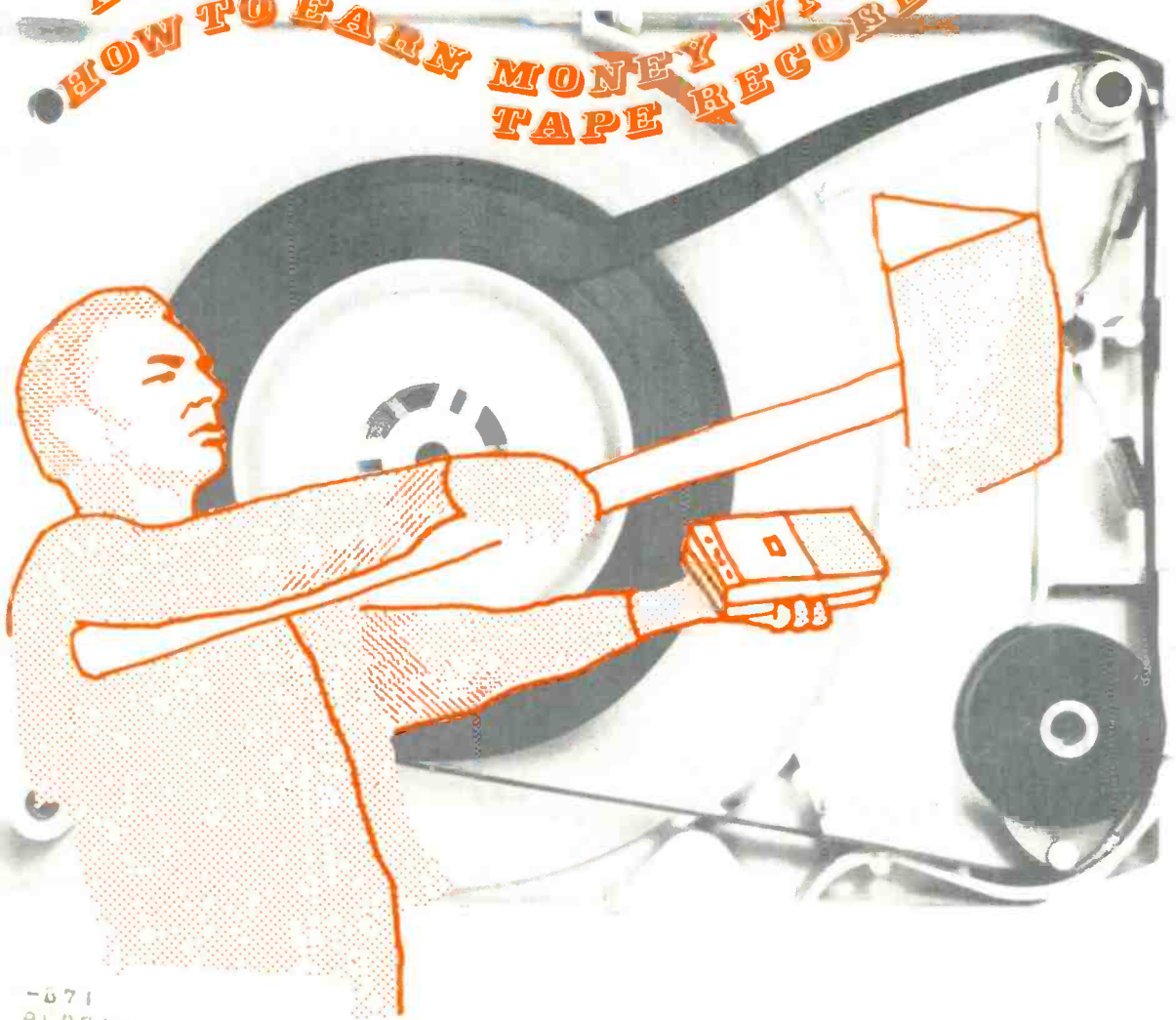


# tape recording

60¢

Volume 15 No. 7

A CASSETTE RECORDER FOR \$12.91?  
HOW VON KARAJAN RECORDED  
THE RING  
ARE AIRLINE TAPES A GOOD BUY?  
• HOW TO EARN MONEY WITH YOUR  
TAPE RECORDER



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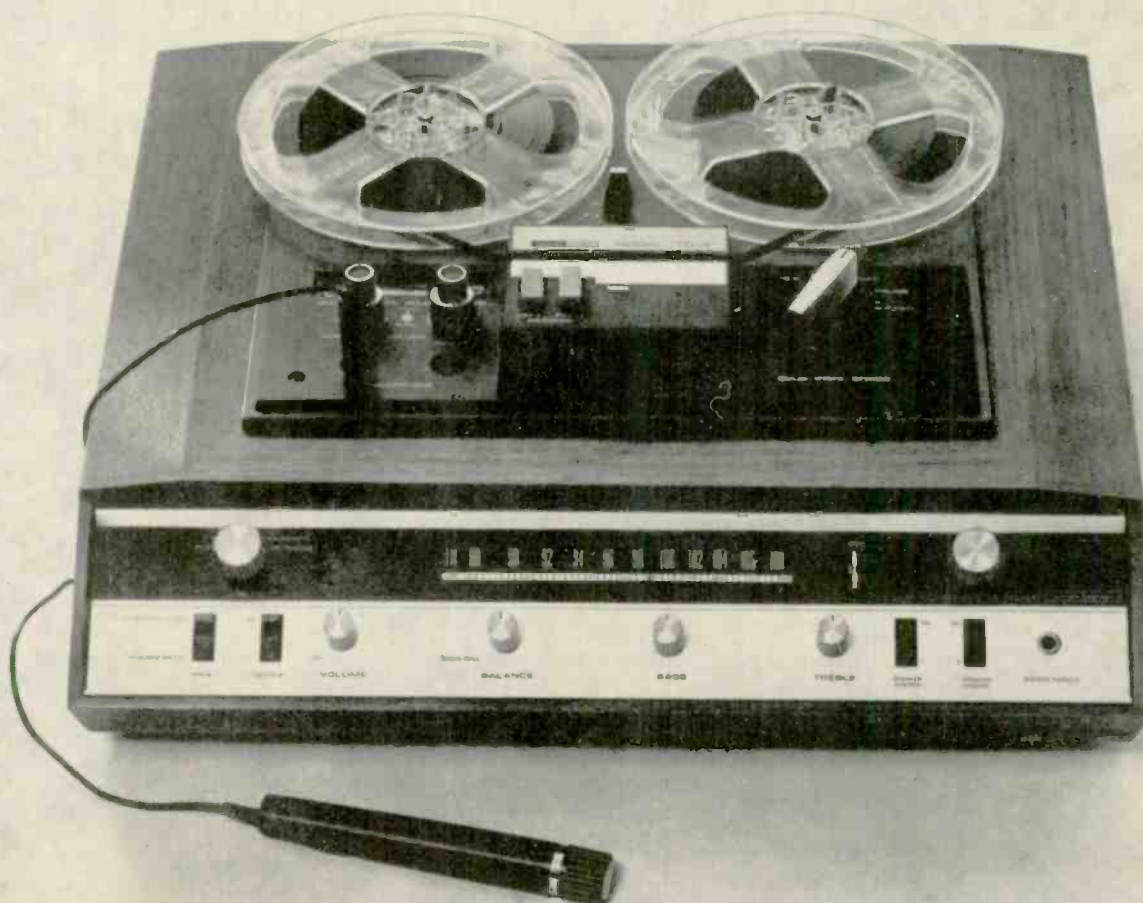
In sum, the TDC33 represents a bold new idea in home entertainment equipment—the control center for a complete solid state home music system *plus* a totally versatile home recording studio. All in one compact package.

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Tape Deck, Model RS-796

# tape

recording

SEPTEMBER-OCTOBER, 1968 VOLUME 15, NO. 7

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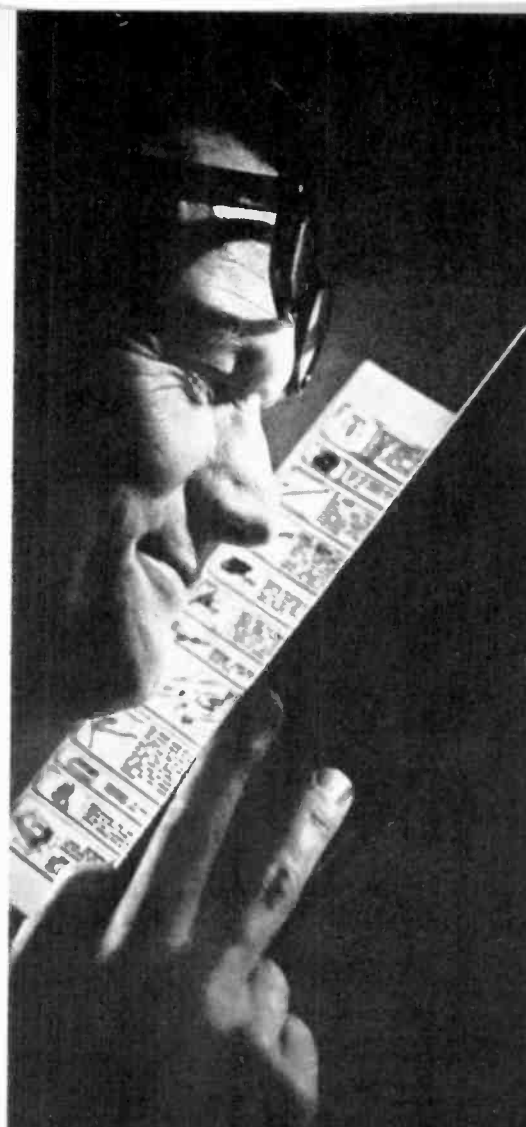
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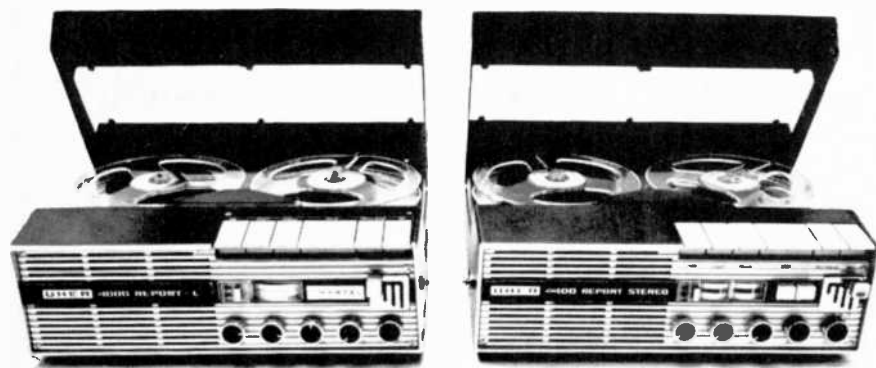
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# tape

NOTES

## Notes of a Non-expert I

One of my physician friends tells the story of a young surgeon who, while performing a rather complicated operation, ran into excessive bleeding which he had trouble controlling. The intern assisting him finally got up nerve enough to suggest that the Chief of Surgery be called in to help out. "Don't bother," said the young surgeon, "he wouldn't know what to do for he never gets into messes like this."

Well, there was wisdom in this tale, for in TAPE RECORDING you can get all sorts of information and advice from the experts. However, you and I know that *we*, the non-experts, can run into troubles which the professionals, in their wisdom, never dreamed of. Of course, this does not mean that we cannot learn from the experts. We can and we should. The problem is to find the information which we want when we need it.

Here are four suggestions to help us out in this:

First—Study the instruction books which come with various components and keep them available for future reference.

Second—Form a library of books on tape recording. Perhaps a good one to start with is "How to Make Tape Recordings" by C. J. LeaBel, published by Audio Devices.

Third—Keep on hand TAPE RECORDING'S Annual Consumers Guide. It contains many helpful brief

(Continued on page 8)



## TODAY'S TAPES, TOMORROW'S TREASURES

WHY IMMORTALIZE ECHOES, DISTORTION, AND ROOM REVERBERATIONS? Whether you're building an audio chronology of your children, practicing speech, using tapes to develop vocal or instrumental technique, or compiling tapes of live lectures and concerts—your microphone is the vital link between you and distortion-free, professional sounding tapes. It is a fact that microphones supplied with tape recorders (even on relatively expensive models) are significantly below the performance capabilities of the recorder itself. Further, with a

good unidirectional microphone that picks up sound from the front while suppressing sound entering from the back and sides (such as the incomparable Shure Unidyne® III shown above) you can control objectionable background noise, room echoes and reverberations, and the "hollow" sound common to most amateur tapes. The Shure Unidyne microphone actually represents the lowest cost investment you can make in upgrading your entire tape system, yet, the difference in sound is astounding!

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NORTRONICS Bulletin 7230A describes the complete line of Nortronics replacement heads, conversion and mounting kits, and accessories. Write for free copy.



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## TAPE NOTES *(continued)*

articles as well as the usual full round-up of available tape recorders, microphones, headphones, and tape with important data on all.

Fourth and finally—Make a card file index of magazine articles and "question and answers" dealing with tape recording and related subjects. (Be sure to keep the magazines!) By using this file you will be able to locate the information which you desire without delay. Index these by subject matter, such as "editing," "maintenance," "storage," "projects" and so on.

By following these four steps you will have the assistance of many experts in solving your problems. However, as I said before, you and I can raise questions and run into situations on which the experts are silent—probably because they overestimate our knowledge.

*Bill Fulmer*

## Notes of a Non-expert II

If you're the proud owner of a brand new tape recorder, one of the first things you'll want to know is how to take care of it. Basically there are two things which you *must* do. One is to keep the tape heads clean; the other is to keep the heads free of residual magnetism. The heads should be cleaned after each eight hours of use but it is impossible to say just how often they should be demagnetized for this varies with different recorders and according to the way that they are used.

The heads must be cleaned because oxide from the tape flakes off in tiny

amounts and builds up deposits on the heads preventing close approximation of the tape to the gaps in the heads. The cleaning can best be done by carefully wiping the heads with a swab of cotton on a stick, (Q-tips are handy) which has been moistened, not soaked, with 90% iso-propyl alcohol which you can obtain at a drug store. You might also use one of the head cleaning fluids sold by various tape and electronic firms.

Writing of this reminds me of an experience I had some time ago. While playing a borrowed tape I noticed that the right channel was nearly "dead." As I had recently cleaned and checked the recorder I investigated all the patch cords on the right channel for poor connections and continuity. They were O.K. I then turned to the tubes in the preamp and amplifier. Nothing was wrong there either. Then I did what I should have done first—I switched the right and left patch cord connections at the recorder output. Now it was the left channel which was "dead." Even I could then deduce that the trouble was in the recorder. Having nothing better to do I recleaned the heads and, voila, everything was fine once more. What had happened was then obvious. Either due to poor quality tape or imperfect splices some bits of oxide had coated the gap of the right channel playback head causing it to malfunction. What did I learn from this? Two things. One, keep the heads *clean*, and two, when searching for the cause of trouble check the simple things first!

Demagnetizing or degaussing the heads is necessary because residual magnetism builds up in them as a re-

sult of normal usage. This magnetism places on the tapes a hiss which can not be removed without erasing the entire contents of the tape. One little hint on how you can reduce this build-up—do not stop the transport while there is a signal on the head, i.e. turn off either your record or play volume control if you wish to stop the recorder while there is tape in contact with the heads.

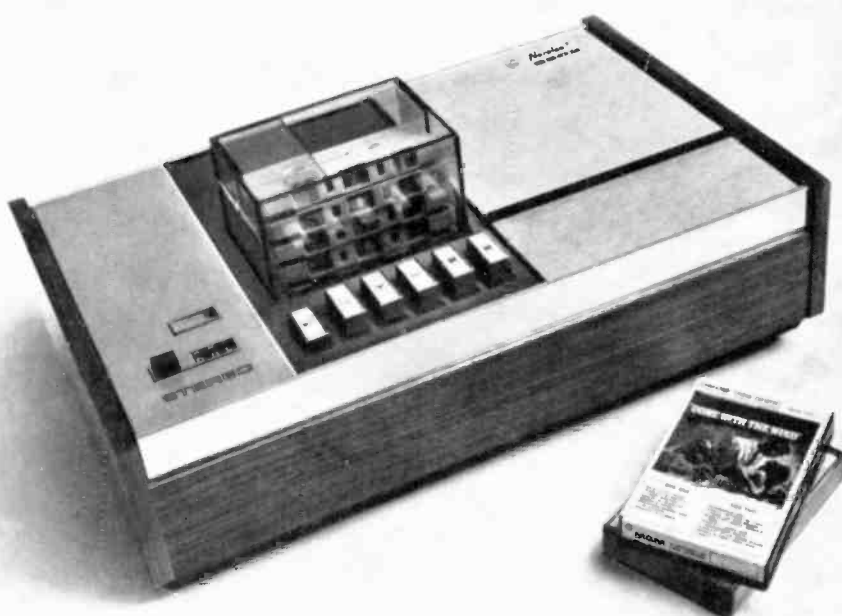
Degaussing is a simple procedure. You use a head demagnetizer which you can obtain from your audio dealer. It will have a projecting metal pole over which, to keep it from scratching the heads, you should place a piece of cellophane tape of just one thickness. Remove the headcover of the recorder—energize the degausser by plugging it in or switching it on. Then gently place the metal pole against the head and *slowly* withdraw it for at least a foot *while it is still energized*. (Should the pole be deenergized while near the head the residual magnetism would be *increased*.) Any other ferrous metal which comes in contact with the tape should also be degaussed. That's all there is to it.

What about other troubles with the recorder—say head misalignment or excessive wow? That's not for us, the non-experts, to deal with. Nor is it something to be trusted to our neighborhood Radio-TV repairman. He is not qualified by experience or equipment to deal with anything so complicated electronically and mechanically. You really have but two choices—take or send your recorder to a shop licensed by the manufacturer to give warranty service or pack it up and ship it back to the distributor or manufacturer. Annoying? Sure, but it is also safe!

Bill Fulmer

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The new Norelco '2502' automatic stereo changer holds 6 cassettes at one time so you can play up to 6 hours of continuous music.\* Flip them over and there are 6 more.

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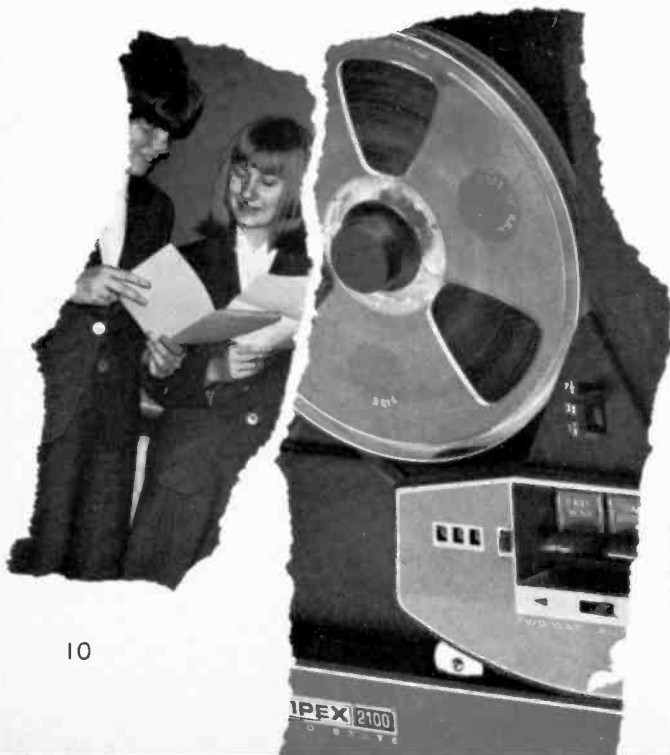
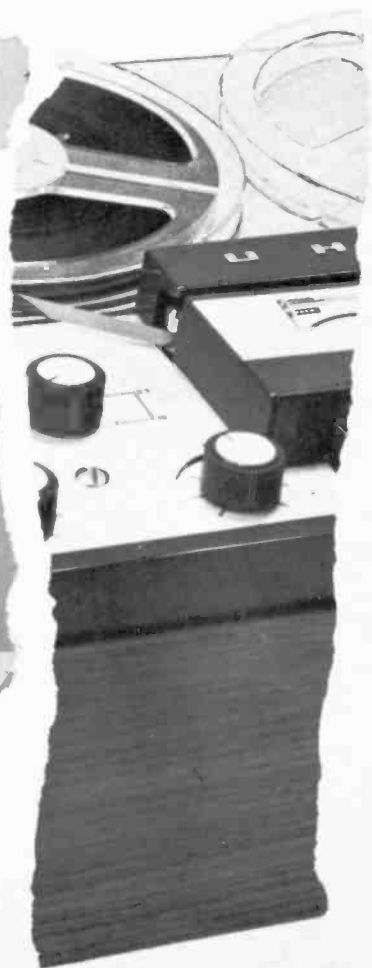
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by George de Serafine

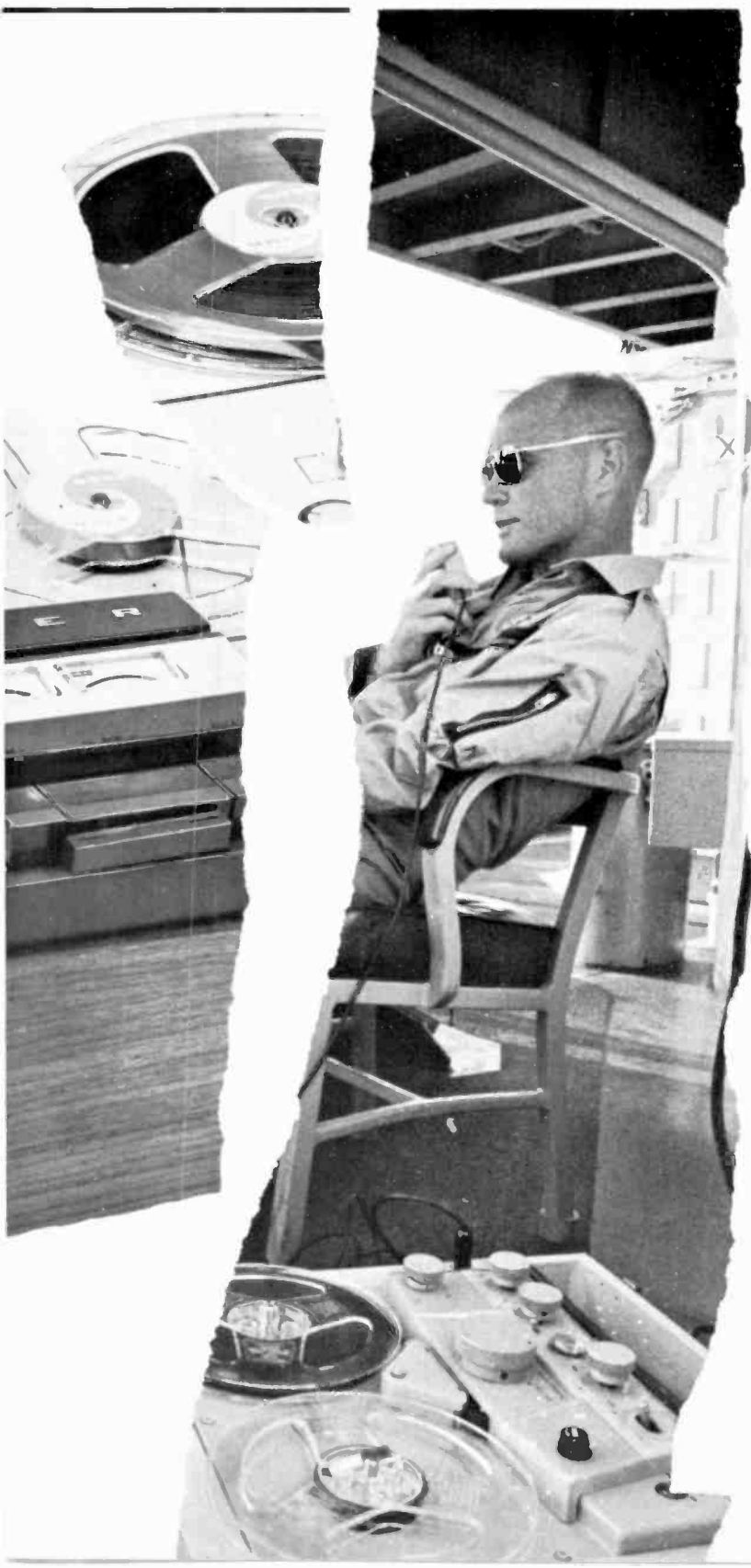
## HOW TO EARN MONEY WITH



*Problem: Can a hard-working college student convert a love of tape recording, a willingness to work and imagination into a \$6000-a-year business? Answer: yes, indeed—if he's equipped to record weddings, church choirs, duplicate classroom lectures, letters from Viet Nam and others.*

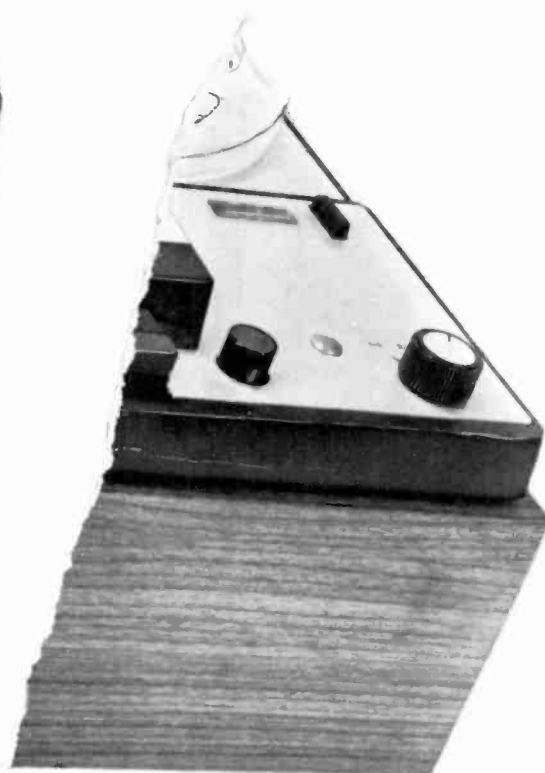


# YOUR TAPE RECORDER



**F**our years ago for his birthday. Edward de Franco of Brooklyn, N. Y. received a Wollensak 1515 tape recorder for his birthday. Today, he owns a system which includes a Uher 4000 battery-operated portable, an Ampex 860 and a Lafayette RK 860 in addition to the Wollensak—plus an array of audio equipment which would make the average teenager's mouth water. For Ed, proprietor of de Franco Sound Studios, a \$6000-a-year business, is 18 years old and a full-time student at Brooklyn College.

"I've been interested in sound ever since I can remember," de Franco says today, "and the thing I wanted most was a tape recorder. When my parents gave me one, I had no idea that it would turn into a profitable business.





I considered it only as a hobby." de Franco got into the business accidentally when his older brother got married. "That was only a few months after I got the Wollensak, and I'd gotten to be pretty good with it. He asked me to tape the wedding ceremony for him. I did, for free. But other people started wanting copies—the bride's family, the best man, and so on. Before I knew it, I was sitting up nights running off copies on a borrowed Sony."

Ed admits that there was nothing special about his recording technique, or the quality of his finished product. "I simply asked the priest if I could set up a microphone at the front of the church, and ran cable back to the recorder which was located outside the main auditorium. But people liked what they heard, and before long, I had a couple more requests to tape weddings. By now, I had established a

price—\$25 for a complete edited tape, and \$10 for each copy. I borrowed the money from my parents to buy the Lafayette so I'd have something to make copies on. The trouble was that many of my customers didn't own tape recorders. So I made arrangements with a recording studio in Manhattan to cut records from my tapes. They charged \$5 for each 12" LP, and I added \$1. That first year, I spent nearly \$100 for acetate discs, and it occurred to me that I could buy an inexpensive cutter and cut my own. So I borrowed some more money."

That first year, Ed made less than \$600—however, it was enough to pay back the two loans from his parents, and to start on the purchase of some other audio equipment. "I bought a used Rek-o-Kut turntable and a good stereo cartridge, plus a used Scott stereo amplifier. Tube equipment was on the way out then,

*Copies of taped letters, such as this one from servicemen in Viet Nam keep de Franco Studios occupied.*

---

and I managed to get a pretty good buy. I ran short of money before I completed the system, and bought two cheap speakers. However, they were good enough to let me hear what I was recording."

Weddings accounted for most of the business that year—but not all. Ed was an active participant in his high school drama club. So when it came time for the class play, who should be called upon to provide the sound effects but Ed. "I spent weekends recording all kinds of sounds—doors slamming, fire engines, dogs barking, by hanging a microphone out the window, or by recording things around the house. I didn't get paid the first time, but I've been able to sell some of these sounds since. What I did get paid for was a recording of the show. The leading man and leading lady each bought tapes."

The next step was the building of a studio in the de Franco basement. "I got a lot of acoustic tile from a local builder, and my dad and I spent hours tacking it up. We used 2 x 4 studs to create a control room separate from the recording studio. The family was in favor of moving the junk out of my bedroom anyway, and for the first time I had a place to work where I could leave things spread out." The recording studio has been used primarily by several de Franco classmates who have their own rock groups. "The guys sing for fun, but occasionally they want a demo cut—either for their own enjoyment, or to send to some talent agent. None of the groups has made it with a regular record company, but some of the demos I cut have resulted in club dates in the neighborhood." Ed has plowed the profits from his studio back into better equipment—particularly a selection of microphones. "I have

two good cardioids, two omnidirectionals and a good mike for mono outdoor recording."

The sound effects venture led Ed into his purchase of a battery-operated portable. "The first one was an inexpensive Japanese model, and it kept breaking down. But with it I was able to do a lot of on-location recording. Then I'd get paid for playing back the tapes I'd made for theatrical groups. There are no set fees—you charge what the traffic will bear. But I usually figure on about \$25 a night if I'm supervising sound equipment and effects backstage, plus \$5 to \$10 for each original recording."

Although de Franco Sound Studios owns only four recorders, it does custom duplication work as well. "I started getting tapes from school—lectures, reports and that sort of thing. Now I get them from small businesses in the neighborhood, from individuals. I have a regular thing with a neighbor whose son is serving in Viet Nam. About once a month he sends a taped letter home, and she has me make copies for several relatives. I duplicate the tapes and mail them." Because the orders are small (his largest is for six copies of a given recording, which necessitates three passes through the Ampex), he has no competition from larger duplicators. "I've built a compensator-splitter which is fed by the Ampex and which in turn feeds the Wollensack and the Lafayette. With it I can duplicate a 1 $\frac{7}{8}$  ips tape at 7 $\frac{1}{2}$  ips without altering the frequency response and with no appreciable increase in signal-to-noise ratio." Ed buys brandname tape in quantity from a distributor. "I charge \$10 per hour of duplication time, which means that a 7 $\frac{1}{2}$  ips tape costs more per minute to duplicate than a 1 $\frac{7}{8}$  ips tape. The tape,

*School and amateur theatricals offer money-making opportunities*

reel and box are extra—.1¢ per foot for tape, computed to the next highest round number plus 35 cents for a 7" reel and 10 cents for a 7" box. If I address and mail, there's a charge for that as well."

Ed believes that duplication may be the fastest-growing part of his business. "I've printed up handbills and distributed them to the stores and offices in my neighborhood. You'd be amazed at the response they get (his younger brothers shove the handbills under doors on Saturday mornings). It seems that just about everybody has a tape he wants copied. I advertise my recording services too, but tape duplication gets all the attention. Doctors, for example, have a speech on tape they made before the county medical society, and they want one copy to send to a colleague in California—or a copy for a medical journal."

For a while, Ed was offering a service to fellow college students—but the College let him know in no uncertain terms that they didn't approve. "It started when I took the battery portable to class to tape lectures. I'd bring the tapes home and start transferring the highlights of each lecture to a large reel. Then when I had to cram for an exam, I'd just play the large reel over. Well, one of the guys who cut class fairly often came to borrow my big reel. I ran off a copy for him and charged him for it. Before long, I had several customers for copies. I don't know how the college found out about it, but it was strongly suggested that I stop."

de Franco doesn't pretend that his work is the last word in high fidelity. "I don't have the money for the best in professional equipment, although I hope to go into the business seriously when I graduate. But most of my

*Cast members often are willing to pay for copies of de Franco's complete recordings. He records shows like this one with music in stereo.*



*for recordists, including sound effects and complete recordings.*

---

customers aren't very demanding when it comes to fidelity, either. They insist on a copy which sounds reasonably good on their equipment. That means you can't get away with things like the \$89 battery portable; but you can use ordinary good home equipment.

An exception has been his work with the choir in his church. "It was a logical outgrowth of the wedding business. The church choir decided to make a record as a fund-raising device, and they asked me to make the master tape. In fact, I not only record the program in stereo each year, but make arrangements with a custom presser to cut the records and press them." He notes that while he makes a profit on the original recording, the choir buys direct from the pressing plant. The records, which have become an annual affair, involve several evenings. Recordings are made in the church on the Ampex, with two cardioid mikes stationed opposite either side of the choir. "We usually record two or three takes of each selection, and the choir director and I decide which one to use. We don't do any fancy splicing like combining parts of two or more takes, but I do put together the best-sounding master I can. Choir members and their friends aren't as critical as the record producers at Victor or Columbia." Because the editing job is time-consuming, and because it's being done for charity, Ed charges an hourly rate for his time and the use of his equipment, rather than making a package price. "I'm sure I get a fair return, and the church feels it's not being taken," he notes.

The final service de Franco Sound Studios performs is the rental of equipment. "Potentially, it's very profitable—but I don't have enough equipment to rent. If I'm not using

any piece of equipment, it's for rent—but it always seems that I have a tape duplication job when somebody wants a recorder—or I'm doing an on-location session with the Uher when somebody needs a portable." There are other tape recorder rental agencies in Brooklyn; but de Franco picks up and delivers (or, rather, the younger de Francos pick up and deliver) and his prices are lower. "Some of these companies get \$5 a day or \$25 a week. We have an hourly rate of \$1, a daily rate of \$4 and a weekly rate of \$15 for the Lafayette or the Wollensak; the Uher is more expensive." Microphones and other sound equipment likewise are available.

What about dubbing cartridges or cassettes? "I'm just getting started on cassettes. I've been asked to dub commercial records, but so far I've stayed away from that because of the legal problems. I've had no demand for eight-track, and I'm not interested enough to buy the equipment. Some small studios dub commercial records on tape for a nominal fee, but I don't want to get involved with licensing, royalties and lawyers. The only music I handle is the customer's own—such as the rock groups or the choir."

Does de Franco Studios interfere with getting a college education? "It used to. But my folks made it quite clear that my studying comes first and if I have to turn down business because of it, that's too bad. Now I work on recordings mostly on weekends and during vacations. Of course, I can duplicate while I study. As a result, I don't think I lose very much business because of school. And after a rocky start last year because I was spending too much time on recording, my grades have picked up."



OLYMPIC AIRWAYS

# THOSE AIRLINE TAPES: HOW GOOD A VALUE ARE THEY?

by Robert Angus

“A tape costing \$23.95? It'll never sell. Besides, what you're offering is a program made up for people to listen to while they're flying from New York to Los Angeles. It's not the same thing as listening in your living room. Who cares that American Airlines is playing Frank Sinatra this month?”

They laughed in Tin Pan Alley when American Airlines sat down at the turntable one day back in 1964 and started to spin records. But today, some 54 airline tapes later, they're not laughing any more. For Ampex Stereo Tapes, Capitol, Decca and Stereotape, the major firms in the long-long-play tape business have proved that there's gold in the friendly skies of American.

The gold is in the form of prerecorded tapes—18 pop stars in 65 current selections, or three hours' worth of the classics with the Berlin Philharmonic and Wilhelm Kempff. The tapes are made for American and Continental Airlines under contract by Ampex and the others, and under the direction of *Billboard*, a music trade journal. When American first introduced stereo music on its transcontinental jetliners in 1964, it contracted with *Billboard* publisher Hal Cook to negotiate with the record companies and provide the tapes.

*Although they came about almost by accident, airline tapes have made themselves best-sellers by offering long playing time, intelligent programming, an assortment of artists and high fidelity stereo sound at a price people are willing to pay.*

OLYMPIC AIRWAYS



OLYMPIC AIRWAYS



AMERICAN AIRLINES



Continental, which flies from Chicago to California, went directly to Ampex for its material.

Cook quickly discovered that if he produced tapes strictly for use in the sky, American would have to pay royalties for each "performance." However, if the tapes American played were commercially available, their in-sky use might be considered promotional, rather than performance—which meant no royalties.

One can almost hear the dialogue that must have taken place around Broadway.

"Well, let's just make a few dozen copies so we can say they're for sale."

"Yeah, but who's gonna buy them? You don't even have a complete symphony on there, just a coupla movements. Besides, you're gonna have to ask at least \$23.95 for them."

"Well, we're stuck. If we want to do business with American, we have to offer them for sale."

Apparently Ampex and Continental reached the same conclusion, for American and Continental tapes began appearing within weeks of each other.

What happened next surprised everybody. The tapes which nobody expected to sell began

selling—not like hotcakes, perhaps, but substantially better than most other prerecorded tapes. Suppliers who saw their retail efforts as a dead loss blinked unbelievably, then began rubbing their hands with glee. The catalogues mushroomed—from one classical and a handful of pop tapes from Ampex to today's 41 pop and 13 classical tapes for American Airlines plus Continental's six pop, two spoken word, two variety and one classical tapes.

What does an airline tape purchaser get? An American tape, whether it's made by Ampex, Stereotape or one of the others, lasts a full three hours and contains an average of 65 tunes. This works out to about 13 cents per minute of music or 37 cents a tune (compared with 19 cents per minute or 54 cents per tune for a standard pop tape or cartridge). Continental's tapes last only 90 minutes, but cost \$11.95. Both thus represent clear savings over individual albums.

The airline tapes are perhaps the biggest step the music industry has taken yet to considering tape as a medium separate from records—and tape buyers have, perhaps unconsciously, responded. Unlike records, which feature up to 12 pop songs by a single artist; or three-quarters of an hour worth of Strauss Waltzes, the tapes contain only one or two selections at a time by a pop vocalist, only a movement from a symphony or a single waltz before a change of pace. Records are limited in playing time; the tapes have virtually no restrictions of time, because they're recorded at 3¾ ips.

*Billboard* publisher Cook realized that, while home listeners may not mind hearing six

Frank Sinatra sides in a row, airline listeners would like a little more variety. "We try to break things up by alternating vocals and instrumentals in our pop tapes, following a fast tune with a slow one. If you don't like what's on now, wait a minute and you're sure to hear something you do like," he notes. Apparently home listeners aren't all that different from airline passengers, after all—Cook believes that this "variety pack" approach is part of the appeal of the prerecorded tapes. Incidentally, RCA Victor executive Elliott Horne had hit upon exactly the same idea at about the same time. Horne, charged with programming RCA's stereo 8 cartridges, decided that motorists would rather listen to two selections each by six artists than 12 selections by a single artist, and RCA began offering variety pack cartridges.

Variety isn't the only consideration, Cook admits. "Since we're programming primarily for the airline passenger rather than for the tape buyer, we try to avoid extremes. You won't hear songs with a strong political message on American Airlines tapes. You won't hear country tunes dealing with violent death in an auto crash or train wreck. You won't hear hard rock or electronic music, though you may hear rock tunes arranged for a big orchestra. On the classical side, you'll never hear a complete opera, and the total number of vocals of any kind is very, very small. Gregorian chant is out, and Tchaikovsky is in." In addition, programmers are careful to avoid selections with long, quiet passages which could be droned out by the roar of a jet engine.

Cook feels that there are no hard and fast rules about programming. "We can use one

track from an album, or the entire album. Because of our contractual agreements, we can incorporate artists from two or three record labels into a single program, which offers the listener that much more variety. While we try to follow a pop solo with a group or an instrumental, there's nothing to say we can't have two or three solos in a row. The programmer simply uses his own judgment about what tunes naturally follow one another."

While this advice doesn't help would-be do-it-yourself programmers, it works out pretty well in practice. This listener, who has heard not only some 55 hours' worth of American tapes, but those from United, Continental, TWA and Pan American, would agree that American's are by far the most interesting.

Okay, you get a lot of music for the money, and the selections are interesting if sometimes incomplete. But what about the sound?

Anybody who has ever listened to inflight entertainment knows that the sound in the skies is just barely acceptable. On the ground, we checked 18 American tapes, and found that all of them are comparable to prevailing industry standards for 3¾ ips tape. "We don't do anything special to them, like emphasizing the high end or cutting the bass," says Jim Johnson of Ampex Stereo Tapes, whose firm makes the majority of American and all of Continental's tapes. "They're duplicated from the same masters in the same way as are all of our other tapes."

As we noted earlier, American's tapes are supplied not only by Ampex, but by Capitol, and Stereotapes. Unless you read the backliner very carefully, you're not likely to know

when you buy who actually manufactured the tape—not that it makes much difference. We auditioned popular and classical tapes from all three suppliers, and were unable to detect any sonic or programming differences. "That's because we set the standards," says Cook. "We want them all to be uniform."

The tape boxes do tell you which record label or labels are included on the tape. If you know, for example, that Deutsche Grammophon is an Ampex label and Reprise belongs to Stereotape, you can distinguish one manufacturer from another (Capitol supplies artists from its own and the Angel roster only). The back liners tell you not only what record labels are involved, but which artists perform which selections. The print is small, because of the lengthy contents of each tape. There are no additional program notes. What's important to a potential purchaser is: are the artists you want on the tape? Do they perform the material you want to hear? In the case of classics, do you care if you get only one movement from Beethoven's Fifth Symphony?

Although American's popular tapes do feature up to 90 minutes of uninterrupted music, the classical tapes feature an announcer who converts the program into the sort of thing you might hear on a classical music station when you're driving home from work (less commercials, of course). Continental also uses an announcer on its tapes. In both cases, the announcements are unobtrusive—but they are there.

Cook believes that most people who buy the Airline tapes for home listening are less

interested in getting a lot of music cheaply than they are in having long-long-play tapes for background use at parties or for company around the house. "After all," he notes, "there have always been long tapes on the market, some of them available at bargain prices. What's different about ours is that they're programmed professionally. The pop tapes are ideal for a cocktail party or an evening of bridge, where nobody is listening very closely. Yet you can stop and listen when you hear something you really like." He notes that much the same is true of classics.

#### VARIETY

Continental Music Hall, Vol. 1 and 2. These tapes, which average 85 minutes in length, include an announcer, range from supper club comedy to Gilbert & Sullivan. Artists include Jimmy Durante, Yves Montand, The Smothers Brothers, Allen & Rossi, the Fantasticks cast and others. Programming, by Ampex, is quite satisfactory. Continental Playhouse, Vol. 1 and 2. Playing time averages 85 minutes and contents include a John Kennedy portrait, readings from Mark Twain and others, mostly drawn from the Caedmon catalogue. Programming not as skillful as American's, but the material is interesting and well recorded (in mono).

#### CLASSICAL

American Airlines Classical Programs Nos. 3, 4 and 6. These tapes are drawn respectively from the catalogues of Vanguard, Nonesuch and Decca—and as any classical tape buyer

knows, these companies concentrate on less familiar classics. Gregorian chant there may not be, but the Nonesuch tape includes a lute interlude by Dufay; the Vanguard an excerpt from Darius Milhaud's choral work, *Pavem in Terris*. The Nonesuch differs from most other classical tapes in that it presents most major works complete—two Haydn Symphonies,

chamber works by Bach, a Mozart Violin concerto, among others. Decca offers helpings of Andres Segovia, Sylvia Marlowe, the Musica Aeterna and Cincinnati Symphony orchestras, while Vanguard includes movements from chamber works, artists like Jan Peerce, Julius Baker, Jean-Marie Darre and the Utah Symphony.

## HOW TAPES ARE PROGRAMMED

Contents of three typical airline tapes show how many short selections and frequent change of artist or musical style maintain listener interest.

### CONTINENTAL CVF 501

Carol Channing—Lorelei's Diary  
Noel Coward, Margaret Leighton—  
Blithe Spirit. Scene  
Julie Harris, Kevin McCarthy—  
White House Saga  
Ogden Nash—Three Poems  
Ingrid Bergman—The Human Voice:  
exc.  
Walter Brennan—The Jumping Frog  
of Calaveras County  
Claire Bloom, Max Adrian—Caesar  
& Cleopatra: excerpt  
Shirley Booth—The Waltz

### AMERICAN AIRLINES CLASSICAL PROGRAM 216

Addinsell—Warsaw Concerto. Holly-  
wood Bowl Orch.  
Vaughan Williams—Fantasia on Tal-  
lis Theme. Philharmonic Orch.  
Suppe—Light Calvary Overture. Hol-  
lywood Bowl Sym.  
Waldteufel—Espana Waltz. Holly-  
wood Bowl Sym.  
Shenandoah, On Top of Old Smoky,  
He's Gone Away—Roger Wagner  
Chorale  
Debussy—Prelude to the Afternoon of  
a Faun. Stokowski and His Orch.  
Sibelius—Swan of Tuonela. Stokow-  
ski Orch.  
Liszt—Hungarian Rhapsody No. 2.  
Bavarian Radio Orch.

Berlioz—Romance, Reverie et Caprice.  
Yehudi Menuhin  
Beethoven—Moonlight Sonata: Ada-  
gio. Laurindo Almeida  
Debussy—Clair de Lune. Laurindo  
Almeida  
Kresler—Schon Rosmarin. Laurindo  
Almeida  
Wagner—Die Meistersinger: Preludes.  
Royal Philharmonic  
Tchaikovsky—Nutcracker Suite ex-  
cerpts. Bavarian Radio Orch.  
Strauss—Blue Danube., Wine Women  
& Song. Royal Philharmonic Orch.  
Smetana—Bartered Bride: Dance of  
the Comedians. Philharmonic Orch.  
Vaughan Williams—Greensleeves Fan-  
tasia. Philharmonic Orch.  
Chabrier—Espana. Concert Arts Orch.  
Newman—Anastasia, Catana, Con-  
quest. Hollywood Bowl Sym. Orch.

### AMERICAN AIRLINES POPULAR PROGRAM NO. 45

Antonio Carlos Jobim—Surfboard  
Nancy Sinatra—Summer Wine  
Orch.—Camelot Prelude & Overture  
Sinatra and Ellington—Poor Butterfly  
Jobim—Zingaro  
Dean Martin—Everybody Loves Some-  
body  
Nelson Riddle Orch.—Sweet Lorraine  
Sammy Davis Jr.—If I Ruled the  
World

Vince Guaraldi—You're In Love,  
Charlie Brown  
Nancy Sinatra—Who Will Buy  
Peter Paul & Mary—Kisses Sweeter  
Than Wine  
Jobim—I Was Just One More for  
You  
Harpers' Bizarre—Chattanooga Choo  
Choo  
Guaraldi—The Great Pumpkin Waltz  
Trini Lopez—If I Had a Hammer  
Nelson Riddle Orch.—Moni Lisa  
The First Edition—If Wishes were  
Horses  
Frank Sinatra—That's Life  
Duke Ellington—Charade  
Anita Kerr Singers—Swinging on a  
Star  
Vince Guaraldi—Oh Good Grief!  
Nancy Sinatra—You've Lost that  
Lovin' Feeling  
Jobim—Se Todos Fossem Iguais a  
Voce  
Sammy Davis Jr.—Hey There  
Ellington—A Beautiful Friendship  
Harpers' Bizarre—Anything Goes  
Ellington—Moon River  
Frank Sinatra—Strangers in the Night  
Vince Guaraldi—Red Baron  
Sammy Davis Jr.—As Long as She  
Needs Me  
Nelson Riddle Orch.—It's Only a  
Paper Moon  
Ellington—Red Roses for a Blue Lady  
Trini Lopez—Lemon Tree

Vince Guaraldi—Peppermint Patty  
Frank Sinatra—The Impossible Dream  
Nelson Riddle Orch.—Night Lights  
Nancy Sinatra—Jackson  
Frank Sinatra—Younger than Spring-  
time  
Vince Guaraldi—Linus and Lucy  
Dean Martin—Bumming Around  
Ellington—All My Loving  
Anita Kerr Singers—The Two of Us  
Ellington—The Good Life  
Peter Paul & Mary—Hurry Sundown  
Sinatra & Ellington—Sunny  
Nelson Riddle Orch.—Too Young  
The First Edition—I Get a Funny  
Feelin'  
Ellington—Satin Doll  
Lopez—Michael  
Nelson Riddle Orch.—Nature Boy  
Nancy Sinatra & Dean Martin—  
Things  
Jobim—Estrada do Sol  
Peter Paul & Mary—Well, Well,  
Well  
Nelson Riddle Orch.—Straighten Up  
and Fly Right  
Nancy Sinatra—Wait Till You See  
Him  
Nelson Riddle—Pretend  
Jobim—One Again  
Nelson Riddle—Walkin' My Baby  
Back Home  
Frank Sinatra—All or Nothing At All  
Nelson Riddle—Ramblin' Rose

# CASSETTE RECORDERS FOR \$12.81?

By Sandy Shenker



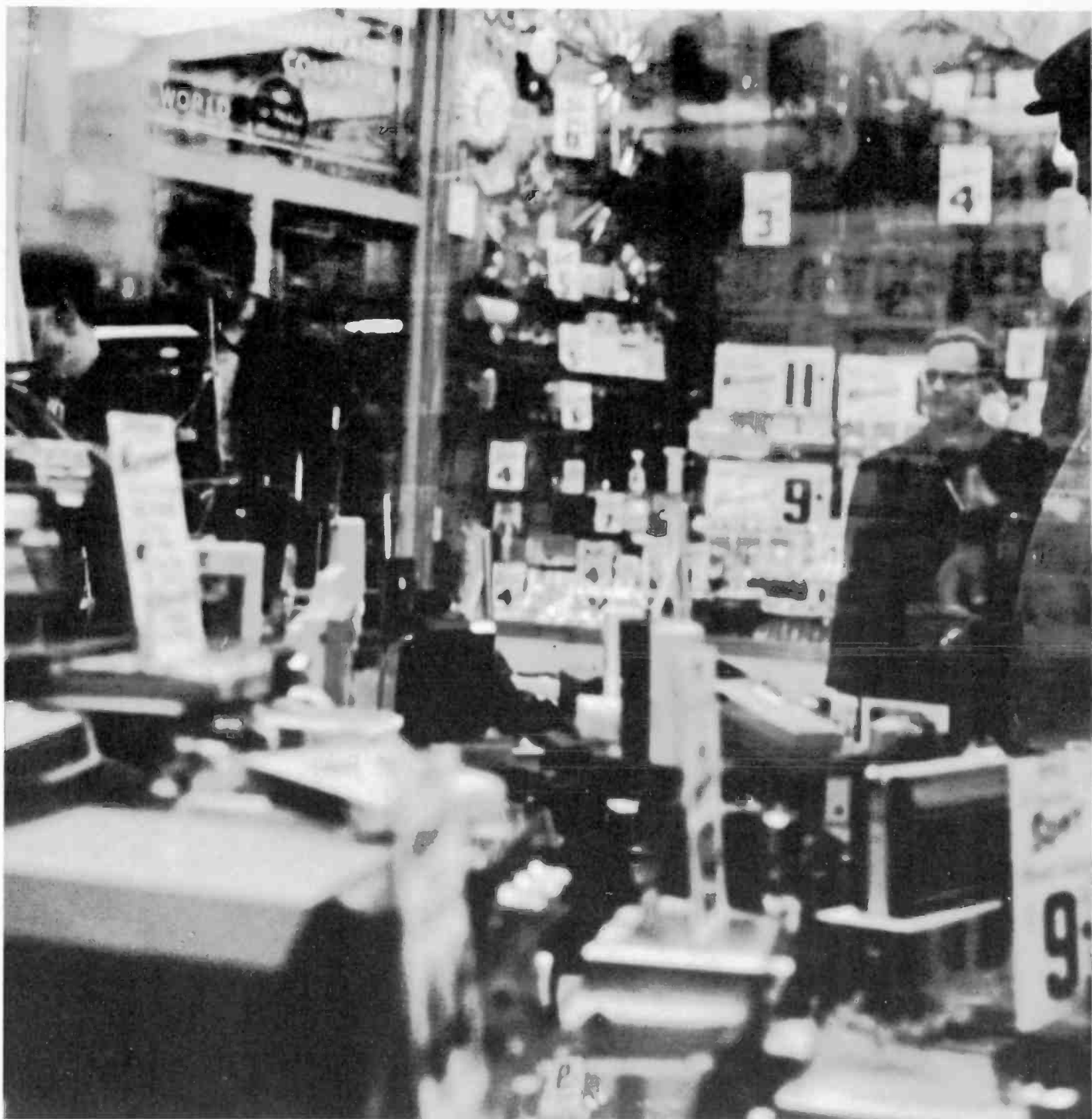
**T**here it was, right in the store window in front of me. Yet I still couldn't believe my eyes. The sign said "Value! Cassette Tape Players—\$12.81 up." Okay, the "up" was in fairly small print. But displayed behind the sign was a selection of cassette recorders, ranging from Norelco's new player-only model (normally \$29.95) through recorders from Viscount, Master-Craft and others to a Philips Carry-corder (normally \$69.95).

The store was one of those Times Square discount shops which seem to carry everything from knives to precision cameras; from portable television sets to dirty movies, all advertised at tremendous savings. In New York,

*Tourist areas in most big cities have windows advertising unbelievable bargains like these in New York's Times Square. Prices may or may not be for items actually shown, and "accessories" needed for operation may not be included at that price.*



*When you see super-bargains in cassette recorders, check to be sure that price*



*includes batteries, microphone, carrying case.*

---

you can find them along Broadway and Seventh Avenue, but they exist along Market Street in San Francisco and Philadelphia and in just about every other big city as well. Within sight were three more stores promising cassette recorders for "discounts up to 70%", at the "Lowest prices in town" and for \$19.95.

Just what kind of cassette player can you get for \$12.97, I wondered. Does it come with accessories, or are microphone, carrying case, empty tape reel, batteries, earphone and the rest all extra? My curiosity got the better of me, so I walked in.

"I'd like to see the cassette recorder you have advertised in the window for \$12.97," I said.

"Certainly," the clerk replied. "However, I have a beautiful model here. You can take it to the beach, record with it, use it for business, anything you want. It's only \$30."

It proved to be a reasonably rugged-looking Japanese cassette recorder. I didn't recognize the brand name. "No," I persisted, "I'd like to see the \$12.97 model."

"It's only a player, you realize," he said. "It doesn't record."

I said that was all right. He reached under the counter and came up with a Playtape player—the kind that uses a mini-endless loop cartridge for pop hits, rather than a cassette unit. It lists for \$19.95.

"But the sign in the window promises a cassette recorder for \$12.97. This is another system entirely. Don't you have a cassette player for that price?"

"No, this is the \$12.97 player we're featuring. Are you sure that's what the sign says?"

I assured him it was.

"Well," he asked, "what's the difference between a cassette machine and this one? This one is an exceptional value." I agreed that it was—although the model had been on the market for some time. But, I continued, I wanted a machine which would play the cassettes I already owned.

"Well, why don't you take the \$30 machine? I can let you have it for \$24."

"Does that include the accessories you showed me?"

"What do you want for \$24? I can't include a carrying case or batteries at that price. But I will throw in a free cassette."

I thanked him and headed for the door.

"Okay, lady, you've got my back up against the wall. I'll let you have the mike, the carrying case and the batteries for the \$24.

I kept going.

"It's a great buy, lady. You should snap it up right now, before the boss comes back," his voice followed me out onto 42nd Street.

Across the street was a sign promising discounts up to 70 per cent. In the window was the same recorder I'd just seen. The price tag said \$26. I went in and asked the salesman if he had anything less expensive.

"Only in recorders that use reels," he said.

I thanked him and started walking out when another salesman called me back. "If you want to take it now, I can let you have the one in the window for \$19.95." He got it out of the window and showed it to me.

"What comes with it?" I asked innocently.

"What do you mean, what comes with it," he parried, just as innocently.

"Well, do I get a microphone, batteries

*Because prices can vary as much as \$20 on a given recorder from store to store,*



and a carrying case?"

"Are you kidding? What do you expect for \$19.95? A dozen cartridges and a rock band, too?"

"Okay, I'll bite. If I buy the recorder, how much do you want for the microphone?"

"Are you going to buy the recorder?"

"I don't know yet. But I do want to know how much the accessories are going to cost."

Apparently he'd realized I was only shopping. "The microphone normally is \$9.95. But if you buy the recorder, I might be able to make a special price."

"How about the carrying case?"

"Well, that's \$6.95."

Since he was offering C-60 60-minute cassettes for 99 cents, and his batteries were 10 cents each, his price for the complete package would have come to \$38.34—or \$14.34 more than the store across the street. Of course, there was the chance he'd come down if I took it all at once. . . .

While I was pondering all this, another customer came in. The salesman turned abruptly away from me and went to work on him. I walked out and down the street to another store whose window featured an attractive display of portable tape recorders, including cassette units. Most didn't have prices. One, in the center of the display, did. It was a Starfire reel tape recorder, and the sign said I could have it for \$5. Leaning on it were two attractive cassette recorders, a Philips and a Concord. A quick glance by an unwary shopper might have indicated that the \$5 price tag equally applied to the Philips and the Concord (each available in nearby specialty stores for between \$50 and \$64).

*it pays to shop very, very carefully.*

---

I went in and asked to see the \$5 recorder. "It really isn't much of a recorder, Miss. We only handle them for people who can't afford and appreciate something better. Besides, it's been made obsolete by the new cassette models. Now, let me show you . . ."

Before I could protest, I was looking at the Philips version of the Norelco Carry-Corder—the 1967 model. "Is it a new machine?" I asked.

"You can have one right out of the box."

"I mean, is it the current model?"

"This recorder sells for \$69.95. But you can have it for \$44.95 if you take it right now."

I didn't get my question answered. But it appeared that the machine being offered didn't have some of the styling of the newer model. "Does it come with microphone and batteries and all the rest?"

"Of course. How else are you gonna make recordings?"

I headed for the door. He reached across the counter and took hold of my arm. "Listen, Miss. I'm not supposed to do this. But I'll even save you city sales tax. It'll cost you \$44.95, all right, but there are no extras. Anywhere else on the block, you'd have to pay \$2.25 in sales tax. I have this cousin in Newark, and we'll just write up the sales slip with his address on it."

He began writing. His grip freed, I headed for the door again.

"Will that be cash or a credit card?"

I told him I don't use credit cards, and I didn't have that much cash.

"You have a checkbook, don't you?"

"Yes," I admitted.

"Then write me out a check."

"But you don't even know me."

"You look like a nice girl. I'm sure your check is good. Besides, I've started out to write up the sales slip. The boss will want to know what's going on if I tear it up."

I told him that was his problem and left.

The afternoon taught me a lot about shopping in this kind of "discount" store in areas frequented by tourists. For one thing, the deals offered in the windows which seem too good to be true usually are. Read the signs carefully, and look for the microscopic print which says "and up." Second, because prices can vary as much as \$20 on a given recorder from store to store, it pays to shop very, very carefully. When you take into account the items normally supplied with a recorder by a conventional dealer, you'll usually find the "discount" stores charge more. Within the same store, you can haggle as at a Near East flea market and save yourself \$5, \$10 or more by keeping your wallet or your checkbook in your pocket.

Third, much of the merchandise offered either is off-brand or not the current model. Comparison with those products which are offered by conventional camera or audio stores in midtown Manhattan indicates that prices are higher in the Times Square stores—sometimes substantially higher. The appearance of lower prices on, say, a Concord or Norelco are achieved by charging extra for the microphone, earphone or batteries. Most customers, having bought the recorder, must come back to one of these stores to buy the accessories they should have gotten with their "bargain" recorder. After all, who else sells microphones or earphones or carrying cases separately?

*By Paul Edwards*

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## HOW VON KARAJAN RECORDED THE RING

As every opera lover knows, one of the most difficult feats in all of opera is to produce a complete cycle of Richard Wagner's "Ring of the Niebelung." The Ring consists of four complete operas—*Das Rheingold*, *Die Walküre*, *Siegfried* and *Götterdämmerung*—each a major masterpiece in its own right. The four operas, composed from 1869 to 1876, is based on Teutonic folklore, and plays an important part in the German nationalistic movement of the late 1800s and the 1930s.

Because of the physical stamina, musical skill on the part of both the performers and the audience and the facilities needed to produce all four in sequence, there have been very

*(Continued on page 49)*

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*Cassette recorder plays orchestral background as musical director Herbert von Karajan (left) gives baritone Thomas Stewart some acting pointers on role of Wotan in Deutsche Grammophon's upcoming Ring cycle by Wagner, recorded at Salzburg Festival.*

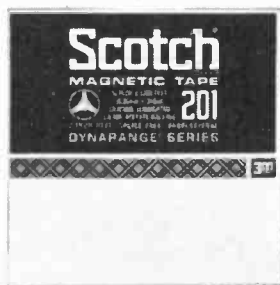
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# tape

## REVIEWS

### Brahms

*Piano Concerto No. 2 in B Flat, Opus 83. Andre Watts, piano. New York Philharmonic Orchestra, Leonard Bernstein, conductor. 7½ ips, Col. MQ 999, \$7.95.*

Music	****
Performance	****
Recording	****

This isn't an easy concerto to perform. It's both made and broken the reputations of some of the best pianists. It almost broke Watts—especially in the first movement, where he takes a slow, deliberate tempo to hide what are apparently shortcomings in his technique. Bernstein dutifully follows (instead of leading) with the result that the opening is labored and often painful to the listener.

The rest of the concerto picks up a little, but that heavy-handed deliberateness is forever with us, although tempered by the music itself. It's not a bad recording; it's just that we have fond memories of Richter, Serkin, Rubenstein and Ashkenazy—all of whom tear into this frighteningly difficult concerto with the gusto of a thirsty worker at a *biergarten*. Watts is still very young and a little afraid of the great Brahms. We'd like to hear what he does with this in another ten years. In the meantime, he does have a basically excellent technique, Bernstein's support is just that—support—and the recording is much better than average. —W.G.S.

### Caballé

*Verdi Rarities (conductor, Anton Guadagno) and Rossini Rarities (conductor, Carlo Felice Cillario) with RCA Italiana Opera Orchestra and Chorus. RCA Victor TR3 5031, 3¾ ips, \$10.95.*

Music	***
Performance	****
Recording	****

The first impression one gets on hearing Montserrat Caballé is wrong; her voice isn't really that beautiful. But she uses it beautifully to express a variety of moods and emotions. She is one of the great exponents of *bel canto*. Caballé controls her voice so well that she can spin out a legato line effortlessly, and her famous floating pianissimi deserve the plaudits they've received.

Her technique is exquisitely employed to serve the emotional content of the Verdi and Rossini music in this two-album tape. Yet, for all her superb technical skill and expressive delivery, she doesn't create the emotional impact of Callas.

The selections themselves are indeed rarities. They are from seldom-performed Verdi and Rossini works. The Verdi works are particularly fascinating to hear, revealing as they do the early Verdi (1840-1850) which reflected earlier composers (including Rossini) and foreshadowed the mature Verdi. The Rossini works here are well worth listening to, as they show the other half of the composer we know already for his great comic operas. The conductors, Guadagno for Verdi and Cillario for Rossini, create a sympathetic framework for Madame Caballé's artistry. —G.R.

### Mahler

*Symphony No. 6 in A Minor, New York Philharmonic conducted by Leonard Bernstein. Columbia M2Q 992, 7½ ips, \$11.95.*

Music	****
Performance	****
Recording	****

If Mahler is your cup of tea, you'll drink fully here. For his Symphony

No. 6, or "Tragic," is perhaps one of his most awesome utterances and, with the possible exception of *Kindertotenlieder*, his most tragic work.

Mahler's works have often been compared with those of Richard Strauss in their grandeur of design. Each composer had gigantic aims and used huge forces to achieve them. But Strauss was a dilettante, of whom Ernest Bolch once remarked, "... Strauss is like a painter who has covered every inch [of his canvas] and then takes the paint he has left and throws it at the canvas." Mahler, in contrast, was always the true creator, forever fastidious (perhaps overly so) in his expression, compelling in his sincerity and originality.

Mahler enthusiasts should find the Sixth particularly cleansing and inspiring rather than depressing. Though the symphony isn't Mahler's greatest, it does have a deep beauty. But one must listen carefully, not casually, to appreciate the inner beauty of the work.

Bernstein is superb here. He is certainly one of the finest interpreters of Mahler and his empathy is evident throughout the work. Under his direction the New York Philharmonic lives Mahler from the first note to the last.

—G.R.

*Symphony No. 9 in D, New York Philharmonic conducted by Leonard Bernstein. Columbia M2Q 993, 7½ ips, \$11.95.*

Music	****
Performance	****
Recording	****

Mahler's "morbidity" is as evident in the Ninth as it is in any of his works, but in this last-completed symphony, the morbidity takes on a different cast. The work shows the composer's intense sensitivity and his great love for this world, coupled with his premonitions of death

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## TAPE REVIEWS (continued)

—which came a year after he completed the symphony in 1910.

Throughout we hear and feel the alterations of despair and hope. We hear sadness and bliss. The work forebodes the finality of death as well as the everlasting peace that comes with it.

As in all of Mahlers' music we find careful thought and planning. Nothing is routine; every note is an integral part of a complex and completely controlled design. And Mahler's originality and intriguing method of writing help to maintain our interest even in such an enormous structure as this.

Bernstein, perhaps the greatest interpreter of Mahler, conducts the work as if it had been written for him and him alone. Though he may fuss a bit too much with a detail here or a phrase there, he merges the orchestra so intimately into the core of the work that Mahler's Ninth, Bernstein and the New York Philharmonic become as one.

—G.R.

pace and sonority that still seem to be traditional in performances of Schumann. Unfortunately, he grossly distorts the Chopin Sonata, making a mockery of Chopin's musical intentions. It seems that only Ashkenazy and Cliburn, among today's pianists, are capable of truly distinguished conceptions of Chopin, with brilliant performances, and with that discipline and restraint that come from real mastery of an art.

The lesser works on this tape are performed well and, in some cases, admirably. But the tape is worth getting if only for the splendid performance of the re-issued Carnival. —G.R.

### Tchaikowski/Rimsky-Korsakov

*Capriccio! Capriccio Italien and Capriccio Espagnol. London Festival Orchestra conducted by Stanley Black. Cassette. Ampex/London Phase 4. LKX-94004, \$5.95.*

Music Performance	***
Recording	***

Mr. Black doesn't do too badly with light classics, but he's still to learn that element of orchestral control that's needed for really top-flight performances. The orchestra responds pretty well to his direction, but too many things are glossed over lightly. The tympani are fuzzy and almost nonexistent; the rhythm falters from time to time, and some of those solo instruments are anything but emphatic. He has a way to go; after all, this is a big step away from the usual Broadway and pop fare he's been leading so long. Plus, the masters don't take too well to "arrangements" by Stanley Black—he's got to play it the way it appears in the score; but he's getting there. Overall, an excellent tape.

—W.G.S.

### Tchaikovsky

*Waltz of the Flowers. Also waltzes from the Nutcracker, Sleeping Beauty. Swan Lake, Eugene Onegin and Serenade for Strings. Philadelphia Orchestra, Eugene Ormandy, conductor. 7½ ips, Col. MQ 998, \$7.95.*

### Rachmaninoff

*The Great Rachmaninoff, performing Schumann's Carnival Op. 9, Chopin's Sonata in B-Flat Minor Op. 35, and lesser works by Schumann, Chopin, Schubert, Mendelssohn, Liszt and Henselt. RCA Victor TR3-5-33, Mono. 3¾ ips, \$10.95.*

Music Performance	***
Recording	***

Collectors rejoice! Give praise to RCA Victor for making a monophonic tape from the material that originally appeared on 78-rpm discs. RCA deserves added praise for re-issuing these performances of this king of the piano in a double-length tape.

Rachmaninoff's playing is an exciting experience. His style is dramatic and incisive with tremendous expressive impact. Not for him the oh-so-controlled approach of most contemporary pianists (with the notable exceptions of Ashkenazy and Cliburn). Rachmaninoff as a pianist, can raise goose pimples.

In this tape, however, his greatness shows itself only in the Carnival, where he avoided the exaggerated changes of

Music  
Performance  
Recording

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Okay, maybe we're slobbering sentimentalists at heart, but here's a collection of Tchaikovsky potboilers that's bound to appeal to the less avant-garde side of our nature. Ormandy has wrapped up the quintessence of the Russian's best-loved waltzes in one neat package with superlative performances—a bit noisy in some spots, a bit electronically enhanced in others—but nonetheless superb from all angles. The recording is up to Columbia's usual high standards, and the tape will make a dandy addition to your collection. —W.G.S.

Tchaikovsky

**Tchaikovsky's Greatest Hits.** Includes: excerpt from 1st movement of Piano Concerto No. 1; Suite No. 4, 1st mvmt.; Symphony No. 6, excerpt from 1st movement; Capriccio Italien excerpt; Nutcracker Excerpts; Eugene Onegin Waltz; Symphony No. 5, excerpt from 2nd movement; waltz from Swan Lake Act I; Violin Concerto, excerpt from 1st movement; Polonaise from Eugene Onegin; Romeo & Juliet Overture; Symphony No. 1, excerpt from 2nd movement; Serenade for Strings; Waltz From Swan Lake Act II; Variations of a Rococo Theme; Sleeping Beauty Waltz; Symphony No. 3, excerpt from 2nd movement; 1812 Overture. Various artists. 3¾ ips, Mercury/Ampex ME 9126, \$9.95.

Music  
Performance  
Recording

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This one is a cram course in Tchaikovsky—cramming all manner of music down the listener's throat. Presenting a collection of Tchaikovsky is one thing; to preselect and then to excerpt from these selections smacks of Readers' Digest, Book of the Month Club, Music Appreciation and summer Pops programs—all wrapped up within the confines of a 7-inch reel of tape. Poor programming is the main complaint here—a good selection will be cut off prematurely (it's just an "excerpt" after all), while medio-

cre performances of full-length works are included. All in all, it's not a bad tape. Janis is fine (what little we hear of him), and Dorati works well on Tchaikovsky as usual. But there's little matching or dovetailing of moods, of musical content, or even of recording quality which varies all over the map. —W.G.S.

Mantovani

**Tango.** Includes Blue Tango, Whatever Lola Wants, Besame Mucho, Hernando's Hideaway, Takes Two to Tango, and others. London/Ampex, LPL 70144, 7½ ips, \$7.95.

Music  
Performance  
Recording

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As time goes by, the Mantovani sound gets to sound less like Monty and more like "something else" and that something else is quite pleasant. He's a man for all moods and all seasons, this Mantovani, and the tango tape is one of his best and least characteristic to date. No syrupy-smooth schmaltz for old-timers and bachelors trying to make out—nope, this is the real stuff and it makes you want to sweep that favorite someone off her feet and tuck a rose between your choppers—even if you've never tangoed before in your life—it's that good. The recorded sound is fabulous, as usual. Good Show, Monty! —W.G.S.

Dukes of Dixieland

**All the Best of the Dukes of Dixieland—Vols. I and II.** Includes: South Rampart Street Parade, Wait Till the Sun Shines Nellie, Hot Time in the Old Town Tonight, Muskrat Ramble, Bill Bailey, Lassus Trombone, Swanee River, Maple Leaf Rag and others. Audio Fidelity/Ampex AFF 5976, 3¾ ips, \$9.95.

Music  
Performance  
Recording

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The Dukes have always had that special something that no other Dixie combo seems to be able to emulate. Call it pazzazz, plus a certain amount of elec-

tronic gimmickry in the mastering, plus a superb recording; it's all here plus some. For these are the old favorites packaged in one neat slow-speed double-length tape that has 24 (count 'em—24) of these all-time great ones.

The two albums combined in this double-bill are "The Best of the Phenomenal Dukes of Dixieland" and "More Best of the Phenomenal Dukes of Dixieland." Okay, maybe the album copywriter went overboard in his superlatives, but what else could he say? We find it pretty difficult not to go overboard ourselves when we hear a job this well done. And the slow-speed recording has done nothing to diminish the fabulous Audio Fidelity sound. It's just great. But you'd better like Dixieland before you rush out to buy. What the hell, even if you don't like Dixieland, you'd probably dig this tape. It's the greatest.—W.G.S.

# SPOT CHECK

**No Need to Have  
Your Head Examined.**

**A RED INDICATOR  
APPEARS ON THE  
FACE OF YOUR TAPE  
HEAD WHEN THERE  
ARE ABOUT 100  
HOURS OF WEAR LEFT**

**FREE BROCHURE**

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SPOT CHECK  
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# WIRING IDEAS TO STRETCH YOUR CASSETTE RECORDER

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*One-kid testing laboratory soon makes need to replace plastic mike that comes with tape recorder obvious. More rugged, higher fidelity model such as this Shure Sphero-Dyne 533SB is ideal for the job. Top of the mike unscrews, dynamic cartridge comes out easily, then cotton packing must be removed for access to switch and wires. Note new hole drilled in side of mike case.*

If you're the proud owner of a cassette recorder, chances are you may have discovered some shortcomings of this machine. This is especially true if it has become your constant companion and you've missed getting a really good recording of a surprise visit by a marching band or some other noteworthy musical event outdoors because of an inadequate microphone.

The mike that comes with the garden variety cassette recorder is okay—it's a dynamic and it has some pretty decent frequency characteristics—but it doesn't have a well-designed resonant cavity; it doesn't have a large diaphragm area; it doesn't have triple pop and wind screen filters; and its directional characteristics aren't always the best in the world. Another problem: the plastic case on the Carry-Corder microphone has a bad habit of breaking when it's dropped on a concrete floor! The microphone will continue to operate held together with Scotch tape, but who wants a non-shatterproof mike case?

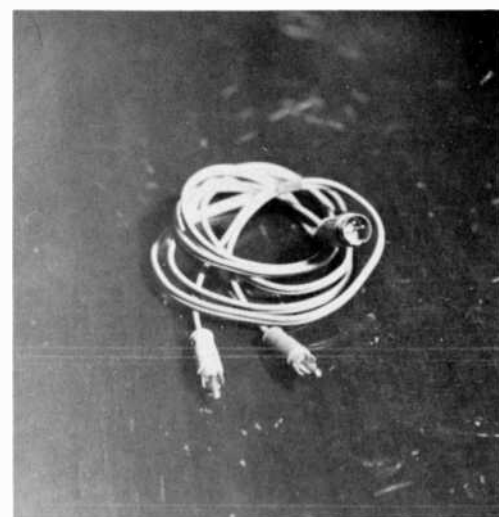
A good solution to this problem involves investing in a new microphone—or it may involve no investment at all—you may already have a good, low-impedance dynamic microphone handy that will fill the bill nicely. This is critical characteristic number 1—it must be a low-impedance type (50 to 150 ohms).

Adapting the microphone to use with a cassette recorder is no big problem, even with the European Din plugs that look so mysterious to the uninitiated. It's setting up the remote control switch that can be the hairy part of the problem. The method that we used here was to select a microphone with an on-off switch built in. While we are great non-believers in microphone switches, this is one case where it ends up serving a purpose in life.

The microphone is a Shure model 533SB, a low-impedance, wide-range, omnidirectional dynamic with an on-off switch on the case.

In disassembling the microphone, the first thing to do is eliminate the switch from the circuit. Just snip off the leads at the switch

*Two cables from mike terminate about 36 inches from mike case—the signal cable in a 3-conductor phone plug (to maintain balanced line output) and the remote control in a 3-conductor line jack. (Left below) Connecting cables for the mike to the cassette recorder terminate in European Din-plugs. See Figure 1 for wiring details. (Center below) Jumper cable with RCA phono plugs on one end and 3-pin Din plug on other by Switchcraft, is supplied*



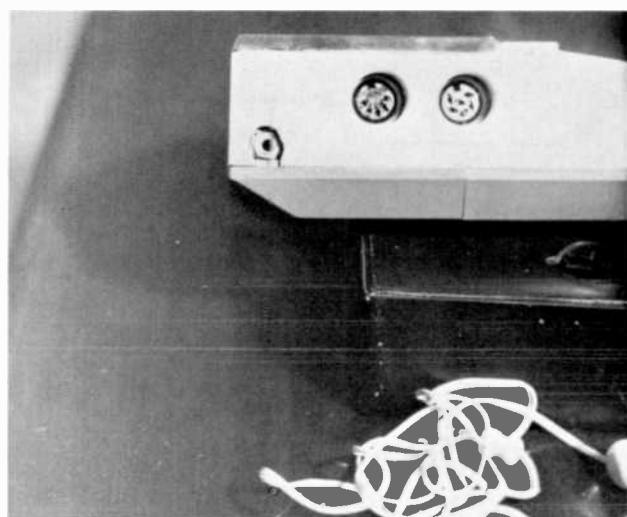
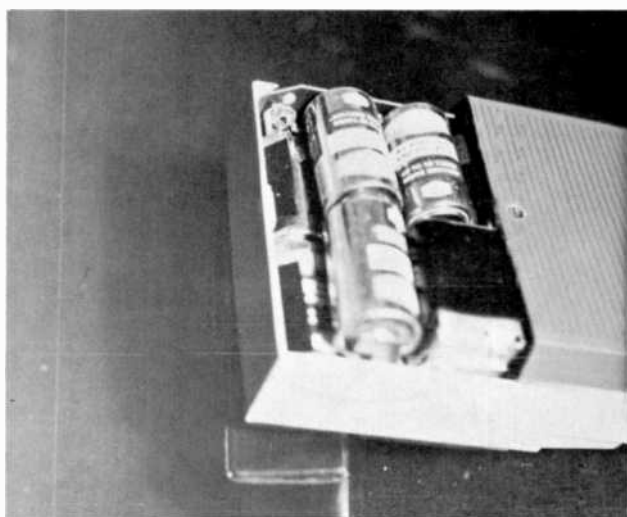
(after some fancy juggling to get the switch out of the case) and resolder them, following the original color code—black to black and white to white. Tape up the soldered connections and phase 1 is comfortably out of the way.

Phase 2 involves drilling a hole in the microphone case to accommodate a remote control cable. We used an ordinary piece of black lamp cord since it has a pretty small diameter and will handle large current loads when used with an AC machine. Boring a hole in the microphone case can be fun. You'll have to be

careful not to go too far or to cause any burring. You'll also have to be careful not to let the drill hit the microphone's wires, which would cause a very nasty break in the circuit.

Once the hole is in, find a rubber grommet that will fit and trim off one of its lips. Next, feed through the black remote-control wire, strip the ends, solder it to the appropriate switch contacts, cover the back of the switch with a hunk of plastic electrician's tape and pry the switch back into place in the microphone case. Its original mounting screws will

*with some European cassette recorders to adapt them to U.S. standards. (Right) page 36 It takes some squeezing to install the earphone jack on older model Philips and Wollensak cassette recorders—the tail end of the battery compartment is the only place it'll fit. (Left below) Outside view of the earphone jack. A similar hole will have to be drilled or cut in the carrying case. (Right below)*



secure it, and that's the end of phase 2.

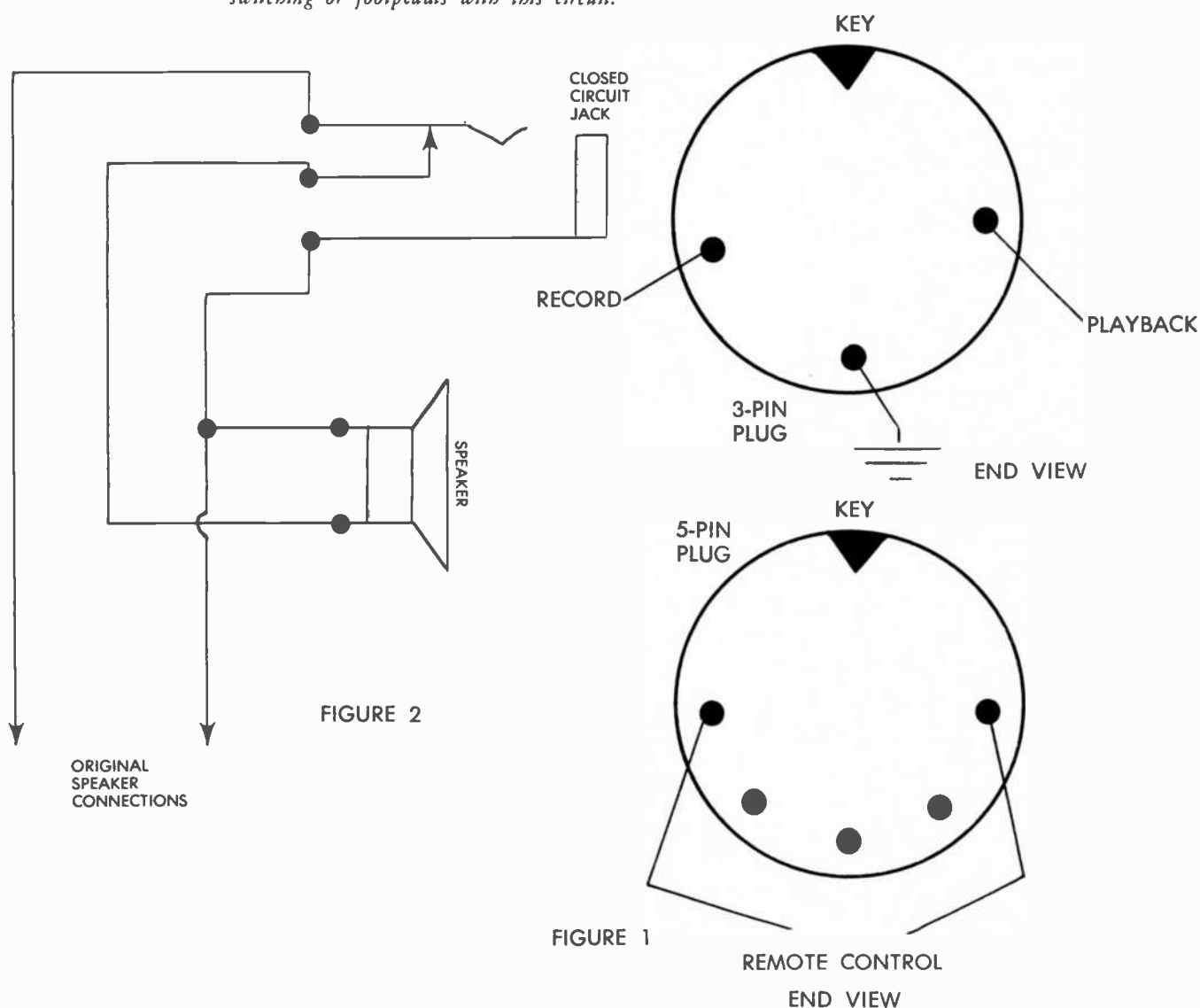
That on-off switch doesn't work like an ordinary switch that opens and closes a circuit. Instead, it's wired to short the mike's two lines together. Presumably, this avoids hum problems when the mike's turned off in its factory-wired configuration. But because it's wired this way, you'll have to do some fancy unsoldering and then *reverse* the switch position when you re-insert it into the microphone case. The reason: in the mike's "off" position, the switch is actually on. In its new role in life, you'll

want the switch's "on" position to correspond with the red dot on the microphone case.

Shure uses a rubbery potting compound to seal up the inside members of the microphone case and to prevent anything from getting loose. This is a very good idea, so we got ourselves some more of the same and squeezed quite a bit of it into the microphone case to cover up any loose wires that might flap in the breeze. The potting compound is Dow-Corning Silastic RTV and it comes in a toothpaste-type tube that sells for about \$1.35 to \$1.50. You can buy

Figure 1. Pin diagram for DIN-type plugs used for Philips and other European cassette recorders. The crucial pins are marked. For the microphone, pins 1 and 2 of the 3-pin jack are used, with the cable shield braid going to the plug's outer shell. Pin 2 is not a universal ground, and in this case is not at ground potential.

Figure 2. Wiring of closed-circuit earphone jack for the cassette recorder. Add on the wire to speaker terminal B, running a wire to jack pin 3. Wire to the speaker's other terminal must be broken, connected to pin 1 of the jack, and pin 2 of the jack reconnected to speaker terminal A. This arrangement will cut off the speaker when the earphone is plugged in. You won't be able to use remote control switching or footpedals with this circuit.



it at most radio parts distributors or by mail order. The potting compound fills in like so much rubbery toothpaste and starts to dry in a few minutes. If you get any on your fingers, just leave it on and it will peel off like a rubber glove in a short time. The Silastic cures overnight and adds to the microphone's already supreme ruggedness.

Just so you don't get hamstrung and tied down to one particular tape recorder (we assume that you might like to use this mike with some other tape recorder from time to time), we suggest cutting the cable to a length of 3 or 4 feet and installing some plugs and jacks on both the microphone and remote control cable. Since the mike has a low-impedance balanced line, we used a three-conductor stereo headphone plug with the two center conductors connected to the red and black leads and the shielded case connected to the wire shield braid of the cable. The extension cable has the same type of wiring arrangement using an extension cable jack. At the recorder end, the standard Switchcraft Din plug is used, wired as shown in the drawings. These plugs are available by mail order from Lafayette Radio.

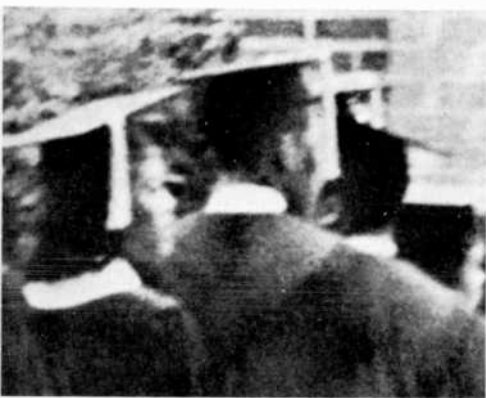
The control switch goes to a standard two-conductor phone plug and jack and then continues on to the other European plug for the recorder. These plugs are easy enough to hook up, especially in the Switchcraft version, and provide better service and contact than the original equipment ever did, if you do it properly.

A nice bonus feature of using the wide-range microphone—even ordinary dictation comes through that much cleaner and crisper on the tape.

Another modification that comes in handy, especially for older model Norelcos, is an earphone jack. This is the model that doesn't have a separate plug for the earphone, but instead requires you to plug in an expensive (\$15.00) headset into one of the Din jacks on the recorder. Aside from the price, there's only one problem with this particular arrangement: on the old-model recorders, you can't vary the volume.

If you'd like to be able to adjust the volume on your headphone and save about \$14.00 in the process, buy an ordinary Lafayette transistor-radio-type earphone and jack (about \$1.00) and install the jack in the speaker circuit. About the only place you can locate this jack on the recorder is on the little phenolic board that holds one of the battery clips at the very bottom of the machine. This will take some fancy drilling to avoid breaking any circuits and chipping the phenolic board. But it's worth the trouble; once you mount this jack and cut a hole in the carrying case in the right spot, you can have a great deal of additional convenience with your cassette recorder.

These are only a couple of possible tricks that you can use to enhance your recorder's capabilities immediately. The microphone idea, while not new for most other tape recorders, is new here, since most people are unwilling to go to the trouble of obtaining the Din plugs. It's no trouble anymore—they're readily available for about 70¢ each from many mail order houses. So buy those Switchcraft plugs, select your favorite microphone, and spend an enjoyable evening updating your cassette recorder. You'll be glad you did when you hear the first tape playback!



## HOW TAPE RECORDERS IMPROVE GRADES

*American industry is sinking millions into  
Mind, a hard headed tape teaching  
system that writes its own rules and gets fantastic  
results. It seems to work in schools, too.*

*by R. B. Pitkin*

*This article first appeared in The American Legion Magazine, to whom we are indebted for permission to reprint it. Copyright 1968 by The American Legion.*

The tape recorder, the movie, the computer, closed circuit TV and many another technical advance have been used in teaching, and usually to the good, without suggesting the use of the word "revolutionize."

Now there's a new use of the tape recorder for teaching which has all the promise of a revolution in the schools. If it comes, it will be none too soon. It is a revolution we have needed for a long time.

Oddly, it's hard to see what's "new" in it all, for there isn't a single part of the tape recorder teaching method developed by Charles F. Adams that seems either new or very exciting. It's the way the very ordinary parts are put together to give startling results that is making news.

Adams is an Oklahoma-born son of school-teacher-missionary parents. He went to 22 schools and colleges in the course of his parents' and his own wanderings. Now just 32, he



lives in Greenwich, Conn. There, as head of Mind, Inc., he and his staff produce and market tape-recorded education systems. Their firm is a subsidiary of Corn Products Corp. The corporation put Adams in business after he had developed his teaching system as a groping experiment underwritten by the National Association of Manufacturers.

The importance of Adams' way of teaching is hardly evident from a glance at his basic tools. They are cassette tape recorders, tape cassettes, accompanying textbooks, trainees who want to learn and teachers of a sort.

That's no gee-whiz list. The excitement lies in the results so far. His taped lessons are teaching people rapidly what they couldn't learn slowly before.

School dropouts, some in their forties, are learning to do arithmetic in their heads better than most of the population. So far, Adams' system focuses mainly on people whom our schools, in total, have failed. More often than not his "basic education" course sees them leap ahead from a "permanent" education level as low as third or fourth grade to seventh or eighth grade in a few months. A leap of more than two school grades in 70-odd hours is not

uncommon.

Taking in people who failed, dropped out, or were passed in school without having learned enough to pass; and who hated education and distrusted teachers, it converts them to taking pride in learning and even teaching one another.

Adams has had girls whose spelling and reading were as low as sixth grade who marched into jobs with big corporations as typists, after a brush up on the three R's in one of his taped courses, then 28 half-hour typing lessons. And all with no homework!

And that isn't all. His system doesn't need professionally trained teachers. Instead, it uses leaders, called "monitors." A bright, interested high school graduate will do, and may get by with only a little training. "A little" *can* mean only a few days. Many have made out with less.

If this sounds like spoof to you, you can't be blamed.

You might think it more of a spoof to be told that Mind classes often show a jump in I.Q.—that is, in supposed native intelligence.

One's I.Q. is supposed fairly well to measure the limits of one's learning capacity, and



*This cassette assembly line at Greenwich, Conn., includes packing not only duplicated tapes, but specialized teaching materials for each project. At bottom, slow learners experiment with remedial mathematics program. MIND grew out of project for the National Association of Manufacturers who saw in it a way of giving new skills to jobless workers, improving the speed of learning in schools, etc.*



to be subject to some, but little, improvement by training.

Adams is presently working on a program that draws a target squarely on the proposition that I.Q.'s can be increased more than anyone has supposed, and he has room for optimism. In Laurens, S.C., his basic three R's course was taught to a group of dropouts of lower grade school level, white and Negro, male and female, young and old. In ten weeks they not only leaped grades in learning, but their average I.Q. as measured by standard tests rose from 74 to 81. Many of them were over 40 years old and most had been unhirable ever since Laurens County switched from mainly cotton growing to mainly industry. But 95% ended up in steady jobs in industry soon after their three-month Mind course. Some of the group started at below 70 in I.Q. At that level it is normal to despair of ability to learn to read. In ten weeks they learned to read, and developed the I.Q. to make it believable. *You* might be hard put to keep up with the basic math they learned to do in their heads at the same time.

Adams hasn't yet modified Mind specifically for use in public schools. But the Park School—a private school in Indianapolis—purchased his arithmetic course, designed for adults, and tested it on grades three through seven. The "experimental" children jumped more than a year in arithmetic in three months, while those not included moved ahead, as might be expected, three to three-and-a-half months. Strangely, *both* groups showed an unexpected and unexplained jump in I.Q. Concentration may have done it for the Mind group. Mind permits student concentration that's impossible

in normal classrooms. Competition *may* have helped the non-Mind group raise its I.Q.

What the result will be when Mind, Inc., gets around to tailoring courses specifically for schoolchildren is entirely up in the air. The Park School reported that even third-grade children had no great trouble handling the tape recorders or following text and tape together, though Adams designed the course for grown-up dropouts and was not able to put his own "monitors" in the school test.

Much of each course is self-teaching with tape and text, and the monitor leads more than she teaches, so it is a fact that even at third-grade level the Park School students largely taught themselves arithmetic. By and large, the cooperating Park School teachers reported that the adult-designed pace was a little too fast for the children. Still, they jumped a year in three months!

Probably the most impressive evidence that there's no spoof in all this is that Corn Products Corp. put up a sizable investment to move Adams from his experimental work at N.A.M.'s offices on New York's Park Avenue and set him up in business in Greenwich. Corn Products' target was to sell Mind courses to American industry and to government-sponsored projects that are reacting to the complexities of the "poverty" problem. One of the complexities is that about 20% of adult Americans, and a high concentration of "the poor," are illiterate or close to it—and as a result almost powerless to help themselves. Mind, Inc., offers a system of education to industry to run schools in their plants.

Continental Can rapidly expanded Mind to many of its locations, then sponsored a

community basic education course in basement property of the Urban League on 114th St. in New York's Harlem. They picked that block because all earlier training projects, government or otherwise, had failed there. The Mind course went over with a bang and "graduated" its 114th St. class this June. The students were mainly Negro dropouts, with little record of steady jobs. Adams ribbed Continental Can for "stealing his students" when the firm found that some of them had become hireable and gave them jobs before they'd finished the course. The N. Y. Police Department hired away a student or two, also. Some had been jobless two and three years. Forty-six of some of the toughest cases for any teacher graduated. John Coleman, who ran the show, said their school work was excellent and their change in attitude was "fantastic."

Mind, Inc., isn't in the black yet, but in the first year the electrifying results from Mind courses induced more than 50 large American corporations, and more than 70 clients in all (including a few schools and several government projects), to purchase \$300,000 worth of materials and services from the infant concern. The first customer was the community project in Laurens, S.C. (where the I.Q.'s jumped from 74 to 81 in ten weeks). That was paid for by the U.S. Government's Office of Economic Opportunity, and run by the United States Research and Development Corp. The first Laurens course ended just about a year ago. The project is now in its fifth cycle.

The expectation at Mind, Inc., is that the firm will sell more than \$1 million in taped education this year and over \$3 million next year. It was but a year and a half ago that

Adams, vice president Larry Knauff, and two or three others started the firm in a walk-up office of an old hotel building on West Putnam Ave., in Greenwich. The Laurens project was the first field operation, set up in late May and June last year. Alan Rosenfeld, who had come over from McGraw Hill to be Mind's operations manager, found himself flying to Laurens to set up the course there almost before he could get his Mind desk organized. Rosenfeld's rapid immersion typifies one of the astonishing things about a Mind project—that is, how quickly an intelligent, interested person can jump in and make it operate.

About 1,000 Mindmasters are presently in operation. A Mindmaster is a Norelco version of a cartridge tape recorder used by Mind. Mind's recording studio can duplicate from master tapes about 500 cassettes a shift. By adding modules it can go to 10,000 a day. The firm has field representatives in Washington, New York, Los Angeles, Detroit and Chicago. New offices are opening in Atlanta and Dallas.

Any reader who is by now impatient to know what on earth is on the Mind tapes and in its texts or to know if it might be extended throughout the schools and colleges can get no fast answer. The distinctions between Mind and many another teaching method might seem to lie in thousands of item-by-item distinctions between what to keep and what to throw out, between what to emphasize and what to de-emphasize. But it isn't that complicated.

Anyone who examines Adams' tapes and texts and who has a teachers college degree (as this writer has) easily puts his finger on a basic difference between Mind courses and pro-

*MIND maintains its own duplication facilities. Below, some students learn mathematics with aid of Carry-Corders.*

fessional education. And from that, the thousands of differences in detail flow.

Adams based his programs on the use of tape. It's as simple and as profound as that.

The tapes are the guts of a Mind course, along with the programmed texts that are read and marked up while the student wears his headphones. They are not "aids." Take them away and there's no course.

Some advantages of fully exploiting tapes are immediately apparent, though there are more that are subtle. A tape can be remade, edited, spliced and remade again. It can be tested on students to capitalize on what works best, and repair what works least.

A board of the most knowledgeable people in the world can construct a tape course to the last detail until it is nearly perfect. It can then be duplicated by the hundreds of thousands and theoretically be made available to anyone, anywhere. Everything can be controlled, right down to the voice on the tape that seems to get the best results.

The same subject can be put on tape at a fast pace for bright students and a slow pace for slow students. Or, working from the same tape, a slow student can replay it as he needs to, while a fast one can sail on. They can both put in 60 minutes of learning during the same hour in the same classroom, each in his own way, without interfering with each other. Twelve or 20 students in a room can be listening to different parts of a lesson at the same time.

The teacher can go to help a slower student without making the others mark time and perhaps get into mischief. They don't need the teacher's attention to get on with their work



during every classroom minute. Overcrowded classrooms? On the tape there is a teacher for every student.

Most learning comes from drill. It is the most important thing for the learner. But drill is the most tedious (and often an impossible) exercise for the teacher to administer en masse. The Mind tapes are drill, drill, drill. The teacher is entirely free from drilling, while her whole class gets all the drill it can take. She is freed, if she has gifts, to use her outstanding talents to help those who most need help, while

*Harlem students range  
in age from 19 to 48, use  
tapes in MIND learning.*

the others forge right ahead.

It is almost impossible in a usual classroom to get above the level of "the right answer." If Susy gives the right answer, whether she took ten seconds or a half minute, Susy is A. The teacher probably doesn't live who, day in and day out, can train a whole class to step up the speed of giving right answers. But it is an integral part of Mind courses to increase the speed of correct work by the whole class at the same time.

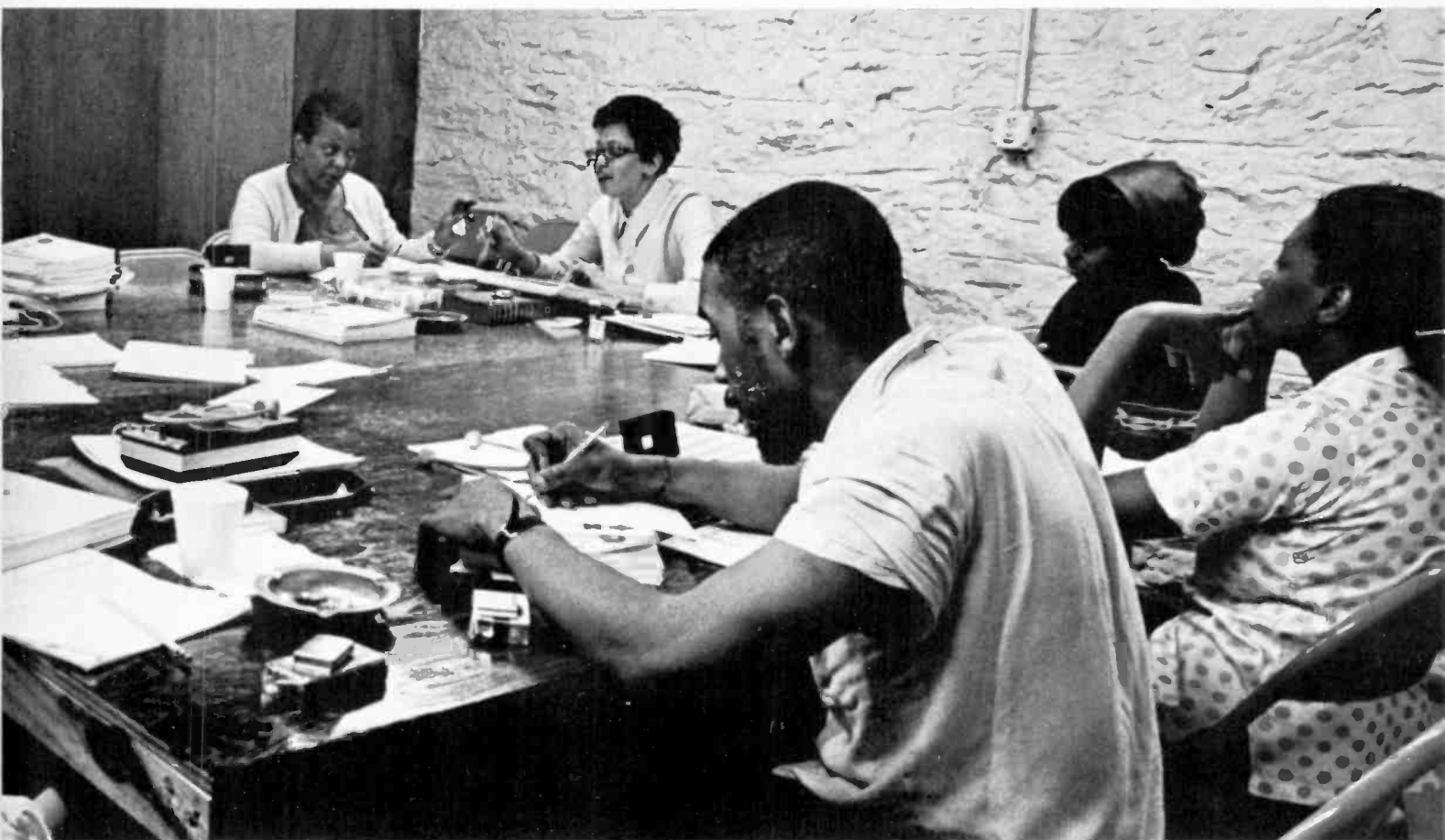
Not long ago Adams spoke to a group of Connecticut bankers. He let them listen to an early Mind arithmetic lesson. It seemed absurd. The tape gave them such problems as "add 7 and 2" and allowed ten seconds of silence to write each answer. That was time enough to write "9," wonder what you'd have for dinner tonight and, perhaps, toss a spitball. Then the bankers heard an advanced lesson. Each of a long list of problems had seven parts, all to be carried in one's head, with two seconds between parts—and write nothing except the final answer. They heard dozens of problems, one after another, of this sort: "Add 9 and 14, subtract 8, multiply by 8, divide by 6, add 61 and divide by 9." The bankers admitted that they got lost (if *you* got lost, allowing no more than two seconds between steps, the answer to this is 9, too).

Mind is teaching illiterate dropouts to handle such problems routinely during a 160-hour course in which they also are mastering the use, writing, reading, pronunciation and spelling of the 5,000 commonest words in the English language. When the Connecticut bankers realized that, they knew they were listening to a revolution in teaching.



In Mind classes, the trainees do their homework in school. The tape-player makes it possible. A Mind class is, more than anything else, a group of people doing their homework in an assured atmosphere, with instruction in their ears to move them along and human help at hand when needed, while nobody suffers for want of attention or from distraction. Since the schools have admitted, *de facto*, that most learning actually takes place while doing homework (and they are right) the center of the Mind "revolution" is that it has developed, at last, a way for everyone to do his homework in class. Many Mind students, excited by their sudden leap in learning, beg for homework in their enthusiasm. But they get it only as a supplement.

The Mind courses recognize what every teacher and anyone who ever went to school recognizes. Public education is full of non-teaching pressures that force anxieties on students and interfere with their learning. Homework is one. How did you feel when you went to class with your assignment unfinished? Grades are another. They exert an artificial



pressure that creates anxiety in students without teaching them anything.

No grades are necessary in Mind courses. Every student knows at all times just how far he has moved along. He can run his tape backward and forward to what he knows and what he doesn't know. Being needless and harmful, there are no grades in Mind courses, and none of the resultant anxieties that go with them. The courses are all achievement and challenge. They produce confidence and ambition.

Examinations and tests are tremendous aids to learning *if* the student can mark his own paper. We probably learn nothing quite so well as that which we have gotten wrong and then corrected. How old the saying: "We learn from our mistakes"!

Mind is full of tests. In its basic education courses, questions fired by tape are answered by students in their workbooks. At the end of a test a student may pull a plastic sheet from the back of his book, lay it over his test answers and see immediately which he got wrong.

His next job is to backtrack in book or on tape to find the right answers. For review, he

may do the whole test over, and see if he can get it all right as a result of correcting his test. After a test, a student who had trouble with certain questions might tell the others, "I got number 12 wrong, and for the life of me couldn't backtrack to the right answer." The other members of the class will then help him get it.

Result: Instead of a poor grade a few days later, a student who does poorly in a test may have mastered the material before the test hour is up. Those who do well reinforce their knowledge by immediately helping the others.

There seems to be nothing about Mind that cannot be applied at all levels of schooling, given the time and will to create courses in anything under the sun. Chemistry, physics, history and other classic school courses offer no apparent obstacles to the rapid acceleration of learning via sound and TV tapes. The peculiarities of each subject would call for intelligent variations in the use of the devices. The rapid teaching of hundreds of skills, other than typing and stenography, would seem adaptable to Adams' methods.

Continental Concert Hall, American Airlines Classical Programs Nos. 1, 214 and 216: Here is more orthodox fare—the final movement from Dvorak's New World Symphony on Continental, the complete Schubert Unfinished on CW-1, the overture to Strauss' *Die Fledermaus* on No. 214. The latter tape, drawn from the Deutsche Grammophon catalogue, includes helpings of Tchaikovsky, Beethoven, Ravel, Moussorgsky, Mendelssohn and others by the Berlin Philharmonic; while CW-1, from Command and Westminster, throws in Mozart, Haydn and Handel with more familiar music by Tchaikovsky, Moussorgsky and two movements from the Brahms First Symphony. There's been a distinct improvement in signal-to-noise ratio and dynamics from No. 1 to No. 214, incidentally.

### POPULAR

American Airlines Popular Programs 7, 11, 19, 36 and 45 are drawn from the catalogues of Warner Brothers and Reprise Records and feature such artists as Frank Sinatra, Trini Lopez, Dean Martin, Nancy Sinatra, the Les Baxter Orchestra, Bob Eberly, Keely Smith, the King Family, Vic Damone and others. All run approximately 180 minutes and contain approximately 65 hit tunes. Programs are remarkably similar (though there are no actual duplications from one tape to another), and the ones you choose should depend on whether the songs and artists you want get together.

American Airlines Popular Programs 44 and 48 are two of the most recent Capitol entries and include Ella Fitzgerald, Nat King Cole, Stan Kenton, Guy Lombardo, Glen Campbell, Peggy Lee and others. Our choice for repeated listening is W-48, which includes Barbra Streis-

and's "Don't Rain on My Parade," a couple of Ella Fitzgerald medleys and some string arrangements of Moon River, and Live for Life by the Jackie Gleason orchestra.

American Airlines Popular Programs Nos. 18, 39 and 46 feature respectively the artists of ABC-Paramount and Command; Project 3 and Mercury-Fontana-Philips-Smash. Not surprisingly, the first two lean more to instrumentals than do the other pop tapes we auditioned, with Project 3 offering Bobby Hackett, Tony Mottola and the Enoch Light Orchestra, among others. Even the Mercury reel stresses the Ray Davies and Paul Mauriat orchestras and the Clebanoff Strings at the expense of the Lennon Sisters and Smothers Brothers who fill up the tape.

Are the tapes a good buy? In absolute terms, there's no doubt that you get more music for a buck with them than with conventional albums. However, the serious listener or collector may prefer to have his Sinatra or Sibelius all in one place when he wants to listen to it. Are they satisfactory as background music? Eminently so—provided you're aware that there's an announcer on the Continental and classical tapes. As a group, they're by far the most intelligently programmed prerecorded tapes we've ever encountered. And while even the best of them—the Deutsche Grammophon No. 214—doesn't sound quite as good as a 7½ ips tape played through a component system, each of them sounds at least as good as contemporary 3¾ ips tapes. A word for sound hounds—the program numbers are chronological, which means that the highest numbers are the most recent and sound best. The earliest suffer from some tape hiss and lower dynamic range.

few complete Ring Cycles, with the exception of those staged at the Bayreuth Festival in Germany. Here, at the composer's birthplace, audiences have been able to see all four operas with a single conductor and unified casts.

Consequently, when conductor Herbert von Karajan undertook to produce a complete Ring for the Salzburg Festival this year, he not only reexamined the original score, but called upon the latest technology to create a new Ring. Deutsche Grammophon is in the process of taking the performances down on tape with a view to releasing them during 1969.

The dynamic German conductor became the first serious musician to call on the cassette recorder to help him shape a musical performance. The problem, in part, is the sheer size of the vocal forces Wagner calls for—one of the largest orchestras in all of opera, a full chorus and as many as 14 soloists, some of whom appear in three of the four works.

As baritone Thomas Stewart, selected by von Karajan for the role of Wotan, recalls, "He demands as complete and polished musical and vocal interpretations as was possible." To get them, von Karajan recorded not only the live performances at Salzburg but also the weeks of intensive piano and orchestral rehearsals.

Stewart notes that each member of the cast then was given a cassette recorder together with cassettes to listen to and study for three months so that he was completely familiar with every nuance of his role from a musical and vocal standpoint."

"The subsequent stage rehearsal in Salzburg was held with the singer not being re-

quired to sing a tone," Stewart continues. Instead Karajan, the musical and stage director of the production, used a cassette with the music so that he could give stage and dramatic instructions to the soloists.

"The result was that the singer's vocal reserves weren't depleted during stage rehearsals, as is so often the case," Stewart notes. The Philips recorder not only took the pressure off the vocalists, but avoided the need for long and frequent orchestral rehearsals as well.

Cassettes may not be the traditional way to record an opera, but then Herbert von Karajan is no traditional individual. Dashing handsome, he loves sports cars and skiing, flies his own plane, maintains estates in Casablanca and on the Cote d'Azur. A sort of Teutonic Leonard Bernstein, if you will.

Wagner has formed an indelible part of von Karajan's career, beginning with a performance of *Tristan* in 1936, when the conductor was barely 30. The performance created something of a sensation in Berlin, so when Wilhelm Furtwaengler retired from the Berlin Opera in 1941, von Karajan was the obvious choice to succeed him.

Operagoers quickly discovered that the *kupellmeister* conducted operas without a score—even the lengthy and complicated works of Wagner. During 1941, Adolf Hitler, at the time Wagner's number one admirer, attended one of these performances and caught the youthful maestro in a mistake. After the performance, von Karajan was told politely but firmly to use a score in the future.

After World War II, von Karajan appeared at Bayreuth, Wagner's spiritual home, where he recorded one of the earliest complete Wagner operas, *Die Meistersinger*.

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## NOTES

We never realized how many friends we had, nor how patient and understanding our readers could be until TAPE RECORDING was hit by two disastrous strikes (we were involved only as a customer) earlier this year. The first, against our printer, promised to be settled quickly. But as it dragged on, we searched for and finally found another printer who promised to help us make up for lost time. Before he got the chance, however, the mailing house which addresses and ships your copy was hit by a second strike. This time, we were prevented from removing our addressograph plates and having another mailer ship for us.

During this trying period, we received a number of phone calls and letters. We very much appreciate your interest and concern. To make up for the delay, everyone on the staff, from the publisher and editor on down have determined to make TAPE RECORDING even more informative and interesting in 1969—and, more important, to get your copy to you on time.

It really makes an editor feel good to have readers call demanding their copies—who are willing to bear with us once we have a chance to explain the situation.

—R.A.

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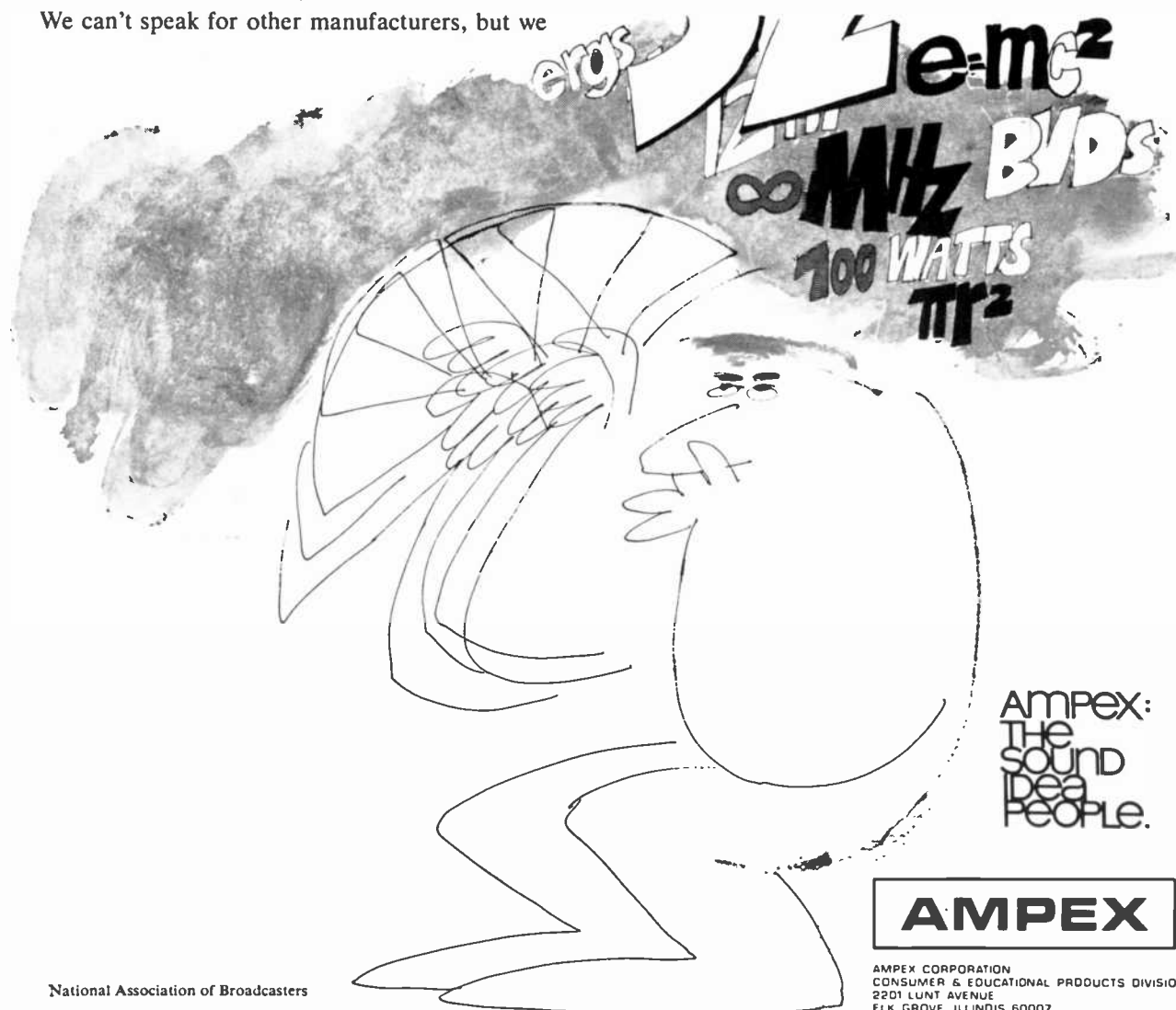
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