

# HIGH FIDELITY trade news

VOLUME 26, NO. 12  
DECEMBER 1982

## Bread & Butter

Turntables And Cartridges Sales Are Stable

## Cleaning Up With Accessories

Essential Performance Items

Bring 'Em Back For More • A/V Furniture



# The Dawn Of Digital

The Wait Is Almost Over

# KENWOOD.

## FOR THE AURAL MINORITY.



In the vast marketplace of sound electronics, there remains a select group of consumers who refuse to settle for anything less than the best.

Which is why you should know about Kenwood's L-02T tuner and L-02A integrated amplifier. They're the top of the line from a company whose innovations in sound technology border on the miraculous.

Of course, that technology is by no means exclusive to these two components; it's reflected in all our audio and video systems, components, and exemplary car stereo systems.

Kenwood technology. It's achieved a degree of quality matched only by its profit margin.

### KENWOOD AUDIO EQUIPMENT

Kenwood Electronics, 1315 East Watsoncenter Road, Carson, CA 90745.



One of the greatest personalities in music is back to help you sell your best line in tapes. Stevie Wonder will be adding his own personal magic in ads that tell the story of TDK's leadership to his millions of fans.

You'll see Stevie everywhere—on TV and in national ad campaigns. Our multi-media push will increase your store traffic and sales for TDK cassette tapes across the board. Especially your already fast-selling TDK Reference Standard Series. With improved tape formulations, the Reference Standard Series offers your

customers exceptionally high performance at outstanding values.

MA, the metal-bias cassette, is a moderately-priced version of TDK's state-of-the-art MA-R.

Super Avilyn SA is the industry's high bias reference standard cassette.

AD is the premium normal bias cassette that's ideal for all portable and car stereo applications.

D is a moderately priced normal bias cassette that delivers a finer performance than cassettes that cost more.

Music-quality MA and AD microcassettes, and general

recording quality D micros offer the same advanced tape formulations used in TDK's full-sized cassettes.

And for the critical requirements of your open reel tape customers, TDK's LX Professional delivers higher output performance.

TDK offers special product packaging to meet your special sales needs, including blister packs, poly packs and more.

So the winning combination of TDK and a super Stevie Wonder promotion means an exceptional opportunity for you to increase your profit potential on your already best-selling, fast moving line of recording tapes.

# The leader in music is helping you sell the leader in tape.

 **TDK**  
TDK LEADS THE WAY



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Profits in furniture  
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Sample some accessories  
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The Dawn Of Digital  
The Next To Arrive Cover

**On The Cover**  
Sony's CDP-101 compact  
disc player. See story page  
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**BPA**





# PICK A WINNER!

The people who brought you the first truly portable stereophone, the Koss Sound Partner, now bring you the Koss Music Box. It's the slim, pocket-sized portable AM-FM stereophone receiver that sounds so great your customers will think they're listening to a home component system.

You already know that the personal, portable sound market is exploding. More than 17 million portable radios were sold last year in the United States, alone. Unfortunately, there is a lot of inferior product out there that can't meet the demands of the discerning music lover.

The Koss Music Box is so superior in sound quality that we invite you to let your customers compare it with quality home component systems. They'll be amazed and so will you. With the Koss Sound Partner stereophone included with the Koss Music Box, your customers can't buy a better portable AM-FM stereophone receiver with a better sound any place for any price.

The Koss Music Box is the right sound at the right price—\$89.95 suggested retail—for today's on-the-go, active lifestyle. It slips into shirt or pants pockets, slips onto belts or over a wrist. And the Sound Partner folds down to fit in the palm of a hand.

Contact your Koss Representative for the hottest turn-on in the audio world, today. It's a sure winner!



Koss Music Box is light, slim and truly portable.



Koss Sound Partner stereophones fold down to palm-size.



Koss Music Box slips into pockets, loops over belt or wrist.

© 1982 Koss Corp.

## **KOSS** *musicbox*

PORTABLE AM/FM STEREOPHONE RECEIVER

INTERNATIONAL HEADQUARTERS/4129 No. Port Washington Avenue Milwaukee, Wisconsin 53212 Facilities: Canada, U.K., France, Germany, Ireland

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## **What's Inside**

It's Christmas again, and the buying season should be well under way. Most retailers haven't got time to sit back and take stock of the past 12 months or think about what the next 12 will hold, but that's exactly what they should be doing. With the Winter CES coming up next month, and the rash of new products that it invariably brings — not to mention the rash of new product *categories* — retailers will be faced with even more decisions about what to stock and how to sell it.

One piece of equipment that has been getting attention for some time now bears consideration. The digital audio disc player and accompanying software should be ready for distribution during the coming year and discriminating music lovers will be ready for them. Will you? To give you an idea of where the concept stands at the end of 1982, contributing editor Cindy L. Morgan talked to the people in the industry most intimately connected with the new technology. Her report, which begins on page 13, offers the most up-to-date information on the subject compiled in one place.

Meanwhile, analog systems have been with us for years, and turntables and cartridges are still "bread and butter" items in audio stores. Beginning on page 19, Alexandra Wickser reports on what dealers say are their most popular models.

One potential source of profit that no retailer can afford to overlook is accessories, whether they be head cleaners or fine furniture to house A/V gear. As HFTN newcomer Deborah Merck reports beginning on page 23, accessories can represent up to 20% of a store's dollar volume.

Norman Eisenberg, an outstanding audio writer whose work recently appeared in *Playboy*, discusses the benefits of using superb recordings when demonstrating superb equipment on page 34.

Opening a new store is risky enough in the right location, but the wrong spot can spell instant death. Beginning on page 38, real estate expert Oscar Reid lists nine variables to consider *before* picking a store location.

When the going gets slow, the tough trim the deadwood from their ad budgets and keep right on going. As the article on advertising and promotion on page 42 points out, a down economy is *not* the time to hide one's light under a barrel.

If the recession has a silver lining, it's that people are spending more time at home — in front of their TV sets. Sales of VCRs and color video cameras are way up from last year. Check page 46 for the figures.

A Boston-area hi-fi dealer found out that computers aren't just for the customers. Read about cutting administrative overhead beginning on page 48.

Finally, technical editor Ralph Hodges discusses the problems that the wrong tone arm/cartridge combination can cause and offers a simple remedy for the problem beginning on page 53.

T.L.M.





AT6015  
**TechniClean™**  
Audiophile Record  
Maintenance  
System

# Improve your vinyl hygiene with new record cleaner

## Stereo

Rich Warren

Ever wonder why friends start edging toward the door when you turn on your stereo? First, their ears twitch, then teeth grind and finally, with a hurried goodbye, they're out the door. Perplexed, you continue playing away. Psst—It's your vinyl hygiene.

Your records sound worse every day. Soon you'll be a total failure at throwing parties. Nobody wants to hear your stylus sounding like a car driving down a gravel road. Strangers edge away from you, whispering under their breaths: record-abuser.

There's hope for you to make new friends and rejoin society. In the past, there was only one company that made a good record cleaner. Now there is one that makes a great record cleaner. It's TechniClean from Audio-Technica, officially numbered AT6015. The approach is not revolutionary, but the performance will make your past ties a success in no time. TechniClean pleases esthetically. At first inspection, it's a brushed, rectangular aluminum block for proper orientation. Grasp the top and it separates into an easily held record cleaner and its base, with a recess for the supplied large pad-cleaning brush.

The plush pad of the AT6015, with specially angled fibers, is large and gently curved. Unlike the competition, there are spaces between the rows of cleaning fibers, allowing the dust to be collected rather than spread around the disc. If applying cleaning fluid to the pad seems clumsy and imprecise, the AT features two small holes

on top for a squeeze of the special solution, with the pad receiving just the right amount.

The TechniClean solution is a mild, non-alcoholic cleaning agent that leaves no residue and doesn't damage records in any way. Repeated cleaning of the same disc showed no deterioration of sound quality. **Its efficiency impresses.** Dust appears on the pad from records already appearing to be clean, and it's amazing how much debris materializes from new discs.

A novel feature of TechniClean is its anti-static property. While most record-cleaning systems fall to drain static charge, the AT helps considerably. The pad's damp fibers conduct the charge to the metal handle and to your fingers, where your body provides ground potential. You won't feel a shock, but your records will feel relief. And it's all accomplished without depositing a chemical agent on the disc.

The Audio-Technica TechniClean is the first new product to improve upon previously established similar record cleaners. Obviously, a great deal of thought and research brought about these improvements.

Pretty soon your friends will be asking how you got back in the groove. Just tell them cleanliness is next to high fidelity.

© Chicago Sun-Times, 1982. Article by Rich Warren.  
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**IT BEARS REPEATING...** "In the past, there was only one company that made a good record cleaner. Now there is one that makes a great record cleaner. It's TechniClean from Audio-Technica..."



**audio-technica®**

AUDIO-TECHNICA U.S., INC., 1221 Commerce Drive, Stow, Ohio 44224 • (216) 686-2600



**FREE P-O-P DISPLAY**  
with qualifying order.  
See your A-T rep for  
details today.



**EIA COMMITTEE REOPENS STEREO TV TESTING:** Reacting to charges that parts of the record of its TV stereo testing were missing, to changes made in systems being considered following the testing and to questions about compatibility with cable television, EIA's Multichannel Sound Subcommittee delayed its scheduled September vote to recommend a single TV stereo system to guide the industry. Late in October, EIA was completing a plan to complete the technical record of the testing, according to EIA's Eb Tingley. Although the letter questioning testing procedures from Telesonics, one of the three companies whose systems are being considered, also cited legal precedents that seemed to indicate that professional organizations are subject to antitrust prosecution, Tingley said the committee would proceed with its new testing, a process he speculated would take about eight months. He added that if the FCC issues a notice of proposed rulemaking for TV stereo, the comment period was expected to be long enough to allow the committee to finish the new testing. If not, the committee still has several options to delay adoption of the rules.

**EIA/CEG CREATES COMPUTER DIVISION:** In response to the growing importance of personal computers to the consumer electronics market, the Consumer Electronics Group of EIA has formed a Computer Division to develop methods of gathering and analyzing computer and video game sales data. Structured along the lines of CEG's video/audio statistical program, the division is expected to begin providing data about the fast-changing computer and game industry within a year. The newly elected CEG board of directors voted to create the division during EIA's 50th Annual Fall Conference in Los Angeles in October.

**MAGNAVOX SUES ACTIVISION FOR PATENT INFRINGEMENT:** The Magnavox Co., subsidiary of North American Philips Corp., filed suit in California in October against Activision Inc. for infringement of U.S. Patent Re. 28,507 resulting from Activision's manufacture and sale of television game cartridges. The patent is one of several television patents owned by Sanders Associates Inc. and licensed exclusively to Magnavox. In recent court action against Mattel Inc., a federal judge found the patent to be infringed by the combination of Mattel's Intellivision microprocessor-based master component with some of Mattel's game cartridges. He further held that the manufacture and sale of cartridges for television games covered by the patent constitutes contributory infringement.

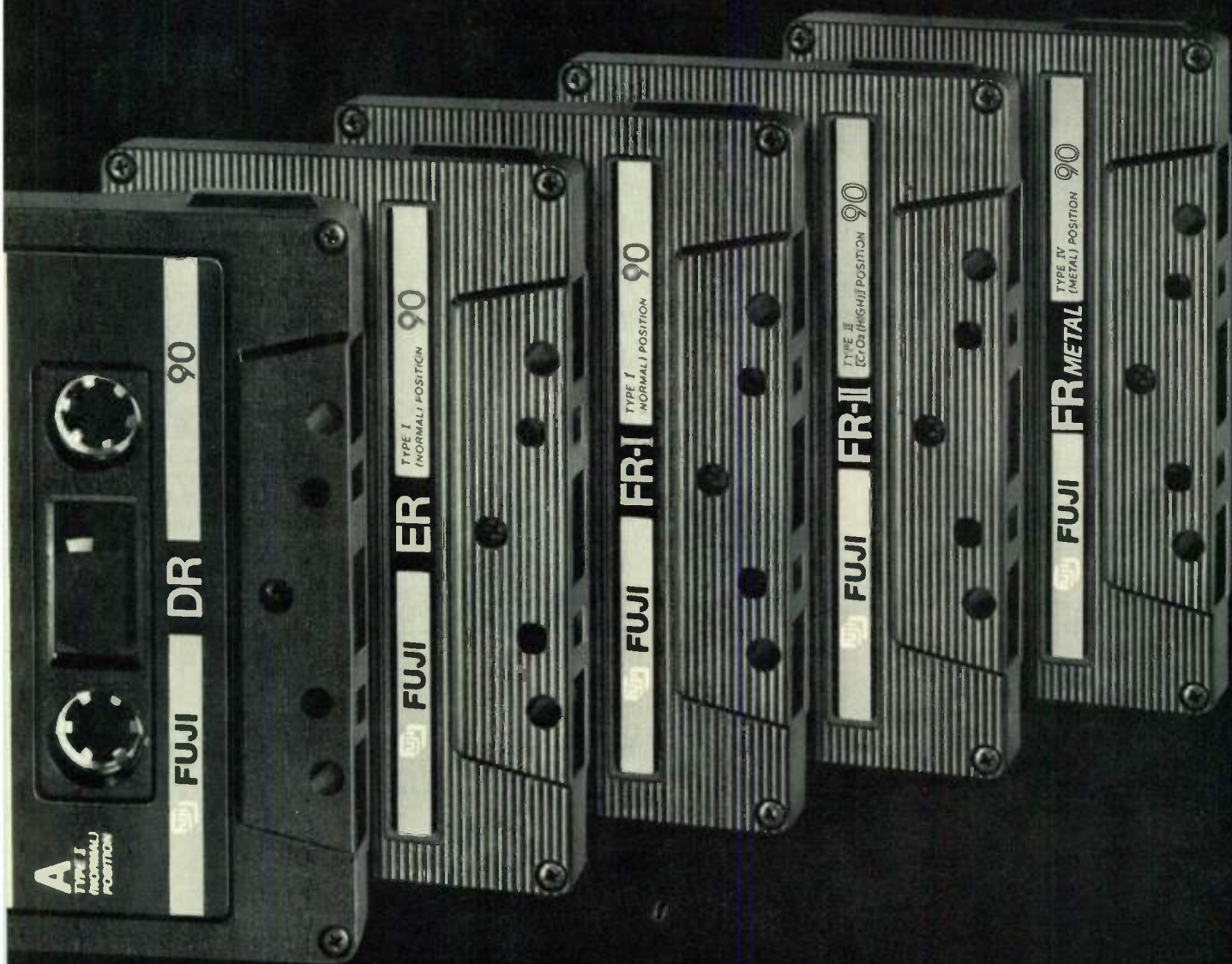
**HARMAN ACQUIRES INFINITY:** Harman International Industries Inc. announced last month that it had reached an agreement in principal to acquire Infinity Systems Inc. Chairman of the board Sidney Harman said the acquisition would provide a worldwide distribution network for Infinity. Arnie Nudell, one of Infinity's founders as president and chief executive officer of the autonomous Harman division, still headquartered in Canoga Park, Calif.

**dbx STRIVES FOR DIGITAL AFFORDABILITY:** A digital audio processor for the professional market priced less than \$5,000 was unveiled during the 72nd Convention of the Audio Engineering Society in Anaheim. The new processor was developed by dbx Inc. with a system it calls Companded Predictive Delta Modulation, much less complex and, therefore, less expensive than Linear Pulse Code Modulation, the technology upon which other digital processors, priced in the \$30,000 range, are based. dbx engineers claim that two technical innovations they devised solve the low range and noise problems that thus far have inhibited development of delta modulation systems, providing their Model 700 with performance equal to that of a 16-bit PCM system at a substantially lower cost. The company hopes the attractive price of its new digital audio processor will boost production of digitally recorded audio software and, as a result, encourage introduction on the mass market of the digital audio disc player.

**RCA WILL BUILD STC SATELLITE:** The Associated Press reported that The Satellite Television Corp., subsidiary of Communications Satellite Corp., has selected the RCA Corp. to build satellites for its Direct Broadcast Satellite service. Under terms of the contract, said to be worth more than \$100 million, RCA's Astro Electronics Division must deliver one satellite within 39 months and a second three months later. STC was the first company to win FCC approval for its DBS system.



# ANNOUNCING THE BEST AUDIOTAPE WE EVER MADE: AND THE EASIEST AUDIOTAPE YOU EVER SOLD.



Five new premium formulations that deliver  
more performance from any tape machine.  
Packaged and priced to deliver more sales and profits.  
Call your Fuji sales representative today.



**If it's worth taping, it's worth Fuji.**

© 1982 Fuji Photo Film U.S.A., Inc., Magnetic Tape Division, 350 Fifth Avenue, NY, NY 10118



## Coalition Battles Recording Tax

WASHINGTON, D.C. — Imposing a proposed recording tax on audio recorders and blank tapes would be inequitable, inefficient and costly to consumers and would ignore the primary reason for declining record sales, EIA/CEG senior vice president Jack Wayman told a House Judiciary subcommittee in August.

Wayman rejected the recording industry's claim that its sales slump is largely a result of home taping. He said the overall economic recession, competing video revolution and changing consumer preferences for portable music have been much bigger influences.

To help block the proposed recording tax and other taxes related to consumer audio recording equipment, an industry-wide coalition of manufacturers, trade associations, retailers and consumers organized the Audio Recording Rights Coal-

ition to combat legislative attempts by the recording industry to constrain free enterprise.

One of the coalition's first efforts was to commission the research firm of Yankelovich, Skelly and White to do a study about consumers' home audio taping habits. Sept. 22 the research firm presented those findings, which supported the coalition's position, to the same House subcommittee.

Both House bill No. 5705 and the amendment to Senate bill 1758, which introduced the audio royalty tax, remained buried in committee at the close of the regular sessions. Allan Schlosser, director of public affairs for EIA/CEG, said the coalition did not expect the issue to resurface during the special lame-duck session of Congress scheduled to begin in late November. However, the group is ready to "fight another round," if the bills see committee action in the short session or if they are reintroduced in the 98th Congressional Session.

## Sony Separates Audio And Video

PARK RIDGE, N.J. — In a move to strengthen its marketing of consumer audio and video products in the United States, Sony Consumer Products Co., a division of Sony Corp. of America, has established separate audio and video divisions and instituted a series of senior management promotions.

Joseph A. Lagore, president and chief executive officer, said Sony has centralized various product-related functions and strengthened communications within its product management system by creating separate audio and video divisions as independent profit centers within the consumer products company. "We feel strong, separate audio and video divisions will better enable us to meet our future growth objectives," he added.

Heading the list of new promotions are three new senior vice presidents.

Ed Adis, formerly vice president/sales, has been appointed senior vice president/sales. Dick Komiya, previously vice president/consumer video marketing, becomes senior vice president/Video Products Division. Hiro Kato, formerly vice president/consumer audio products, has been promoted to senior vice president/Audio Products Division.



Komiya



Kato

Mr. Lagore also announced that John Briesch, formerly national sales manager for Sony high fidelity products, has been appointed vice president/consumer audio sales and marketing, and Osamu Naka, previously vice president/Hi-Fi Products Division, has been named vice president/Betamax sales and marketing.

## HFTN Appoints Western Rep

NEW YORK — HIGH FIDELITY TRADE News has assigned sales responsibilities for the Western United States to Western Media Sales. The company is located at 50 W. Hillcrest Drive, Suite 215, Thousand Oaks, Calif. 91360. Ron Thorstenson and George Carrick are principals. The telephone number is (805) 496-3500.

## Hall Of Fame Welcomes Four

NEW YORK — Four audio industry leaders were inducted into the Audio Hall of Fame during ceremonies in New York in October.

Leonard Levy started in the radio business 60 years ago at the age of 14. In 1935, he opened the first Leonard Radio store in New York and since has opened two other stores in the New York area. He is the first retailer to be inducted into the Audio Hall of Fame.

The late Bernie Mitchell was president of U.S. Pioneer Electronics, where he introduced high fidelity equipment into the mass-merchandise retail market. He also served for a short time as chairman of the board and chief executive officer for Advent.

Dr. Amar G. Bose is chairman of the board and technical director for Bose Corp. and is a professor of electrical engineering at the Massachusetts Institute of Technology. While at MIT, Dr. Bose began a research program in electronics, obtaining several patents in the fields of electronics, acoustics and non-linear systems. This research and these patents led to the formation of the Bose Corp.

Joseph F. Grado founded Grado Labs during the early 1950s. He currently is president of the company, a manufacturer of phonograph cartridges and record accessories.

## Speakers Orbit On Space Shuttle

ANAHEIM, Calif. — Altec Lansing is providing loudspeaker compression drivers as part of several upcoming NASA space shuttle missions, according to Altec's Bob Davis, vice president/professional market development for the sound products manufacturer. The Altec loudspeakers are part of an experiment being conducted by researchers at the Jet Propulsion Laboratory in Pasadena.

JPL acoustics engineer Jim Stoneburner explained that three Altec Lansing 908-8A high frequency compression drivers are being used in an acoustic containerless processing experiment involving the melting and recooling of experimental glass under zero-



# HOW TO TAKE ON A FULL LINE OF VIDEO CUSTOMERS.



In today's booming video market, everyone's looking for something different.

Many people want the super-premium quality of Maxell HGX. So they can use their tapes over and over, and get a better picture at their machine's lowest recording speeds.

Others want Maxell's standard formulation. A lower-priced tape that produces a great picture under normal recording conditions.

Visit us at CES booth 612.

And of course, some people need our VHS format tapes, while others require Beta.

Our point is simple. Unless you've decided to carry just one kind of video customer, don't carry just one kind of Maxell tape.

**maxell**  
**IT'S WORTH IT.**

Maxell Corporation, 60 Oxford Drive, Mahanah, N.J. 07074



gravity conditions on board the shuttle.

The three 30-watt, 7/8-inch throat Altec loudspeaker drivers are mounted to specially designed sound waveguides attached to the sides of a small, rectangular heating chamber. Once the shuttle is in orbit, the glass to be melted will be "levitated," or suspended, at the center of the chamber by sound waves generated by the drivers. As the chamber and glass sample are heated to more than 600° C, a video camera will record the behavior of the sample throughout the two-hour experiment. In later shuttle flights, the temperature will be raised to 900° C. The 2.5 to 5.5 kHz tones generated by each Altec driver will produce a sound pressure level of 140 dB within the chamber.

Mr. Stoneburner pointed out that the Altec 908s were selected for their compact construction, light weight and high acoustic power output. Except for the addition of special mounting holes and the use of a high-temperature epoxy, the drivers used are standard Altec stock.

## Consumers Flock To Mall Exhibit

**NORTH HOLLYWOOD, Calif.** — "Premiere '83: New Lifestyle Electronics," a consumer home electronics expo held in eight Southern California shopping malls during October, opened Oct. 2 and 3 to unexpectedly large crowds. "We knew a lot of people would be interested in seeing the new trends in home electronics," said Ron Bernard, vice president of Jack Carter Associates, an electronics rep firm, who is producing the shows. "But the number of people who stopped and spent time at the booth far exceeded our expecta-



## Massive Sound System

**NORTHRIDGE, Calif.** — More than 2,400 individual loudspeaker components make up the 400,000-watt JBL sound system built to power the three-day "US Festival" concert earlier this fall in Southern California. Critics from music industry publications called the system, "the best outdoor sound system ever constructed." Performers included the B-52s, The Police, Jackson Browne, Pat Benatar, Jimmy Buffet, the Grateful Dead, Fleetwood Mac and others whose diverse musical styles tested the system's power and accuracy. The system was designed by Clair Brothers Audio, Pennsylvania, and Showco, Dallas, both JBL professional products dealers.

tions. We had to have security personnel rope off the area and set up waiting lines to handle the crowds at both Laguna Hills Mall and Tropicana Plaza."

Action was most intense by the GCE Vectrex Arcade Systems and GCE game watches and calculators.

Another particularly crowded area was in front of the Jensen Home Electronics Audio + Video component television. The unusual sight and sounds of a stereo television system attracted the curious and the unbelieving.

Undaunted by the news that the Anova system would not be available until January, consumers nearly exhausted supplies of literature.

## 1982 Milan Show Attracts Buyers

**MILAN, Italy** — SIM-HI-FI-IVES '82, the international exhibition of consumer electronics, attracted a total of 124,089 visitors, averaging about 25,000 daily. Italian and foreign trade visitors, including distributors, wholesalers and retailers, numbered 27,271, approximately 25% of the total fair visitors.

The 1982 fair recorded a marked increase over 1981 in the atten-

dance of buyers, an increase attributed partly to the addition of new commodity groups, but also to the increasing importance taken on by the Milanese expo.

Although no exact figures are available for the total volume of business concluded during the five days of the exhibition, hi-fi, radio, TV and game exhibitors reported better-than-expected results.

## Album Released On Chrome Tape

**ANAHEIM, Calif.** — The new Supertramp album, "Famous Last Words," will be issued on BASF chromium dioxide cassette tape by A & M Records, making the company the first in America to make a general album release on super high fidelity tape. A & M and BASF Systems Corp. jointly announced the release in October.

Supertramp's previous albums all have been distinguished by convincing production quality and attention to sonic detail. While the group was completing plans to release "Famous Last Words," BASF was in contact with Marv Bornstein, A & M engineering vice president, to explain new methods of translating studio quality sound to cassettes duplicated at high speeds through the use of BASF chrome, the same tape used in BASF Professional II cassettes.

As a means of testing public interest in true high-fidelity quality for popular mass market releases, A & M and BASF agreed to release the prerecorded chromium dioxide cassettes at standard ferric tape prices.



# Stop selling bubkes

(and start selling out).

At a time when most folks aren't selling much of anything why are our Dittons jumping off the shelf?

**Uncommon sense.** These babies were not designed to sit around collecting dust. We've kept it simple—simple price points like \$130, \$200, and \$300 each. Simply the price points where you do business.

**Look around you.** While it may feel good to showcase the latest and greatest in the \$1500 each category, ask yourself two questions: When did I last sell one? How many buying dollars have I already tied up in static inventory?

Then face it—costly, humongous demos and 12-model speaker lines

aren't moving. They're just taking up space.

**All this plus the bucks!** After combining superb sound, popular prices and compact size with all the advantages of unsurpassed laser technology, we thought we'd add one more thing. Profits. (From the least expensive Ditton 100, to our Flagship SL-6.) Because we've been listening to you—the dealers—and analyzing the market to give you what you need.

So, if things are slow, Celestion Dittons are the perfect response to bubkes at the cash register. First think about what it costs to take on the whole spectrum of someone else's expensive line. Then consider the economics of Celestion.



**celestion**  **speakers**

Celestion...ahead by design.

Celestion Industries, Inc., Kuniholm Drive, Box 521, Holliston, MA 01746

In Canada, Rocelco, Toronto

World Radio History

© 1982 Celestion Industries, Inc.

### Desktop Computer System Links Zenith With Distributors

Zenith Radio Corp. has established an electronic mail system using Zenith desktop computers within the company and its distribution chain.

The electronic mail system uses software written by Zenith's Information Systems staff, small computers sold by its Zenith Data Systems Corp. subsidiary and a computer timesharing service. Called ZGRAM, it is being used at 72 of Zenith's distributor sites in the United States and Canada, in the company's 67 Heathkit Electronic Centers and in 50 other locations, sending messages automatically overnight for less than 20 cents per message and for less than 60 cents for immediate daytime delivery.

In September, Zenith began offering the system to other companies for sale with its Z90 series of desktop computers. The software will be available for the new Z100 desktop computer in early 1983.

"For several years Zenith had been searching for an effective and inexpensive way to communicate sales, inventory, shipments, order entry and messages with its North American distributors," said Tom Buchsbaum, director of information systems.

"This system allows the desktop computer to be used as a word processor or data processor during the day and an unattended communications terminal at night when costs are at their lowest."



*Computer operator Susan North reviews a memo that will be transmitted overnight to Chicago using ZGRAM with Bernie Erlich, president/Zenith Distributing of Kansas.*

### Equalizer Manufacturer Sees Opportunities In Video's Popularity

A growing number of video customers are learning that you can't take the audio out of the video, and the result, according to Empire Scientific Corp. vice president Andrew D. Segal, is that sales of quality equalizers soon will climb through the roof.

"We are convinced that the continuing popularity of video will add a sudden and dramatic importance to the role an equalizer plays in balancing out a true audio/video home entertainment system," Segal said. "Most video customers started with an audio system and then added a VCR. Many have found that the weakness of the VCR is in its audio capability. A growing number of these video consumers are turning to equalizers to improve the audio quality of their video systems."



**"Video consumers are turning to equalizers to improve the audio quality of their video systems."**

*Andrew Segal*

According to Segal, the video applications of audio equalizers provide the retailer with a strong selling tool in his local marketing efforts. "Retailers should capitalize on this trend and promote equalizers as a necessary component in a home video system."

Segal explained that the home entertainment market is a *horizontal* one, as opposed to the traditional audio industry which is primarily a *vertical* one.

"In the traditional audio market, people upgraded vertically in their purchases of turntables, receivers

and speakers. If a consumer wanted to upgrade his audio system, he'd buy a better pair of speakers to replace the old ones," he said. "The introduction of quality home audio cassette decks began to alter this pattern about three years ago. The cassette deck, in effect, became the first horizontal purchase. Now the era of the audio/video system is upon us, and the equalizer has emerged as the central cross-over purchase that brings the two together."

### Rental Of Video Tapes Doubles

Consumer demand for rented prerecorded videotapes has doubled, reports Dennis Farmer of 3M's Magnetic Audio/Video Products Division.

In a survey conducted in January 1981, the demand for rented prerecorded tapes was 16.6%. According to 3M, the latest study reveals that 38.2% of the respondents rented videocassettes.

The latest study also pointed out that 23% of VCR owners had purchased prerecorded videotapes in the past, while 21% plan to buy an average of four video cassettes each in 1982.

When it came to renting, 51% of the respondents had rented prerecorded cassettes in the past. The figure includes both renter/purchasers as well as renters only. Some 57% plan to rent an average of 36 prerecorded video cassettes each in 1982. The survey indicated that women have become more involved in the selection of prerecorded video cassettes, whether bought or rented.

The phone survey of 670 VCR owners was conducted by the A. C. Nielsen Co. for 3M's Magnetic Audio/Video Products Division. Those surveyed were selected at random from a list of about 10,000 VCR owners. □





# The Dawn Of Digital

Whether the hardware is waiting for the software or vice versa, one thing's for sure — everybody is waiting for the U.S. introduction of compact digital disc players

By Cindy L. Morgan

*There's no doubt about the potential for success of the long-awaited compact disc; the product represents a quantum leap in technology. Unfortunately, it is still a question of "when" the product will see itself on the shelves of U.S. retailers since manufacturers are stuck with the old "chicken-or-the-egg" dilemma.*

*Frustrating for all involved, the product, in terms of hardware, is at the mercy of the software produc-*

*ers, which, at this writing, have not yet put their money fully behind compact disc production in this country. (Simply stated, the compact disc requires a lot of money in terms of investment in the sophisticated technology it requires to produce the software.)*

*In spite of the handicaps, the machines are here, or almost here. The following article outlines the present state of this new state of the art.*



*Sansui PC-V1000 Compact Disc Player*

Although consumers won't be finding compact disc players beneath their trees this year, Christmas 1983 will be a different story, according to manufacturers, dealers and audio critics surveyed by HIGH FIDELITY TRADE NEWS.

October was "release month" in Japan; beginning just before the Tokyo Audio Fair, compact digital disc players began rolling out from nearly all the top names in audio/video manufacturing.

Leading the roster, of course, was Sony, the co-developers of CD with the Philips company, along with Hitachi and Denon. Other companies planning Japanese introductions include Onkyo, NEC, Marantz, Technics, Pioneer, Sanyo, Toshiba, and Mitsubishi. Trio/Kenwood was among the last — in exclusive release dates obtained by HFTN — to get its products to Japanese consumers, and Sansui, with its Japan plans sitting on the back burner, has chosen to highlight its PCM Digital Processor this season instead (see sidebar).

#### **The Software Side**

All licensees of the compact disc clearly regard the player as a product "with vision" and believe participation in its eventual introduction is important to their positions in the marketplace.

Yet, with software availability still a thorn in their U.S. sides, few were confident as to exactly when they would bring products to the U.S. consumer. The best anyone, as of this writing, would estimate was spring 1983 at the earliest, with the bulk of the rollouts slated for mid-to late 1983.

As reported in HIGH FIDELITY TRADE NEWS last month (see *New Technology*, page 8) the software situation for European and Japanese consumers is shaping up more smoothly than it has been here in

the United States, where royalty "discussions" between Philips and U.S. record makers are creating political storminess in that end of the business.

At least one major record company is close to announcing its position on compact disc production, but no figures or exact target dates were available from that source as we went to press. The three major record companies from which manufacturers are hoping for commitments are CBS, RCA and Warner/Electra Asylum. All have endorsed the compact disc positively to the record industry trade, some so strongly as to point to the disc as "the only viable format" for the future.

According to record industry sources, the hesitant attitude on the part of record executives may be a somewhat nationalistic reaction toward a largely Japanese hardware system. By and large, though, it has been prolonged royalty hassles that have caused the slowup, with record companies claiming that Philips wants too much money per record for royalty payments. Others noted that there are a lot of negotiations involved before a record is approved for disc reproduction, saying that "recording artists must be handled delicately in negotiating for this new medium."

With this, too, comes the fact that the record industry is in a vulnerable position. Simply put, it can't afford any major mistakes this time out by supporting what *could* turn out to be an unsuccessful system. "Quad" and other "audio Edsels" are still remembered, and marketing executives can ill-afford to be caught earmarking funds for pressing something that could emerge an uninspired (to the consumer) technology.

There are currently nine software licensees, but only Sony/CBS and Polygram in Europe are in production, providing the total software output for the industry. In 1983, Polygrams' disc output is scheduled to run between 4 and 6 million, which breaks out to about 200 titles for Europe with an add-on rate of about 30 titles per month.

#### **True Digital Discs**

In addition, Denon, which hopes to head for the "high end" of the compact disc market, has its own plans readied with respect to software.

In 1972, Denon developed its concept of applying digital technology to the recording process. As a result, under the Denon PCM record label, Nippon Columbia has accumulated more than 500 digitally encoded, original master recordings. These recordings, of course, are distinct from analog master (conventional recording techniques) that may be released subsequently in so-called digital formats. Obviously, as a result, Denon's releases will be true digital compact discs and not mixed-down from analog tapes; its library represents perhaps one of the largest, if not the largest, of this sort at the present time.

The initial Denon compact disc player currently is being marketed in Japan, while work continues there to develop that "high end" player truer to the Denon tradition. According to a Denon spokesperson, "We realized that in the same sense some of the first VCRs introduced were more or less 'standard' product. We feel that a Denon player requires even more advanced technology than generally is offered by CD producers who are in line to be 'first.' We are focusing our primary attention on our experiences in servo and direct drive



technology. Across the board, there are a lot of similarities."

Denon currently is investigating distribution for its CD player and other marketing alternatives in order to offer its advanced selection of CD software in time with the competition.

One of Denon's priorities with respect to hardware is to make its line of compact disc players more user-friendly in terms of program selection, random access, repeat play and other special features.

Sony, which is leading the pack so far in terms of getting its product around to be seen, reviewed and otherwise evaluated, has made clear its intention to be among the first to introduce product — but with what its executives have called a complete package in terms of hardware, software and dealer marketing support.

Close on its heels has been Hitachi, which was rumored would be drop-shipping about 200 pieces to the U.S. market this month, with three sample discs per player. But an Hitachi spokesman confirmed that these plans were killed because of the lack of software. As everyone else, Hitachi, too, is ready to move but is being held up until the software situation mends itself.

#### Success in the Press

Pioneer is also anxious to introduce its hardware, HFTN was told, and is hopeful that software negotiations will speed up so this "viable and important product" can be gotten into the hands of U.S. consumers. As of this writing, it is likely the product will be handled by the audio part of Pioneer, rather than Pioneer Video (PVI), though the product reflects "the linking of audio and video product categories."

All other manufacturers contacted by HFTN were vague about U.S. introductions, but none gave a target earlier than spring 1983 — and most hinted at much later dates. Sanyo sources remained mum as well, but one said that this was so that Sanyo could "surprise and overpower the competition . . . especially since prices are so much of Sanyo's success story."

With so little hardware and software on the scene here, the real "experts" at this time on the compact disc and its inner workings appear to be the consumer audio press, whose favor often is curried by the top makers and who therefore have been privy to some of the originally available compact disc gear.

Among those who ran initial CD products through their paces were Len Feldman, the noted audio expert, whose findings were released in the November *Audio* magazine; Eugene Pitts, editor of *Audio*; and David Ranada, a technical editor with *Stereo Review*, whose in-depth report appears in this month's issue of that magazine.

According to Ranada, who put Sony and Hitachi units through some grueling scrutinization, "the hardware performs as said by the producers. I was particularly impressed by cueing capabilities."

Ranada does not expect any rapid decreases in the price of the hardware and says that any decreases should follow the trend of floppy-disc hardware, which is similar in technology.

The technical editor has investigated the inner workings of both Sony and Hitachi units and finds that error concealment (as related to dropouts) worked more often than it theoretically should. He finds, in fact, that the error concealment is adequate, and would not ask for anything more sophisticated in terms of error detection/correction. (Further test results are reserved for his article.)

Pitts also was impressed by the compact disc players he auditioned and observed that the industry will need to develop new parameters for this sound source.

"We found that the compact disc, too, can suffer from acoustic feedback — people haven't thought about this yet. Yes, we heard flaws in some of the disc software, but I



## Sansui Emphasizes Processor

Unwilling to "be the only major company to keep silent about digital audio," Sansui has announced marketing plans for two digital audio products: the PC-X1 Tricore PCM Processor, reported to be compatible with any VCR format, and the PC-V100 Compact Disc Player.

According to Tom Toda, vice president/sales and marketing, the PCM processor will be on the market by March 1983 and sell for "no more than \$2,000." Depending on available software, the compact disc player will be introduced in August with a \$999 suggested list.

Sansui consultant Gerry LeBow explained that the company had waited to announce its digital products because it did not want to release "just another me-too item. A number of PCM players have been made over the past few years, but none of them was efficient in its use of tape (in the VCR). They were designed

for recording and playback at normal speed, instead of being able to play at one-third speed."

With the growing popularity of portable VCR and PCM processors as well as extended-play operation, LeBow noted that Sansui believed "it was important to have a system that could be used to record an entire concert. And, until recently," he said, "there was always a problem with the length of recording time available. Users were formerly limited to full speed, whereas the Sansui system records and plays back audio signals at as little as one-third speed, making it ideal for extended play VCR."

In its Compact Disc Player, Sansui aimed for even more accurate music reproduction than currently available on other suppliers' disc systems. The PC-V1000 process signals from digital to digital; not analog to digital. □





Hitachi DAD-1000 Digital Audio Disc Player

emphasize that these were not the full production discs. As for the different brands of systems I auditioned, yes they do sound alike and they sound more alike than most pairs of phono cartridges with the same records. In direct A-B comparisons, there were relatively small differences."

#### Very Sexy Machine

The editor continued, "The small size and ease of playing was as nice as was promoted to us by the manufacturers. The Hitachi unit, for example, is a very sexy machine in its operation, especially in the manner in which it accepts the disc for playing."

Pitts also observed that recording engineers will "have to think twice" about the techniques they use — digital compact discs will cut any poor techniques apart. CDs require us to go back to simple miking techniques." Multi-miking, feels the editor, will sound unnatural.

One important aside: Pitts believes that acceptance of the disc will be slow; nobody — neither dealers nor consumers — has any money.

In his November *Audio* article Feldman revealed that the devices "were really as good as I thought. They are — and then some!"

He agrees that analog portions in all of these players will make product sound different, even though some have suggested that differences in sound quality between different compact disc players will be negligible. In addition, the way manufacturers will choose to implement these standards with innova-

tive products and features and conveniences will still vary from unit to unit.

With the consumer audio press largely behind the compact disc, what next? What do dealers actually think of the product? According to those surveyed by HFTN, it depends on what type of retailer you ask.

Clearly, Sony dealers seem quite interested in the opportunity of becoming involved closely with disc marketing. These dealers, and others accustomed to heavy involvement in the education of their customers, tend largely to be audio specialists who have followings of audiophile customers willing to spend the initial \$1,000 for the product. You'll find compact disc aficionados at such dealers as Pacific Stereo, Sound Advice, Alterman's Audio and the Sound Chamber in Rochester, N.Y.

But dealers with much less of an audiophile following are more practical about their enthusiasm. For example, Wade Gaylor of Inman's (Dallas) told HFTN, "The consumer isn't aware of the compact disc — and he wouldn't believe it if you told him. I think we are far away from a digital disc era. If my customer wants to come in and buy something now, today, I don't have the time to sell him something 'coming.' I don't even have the software. I have got money invested in what I've got in inventory for other products."

However, according to Marc Finer, national sales training manager for Sony, the word is getting out. Finer and other Sony representatives recently visited what might

be labeled a disbelieving group of audiophile consumers. This particular group, a Westchester, N.Y., audiophile society, had read reviews of digital products (including Sony's F-1 processor) in an "underground" industry publication called *Absolute Sound*. Typically for the publication, it gave the digital products, including the disc, a thumbs-down write-up.

According to Finer, once the Sony technical staff played some digital records, explained the disc and let these consumers play with the software, the doubters were converted.

And therein lies the key to the product's launch, Finer believes.

"Once the customer gets his hands on it and plays the unit, he'll want it," said the training manager. "But it may take vision for those dealers who haven't tried it yet to appreciate this."

#### Steep Price Seen

The price that consumers might be willing to pay for the devices appears to be another stumbling block that will slow acceptance of the first compact disc players.

One sure-fire question that elicits "no comment" from manufacturers is pricing. The \$1,000 average price given to HFTN by some manufacturers as the "U.S. price" has many clearing their throats. It is agreed, however, that the audiophile level may at first swallow this price tag to be "among the first." It is these hobbyists who'll form the base for initial D.A.D. marketing. But, some manufacturers hinted they would be slow in bringing hardware to the United States until they could "get the price down."

The price of software, when available of course, is expected to be less of a stigma since it will match closely that of audiophile recordings. The first discs should cost from \$15 to \$18.

Sony's Roland Martin, heavily involved with the launch of that firm's disc product and with related software negotiations, told *HIGH FIDELITY TRADE NEWS*, "If the compact disc is not demonstrated carefully and presented properly, then dealers will be absolutely right — a prospective buyer might find the product relatively high in price and be unable to justify adding it to a system."

Certainly, enough makers are banking that more than a handful of consumers will justify adding this new black box with rainbow-colored software to their home entertainment system. And, by next Christmas. □



# Bread & Butter

**Retailers report sales of turntables and cartridges — mainstays of the audio industry for years — are holding their own**

By Alexandra Wickser

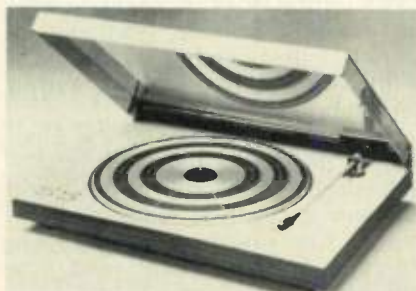
In an unstable market, turntables are holding their own, say audio dealers across the United States. One retailer referred to the turntable as a "bread and butter" item, one that always gets a certain amount of consumer interest because it is so basic to the audio high fidelity system, and yet never arouses much excitement. But other dealers are finding that a little extra effort on the sales floor, combined with some good traffic-builder/promotion ideas, has helped to increase their turntable sales.

Because of the influx of lower-priced, feature-laden, sleekly designed models, dealers have to make an effort to steer the customer toward making a more expensive, higher quality purchase. But most dealers welcome this opportunity to demonstrate their knowledge and love of the business; in fact, several retailers report what could be the beginning of a rise in the belt driven turntable's popularity. More people are buying quality, and belt drive is part of the quality story in many dealers' view.

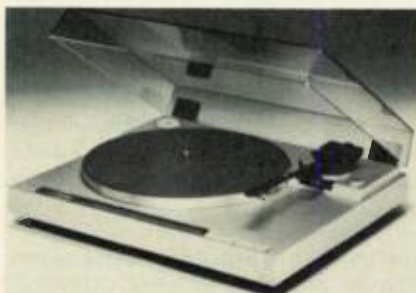
Dealers are not ignoring cartridges, either, not just because of good profit margins (especially in the high-end part of the market), but because of their belief in the cartridge's strategic importance in the sonic reproduction system. Also, cartridge "check-ups" are a tried and true method of getting customers back into the store.

## Acoustic Feedback Problem

Last year at this time, Audio Craft's Wayne Puntel complained that the problem of acoustic feedback (which occurs as a result of vibrations created by strong bass frequencies) had not yet been solved by most turntable manufacturers. Today, "the industry still hasn't made any moves," and though the Cleveland-based retailer carries



*B&O Beogram 1700*



*Yamaha P200*

Bang & Olufsen, Yamaha, JVC, Mitsubishi, Luxman and Dual, one of his best-selling units is the \$345 B&O 1700.

"The 1700 is one of the few turntables to address itself (successfully) to the basic weakness of the acoustic feedback problem. Once a good salesman is allowed to demonstrate the difference, chances are we'll close the sale," he said.

In total actual units, the Yamaha P200 is the number one mover, but, Puntel added, "The P200 just happens to be the model we carry in that price point. There's very little difference in turntables under \$200."

He has noticed an increase in demand for straight line tracking, despite its higher price (\$400-\$450) and urged retailers "not to turn their backs" on record changers, which he claims still have a substantial following, especially among the older customers.

"These people want changers, and if a machine is well-made, stacking records is okay," he said. "We're doing a great job with Dual record changers (one of the few companies still manufacturing changers)."

Clinics are a good way to encourage people to step up, he thinks, because the store gets a chance to show the consumer "what he could have compared to what he's got." The in-store seminar is therefore a way of life for Audio Craft, and much effort is put into promoting and positioning the seminar via direct mail, newsletters and newspaper ads.

Cartridges are checked at these clinics, too. In fact, Puntel does a brisk business in Bang & Olufsen, Signet and NAD; the most popular models are Signet's I and III, at \$46 and \$74 respectively, and B&O's MMC10, which he sells for \$55.

## Solution Is Salesmanship

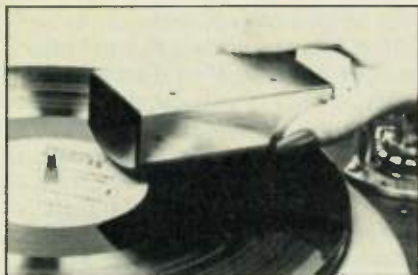
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"One of the most difficult things about audio is that so much stuff looks good but really isn't, and a prime example of this is turntables. How do you distinguish between the \$89 unit and the one priced at \$220?" asks Mike Breitenstein, owner of Audio Plus in Wichita.



## ssorted Accessories

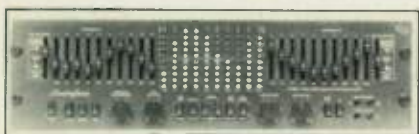


### Anti-Static Cleaner

Audio-Technica's record maintenance system uses a conductive construction and an inner reservoir that releases minute amounts of a specially formulated cleaner to alternately spaced rows of unidirectional fibers to drain off static charges while removing dust and harmful deposits from record grooves. The system includes the cleaning pad and a matching base that protects the pad from dust and air-borne contaminants as well as holding it. A bottle of TechniClean Solution with applicator completes the package. Suggested list price is \$24.95, with two-ounce solution refills priced at \$2.95. **Audio-Technica U.S. Inc.**, 1221 Commerce Drive, Stow, Ohio 44224. (216) 686-2600.

### Cassette Adaptor

With the CS112A Stereo Cassette Adapter from Recoton, consumers can play cassette style tapes on any eight-track cartridge player. The cassette is inserted into the adaptor which then fits into the eight-track cartridge door. The unit features rewind, stop and play positions and an automatic stop. Suggested retail is \$59.95. **Recoton Corp.**, 46-23 Crane St., Long Island City, NY. 11101.



### Analyzer/Equalizer

The AE2000 Auto-Scan-Alyzer is a combination analyzer/equalizer that combines Soundcraftsmen's differential/comparator circuitry to provide a level of accuracy in analyzation that the company claims is 10 times greater than others (+/- 0.1 dB). The equalizer uses high precision wire-wound inductors instead of IC Op-Amp filter circuits for highest gain, lowest noise and most neutral sound. Octave scanning is automatic and a calibrated

mike is unnecessary. The AE2000 retails for \$699. **Soundcraftsmen**, 2200 S. Ritchey, Santa Ana, Calif. 92705. (714) 556-6191.

### Overload Protection

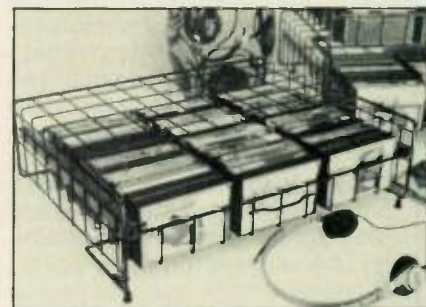
The Protech SP150 protects speakers against D.C. voltages, excessive high frequency content, gradual voice coil heating and excessive transients and can be used to limit the maximum volume of speakers. Units offer no signal degradation and place no stress on the amplifier. They continuously monitor the signal to the speakers and trigger a time delay if an overload occurs. If the level does not fall to an acceptable point, a relay reduces power to a safe amount. The delay is long enough not to affect the transients, yet quick enough to protect the speakers. The circuit becomes more sensitive at higher frequencies. The crossover point is 5 kHz with a roll-off of 6 dB per octave requiring progressively less power as the frequency increases to enhance protection for midrange units as well as tweeters. The system is not suitable for use with tube amplifiers. **QED USA Inc.**, West Lake Road, 2141 Terrace Lane, Skaneateles, N.Y. 13152. (315) 685-3806.



### Sound Meter

The Quest Model 208 Sound Level Meter can be used by audio specialists, film and video producers, music teachers, architects or anyone who needs an accurate instrument for checking the acoustics of rooms and buildings, speaker systems or public address systems. It fits in a shirt pocket and measures noise levels in the A-weighted mode (essentially the same as humans hear), with a measuring range from 70 to 120 dB. The noise level is displayed with 10 light-emitting diodes. It can be calibrated to main-

tain its accuracy. It is priced at \$125. **Quest Electronics**, 510 S. Worthington St., Oconomowoc, Wis. 53066. (414) 567-9157.

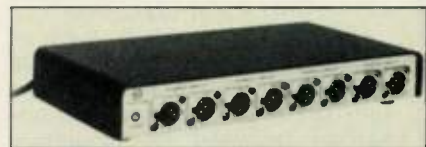


### Cassette Storage

The stackable cassette storage modules introduced by Wire For Sound hold 42 Phillips-boxed cassettes each in a compact configuration that features a pull-out drawer with a smooth glide track for easy and silent cassette access. Made of metal wire coated with baked-on polyester, the modules are available in six colors. Each unit lists for \$24.95 and includes a set of alphabetical dividers and title cards. **Wire For Sound**, 6840 1/2 Vineland Ave., North Hollywood, Calif. 91605. (213) 762-0619.

### Tape Cleaning Package

Discwasher has packaged all its products needed for tape deck cleaning and care together in Care-set at a suggested retail price of \$14.95. Careset includes Discwasher's Perfect Path Cassette Head Cleaner and C.P.R. Capstan Pinch Roller Cleaner. **Discwasher, Jensen Sound Laboratories**, 4136 N. United Parkway, Schiller Park, Ill. 60176. (314) 449-0941.



### Microphone Power Supply

The Crown PH-4 supplies 48 volts of D.C. phantom power for all types of microphones. It consists of a master unit with connections for up to four microphones, plus slave units that each add capability for another four microphones. The company's suggested list price for the PH-4 is \$179. **Crown International** 1718 W. Mishawaka Road, Elkhart, Ind. 46517. (219) 294-5571.



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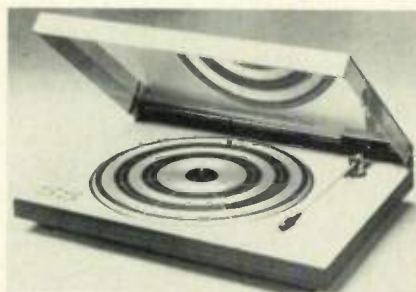
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The solution, he says, is salesmanship: "We concentrate on showing customers quality. We have to demonstrate why something that doesn't look different is better. But when we do get a chance, you can see it (the appreciation) in the customer's face."

This strategy has been working very well for Breitenstein. Though most people coming to his shop don't know the difference between semi- and fully automatic, or between direct and belt drive, they do respond to a good demonstration and sales pitch.

His best selling unit is the Mitsubishi quartz locked, direct drive DP6 at the \$220 price point. He also sells NAD and Dual. So far he has seen no decline in his turntable business — "I'm happy with it" — and though cassette decks are more popular than ever, they are not taking away from turntable sales.

"People consider the turntable an essential part of the system. Even with the cassette deck, you need to record. The advice we usually give is don't comprise the system now; get the deck later," he explained.

Selling cartridges is another area to which the emphasis on quality is applied. Audio Plus carries Grace,

Ortofon and Stanton, with the Grace F9 an especially good mover at \$200, and Breitenstein's sales staff makes "an effort to explain the difference between low and high end."

"A lot of retail operations spend 30 minutes selling you a turntable and then pitch a low-priced cartridge. If someone wants bargain basement we have it, but if we just had to push the lowest-priced product, this business wouldn't be any fun!"

### The Move to Belt Drive

"People are getting more quality conscious," says Bob Thornton of his turntable sales. Because of this, belt drive units are moving up in sales for the Odessa, Texas-retailer as more consumers gravitate toward belt drive when they learn it is a higher quality, longer-lasting turntable purchase.

As general manager of the Electronic Service three-store chain, Thornton sells "a lot" of Bang and Olufsen as well as Sony and Yamaha. The Yamaha P-500 has become a popular model, and now shares the spotlight with the Sony direct drive fully automatic PX-LX3, moving at \$199.

Though Electronic Service does not carry a "demand line," it does offer its customers the added con-

venience of geometric alignment for each turntable bought, and regularly conducts turntable clinics and free cartridge inspections in order to generate more business. But Thornton has also found that a turntable lends itself particularly well to a thorough in-store sales presentation.

"The turntable is a mechanical device," he explained. "People can understand it and are attracted to it for that reason." Thornton's turntable business is, as a result, "steady." He has not experienced an increase in the demand for cassette decks at the expense of turntables — "when we explain how important it is to record off a good turntable, people normally will buy it" — and continues to do a good business in cartridges. The B&O MMC 10E is an "excellent" mover, he said, adding that he also carries Signet cartridges.

### Educating the Consumer

Steve Firszt, owner of Campaign, Ill.'s Good Vibes, carries Dual, Harman Kardon, Sony, Hitachi, Pioneer and Luxman turntables, and though Dual has traditionally been the number one line in terms of dollars — his best-selling turntable is Dual's 508 at \$150 — he is very enthusiastic about the pros-

## Recent Entries

### Thorens TD 147

A frictionless velocity-sensing system triggers the automatic end-of-record tone-arm lift and platter shut-off on the Thorens TD 147 turntable by Epicure, although the chassis, suspension and platter



drive systems are the same as those found in top-of-the-line Thorens turntables. The TD 147 features the company's TP 16 tone arm, with low pivot-bearing friction and low effective mass. A "floating" sub-chassis supports platter and tone arm, isolating them from the base, dust cover and drive motor. An ad-

justable three-point suspension system prevents external vibration from distorting reproduction. A 16-pole synchronous motor with acceleration clutch drives the zinc-alloy platter via a flexible rubber belt. The platter rotates on a polished steel shaft, supported by Teflon and bronze bearing surfaces. At \$525 suggested retail, the TD 147 has a five-year limited warranty. Epicure Products Inc., 25 Hale St., Newburyport, Mass. 01950. (617) 462-1000.

### Two From Luxman

A low 0.03% wow and flutter in Luxman's Model PD-300 turntable is made possible by precise operation of the brushless and slotless DC Servo Motor. This double-insulated belt driven turntable has an eight-pound platter, sturdy replaceable tone arm base, non-resonance 4mm-thick dust cover and vacuum Disc Stabilizer System indicator.

The fully automatic Luxman Model PX-101 tangential tracking turntable also features direct drive, auto disc pause, remote control



connector, 33 1/3 and 45 RPM speeds and signal-to-noise ratio better than 70 dB. Luxman, A Division of Alpine Electronics of America, 3102 Kashiwa St., Torrance, Calif. 90505. (213) 326-8000.

### Hitachi Line

Hitachi's fully automatic HT-68 turntable leads off a line of five turntables introduced recently by the company. The direct drive quartz lock model features a High Tech damped tone arm, feather touch controls and an automatic record-size selector system. It can be used with Hitachi's exclusive One-Touch audio component system. Suggested retail is \$260.



pects of H-K's three new belt drive models. In fact, one of his current best-sellers is the HKT-40, by Harman Kardon, for \$279.

"We're selling bunches, because it is the first legitimate belt drive model in the non-esoteric variety," he said. "In the past, direct drive has gotten a lot of attention, though it is undeserved from a quality sonic performance point of view. Belt drive is better, and H-K has a lot of guts to go ahead and introduce these three models."

Like other dealers, he relies on the ability of his sales force to get the belt drive story across to his potential customers. "It's a question of educating the consumer," he said. "But we're having a lot of fun turning the tables on direct drive!"

Firszt predicted that other turntable manufacturers will eventually get into high performance belt drive models, which he thinks is a good thing, especially for the consumer: "Everybody knows we've been duping the consumer, but now we have an alternative to offer him."

In the meantime, he is enjoying higher profit margins with Harman Kardon, and is looking forward to more people making trade-ups to belt drive models.

Cartridges are an important part

of the turntable sale at Good Vibes Sound — so important that it is recommended that the cartridge represent one-third of the total cost of the turntable/cartridge system (people are told that if they have \$150 to spend, it's better to get a \$100 turntable and a \$50 cartridge than to spend more on the turntable and skimp on the cartridge).

"Furthermore," he pointed out, "the cartridge has remained one of the few bastions of profitability in this business."

Good Vibes Sound sells Ortofon, Grado and Stanton, with the Ortofon LM-20 Low Mass at \$100 being the best-seller.

Firszt also holds cartridge testing sessions, which is always a good traffic builder, though he is relying less and less on turntable clinics to generate sales, calling clinics "part of the old days."

#### Bread and Butter

Guinn Unger, owner and president of Sheffield Audio in Houston, has always sold a good number of JVC turntables. Current best sellers are the JVC LF41 at \$159 and the \$94 LA10, and he added that most people are willing to pay more for the fully automatic models.

Another hot feature — though people don't ask for it — is the low

mass tone arm, but few give the difference between belt and direct drive much weight when it comes to making a purchase. "The majority of customers are still looking for direct drive because they've heard the term so much," he stated.

Unger also carries Sony and Luxman brands and does a good business in cartridges, especially in the lower price range. One of his best sellers is the Ortofon FF 15XE Mark II, which carries a suggested retail of \$45 at his store.

Turntables and cartridges complement each other for Unger, but he doesn't see record sales affecting turntables "all that much." He has a good supply of specialty disc labels, including Sheffield, Nautilus, Mobile Fidelity and Telarc, but only with more expensive turntables do customers make the connection between discs and turntables.

He also has the dbx system, but so far has noticed no marked interest for his dbx inventory.

Clinics are held at Sheffield Audio, and turntables are frequently highlighted in the store's newsletter, but Unger confessed to finding it difficult to elevate the turntable above its "bread and butter" status.

The line also includes the fully automatic HT-67, a direct drive quartz lock model with High Tech damped tone arm and feather touch controls. Suggested retail is \$200.

The HT-51 is a fully automatic, direct drive quartz lock model with the High Tech damped tone arm and Hitachi's exclusive Unitorque motor. Suggested retail is \$170.



HT-68

The HT-45 is a semi-automatic direct drive turntable with the Unitorque motor and a straight tone arm. Suggested retail is \$140.

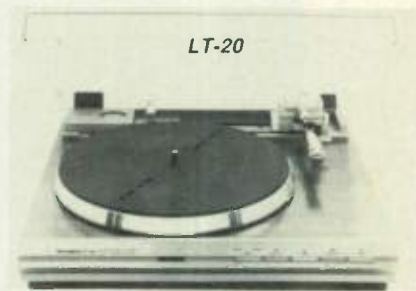
The HT-21 is a semi-automatic, belt drive unit with gimbal suspension, a straight tone arm and front

panel controls outside the dust cover. Suggested retail is \$100. Hitachi Sales Corp. of America, 401 W. Artesia Blvd., Compton, Calif. 90220. (213) 537-8383.

#### Mitsubishi Models

The fully automatic, logic controlled linear tracking LT-20 turntable from Mitsubishi Audio features a quartz PLL DC servo motor. Offering 0.025% wow and flutter, the turntable has an aluminum diecast platter and a universal statically balanced straight tone arm with an effective mass of 13.9 grams without cartridge. Suggested retail is \$410.

Two other models complete Mitsubishi's line of five turntables. The DP-EC8 is an electronically controlled, fully automatic quartz PLL direct drive turntable with aluminum diecast platter and wow and flutter of 0.025%. It features a statically balanced tone arm and has a suggested list price of \$300. The DP-6 is a semi-automatic direct drive quartz-controlled turntable with aluminum diecast platter and wow and flutter of 0.03%. Mitsubishi Electric



Sales America, 3030 E. Victoria St., Compton, Calif. 90221. (213) 537-7132.

#### Shure V15 Cartridge

The V15 Type V phono cartridge introduced by Shure Brothers Inc. features the Microwall/Be Beryllium stylus shank, which, according to Shure spokesmen, gives the cartridge the highest trackability of any cartridge available. The company boasts good reviews from audio critics worldwide. Through Dec. 31, the company is offering a \$50 Savings Bond free to purchasers of the V15 Type V. Shure Brothers Inc., 222 Hartley Ave., Evanston, Ill. 60204. (312) 866-2573.



"The turntable is not a glamorous item; it's difficult to generate excitement and interest in this product category. But my turntable business this year is probably higher than it was for last year, and I see Sony coming on with more strength in turntables."

### Crisis in the Industry

As the owner of Sound by Singer, a New York City-based audio specialty store, Andy Singer has "a very strong bias toward the importance of maximizing the transcription system before doing anything else. If one's goal is to provide the most realistic sound reproduction, it's essential."

Singer called the unwillingness of most dealers to demonstrate their turntable product indicative of a "crisis" in the audio high fidelity industry, adding, "Turntables matter more than anything. We challenge the mid-fi or mass merchandisers to prove otherwise. If it were up to me, all systems would have a \$1,200 turntable/cartridge set-up, even with a \$200 receiver, and the superiority of the system is demonstrable."

Out of a line-up of NAD, Micro-Seike, Rega, C. J. Walker, Linn-Sondek and Pink Triangle (a model

that uses a ruby bearing), his best movers are the Linn-Sondek LP-12 at \$995, and the Rega Planar II and III, at \$435 and \$550 respectively.

In Singer's opinion, the consumer has become far more knowledgeable when it comes to making an audio purchase, which has been great for business (turntable sales are up from last year). Belt driven turntables are rising in popularity, because people recognize they have less motor noise and vibration than direct drive units, and though there is still definite prejudice in favor of semi-automatic turntables, with the help of a good demonstration, Singer can usually prove that the buyer gets more for his money with a manual.

Another method Singer has adopted to promote quality high fidelity products is to take on specialty discs: "The more of those around, the more interest in good sound," he said. He sells Mobile Fidelity, Telarc and Sheffield, and reported that Mobile Fidelity's UHQR's (Ultra High Quality Recording), which are in the \$50-per-disc range, were all sold out.

He also conducts in-store demonstrations and seminars, and plans his advertising so that turntables are frequently emphasized.

However, he added that the change of direction audio must take in order to survive is ultimately based on the willingness of knowledgeable salespeople and dealers to educate the consumer.

Singer isn't worried about the possibility of cassette decks overtaking turntables because of the "quality and price of the prerecorded cassette." What is happening, he believes, is the continued fragmentation of the market between those who buy the latest gimmick and hype, and those who buy quality.

"The Japanese saw the high-end market disappearing, so they came up with such features as linear tracking and vertical turntables and got in the 'bells and whistles' race. But that doesn't take away from the high-end models. A turntable still has to be built well; it's a hand-crafted job vs. one for the assembly line."

Singer has a large cartridge selection, including Astatic, Adcom, Grace, Dynavector and Grado. Sales in the moving coil category concentrate on the Dynavector 23-R at \$310, while leaders in the moving magnet category are Adcom's HCE at \$130, Grace's 19E at \$200 and Grado's GF1 Plus for \$80. □



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# Accessories Are Big Business

By Deborah Merck

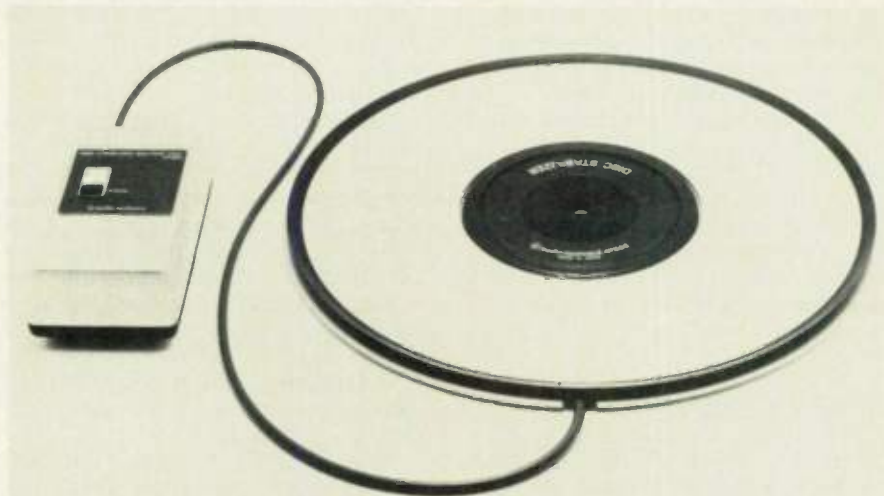
At one time audio and video accessory items were considered strictly supplementary to an electronic system's functioning, but in the minds of today's consumer these electronic adjuncts are complementary items essential to maximum system performance. Due to increased consumer awareness, products such as tape and record cleaners, anti-static devices and other accessories are becoming what one audio/video accessory manufacturer calls "necessaries." This name, which Audio-Technica has coined for its latest line of accessory products, appropriately describes today's market attitudes toward audio and video accessories.

Product information and education by dealers have brought the consumer a long way toward understanding the long-range benefits of these products. Now the consumer understands that the more sophisticated the system, the larger the investment, and the larger the investment, presumably the more care needed to get the most benefit from the system and to preserve it. It is no wonder then that audio and video accessory manufacturers are continuing to increase and revamp their product lines to meet the needs of today's sophisticated electronics.

The more sophisticated the piece of equipment, the more likely the mechanism is to pick up static and imperfections in records and tapes and magnify them as unwanted sound. To help eliminate this problem, innumerable cleaners and solutions, as well as anti-static devices, have been introduced to the market. They are based on different concepts and they come in different price ranges, but they all have one goal in mind — to eliminate unnecessary interference with sight and sound. Some are more outstanding than others. And some are more esoteric than others.

## State of the Art

One new item on the market that stands alone in its testimony to the state of the art in accessory technology is Audio-Technica's AT666EX Disc Stabilizer. With a re-



*Accessories include such diverse items as the Disc Stabilizer above (\$295) and the Stanton Totables headphones (\$29.95).*



tail price of \$295, it's a turntable accessory that has an electric pump to operate a suction to hold the record in place. It claims to improve the sound of the disc dramatically, even when playing warped records, by addressing itself to problems of warp-wow and changing tracking force. It also eliminates sonic vibrations that cause the record to resonate. Though this warped-record rejuvenator does not stand alone in terms of being the only device ever designed to address these particular problems, it is a unique and innovative piece of equipment, designed for high-end markets primarily.

At the other end of the price spectrum, by contrast, lies Audio-Technica's AT618 Disc Stabilizer that retails for approximately \$22.95. It is made of solid brass and is covered with rubber. Instead of positioning itself underneath the

record though, this unit is placed on top of the record, also for the explicit purpose of eliminating resonances. Although one might assume the \$295 Disc Stabilizer is 13 times better than the \$22.95 Disc Stabilizer, it is safer to assume that the huge price gap is a function of creating something for everyone, for today's audio/video market is a something-for-everyone market. And competition for the consumer dollar is stiff.

Most competitive in the overall accessory market are the maintenance items — audio and video cleaning systems. And in the forefront of that competition is Allsop.

"We sell very well in cassette deck cleaners," says Jeff Heininger, director of the Fidelity Division of Allsop. In fact, we're the leader. And we were the first with video cleaners. When people talk about them, they use our name almost generically, 'If it's a cleaner, it's an Allsop.' That's because we were the first to do what is best. We use alcohol."

One of Allsop's items that has the highest mark-up for retailers is its record cleaning system that includes an anti-static mat as well as cleaning solution and a cleaning pad. It is called Orbitrac and, along with the two video care systems and several cassette deck cleaners,



makes up a complete line of audio and video cleaning accessories. That line will be expanded soon with the addition of an audio cleaner for micro cassette recorders.

Nortronics, a leading designer and manufacturer of high technology recording heads for more than 25 years, also claims to know more about cleaning heads than most because it manufactures them.

"Our cleaning products are more expensive because they are U.S. products," says Nortronics' national sales manager Ken Lubitz. "Unlike many other companies who buy foreign-made products, put their American labels on them and just distribute them, our products are made here and are better items."

### Expanding into Video

Nortronics, too, has expanded its product line from audio to video cleaning accessories and like several other audio/video accessory companies is beginning to address the needs of the computer industry with a line of cleaning products.

Another company with its sights set on video is Recoton. It has

emerged in the video accessories market with its Product Series line of stabilizers and enhancers. These elements do such things as connect a VCR to two TV sets in the home, record video tapes from VHS to Beta format, record regular TV while watching pay TV, improve the sound quality of a TV and also can permit the operation of up to six video components without ever disconnecting cables.

"Video enhancers and amplifiers enable one to defeat the loss of sound and viewing that often occurs and so inevitably one winds up with a better video product," says George Calvi, vice president/sales for Recoton, who explains that the company's shift in emphasis from audio to video accessories was due to the shift in consumer interest. The company, which bought Fidelitone, now produces 240 video accessory products.

While Recoton has been increasing its video accessory lines, so has Colormax, according to Michael Bolduc, general manager of the company. One example is a Colormax video product that is unique to the video accessory market and very specialized. It is a caption con-

verter for the hearing impaired, called a Telecaption Decoder. It automatically translates human speech to captions and displays them on the TV screen.

Yet another company jumping on the video bandwagon is AMCO Electronics. In 1981, the firm introduced video switching systems into its video accessory line, but according to AMCO's marketing director Scott Wood, future technology just may eliminate the need for video switching systems. "People are accustomed to being able to use any channel in any room. Someday TVs are going to have switching systems built into them."

Though advances in technology may foreshadow the demise of some accessories currently produced in the audio and video industries, there certainly will be others to take their places. Until records and tapes become self-cleaning and static becomes extinct, there will be a need for maintenance products. As long as there is no end of consumer interest in audio and video communication in sight, there will be no end to the number of products that improve that communication. □

## Accessories Can Turn A Customer Into A Regular

The sale of audio and video accessories makes up anywhere from 5% to 20% of total revenue for many hi-fi dealers across the country. But more often what accessories do for the dealer in terms of sales is wave a big red flag that says "stop here." Accessories serve as a lure that can turn a one-time customer into a repeat customer and, possibly, a purchaser of equipment. Accessory sales can create the first bond of trust between customer and dealer.

Though across-the-board the mark-up on accessories is about 40%, some retailers say that some items, such as cables, extension cords and plugs, provide a little better profit. Because most items provide the same profit margin, however, one distinguishing characteristic so important to the sale of accessories is display.

"It's critical," says John McQuire of Stereo by McQuires in Rockville, Md. "Someone comes in, you're not paying attention, you end up not showing them everything you've got and you've lost a sale. If the display

can be seen and is attractive or eye-catching, it will draw the customer to it and sell the item without your help."

Larry Goldberg, general manager of Natural Sound Inc., of Framingham, Mass., agrees. "Accessories have to be out and on display so you can see them. If you have to pull them out, you won't sell them."

To some extent, say McQuire and Goldberg, accessory buying is impulse buying, but other retailers disagree. According to Steve Smith, manager of Von's Electronics in West Lafayette, Ind., "Most people come looking for a specific item."

In general, however, one thing most dealers agree on is that accessories are not hard sell items. Oftentimes a purchaser will make his first acquaintance with some accessories, such as cables, microphones and cleaning devices, at the time of an equipment purchase. For the first time the customer also may become aware of the importance of keeping equipment clean and the value of anti-static kits. Because the purchaser has an in-

vestment at stake, preserving and maintaining that investment suddenly becomes more significant and learning about how to take care of that investment means learning about available maintenance products. McQuire says that in his shop half of his accessory sales come at the time of an equipment purchase, although "we always have people coming in just for accessories," he adds.

One way to help assure repeat business, which many dealers say maintenance products amount to, is free clinics to familiarize the customer with all the products available and their uses.

But Roy Mears of Hi Fidelity of Lubbock in Lubbock, Texas, says the dealer ultimately determines what the customer will buy. "They buy what we tell them is best. If you go to a doctor and he gives you a prescription, you don't say you want to pick another prescription. You take what the doctor gives you. It's the same way with accessory buying."

—Deborah Merck



## Audio/Video Furniture — A Profitable Addition

Though the audio furniture industry as a whole has reached a plateau, according to Michael Wertman, senior vice president/marketing and sales for Gusdorf Corp., he's not worried. The reason for the plateau, he explains, is not just the recessionary crunch that has hit many consumer pocketbooks hard, but also the fact that video products are cashing in on a consumer craze. The consumer is fascinated with the new cable and taping capacities video has to offer, he says, and they're buying it.

"Our product is aftermarket sales. They buy our system after they buy their electrical system," he adds.

But the industry is not becoming static, with new product lines coming onstream, the industry is still experiencing growth. Gusdorf, for instance, has a line of

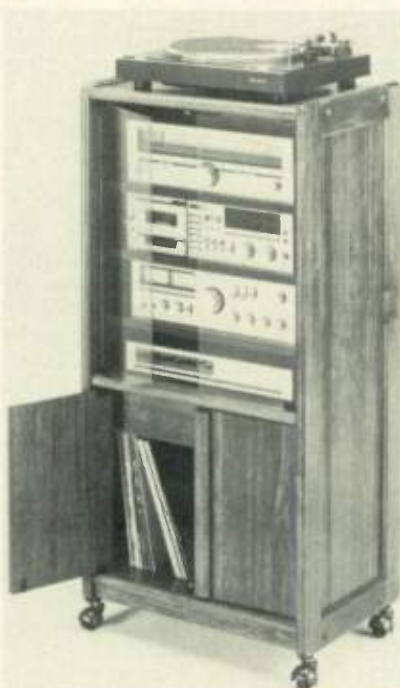


**Gusdorf Model 2650**

new, all-gray metallic audio pieces. With its very high-tech look this line is a departure from Gusdorf's standard knock-down component system, which is made of particle board covered with a vinyl wood grain finish.

O'Sullivan Industries, one of Gusdorf's major competitors, is also adding to its product line with smaller, sleeker components, designed to accommodate the new, sleeker-designed electronic parts. O'Sullivan's competitively priced cabinets, like Gusdorf's, have a good mark-up and are profitable items for the dealer. For this reason, the firm reports having little trouble getting them on dealers' floors. Hi-fi components and the furniture simply complement one another.

"Space is elastic," says Wert-



**O'Sullivan Model NC 365**

man. "If there is a profit to be made, (space) can be found."

This old merchandising adage apparently holds true in the case of audio furniture because O'Sullivan is reporting a 10% increase in revenues this year. Another manufacturer, Custom Woodwork & Design of Bedford Park, Ill., maker of expensive all-wood cabinetry, also reports growth in revenue for the year.

### Expanding into Furniture

"I think a few items *have* been selling better," says John McQuire of Stereo by McQuires in Rockville, Md.

Noting that there is a substantial mark-up for the dealer, ranging from 35 to 50 points, he cautions, "There's more work involved as well because you have to assemble it (furniture) yourself and one out of five pieces

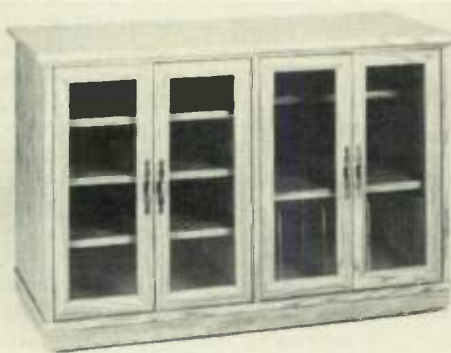
will have a chip or mark on it, so there's more involved. But," he admits, "it's profitable and we're going to do some expansion in that direction."

Even with the high profit margin, audio furniture is not profitable for everyone. Larry Goldberg of Natural Sound Inc. in Framingham, Mass., says that because his is a very high-end business he sells very expensive all-wood furniture. "The average cabinet is about \$400 and they are slow moving items. They are wood and handcrafted and very good, but what we sell is so heavy, we loose in the shipping costs."

Though these authentic wood cabinets have the disadvantage of high freight charges, their strong selling point is the fact that they are oak and walnut and if scratched or nicked are not ruined. They simply can be sanded and refinished. This gives them longevity, says Kathy Renz, sales director for Custom Woodwork & Design.

Not only do audio furniture dealers compete with each other for dealer space but with a multitude of other accessory displays. "We're all fighting for the retailer's floor space," says William Schaeffer, vice president/marketing and sales for Bush Industries, "but we have one advantage: we can sell the equipment because when the customer sees the furniture fully loaded and sees how the stereo or video system and the furniture complement one another, their interest is aroused. Then after the equipment sale is finalized, the dealer needs to ask, 'Where are you going to put this in your house?' Then they're 90% of the way to getting the furniture sale order."

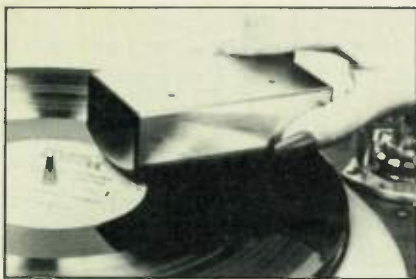
— Deborah Merck



**Bush Industries  
Model CE 1250**



# ssorted Accessories

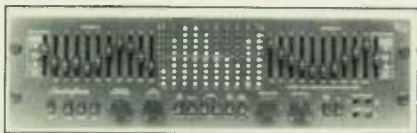


## Anti-Static Cleaner

Audio-Technica's record maintenance system uses a conductive construction and an inner reservoir that releases minute amounts of a specially formulated cleaner to alternately spaced rows of unidirectional fibers to drain off static charges while removing dust and harmful deposits from record grooves. The system includes the cleaning pad and a matching base that protects the pad from dust and air-borne contaminants as well as holding it. A bottle of TechniClean Solution with applicator completes the package. Suggested list price is \$24.95, with two-ounce solution refills priced at \$2.95. **Audio-Technica U.S. Inc.**, 1221 Commerce Drive, Stow, Ohio 44224. (216) 686-2600.

## Cassette Adaptor

With the CS112A Stereo Cassette Adapter from Recoton, consumers can play cassette style tapes on any eight-track cartridge player. The cassette is inserted into the adaptor which then fits into the eight-track cartridge door. The unit features rewind, stop and play positions and an automatic stop. Suggested retail is \$59.95. **Recoton Corp.**, 46-23 Crane St., Long Island City, NY. 11101.



## Analyzer/Equalizer

The AE2000 Auto-Scan-Alyzer is a combination analyzer/equalizer that combines Soundcraftsmen's differential/comparator circuitry to provide a level of accuracy in analysis that the company claims is 10 times greater than others ( $\pm 0.1$  dB). The equalizer uses high precision wire-wound inductors instead of IC Op-Amp filter circuits for highest gain, lowest noise and most neutral sound. Octave scanning is automatic and a calibrated

meter is unnecessary. The AE2000 retails for \$699. **Soundcraftsmen**, 2200 S. Ritchey, Santa Ana, Calif. 92705. (714) 556-6191.

## Overload Protection

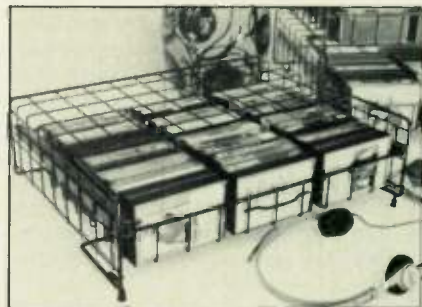
The Protech SP150 protects speakers against D.C. voltages, excessive high frequency content, gradual voice coil heating and excessive transients and can be used to limit the maximum volume of speakers. Units offer no signal degradation and place no stress on the amplifier. They continuously monitor the signal to the speakers and trigger a time delay if an overload occurs. If the level does not fall to an acceptable point, a relay reduces power to a safe amount. The delay is long enough not to affect the transients, yet quick enough to protect the speakers. The circuit becomes more sensitive at higher frequencies. The crossover point is 5 kHz with a roll-off of 6 dB per octave requiring progressively less power as the frequency increases to enhance protection for midrange units as well as tweeters. The system is not suitable for use with tube amplifiers. **QED USA Inc.**, West Lake Road, 2141 Terrace Lane, Skaneateles, N.Y. 13152. (315) 685-3806.



## Sound Meter

The Quest Model 208 Sound Level Meter can be used by audio specialists, film and video producers, music teachers, architects or anyone who needs an accurate instrument for checking the acoustics of rooms and buildings, speaker systems or public address systems. It fits in a shirt pocket and measures noise levels in the A-weighted mode (essentially the same as human hear), with a measuring range from 70 to 120 dB. The noise level is displayed with 10 light-emitting diodes. It can be calibrated to main-

tain its accuracy. It is priced at \$125. **Quest Electronics**, 510 S. Worthington St., Oconomowoc, Wis. 53066. (414) 567-9157.



## Cassette Storage

The stackable cassette storage modules introduced by Wire For Sound hold 42 Phillips-boxed cassettes each in a compact configuration that features a pull-out drawer with a smooth glide track for easy and silent cassette access. Made of metal wire coated with baked-on polyester, the modules are available in six colors. Each unit lists for \$24.95 and includes a set of alphabetical dividers and title cards. **Wire For Sound**, 6840 1/2 Vineland Ave., North Hollywood, Calif. 91605. (213) 762-0619.

## Tape Cleaning Package

Discwasher has packaged all its products needed for tape deck cleaning and care together in Care-set at a suggested retail price of \$14.95. Careset includes Discwasher's Perfect Path Cassette Head Cleaner and C.P.R. Capstan Pinch Roller Cleaner. **Discwasher, Jensen Sound Laboratories**, 4136 N. United Parkway, Schiller Park, Ill. 60176. (314) 449-0941.



## Microphone Power Supply

The Crown PH-4 supplies 48 volts of D.C. phantom power for all types of microphones. It consists of a master unit with connections for up to four microphones, plus slave units that each add capability for another four microphones. The company's suggested list price for the PH-4 is \$179. **Crown International** 1718 W. Mishawaka Road, Elkhart, Ind. 46517. (219) 294-5571.



# DON'T CONFUSE THE PHONY WITH THE SONY.



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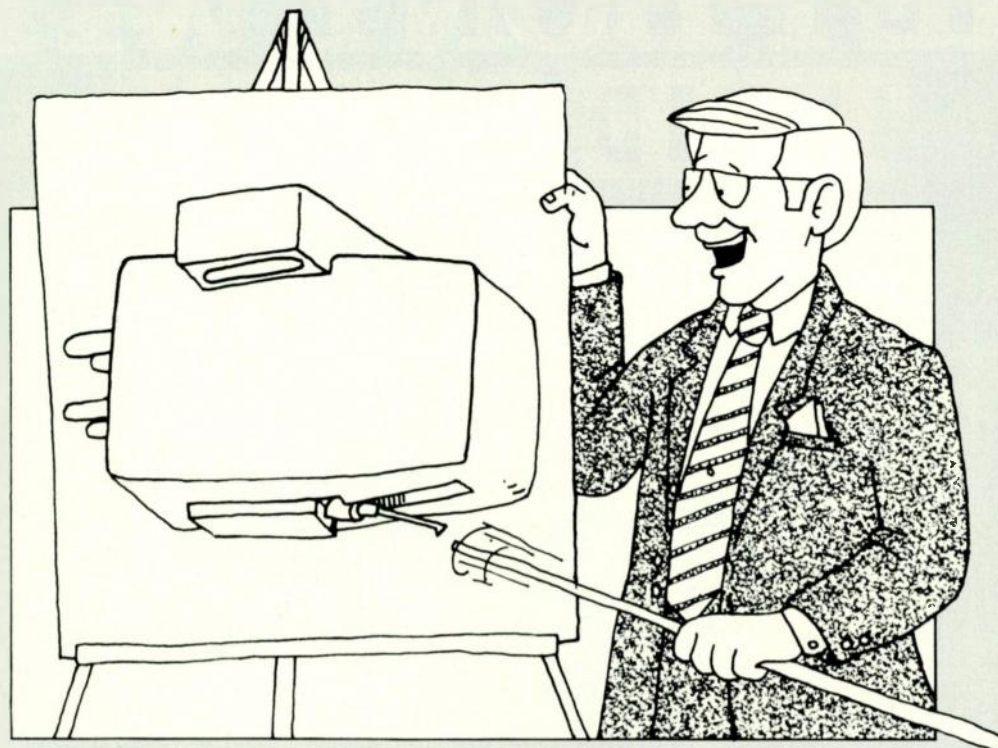
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# AUDIO SALESMAN



## Demonstrate Cartridge Differences

**T**urntables have tone arm gimbals, spring-loaded feet, strobe lights and automatic controls. Their features can be easily pointed out and demonstrated. Phono cartridges, on the other hand, are another story. Although all-important to the sound of a system, its diminutive properties make physical features nearly impossible to view. The problem for the consumer is that aside from the packaging, a \$20 model appears more or less identical to an \$80 one. Your problem, naturally, is to overcome this "they-all-look-alike" appearance.

Begin your cartridge presentations by explaining the importance of the device to the sound of the overall music system. Emphasize that the cartridge is very much an audio component, not an accessory. Avoid the concept of "you need a turntable with a cartridge on it." Instead, make your customer aware of the need to make a buying decision on a cartridge *and* a turntable. Naturally, you're there to help determine their compatibility.

Since phono cartridges and their

moving elements are too small to be easily evaluated with the naked eye, assemble some selling aids to help your presentations. Posters or cards depicting diagrams of cartridges are very useful, as are larger-than-life models, especially the type that can be broken apart to reveal inner workings. Models are most valuable in detailing styli shapes, since they are hard to present two-dimensionally.

Always remember to describe not only the elements of the cartridge that you are presenting, but also to relate how these elements will contribute to better sound. Since you cannot really demonstrate each and every phono cartridge in the shop, a certain element of "romance" might be included in your description of the product. Indeed, a glance at manufacturers' advertising brochures reveals such terms as "silky," "pure," "natural," "exciting" and "brilliant." The general rule here appears to be the smaller the steak, the greater the need for sizzle.

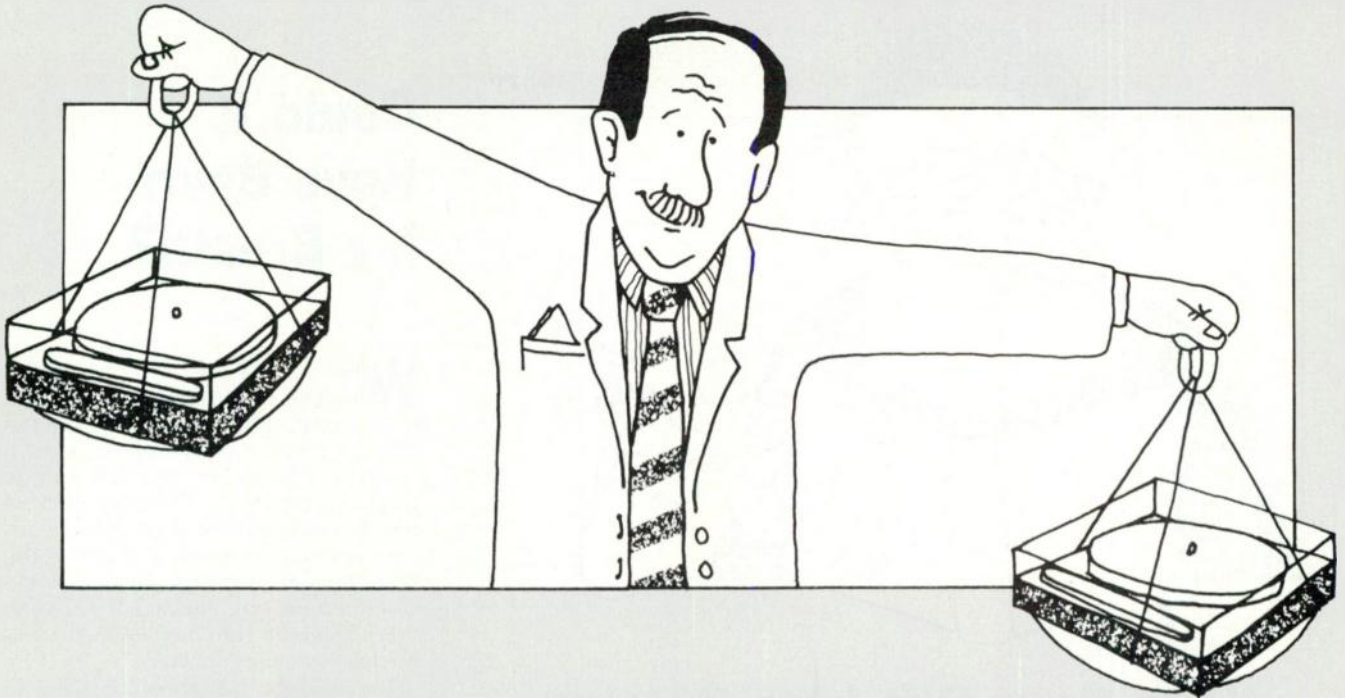
Whenever possible, demonstrate equipment using a good quality car-

tridge — one that belongs to a line offering a wide selection. When it comes time to discuss cartridges, point out the model that your customer had been listening to (and we hope, enjoyed). Based on your demonstration, your customer may choose this cartridge, or opt for a model that is close to it in the same brand line.

The growing popularity of cassette decks may tend to lessen the turntable/cartridge combination in some shopper's minds. When a customer expresses an interest in home recording, remember to explain to him the importance of a quality cartridge for good recorded results.

Lastly, the value of a fine quality cartridge may be related directly to the cost of record albums. A client may balk at spending \$80 or more for the tiniest component, but a handful of albums (or just a few audiophile discs) can reach that price point easily. What's going to protect his investment in his record library better than a quality phono cartridge and a good cleaning kit?





## Apples vs. Oranges? Nobody Wins

**S**o many turntable sales seem to hinge upon debates that center on a single aspect of design. "What's *really* better?" asks the bewildered consumer, "direct drive or belts?" How many times have you had to explain the design merits of curved tone arms vs. straight?

Comparing product is our job, and the shopper is rightfully expecting us to help him weigh the product's differences and advantages. Yet, centering upon a *single* design specific all too often tends to boil down to a debate on an issue. You wind up arguing against the statements of the last salesperson — both arguments, naturally, appear to have the support of logic and physics in general. Even if you do "win" this debate (a near impossible task) you are then left with the prospect of selling a turntable. Note that winning a design debate certainly does not sell you any product automatically. Also, adherence to a "This design is always better than that one" concept automatically rules out many choices in your showroom. Certainly, the customer often must wonder why you bother carrying a product, if its design is as awful as you say.

There is a way to successfully sell turntables and other products without constantly resorting to a debate on physics. A good audio salesperson learns to discuss items like turntables in

the context of a complete product system. Certainly, you may talk about the value of a low-mass tone arm. Relate this value, however, to how well it performs with the specific gimbal, suspension, head-shell and drive system of the model in question. Include the merits of a given brand's reliability, reputation

for excellence and sonic quality. Add your personal experience with the model in your showroom, and detail the satisfaction of your customers. Suddenly, you will find yourself selling turntables instead of teaching physics. And after all, isn't that what you're really hired to do?

## The Horse & The Cart

**I**f you're like most audio salespeople, you could probably analyze the time that you spend selling a turntable and come up with figures like this:

Time spent selling turntable: 70-80%

Time spent selling cartridge: 20-30%

If you're on commission, you probably make at least as much on the cartridge as you do on the turntable itself. Yet if this is so, why is the phono cartridge so often treated as an afterthought to the sale? With a presentation like this, it's no wonder that the customer sometimes balks when a cartridge costing more than \$30 is suggested.

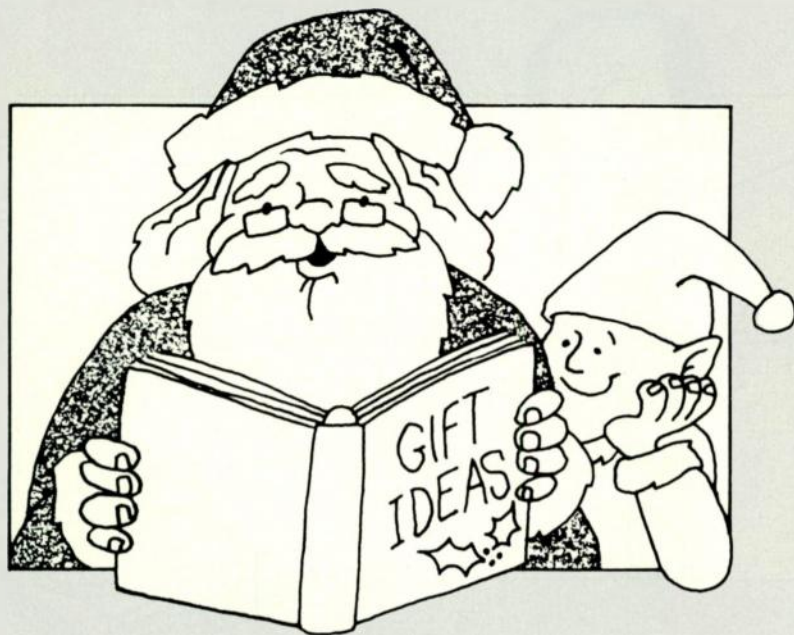
Perhaps if we took more time to explain the importance of a cartridge to the total sound system, and if we went directly to the cartridge at the beginning of the sale, we'd meet with less resis-

tance to the purchase of higher-end cartridges.

See what happens if you go directly to the phono cartridge with your customer and take the time to fully explain the differences, including price ranges — much the same way that you might show off some speakers before having your customer select a receiver. After your customer understands the value of a good cartridge and makes even a generalized selection, you can then show him the turntable that would best handle the cartridge.

By selling in this fashion you not only direct your customer to consider better grade (and better paying) cartridges, but both remove yourself from potential price-only turntable selling and enable yourself to suggest a specific turntable to match the cartridge.





## Your Own Gift Idea Catalog

**C**ustomers flock into our stores this time of year for specific gift items such as turntables and VCRs, but when they go out for an evening of "looking around for something to get Uncle Harry," they usually go to a department store. They tend not to think of us for impulse-type purchases because we're thought of only in relation to big ticket products.

The truth is that our shops contain plenty of inexpensive gifts that are both useful and entertaining. But because most of our merchandising is geared toward the bigger sale, the smaller ticket items tend to get buried. Rarely will someone come up to you and say, "I'm looking for a good gift for my nephew." But by showing our customers that we have such gift products available, we can increase our personal sales volume and profits. The question is, how do we do this?

One practical way of calling attention to gift items is to bulk display them on the counter or in a high-traffic area of the showroom floor. Tagging a stack of headphones or portable stereo appropriately creates interest and appeal. In some stores, of course, space is at a premium, and stacks of small items always represent a shrinkage hazard.

An interesting way to present impulse ideas safely and inexpensively is to create a "Gift Ideas" binder and leave it on your counter. All you require is a

standard ring binder with plastic insert pages, the sort that make up photo binders. Pick out literature describing various items that you feel would be suitable as gifts, and indicate the price of the product. If you wish, you may add some of your own ideas about why the merchandise would be a good gift choice on a facing page.

Select products that are usually in stock, and place them in price order in the book. Start with a \$10 or \$15 accessory item and work up to more expensive gifts. You might end with a \$60 headphone or go all the way up to a complete auto sound system. There's no real limit to good impulse-purchasing ideas.

Remember to include gift ideas that are suitable for a general audience. If you include a \$15 VCR head cleaner, also suggest a radio or record care kit in the same price range. Not all of your customers own video recorders yet. Good gift suggestions to include might be a personal portable, a case of tape, headphones, demagnetizer, cartridge upgrades, equalizers for car and home, and of course, if you offer them, gift certificates.

Title the binder "Gift Ideas" and decorate it, if you like, with a little wrapping or ribbon. Leave it on your counter as a silent sales partner to add to your sales as you write your holiday invoices.

## Could It Have Been My Breath?

**W**hile it's possible to try as hard as we can to sell and still fall short of our goal, most of our sales are lost through simple mistakes on our part. It could be because we took too long to reach our customer, thereby creating an impression of indifference on our part. Maybe we chose the wrong demonstration materials, or we seemed unenthusiastic about our merchandise. Whatever the reason was, our shopper left us holding an empty invoice.

Losing sales is disappointing, not to mention counter-productive financially. It isn't, however, a crime. That is, unless we decide to do nothing about it.

All too often we attribute our lost sale to a customer's bad intent, inability to perceive value or personality. Inwardly we usually realize that the fault remains with us, not the shopper. Did he really fail to perceive a product's value? More likely, it is we who failed to perceive his own concept of value, and wound up showing him the wrong thing.

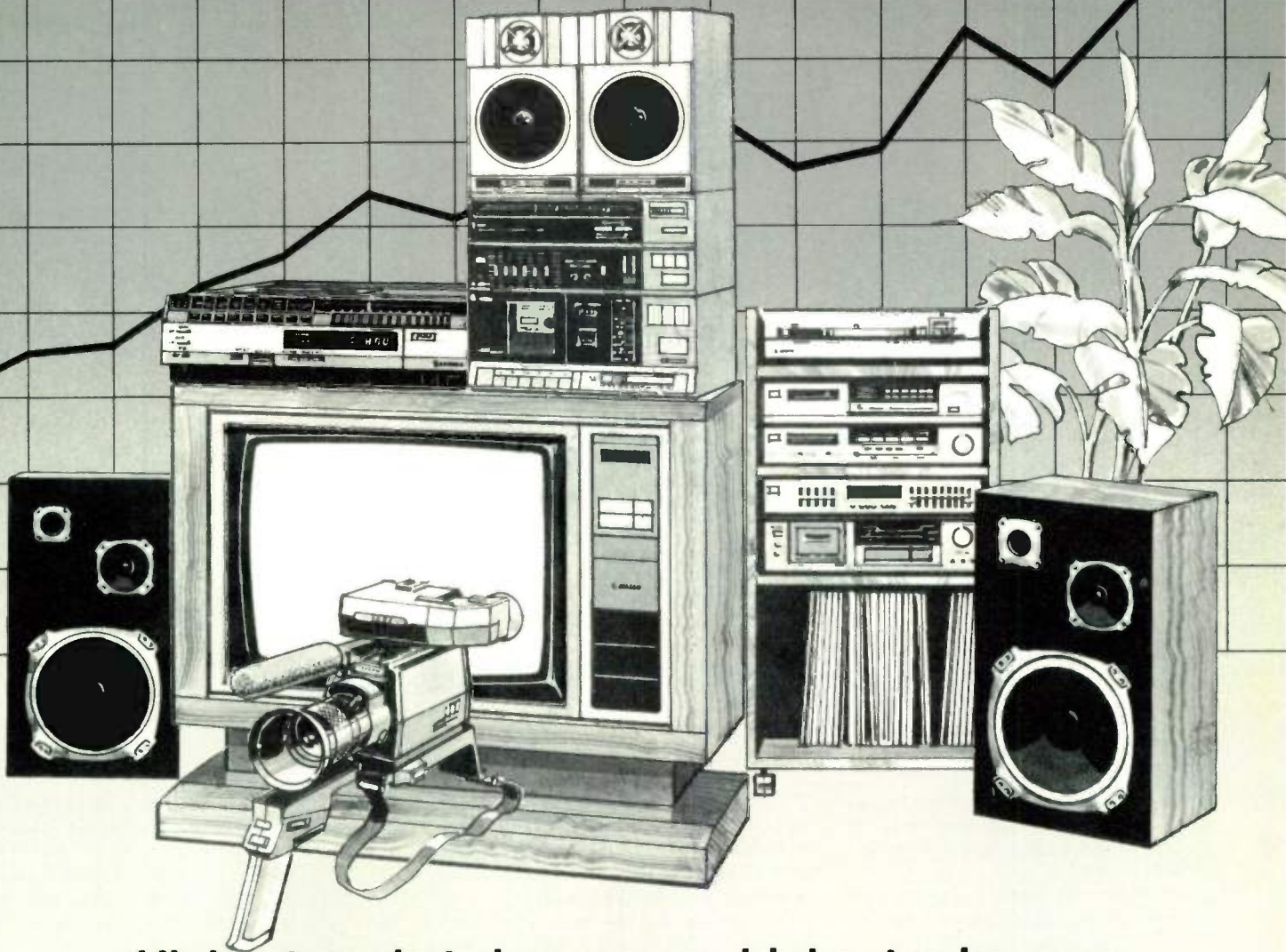
It's important for us to learn to recognize and really admit our selling errors . . . for only then will we be able to rectify them. If we consistently present a line of speakers before even fully describing their merits, it's no wonder that we don't sell as many as we'd like to. Yet, if we do not admit the fact that we are making a mistake here, we risk making it again and again, cutting down our effectiveness in selling as we do it.

The best guard against repeating the mistakes that we all make in selling is to *review* what happened soon afterwards, and identify whatever it is that went wrong. In this manner, we can help ourselves steer clear of the bad habits that we've created over the years.

One more tip: Just because we made a sale doesn't mean that we made no mistakes. Think it over: Why didn't they go for that software package, or headphones, too? Was it simply a matter of budget, or did you do something wrong? Think about it; it's the only way to improve.



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## Tip Top Tapes Keep Toes Tappin'

**W**hile loudspeaker demos are still best performed by using a good demonstration record and cartridge, the cassette is fast becoming an important demonstration source. The fastest growing areas of audio — decks, personal portables and car stereo — all involve cassette demonstrations. Just as with turntables and speakers, a good quality demo source is essential for proper selling. A poor-sounding tape or one that fails mechanically can easily be attributed to poor equipment in the consumer's eye. For that reason, special care should be taken to help insure a flawless demo.

Start by using a very high quality tape — preferably a high bias type. These tapes offer good performance, even when played back on equipment not equipped for them. Car stereos, for example, sound "hotter" without adjusting bias, improving high-end response. Metal tapes can sound a trifle better on good gear, but should be avoided for all-around use. Consumers

who do not use metal tape may suspect a "rigged" presentation — "I never buy eight dollar cassettes." Also, some low-end equipment may overload and distort when trying to reproduce tapes with very wide dynamic range.

Use a C60 or, even better, C46 minute tape. The shorter the tape, the thicker the base, and this helps avoid print-through and jamming. It also saves you important demo time when trying to locate a particular passage.

When recording the tape, select a disc with ultra quiet surfaces. Surface ticks and hiss may make your customer suspect that the noise reduction system being shown him is less than perfect. Use short pieces whenever possible. Many cassette players are incorporating music search systems. The faster you get them to locate a song, the more impressive the system seems. Load one side of the tape with classical selection, put popular music on the reverse. When demonstrating ask your customer for his preference, to avoid assaulting his

ears or boring him. Never assume what his choice will be — you'll sometimes be wrong, and will not appear considerate.

Use Dolby B noise reduction, since the bulk of your gear is set up to handle it. A second tape with Dolby C on one side and DBX on the reverse can be made, or you can leave made up demos inside these specially equipped decks.

Carrying your demo tape with you is a good idea. It avoids a last minute scramble — "Let's see, what was I demonstrating last?" Remember to knock out the anti-erase lugs for the obvious reasons, and *always* carry the tape in its case! Lint and moisture can ruin a tape easily, and loose tape tends to unravel and crinkle up.

Remember that a demo cassette is subjected to unnatural wear and tear, and that you depend upon its performance characteristics. Remake and replace your tapes periodically to avoid any embarrassment when you present your products.



## Computing Qualifications Is Important

**T**his holiday season we're seeing the home or personal computer begin to come of age. For many of us, this is a category full of new and fascinating products. The consumer, too, is fascinated, but confused by what he's seen and heard about these things. He'll be coming to you for buying advice, sometimes not even knowing what questions to ask.

A microcomputer customer must be qualified in much the same way an audio or video shopper needs to be. Just as in these other categories, care must be taken to qualify the customer properly with regard to his interests and needs, before any serious product presentation can begin.

It may simplify things if we break the shoppers down into three general categories. Each type of shopper needs a somewhat different computer at the moment, but his immediate needs may grow eventually to encompass the needs described by other types. The better you can qualify your customer, the better you can judge just what type of buyer your customer ultimately will be.

The first type of computer shopper is the game-oriented person. Buying for himself and his children, this person may have started out shopping for just a video game. But noting that home computers need not cost much more, and that they're supposed to be better, he's curious to see whether he might not get more for his money with a computer. A basic membrane-board computer with joystick and cartridge parts would suit his needs fine. He needs to be shown how much better games can be on a computer, when compared to ordinary game machines. It is important to explain to this shopper that his older game cartridges, if he has any, will not usually work on his new purchase. Also, be sure to find out whether his kids absolutely *must* have any certain game — the wrong computer would never play it.

Next comes the person interested in learning a bit about programming. This person should be shown models that are capable of a variety of true computer functions and (importantly) that have very good literature available for them. This customer may be buying a computer so that his children will get a head start on BASIC — both good instruc-

tion manuals and a variety of software will be a must for him. This customer will almost certainly need a cassette loader and a telephone modem to be able to properly explore his computer's possibilities.

Last comes the type of buyer who not only wants to do the budget and home inventory, but wants to use his machine for business purposes as well. A more powerful model is in order here, and one that can accept a host of peripherals. If word processing is a future possibility, then only a full-stroke keyboard will do. Easy memory expansion

also will be important, along with disk drive and printer ports. Most of these peripherals will not be purchased at once, but this customer needs to be shown how important it is to own a machine with expanding capabilities.

Naturally, any basic type of computer customer may find his needs edging up a rung or two, once he begins using the machine. Take the time to explain fully the possible uses that he may find for his computer. Naturally, by spending a little more this season he may find himself saving money for many years to come.

## Computer Book Aids Sales Staff

Over the next few months we will be hearing more and more about computers and how they will interface with the audio and video equipment that we already carry. At the moment, it isn't a bad idea for salesmen and women to study up on the basic concepts of computers, their use, and their workings.

One of the easiest to understand books about computers that has recently appeared is **Computer Consciousness, Surviving the Automated 80's**. **Computer Consciousness** is a simple, easy-to-read soft-back that details exactly what the elements of computers are and explains their uses when assembled into a system.

The book is broken into five main sections, including one on hardware and one on software. We are also given some historical perspective on the machines, along with an introduction to the different computer languages.

Even if you are more than just a computer novice, chapters covering subjects as simple as "What is a Program?" help you devise simple, non-threatening sales dialogues to the consumer. Certainly, you need not be a cybernetics expert — nor should you be — but you will be able to express yourself.

**Computer Consciousness** — Covvey and McAlister, Addison-Wesley Publishing Paperback \$5.95.

## Suggest An Extra Stylus

**T**he high cost of purchasing and inventorying styli has forced many audio retailers to curtail their replacement stylus offering. This very fact may be the reason why your customer is buying a new cartridge from you today.

If you offer replacement styli for your cartridge selection, why not suggest the purchase of a replacement at the time of the initial sale? Buying a new needle at the outset will save the

buyer a frustrating search in the future. You might also point out that many people replace their styli only after it is too late. By that time they've done permanent damage to some valued records. Obtaining a replacement right away will save *him* time and money. You might write a date on the replacement's carton for him, reminding him when to install it. Base this date on his estimated turntable use.



# Super Recordings Make Super Demos

By Norman Eisenberg

What with direct-to-disc, digitally mastered, half-speed mastered, and dbx-coded albums, there are a spate of superior recordings available that can really stretch the sonic sinews of any stereo system. It wasn't always like this — for years complaints were legion about commercial releases that may have had musical interest but that often failed to match the acoustic capabilities of good playback systems.

Today there's an increasing number of recordings that qualify on both counts. Their technical quality is a real match for a modern stereo system — in fact, some of them will show up, rather than show off, some systems. And musically, they span all tastes with something for everyone. When talk about specs and the audio "numbers" is said and done, it is, after all, the musical sound of a system that people are buying. Here's a rundown of some current albums that seem especially relevant for this purpose.

→ *The Sheffield Track Record.* (Sheffield Lab 20; direct-to-disc; limited edition.)

A six-man rock group combines tremendous energy with tasteful artistry that is superbly captured in what has to be one of the best rock albums yet issued. This is excellent source material for dynamic range and transient impact, both high and low frequencies; ditto for tonal color. The purity of the recording process also makes this one very good for demonstrating the effect of an image enhancement device if you have occasion to do so. Note that the groove is wider than on a conventional disc to allow for full bass swing of the record cutter with the use of signal compression. This calls for high-grade playback equipment and also accounts for the relatively short time of each side (8:20 and 7:35 minutes respectively). But really, this is how pop albums *should* sound.

→ Jack Sheldon: *Playin' It Straight.* (RealTime Records RT-303. Digitally mastered.)

Jack Sheldon's "Late Show All-Stars" combo makes jazz that ranges from hot and "crazy" to

tepid and moody, all of it interesting and very virtuoso in the playing. A generous share of wind instruments is used, including saxophones, flute and of course, trumpet (Sheldon's forte), and their tonal contours are realistically preserved together with a sense of live ambience and superior built-in stereo imaging. This is exactly the album to get out and play for a jazz buff shopping for a new or up-graded system.

*La Fiesta de la Posada — The Festival at the Inn — A Christmas Choral Pageant.* Music by Dave Brubeck; text by Lola Brubeck. (CBS Mastersound IM 36662. Digitally mastered.)

Of seasonal timeliness, this original work is based on "las posadas," a reenactment of Joseph and Mary's search for lodging on the eve of the birth of Jesus, traditional in Latin America and in our own Southwest. Soloists include vocals, piano, bass, drums and Latin percussion. In addition there are choral groups and the St. Paul Chamber Orchestra. Conductor Dennis Russell Davies gets it all together in a cleanly recorded performance. This album will not blow your socks off, but it can create a quietly appealing mood.

*Romantic Music for Violin and Piano.* R. Strauss: *Sonata in E-Flat Major, op. 18*; Dvorak: *Romantic Pieces, Op. 75.* (Sheffield Lab 18. Direct-to-disc.)

Sheffield has not issued too many classical albums, but those I have heard are uniformly splendid for purity of tone, convincing stereo and ultra-clean surfaces. This one is no exception. Performances by Arnold Steinhardt on violin and Lincoln Mayorga on piano should appeal to classical buffs and may even convince others that this kind of music has its own charm and areas of discovery.

## Telarc Digitals

Following their triumph last year with the release of Beethoven's *Emperor Concerto* performed by Rudolf Serkin and the Boston Symphony under Seiji Ozawa (No.

10065), Telarc has produced the same composer's *Fourth Piano Concerto* with the same performers (Telarc DG 10064). The performance was recorded by Soundstream in Boston's Symphony Hall, one of the world's best for large-scale musical works. Natural ambience complements the artistry and power of the BSO, which makes a nice framework for Serkin's seminal pianism. Listen to the fast keyboard runs and how the rapid-fire notes blend and yet remain distinguishable. Check, too, the nervous pulsating energy of the last movement for some taut transients.

Other current Telarc Digitals worth auditioning include the BSO performing Vivaldi's *Four Seasons* (Telarc DG-10070), which generates some awesome power, all from the strings. *Encores à la française* (Telarc DG-10069) contains several shorter works performed on the organ at Symphony Hall by Michael Murray — outstanding for dynamic range and frequency span. Rousing, yet sensitive, performances of Gershwin's *Rhapsody in Blue* and *An American in Paris* by the Cincinnati Symphony Orchestra conducted by Erich Kunze Kunzel with Eugene List at the piano for the *Rhapsody* are available on Telarc DG-10058.

All the dbx-processed albums present an uncanny quietness of surface from which awesome dynamic ranges emerge, and any of these remarkable releases can show off a stereo system better than anything I know of that's commercially available. In fact, it has been said that the single most telling improvement one can make in an otherwise decent stereo system is to add the dbx decoding facility.

One album that's been around for better than a year now is *The Digital Fiedler* (PS-1021). This was the late conductor's only digital recording, and possibly the best single 12-inch LP I have ever heard. It contains Tchaikovsky's *Capriccio Italien* and Rimsky-Korsakov's *Capriccio Espagnol*. Just put it on the turntable, turn up the volume and step back — but first make sure that whatever speakers you use can handle all the clean decibels they will be getting!



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## Store Location Can Spell Success — Or Failure

Opening a new hi-fi store can be a risky proposition. One way to increase your chances for success is to find the most viable location for your store, according to Oscar Reid, executive vice president of Urban Investment and Development Co., Aetna Life & Casualty's real estate development subsidiary.

"The right location can go a long way toward overcoming the question of whether your hi-fi store is reaching the market it needs to succeed," Reid said. "Considering the current high cost of financing and the cautiousness with which lenders examine new or expanded business ventures, it makes sense to select a location that shows good promise of attracting your desired market."

The price of the site is not the most important criterion, he noted. An inexpensive site in the wrong location is no bargain. A more expensive site in an optimum location may pay for itself quickly.

There are nine location factors Reid believes are critical to the success of a new hi-fi enterprise:

**1. Basic demand for your audio products or services, and the proximity of competition, if any.**

Does the market have a large enough demand for hi-fi equipment and accessories to support an ongoing business? And will your businesses likely be undercut by similar operations already in the area?

If there is a substantial demand for hi-fi products in your market, and this demand is not already being fully met, then you have a good chance to succeed, all other factors being equal, Reid said.

**2. Income levels and spending habits of the surrounding population.**

(The latter can often be more important than the former, Reid emphasized.)

"You can have two communities with identical income levels, yet people in one lean toward staples and necessities while people in the other prefer to spend their money on luxury items," Reid observed. "Be certain people in your market can not only afford audio merchandise, but that their spending habits lean in this direction."

**3. Growth trends. Real estate may be priced to reflect anticipated growth, but you should know how**



**"Be certain people in your market can not only afford audio merchandise, but that their spending habits lean in this direction."**

*Oscar Reid*

**much growth is expected and how soon it will occur.**

"One merchant may enter a new area to gain a portion of a growing market, while another may want his market already established," Reid said. "You must assess your own situation and determine whether you can survive while a potentially large market is still taking shape."

**4. Proximity of residential development.**

"Obviously, the closer you are to residential areas, the more likely you are to capture local business," Reid said. "If you're farther away, you run the risk of losing much of your business to the competition."

He noted that in certain communities — such as the five Urban is developing in suburban Chicago — developers provide commercial land for sale or lease adjacent to sites planned for residential construction. This provides businesses with a ready-made market.

**5. The proximity of major highways and thoroughfares.**

Accessibility is important for practically all retail businesses, whether or not they draw from distant clientele.

"Having a site near a major thoroughfare is likely to build traffic for any type of business, hi-fi stores included," Reid said.

**6. Adequate parking.**

In suburban communities, parking is essential. If parking spaces are cramped, or if the parking area is difficult to reach or requires walking long distances, customers are likely to shop elsewhere.

"Parking area maintenance is

also important, especially in winter, when piled up ice and snow can cut down on the number of available spaces," Reid said.

**7. Visibility.**

High visibility can be crucial to the success of a new hi-fi store. For best results, look for a site in a well-traveled area where there are other complementary attractions.

"Sites near major shopping centers usually have excellent visibility," Reid observed. "Such centers tend to attract hundreds of thousands of people a year — people who are in the mood to buy."

**8. Architectural controls.**

Some communities regulate the exteriors of commercial buildings. Others may permit almost any kind of design, which can be a detriment in many cases.

"Today, most business people prefer to be in sites with strong architectural controls," Reid said. "Otherwise a store risks being surrounded by garish architecture, flamboyant signs and traffic-snarling driveways."

**9. The interest and objectives of neighboring developments.**

Sites with speculative development next door eventually may lose value, Reid noted. He suggests locating in areas where neighboring development is compatible with the interests of your business.

"Look for communities where development follows a planned approach," he suggested.

Reid said there are many ways to investigate these nine criteria. You can do it yourself by consulting the research departments of local



newspapers and banks. The Census Bureau may also have data. You can contact the developer of the property or, if none of these methods is adequate, you can hire your own professional research consultant.

"Here, too, locating near a shopping center has its advantages because, in most cases, the center's

developer has already done most of the transportation and market studies for you," Reid said.

Reid is responsible for marketing commercial sites in Urban's five Chicago-area planned communities. These are New Century Town in north suburban Vernon Hills, Stratford in west suburban Bloomington, Fox Valley Villages in Au-

rona, Orland Square in southwest suburban Orland Park and River Oaks West in south suburban Calumet City.

For more information on sites in Urban planned communities, contact Urban Investment and Development Co., 845 N. Michigan Ave., Suite 800, Chicago, Ill. 60611, (312) 440-3315.

## Retailers Need Meaningful Leads

Any audio manufacturer who intends to grow and flourish must ensure that his dealers prosper as well. Supplying top quality products and following through with effective sales training and advertising and promotion support is one part of the manufacturer's commitment. However, helping the retailer build business for the products is another, according to Lawrence G. Jaffe, director of marketing and sales for the Revox Division, Studer Revox America Inc.

"Therefore, a program to develop meaningful leads for dealers to build on is a vital component of Revox dealer support and a *modus operandi* used by the company" he said.

Most manufacturers supply leads to retailers, but Mr. Jaffe says he believes Revox has a somewhat different approach to customer leads. "We believe that leads must not be run-of-the-mill types; they *must* lead to new customers, not thin air."

One method used by Revox is highly selective advertising. In its campaign, Revox is employing coupon ads in "upscale" publications aimed at high-end consumers, such as *Architectural Digest*, *GEO*, *The New Yorker*, *Playboy Guide to Electronic Entertainment* and *Scientific American*. "Advertising in these publications is helping us determine who our 'other' potential customers are. By others, we mean those in addition to the audiophile/buff, semi-professional, professional and broadcasting markets," Jaffe explained.

The upscale magazine campaign is producing excellent leads for Revox by qualifying prospects more effectively than does 'shotgun' advertising in a wide variety of publications. "For example," Mr. Jaffe noted, "by advertising specifically in these upscale magazines, we are able to determine from the coupon returns that those sending them in are, one, able to afford Revox products and, two, that they are specifically interested in Revox by virtue

of having made the effort to fill out and mail the coupons.

Another method Revox uses to develop significant leads is "bingo cards" sent to the company by the media. While many manufacturers believe such leads are unproductive, Mr. Jaffe believes Revox's handling of them produces better results.

"Many readers fill out bingo cards because it's so easy. Most who do so are catalog collectors, the merely curious, and time wasters who really don't intend to buy," the marketing executive conceded.

However, Revox responds to bingo card inquiries by prompt processing — sending a short-form catalog with basic "teaser" type

product information, plus a follow-up coupon. "We recommend to the inquirer that additional information is readily available from a nearby Revox dealer whose address is listed in the short catalog. The customer is given the option of visiting the retailer for a demonstration or of mailing a coupon for a free full-color catalog to the dealer or directly to Revox. Those who opt for the catalog are likely to receive a 'come visit us' telephone invitation from the dealer because more than 80% of the coupon respondents supply their telephone numbers," Mr. Jaffe explained.

The screening of leads is "really bringing customers into our dealers' stores," said Mr. Jaffe.

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## Maxell Ad Campaign Aims At Brand Awareness

Maxell Corp. of America has embarked on a three-pronged advertising campaign aimed at increasing awareness of the Maxell name and image among a greater percentage of Americans.

The campaign involves television, concentrated on cable, as well as radio and print.

"We have decided to integrate all of our advertising efforts to emphasize Maxell brand recognition and to underscore our twin themes of durability and fidelity," said Chris Mangiapane, advertising/merchandising manager for Maxell. "Rather than produce several different messages, or produce specific product ads, we have selected a few powerful images and messages and adapted them to each medium we're using."

For example, Mangiapane explained, the "Porsche" ad, which depicts the top of a Porsche 911

Targa being blown into the sky by the power of the music recorded on a Maxell cassette, has been produced for television. Maxell's "500 Plays" ad, which shows a listener seated in an easy chair being blown away by the sound of the music coming from a loudspeaker in front of him, has been produced for radio as well as television. Other ads, one depicting robots on a moon-like planet and the other showing a punk-rocker, have been produced in print, television and radio versions.

"The idea," explained Mangiapane, "is to select relatively few images and repeat them so their messages become reinforced in the consumer's mind. In our case, the message is durability and fidelity. That way, when a customer passes a display rack of Maxell tape, he automatically recognizes the name and associates it with the

long-lasting nature of the high fidelity sound."

Mangiapane pointed out that this strategy is especially important when trying to reach general consumers who are unsophisticated about audio.

"The demand for premium-quality audio cassettes has increased dramatically among general consumers, and in our effort to satisfy that demand we're expanding our distribution to include general merchandisers," observed Mangiapane. "But people who shop in those types of outlets don't know a great deal about audio. Because of that fact, they don't respond well to specs and technological explanations. They respond to strong simple messages about product benefits and that's what we're producing."

Scali, McCabe, Sloves is the advertising agency.

## Monster Cable Spotlights Autosound

Monster Cable, designer/manufacturer of high-end connecting wire for hi-fi and car stereo component systems, sponsored an autosound rally in Southern California in September to motivate dealers and increase overall sales in the territory. The mini car audio convention and seminar attracted dealers from throughout Southern California who were treated to exhibits, product introductions and lectures about technology and merchandising.

Monster Cable founder and president Noel Lee described the company as not only the connecting link between components, but as the connecting link between manufacturers of components.

He said the rally was an opportunity for manufacturers to field test new products and programs among an interested group of qualified retailers.

Participating manufacturers included Kenwood, Alpine, JBL, Sony, Nautilus Recordings, Rockford Fosgate, AudioMobile and Monster Cable. Seminar topics included installation techniques, marketing and merchandising car stereo, car acoustics and the systems approach to auto stereo design.



Scot Edwards, Jan Mancuso and Rich Baccigaluppi compare autosound rally's results.

## Mattel Continues Intellivision Rebates

As a follow-up to the recent success of a \$50 cash rebate offered with the purchase of Mattel Electronics' Intellivision, the company has begun a \$25 cash rebate good through Dec. 19. (The \$50 rebates expired Nov. 28.)

Mattel spokesmen say they hope to continue the sales momentum

established during the first promotions through the holiday selling season, boosting the demand for Mattel software as well as the game systems.

The rebates are being promoted through national television commercials, magazine ads and in-store materials.



## BRUCE LEE

ON VIDEOCASSETTE!



20th Century-Fox poster features Lee

## Promotion Art Attracts Fans

The point-of-purchase poster and the deluxe storage pack for the four Bruce Lee prerecorded video cassettes recently released by Twentieth Century-Fox Video are so dramatic looking, dealers report, that many consumers are using them as artwork in their homes.

Jack Dreyer, vice president and general manager/Consumer Products Division, Twentieth Century-Fox Video, said, "The artwork we have created for our Bruce Lee video cassettes captures the unusual moods and energy of the films. We have been told by dealers that their customers are buying the tapes not only for the films, but also for the unusual packaging. Both the poster and storage pack are classic depictions of the age-old martial arts."

The artwork consists of a black-and-white stylized photograph of Bruce Lee silhouetted against a symbolic gold dragon. The background is colored in a bright Chinese red. In addition, the outer spine of each video cassette package has a gold design. When the four individual packs are placed together, the art forms a dragon.

The Bruce Lee poster and packaging design were created by Skidmore Sahratian Inc., a graphic arts studio in Troy, Mich. Petra Pepelashi was the project coordinator. The graphic designer was Ron Rae, and the illustrator was Rudy Laslo.

The titles included in the series are: *Chinese Connection*, *Fists Of Fury*, *Return Of The Dragon* and *Game Of Death*.

## Marantz Launches Fall Campaign

A major advertising campaign designed to support retailers throughout the introduction of a stereo Beta VR-200 videocassette recorder has been launched by Marantz.

The print portion of the advertising push includes insertions of a Marantz VR-200 ad in *Penthouse*, *Us*, *Omni*, *Inside Sports* and *East/West* Inflight magazines on United, Eastern, Western, PSA, US Air, Republic, Texas International, Continental and Ozark airlines, and also Amtrak trains.

In addition to the support behind the first model in what will become a full line of video products, Marantz is supporting its audio products with a second ad, headlined "Discover Audio Gold," with placements in the 1982 *Playboy* and *Cosmopolitan* magazine Gift Guides.

According to Richard Fried, Marantz marketing services manager, a 60-second radio spot focusing on both Marantz audio and video products aired during October and November on top stations in eight major markets, including New York, Los Angeles, Chicago, New Orleans, Atlanta, Houston, Dallas and Madison, Wis.

"Millions of Americans will be hearing — repeatedly — about the new Marantz VR-200, the world's first stereo Beta Dolby C videocassette recorder, as well as our latest state-of-the-art hi-fi equipment. Those consumers who, over the years, have purchased and enjoyed Marantz hi-fi will be interested and delighted to hear about state-of-the-art video now available from Marantz, particularly since it is designed for the active hobbyist,"

## CBS Promotes CX

CBS recently launched a worldwide co-op advertising program, under which the company will share costs incurred by CX hardware licensees for advertisements that highlight or promote CX, CBS' noise reduction process. The campaign is expected to stimulate extensive consumer advertising and to heighten the public's awareness of CX software and hardware. Potential licensees wishing copies of the plan can write Spencer E. Olson at CBS Technology Center, 227 High Ridge Road, Stamford, Conn. 06905.

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# Trimming The Fat

Take a critical look at your ad campaigns

The economy may be down, but audio and video dealers aren't out. Many have reassessed their business practices — advertising and promotion strategies included — to maintain their market position.

Every dollar has to count, they realize, and every dollar has to go further than in the past. So, many dealers report, what they advertise and promote and, just as importantly, how they advertise and promote have changed to keep in step with the economy. In some cases, extra advertising dollars were part of the strategy.

In their advertising, some dealers have begun emphasizing step-up sales, service contracts and, depending on their customer base, lower price points. Additional emphasis on growth areas such as autosound and portable stereo was also part of some dealers' strategies.

The media that dealers choose for their advertising also have been influenced by the desire to reach more effectively those who still are buying. Some see direct mail helping them weather the economy, and some are advertising less on FM stations.

Autosound has figured more prominently in some retailers' advertising strategies because it has proven to be recession-proof. People either are holding onto their cars longer or, if they're not buying new cars, are buying used cars, and they are willing to spend some money on improving their cars' sound systems, said Shelley Miller president of United Audio, a five-store chain of mid- to hi-end audio specialty stores. Miller is also pushing portable stereo in his advertising campaign. "It's a significant growth area," he said. "Portables also are substituting for a second system in the home."

In its advertising strategy, Soundtrak, an Oklahoma chain of audio-video stores, is promoting lower price points in both audio and video. "We appeal more to the mass market," said vice president Linda Verin. Soundtrack is emphasizing audio components at \$99 to \$150 and some systems, either in

the \$499 area or at \$800 to \$900 if they represent "hot deals" that originally sold for twice that amount.

Paul Luskin, owner of 11 Luskin's High Fidelity audio/video stores in Florida, has begun emphasizing

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**"We're spending 25% more on advertising," says one dealer. But he's "eliminated the deadwood."**

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low-end systems and step-ups in his hi-fi advertising. Step-up advertising pushes mid-end components that would appeal to 30-year-olds who are ready to upgrade their equipment, Luskin said.

Step-up advertising is also part of the strategy at Dynamite David's Stereo Magic, a five-store chain in upper New York state. "Car-fi has been 25% of our business in the last year," vice president Dennis Faggella said. "It has been very strong, and most of our sales have been upgrades."

Faggella also is highlighting service contracts — for autosound now and video soon. "Offering a service contract for \$29.95 for two years seems to be a very key selling point. Serviceability and a good line of car-fi is helping us," he said.

Other retailers who have attached more importance to step-up and add-on sales in a down economy have found direct-mail to be an effective way of reaching those markets. Jim Pierce, president of Stereo Lab, a four-store Columbus, Ohio-based chain, said he has placed "a much larger emphasis" on direct-mail that highlights step-up and add-on sales. "We can target demographic groups or our past customers," he said.

Bob Morgan, owner of Sassafrass Audio, a four-store specialty chain in eastern Pennsylvania, said he is doing more promotions — both price and event-oriented ones — because of the economy, and be-

cause he has promoted mostly through direct-mail, that medium has grown in importance. The promotions — such as clinics — are geared to audio owners who are potential second-time buyers, he said.

"When we do run direct-mail promotions," Morgan said, "they're good promotions, and in our particular locale, direct-mail is one way of reaching people in a more personal way. The media are pricey here, too."

Stage Door Video also has gone the direct-mail route because of the economy, owner Richard Cawley said. He said he cut back on his penny-saver advertising because he gets better response from direct mail, which is distributed to previous customers. "I give them an incentive to come back — a free movie rental or head cleaner at \$6 off," Cawley said. Stage Door does not stock hardware but will special-order for customers. Direct-mail is particularly important to him because software retailing "appeals to 3% of the people."

To some dealers, as direct mail has become more important, advertising on FM radio has become less important. "Most audio dealers who a few years ago could advertise to youths who didn't have hi-fis found those people are the most affected by a poor economy," Stereo Lab's Pierce said. "So those media such as FM rock may not have as strong a pull. We haven't ceased FM advertising, but we have made adjustments."

United Audio's Miller, on the other hand, believes radio advertising is just as important as ever, if not more important. "We are spending 25% more on advertising, and we definitely have eliminated the deadwood and gone with proven successful media. We have increased our metropolitan newspaper advertising and our radio advertising, too. Even though young people are most affected by the economy, there are still many people out there who don't read newspapers." Miller eliminated magazines and weekly newspapers from his advertising roster. □



# Recession Resistant Video

**VCRs and cameras maintain even keel atop sinking economy**

While many hi-fi/video retailers and manufacturers struggle with the profit-draining challenges of a slow economy, others are banking that the recession could boost sales of video products if they take advantage of the increasing numbers of consumers the economy is forcing to stay closer to home.

RCA is aiming at the stay-at-home market by emphasizing sales of video products that contain more features than past models.

The strength of the video business in today's recessionary climate suggests that the public can be attracted to more deluxe color television receiver and other video products, "if the industry provides sufficient motivation and, above all, a far greater amount of information that explains the expanding array of new electronic products," according to D. Joseph Donahue, vice president and general manager/RCA Consumer Electronics Division.

Donahue predicted that VCR players would set a record of 2 million units sold to dealers during 1982, but added that the surprising strength of the video industry has attracted more brands to the market, resulting in strong competition.

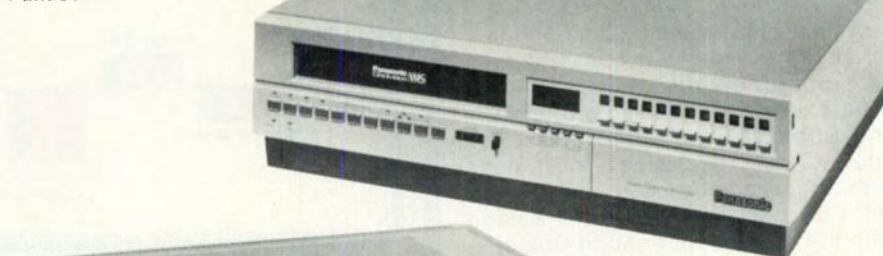
A review of the VCR market published in the November issue of *Atlanta* magazine showed that 26 manufacturers had 100 different models of tabletop and portable VCRs on the market at that time, and more new models continued to fill dealers' shelves as manufacturers raced to get their video equipment on holiday shopping lists. Following is a sample of what is new in the video line.

## New Chassis for 8306

Magnavox's recent VCR introduction is a tabletop model that features a new chassis and reverse search. The 8306 offers a wired remote for armchair control of pause and still functions and is equipped with an electronic quartz digital clock and 24-hour timer for one-event unattended recording.

This step-up model features transition editing, tracking control and a power failure indicator in addition

*Panasonic's PV-1310 VCR*



*Magnavox's 8306 VCR*

to soft-touch electronic controls, three speeds and six hours maximum recording time.

Model 8306 weighs about 21 pounds and is 19 inches long, 5½ inches high and 14½ inches deep. N.A.P. Consumer Electronics Corp. manufactures and markets Magnavox audio and video products.

## Jitter-Free Still Frames

One of the newest video cassette recorders from Panasonic incorporates a four-head, field-by-field tape reading system that the company claims produces photo-like, jitter-free images in the still-frame mode and more sharpness and clarity in search modes than previously was possible in Panasonic VHS.

The Model PV-1510 is a top-load VCR with electronic tuning, soft-touch controls and a six-function wired remote that includes stop, record, search, pause, still frame and frame advance.

The key component in the new system, which Panasonic calls Tech-4, is a rotary head helical scanning system of two double azimuth heads.

In Tech-4, Panasonic has redesigned the four heads and positioned double azimuth heads on opposite sides of the drum. During slower tape speed, the smaller pair of heads is used, while the larger

pair is used in the standard play speed. A different pair of heads is used for playback and record to maximize picture quality and minimize noise during rapid picture search.

In addition, because conventional systems read two adjacent fields to produce an image, they can produce a jittery picture in the still frame mode. In Tech-4, only one field is read by the double azimuth head in the still frame mode.

## New Two-Headed VCRs

Also among Panasonic's fall VCR introductions are two eight-hour models with the capability for forward and reverse search that allows viewing of recorded material at many times the speed of normal playback in the super long play mode and simplifies editing and finding desired portions of the tape.

The Model PV-1310 is a front-load recorder with a 12-position electronic tuner and soft-touch controls on the front panel. The four-function remote includes forward and reverse search, still frame and frame advance.

The Model PV-1265 is a top-load VCR with a wired remote pause control. Both models feature the azimuth recording system that, according to Panasonic, allows more video information to be recorded



onto a smaller tape area and, therefore, offers excellent video reproduction with minimal crosstalk interference.

## Camera Technology

Pentax Corp., among the first still photography manufacturers reaching for a share of the video boom, has added two color cameras to its portable line. Its top-of-the-line model is the PC-K020A MOS camera. The metal oxide semiconductor circuitry replaces a conventional pick-up tube and, the company claims, almost eliminates burning and streaking for improved color fidelity and resolution. It comes with an interchangeable 12.5-75mm f/1.4 6X power zoom lens, treated with the Pentax Super Multi-Coating process to reduce flare, increase light transmission and heighten contrast.

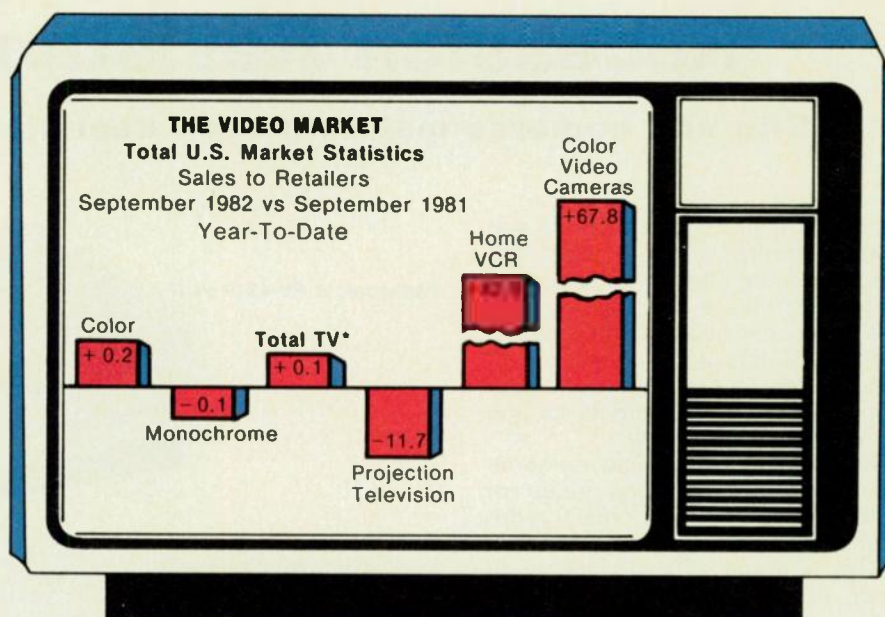
The PC-K030A model is a Saticon-tube camera featuring a one-half inch single electrode tube with low-light sensitivity of 60 lux. The Saticon tube also is designed to reduce lag time and burn-in. Color temperature is adjustable from 2,800° to 8,000° Kelvin for accurate color rendition.

Both the PC-K030A and the MOS cameras feature auto-iris control with a manual override for fade in/fade out.



**Pentax's top-of-the-line PC-K020A**

The top-of-the-line PC-K020A has a universal C-mount for use with all standard video lenses. A KC mount adapter also is available to permit Pentax 35 mm still camera owners to use their accessory lenses for video shooting. The electronic viewfinder, which has diopter correction and indicator lights, can be removed and attached to an exten-



Information contained in this release reflects total market statistics for products produced and/or sold in the United States regardless of the brand name or country of origin.

\* — Excludes projection television.

## Cameras Lead Video Sales

Increasing sales of video cassette recorders to dealers illustrate the rapid growth continuing in the video arena. According to the Electronic Industries Association's Consumer Electronics Group, sales in September increased 58.2% over the same month in 1981. Nine-month sales of VCRs totaled 1,262,779 units, up 42.9% from the first nine months of 1981.

Even greater gains in the sales of color video cameras show the broadening market for the entire video line. January-to-September sales to dealers of color

video cameras totaled 205,640 units, a 67.8% improvement over the first three quarters of 1981. September sales grew 27.5%.

Television sales remained static. For the year, sales of monochrome televisions were down slightly in 1982, 0.1%. Sales of color television increased, but only 0.2% over 1981.

Projection TVs appear to have suffered more from recessionary pressures. Sales to dealers for the first nine months of 1982 decreased 11.7% from the same period last year.

sion cord for remote control and monitoring. Both the pause switch and zoom control can be activated from the viewfinder.

### Stereo for Video

Accessory manufacturers also are cashing in on consumers' fascination with video. There are products for cleaning, storing, carrying and even censoring video equipment. While the industry awaits the development of technology for stereo TV, at least one manufacturer has attempted to fill that niche with a video stereo synthesizer that produces simulated stereo from a

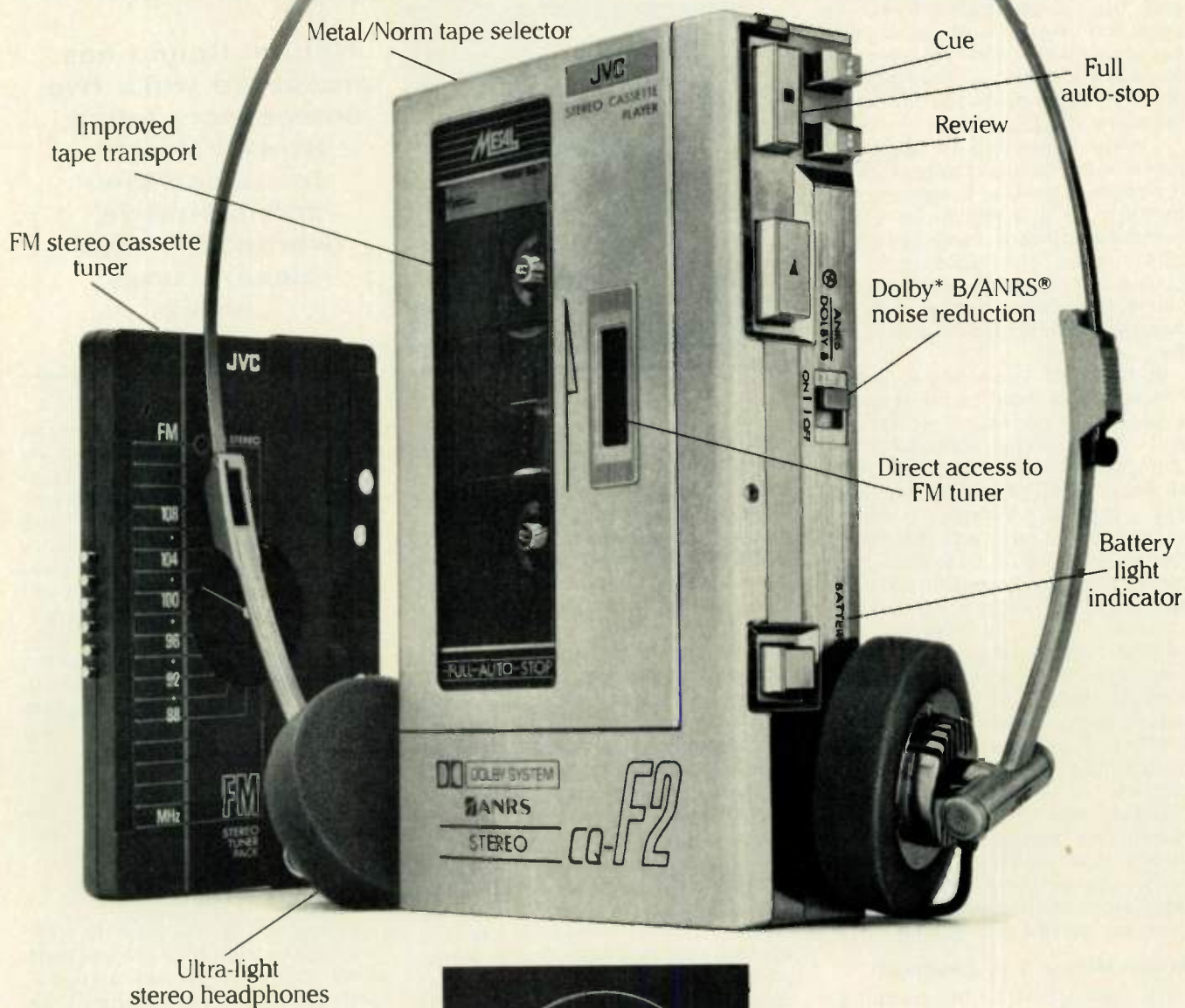
TV, VCR or video disc.

MFJ's model 1501 stereo synthesizer uses an electronic delay to create a comb response that puts alternating 1 KHz bands of sound into the left and right speakers.

The unit features a separation control that varies sound from mono to full simulated stereo, a volume control, TV/VCR selector, a power switch and an LED to indicate when the unit is on. The synthesizer plugs into earphone, TV or VCR audio jacks or clips to the video speaker and then plugs into the auxiliary tape or tuner jack of the stereo.



# IT'LL GRAB THEM BY THE EARS.



As you can see, JVC's new personal stereos are loaded with terrific features. Including two of the most popular features in audio today—Dolby\* Noise Reduction and Metal Tape Compatibility. All for a price that sounds as good as the music.



Start making your selling job a lot easier. Offer your customers JVC's two new personal stereos. In either cassette or FM/cassette models.

And start hearing more of the most beautiful sound of all: "I'll take it!"

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\*Dolby is a registered trademark of Dolby Laboratories.



# Boston-Area Retailer Finds Computers Make Business Sense

Is it wise to walk into a retail store and buy a computer over the counter? According to James Lackey, owner and president of Natural Sound Inc. in Framingham, Mass., it depends on the kind of retail store you pick.

"When I needed to automate some of the administrative work for my retail business, it made sense to me to go to a retailer for equipment and software. I wanted to deal with people who understand my business needs and problems because they have to deal with the same kinds of issues on a daily basis."

In the past three years Lackey has acquired three computers and a variety of peripheral equipment and pre-packaged software products "off the shelf." Beginning with an Apple II that he bought from a local personal computer store, Lackey moved on to a Digital Equipment Corp. WS78 business computer, which he leased through the manufacturer's retail outlet in Manchester, N.H., in 1980. A few months later, when Digital announced its more powerful DECmate business and word processing system, Lackey traded in his WS78 and became the first retail customer for the new system in the country.

Lackey is enthusiastic about the results. He feels that the manufacturer's retail outlet offers him the continuing personal attention of a retail store and the security of big-company service and support.

## **Narrow Market, Low Overhead**

He claims that all his computer systems have more than paid for themselves. Because the store is now able to keep better track of its accounts payable, Natural Sound saves more than \$400 a month on cash discounts alone. "That's enough," Lackey says, "to pay for our computer equipment. In addition, we get other benefits — more efficient operations, better financial management and new business generated by a much-improved direct mail advertising campaign."

Natural Sound is the largest re-



**Natural Sound has prospered while five competitors failed. How? "Market focus and low administrative overhead," says owner James Lackey.**

tailer of quality audiophile home and autosound components in the Boston area. Lackey, who got his start selling hi-fi equipment part-time from his college dorm room, began the business in 1976 with \$35,000 borrowed from a local bank. Natural Sound focused on the mid- to high-end market, concentrated on providing quality service and balanced fall and mid-winter seasonal peaks with a line of mid- to high-end car stereo systems that sell well throughout the summer. The strategy has enabled Lackey to build Natural Sound from \$300,000 in sales in 1977 to well over \$1 million in 1982.

His company has prospered in an area where five out of 12 local competitors have gone out of business because, Lackey says, of Natural Sound's market focus and low administrative overhead. "We can't compete with the mass merchandizers and discounters on price," he says. "In a slow economy, people don't buy hi-fi at all in the low end. In the \$800 to \$7,000 system price range, those customers are looking for long-term quality and service."

Natural Sound's business strategy includes two phases. First, the company identified its market and worked on building steady sales growth. Seven out of Natural Sound's eight employees are active income generators, either through direct sales activity or service. In

phase two, where the company is now, Lackey is concentrating on the organization itself, on ways to increase productivity and profitability. Natural Sound has added more manufacturers to its line and is opening a second store in downtown Boston closer to the young professionals who make up the majority of its customer base. A computer terminal is planned for the Boston store that will link it with the DECmate computer in Framingham and provide on-line cash accounting and inventory information.

"The problem with growth," Lackey says, "is that it has to be managed without significantly contributing to the overhead."

## **Flexible and Forgiving**

Natural Sound still uses its original Apple computer to perform sales commission calculations, maintain employee earned-time records and to produce financial reports using the Visicalc spreadsheet accounting package. However, as Lackey's business grew, he says, "We were frustrated by our attempts to do accounts payable. So, we looked for a business system that would be more flexible and more forgiving. We were impressed with the Digital WS78 because it let you add functions without having to hire a computer expert or retrain everybody."

"We looked at a lot of small busi-



ness systems, including IBM at the high end and Commodore at the low end. Digital's was not the cheapest system we saw, but we needed the support we could get from a big manufacturer, and we needed a system that could grow as we grow without getting any harder to use just because it gets bigger and runs more applications."

The computer system now in use at Natural Sound includes a DECmate with 64K bytes of memory, two floppy disk drives, a letter quality printer and an LA-120 draft printer. Lackey is currently adding a hard disk device in order to accommodate an expanded direct mail operation. The DECmate "work processor" operates under a comprehensive software system called DIBS (Digital Integrated Business System) that allows the store's regular clerical staff to perform word processing, list processing, general ledger, accounts payable and other business functions with the computer without, as Jim Lackey says, "getting into the programming business."

#### Cost-Effective Advertising

Lackey says direct mail is the most cost-effective form of advertising for Natural Sound. With an annual total ad budget of less than \$30,000 for direct mail, radio and print media, Lackey pays close attention to the costs involved in getting his sales message out to potential customers.

Before acquiring the DECmate computer, Lackey farmed out his direct mail ad production and used rented mailing lists. The method imposed time constraints on Natural Sound's ability to schedule, for example, the announcement of special sales and provided no opportunity to fine-tune mailing lists or purge them of duplicates.

"In fact," Lackey says, "we could have justified the purchase of the WS78 for word processing alone. Now that we have the list processing capability and the additional power and storage capacity of the DECmate, we can maintain our own mailing lists much more efficiently in-house. We can pinpoint an audience — dbx record customers, for example, or people interested in audio research equipment. It cuts way down on our postage and handling costs."

Natural Sound also uses automated word processing to support its reputation for courteous, responsive and personal service by sending out thank you letters to every customer who visits the

store, notices about the availability of products and service messages. Internally, word processing is used to produce business correspondence and reports.

Lackey is a founder of the Professional Audio Retailers Association, a trade association of independent owner-operated audio dealers. He is often called upon to speak to other PARA members about computer issues and his experience with "off the shelf" systems. "The worst mistake a small businessman

can make," he says, "is to buy an unsupported computer product with poor documentation. Our customers come to our stores because they are willing to pay a little more to get quality and the security of long-term service, and we have to do the same thing. It just doesn't pay to save one or two thousand dollars by buying an unsupported product that may be harder to learn to use and more limited in its usefulness than a full-fledged business computer." □

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# Automakers Still Unsure On AM Stereo Choice

Although Asian sources and their American manufacturer counterparts are keen on the prospect of AM stereo coming on line in the near future, it is still too soon to determine for sure which of five or so systems under development will win out. One group that is closely watching the issue, and indeed, may have a profound effect on its outcome, is the automotive industry.

Just where do the loyalties of Detroit — General Motors/Delco, Ford, Chrysler and American Motors — lie? All, of course, are studying the technology, the broadcast capabilities, chip availability and other problems inherent to fully implementing AM stereo into their autosound lines.

"Personally, we're anxious to offer AM stereo in our cars," offered one product planner at Chrysler. "We'd love to offer the feature to our customers."

"We're sorry the FCC didn't pick a specific system."

## Sway the Giant

Chrysler influences the purchase of about 500,000 car radios a year, or only about 10% of the radios sold in new cars. But if the company went all out to support a specific system, it could be "enough to sway the giant," the planner said.

He also agreed that his competitors (GM in particular) are monitoring the leading systems for AM stereo broadcasts, although none has chosen to support a specific system, at least not for the record. The Chrysler planner revealed that he personally was "go" for the Magnavox version.

"We could offer product easily, within six months, if Magnavox were selected," he said, "because it has the edge in terms of chip supply and delivery. It also has the equipment to sell to broadcasters. The other systems, I feel, would take longer to get off the ground."

AM stereo, he concluded, "would be a plus for us all — broadcasters and car makers — since we know

that we have a music-conscious population that will respond to an improved AM band."

Meanwhile, much attention is focused on the results of studies done by Delco, the division of General Motors that produces radios, among other things. Broadcasting out of station WIRE in Indianapolis, Delco conducted a series of three-week evaluations of several AM stereo systems, including units made by Motorola, Magnavox and Harris. Although the tests were completed in October, Delco was not expected to have any conclusions drawn until this month. A Delco spokesman said it will be some time before the company can intelligently boil down all the technical data gathered in the trials.

"We feel we have a responsibility to the car division customer to do our own evaluation of the systems available," the spokesman said. "To be fair, though, it would be too soon for us to comment on our preferences."

Delco's findings will be important, if only in terms of sheer numbers: the division equips some 4 million vehicles with radios per year, of which two-thirds are stereo (this figure, incidentally, has been reversed recently; in the past, only a third were stereo).

Spokesmen from Jensen, Pioneer and other major autosound companies agreed that they are still evaluating the systems themselves, but that it will be a while before they are prepared to move either way. Most makers contacted by HFTN felt that the January CES will be too soon to offer a firm conclusion as to the outcome of the AM stereo war.

One manufacturer, who spoke off the record, told HFTN, "Broadcasters don't want the manufacturers to start driving the marketplace in one direction. They have a heavy investment in terms of equipment in varying degrees and that must be considered in the final outcome. The best system technically may not necessarily be the winner." □

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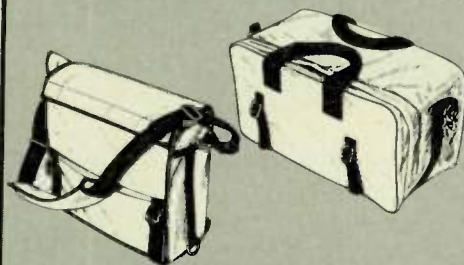
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# The Tone Arm Tango

**The wrong tone arm/cartridge combination can have more moves than Herschel Walker in the backfield**

By Ralph Hodges  
HFTN Technical Editor

To tell you the truth, at first I wasn't at all sure what I was hearing. I had banished the problem from my own system so long ago I had half forgotten it. The tip-off came when the salesman switched to a vented loudspeaker and the grille cloth began flapping like a candle flame in the breeze. Then I had the answer.

My companion — a musician in search of a medium-priced system — heard it, too. Later, uncoached, she pronounced *all* the speakers she had heard in that store inferior to *all* the rest heard in other showrooms.

It was a case of being right for the wrong reason. The speakers were generally on a par with their competition; it was the record-playing system used that was not. But when the actual mechanism of the problem was explained to her, what else could she do but shrug helplessly? How might she, musically acute but technically untutored, be expected to make allowances for one rotten apple in an otherwise wholesome barrelful? All she had to go on was the sound, and if that was bad, so was everything that went into the making of it.

## The Wretched Wobblers

The problem, in no way mysterious, was the common sort of tone arm/cartridge mismatching that results in the assembly being oversensitive to record-warp excitation and other physical disturbances. In typically severe cases you can see the tone arm bobbing up and down

as it plays a record, and the woofer cone bobbing in and out in synchronization. If the woofer's enclosure is vented, you can feel the air chuffing back and forth through the opening, and sometimes even hear it as a low wooshing sound.

## Infrasonic Garbage

Hi-fi literature has discussed this troublesome matter frequently over the years, and if you've kept up with your reading, you're well aware of the usual liabilities of it. For example, the cartridge, which winds up playing the bobbings of the tone arm as well as the groove undulations of the record, puts out infrasonic garbage that robs the amplifier of power that should be going to reproduce legitimate music. The woofer cone, shuttling agitatedly in and out, risks being driven into the nonlinear range of its excursion (distortion) and in some cases, if the musical going is heavy, being propelled entirely out of the voice-coil gap (silence, unless you're lucky).

There is even strong evidence that if the tone arm mass and cartridge compliance team up to create a resonance condition in the horrendously low range of three to four Hz, the warbling of Doppler distortion may be heard as the woofer's motion at these preposterously low frequencies modulates the music it's trying to reproduce. And finally, of course, a record-playing system susceptible to warp excitation can exhibit very large swings in stylus-force value from moment to moment.

Nevertheless, insidious as all the above can be, I suspect they had little if anything to do with the objectionabilities my companion and I heard — and truly, consistently heard, not just "sort of" heard, once in a while, maybe. There was another mechanism at work, which can be called time modulation (if you like the technical flavor of the

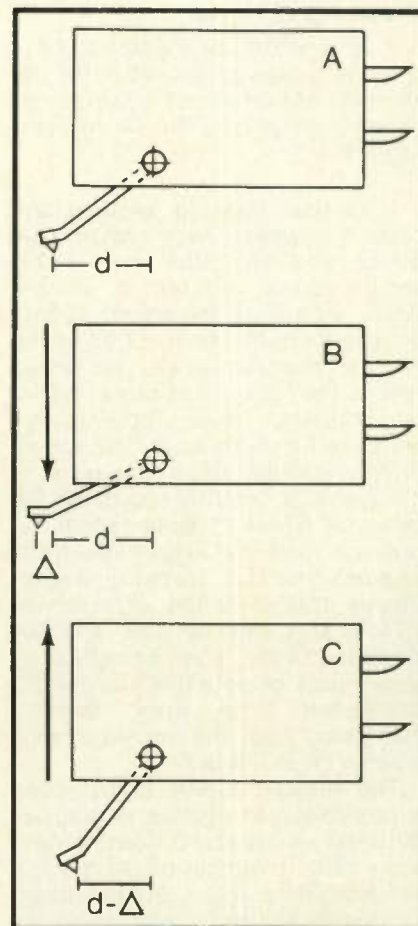


Figure 1. (a) Stylus at rest on record. Pivot-to-tip distance equals  $d$ . (b) Upward-evolving warp compresses stylus suspension, thrusts tip forward, pivot-to-tip distance becomes  $d + \delta$ . (c) Downward evolution of warp causes stylus suspension to relax almost completely. Stylus is drawn backward, and pivot-to-tip distance becomes  $d - \delta$ .



Before joining HFTN, Ralph Hodges spent 10 years as technical editor of Stereo Review and a brief time as communications manager for Dolby Labs.

expression), but which in the end can be adequately discussed as simple, garden-variety flutter.

Figure 1 shows how it arises. When the tone arm bobs down, the stylus suspension yields, the stylus itself is thrust forward in the direction of record rotation, and hence

the stylus/groove velocity decreases. When the tone arm bobs up, the stylus assembly is foreshortened and dragged back against the direction of groove rotation, and stylus/groove velocity increases. If this happens repeatedly as a record is being played, the result is, among other things, flutter. If it happens at a rate much below 10 Hz — as it would if the tone arm/cartridge resonance occurs down there — the result can be very bad, very audible flutter, for those who are sensitive to such things, and who listen to the sort of music that shows them up.

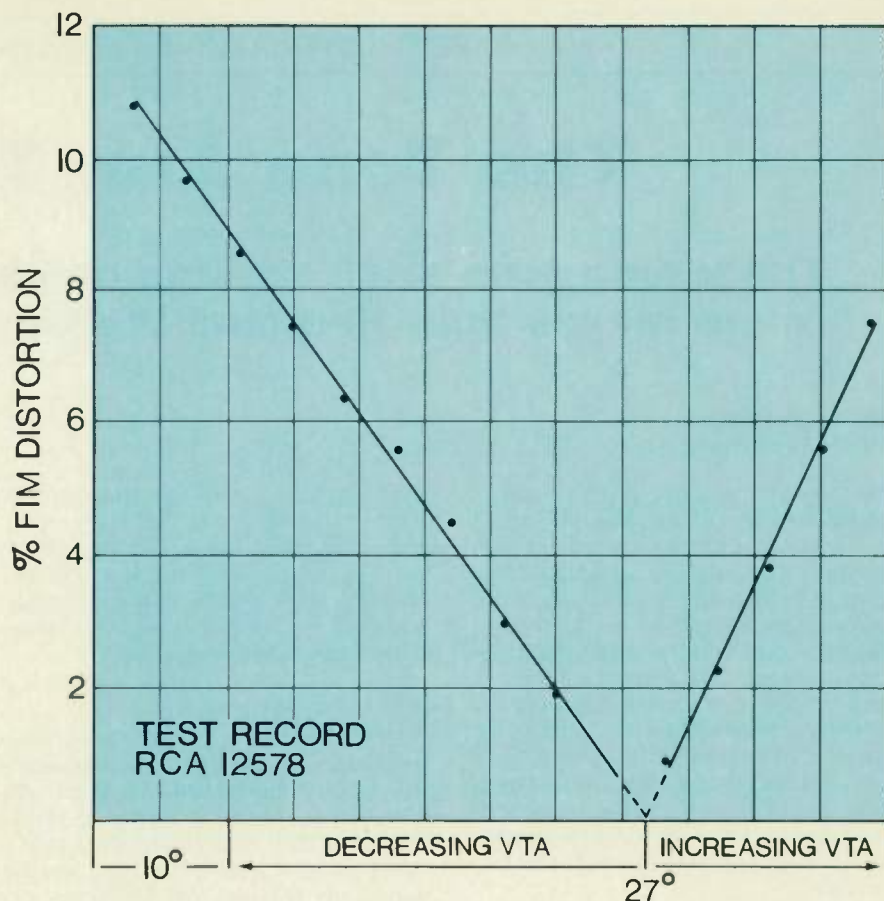
### Those Other Things

If we want to be rigorous about this, we'll have to concede that the complexities of the situation go far beyond simple flutter. A few examples:

**1. Vertical tracking angle.** Hardcore audiophiles have gotten a lot of fun and frustration out of this controversial matter in recent years, with some emerging as true believers (to the point of adjusting vertical tracking angle for every record they play) and others as total skeptics. Shure Brothers, inclined to be skeptical at first, nevertheless decided to run the issue to ground, and recently published the curve of Figure 2, which plots frequency intermodulation distortion against vertical tracking angle. Plainly the condition of optimum VTA is very well defined, and any deviation from it is punished by great gobs of potentially avoidable distortion. Why, then, doesn't everybody hear the consequences when VTA is altered?

The answer, in part, is that when a record-player system is plagued by warp sensitivity, it doesn't *have* a consistent vertical tracking angle or stylus-rake angle. Subtly changing these angles in system set-up actually changes nothing; the very act of playing a record changes them much more, constantly. Getting rid of warp-excitation sensitivity stabilizes things so that you can finally hear what's going on.

**2. Lateral tracking angle.** Warp sensitivity results principally — but not exclusively — in up-and-down bobbing of the tone arm. However, the forces involved give rise to some lateral components of motion as well. For one thing, tone arm bobbing alters tracking force and therefore skating force. The arm seeks the center of the record at one moment and the edge of the record the next, and it stirs the stylus



**Figure 2.** Frequency intermodulation distortion generated by alteration of vertical tracking angle. In this test optimum VTA proved to be a rather high 27°. At 15°, FIM approached 4%. With a warp-sensitive record player this test would be impossible to make, as VTA would change continually. (Diagram, slightly altered, courtesy of Shure Brothers.)

lus around in the lateral plane correspondingly. In theory this should produce the same sort of effective foreshortening and elongation of the stylus assembly as described above, plus increased tracing errors for shorter wavelengths (especially for styli with short edge radii), plus a certain amount of phase shift between channels. Separating these effects out from everything else that is happening is difficult, but physics insists that they are there.

### What To Do

Over the past five years, I don't think I've encountered more than three audio stores using record players for demo purposes that have not had serious warp-sensitivity problems — to say nothing of acoustic-feedback problems and vibration sensitivity in general. Evidently this doesn't matter much to 90% of the clientele. And I freely admit that, in trying to listen through the phasing, flanging, wawa, spring and plate reverb, compression, limiting, grotesque equalization and deliberately in-

duced amplifier overload of many a pop release, it doesn't matter much to me either. But then someone with a musically sophisticated ear turns up to listen to a straightforward symphonic recording, and trouble begins. The strings don't cohere somehow, then get fuzzy, out of focus and even harsh. Intonation seems false in a strange way. Nuances in ensemble work become elusive. The actual size of the orchestra cannot even be guessed at.

These were among the comments of my musician friend, who shrugged so eloquently when I tried to explain what was probably happening. If the system doesn't sound "right" — not even as right as her portable machine that tracks at 15 grams and has a stylus as stiff and imperturbable as a nail — why should she care? And why should her dozens of musician friends, who would love to spend some serious money on high fidelity if they could find it, care either?

Fortunately, the cure for all this is easily within reach of anyone who has a handful of phono cartridges



and a half dozen tone arms at his disposal. It's just a matter of pairing them off in various combinations to see what happens. If warp sensitivity occurs, a tone arm with less effective mass or a cartridge with less compliance will help. If strange things are heard at the lowest musical frequencies, the tone arm may have too little effective mass, or the cartridge too little compliance. Somewhere there's a happy medium — a truly good match of arm and cartridge. In most cases you won't even have to listen to find it. You can study the shuddering of the signal trace on an oscilloscope (no shudder is the ideal) or the motional behavior of a woofer cone (it should not move visibly unless someone on the record hits a bass drum). You can even squat down and watch for stylus-assembly flexure as a record is played. There shouldn't be any visible to the naked eye.

And there are other approaches. Aside from possible intrinsic merits that have proven extremely difficult to pin down, moving-coil cartridges certainly won much of their newfound acceptance amongst audiophiles by having stylus assemblies

appreciably stiffer (less compliant) than those of their moving-field counterparts. For a given arm, this drove the arm/cartridge resonance up in frequency, reducing warp sensitivity and giving rise to that detailed, sharply etched sonic character that many attribute solely to a characteristic (but avoidable) rise in high-frequency response. The right moving-coil device in the record player you prefer to demo with can be a revelation.

#### Motorized Tone Arms

Motorized tone arms available from Sony and Denon employ electromechanical servos (courtesy, it appears, of upcoming digital-disc players that will require the same sort of technology) that work to keep the stylus assembly unaffected by infrasonic warp excitation, and can make all signs of any arm/cartridge resonance virtually disappear. They're pricey (but not as pricey as they would be if the servos had been developed for this application alone), but they seem capable of doing what's necessary for almost any cartridge.

The P-mount system developed by Technics has resulted, for the

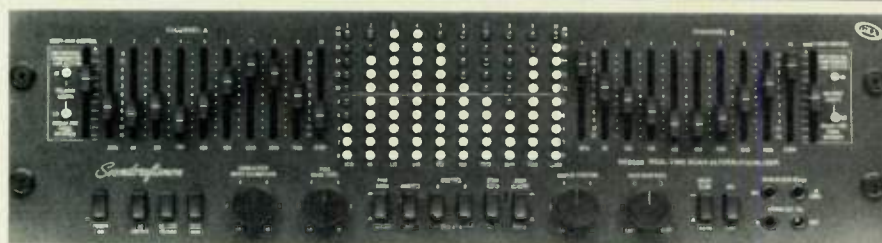
first time, in a specially designed generation of phono cartridges, standardized weights. Since cartridge weight is a significant contributor to tone-arm effective mass, record-player manufacturers have now been given a fixed design target at which to aim. If cartridge compliance values can fall in with the parade, the whole difficult situation could go away without further attention.

But right now it remains a difficult situation — more so than is generally realized. The consumer, who buys *one* phono cartridge from this source and *one* record player from that source, is stuck with what he gets. The manufacturer can design his phono cartridge for the vast population of record players, or his record player for the vast population of phono cartridges, but he can't directly guide the consumer to the optimum combination. The dealer, however, can ferret out the optimum combinations by experiment and manufacturer guidance. And once he has, he can put himself in the position of being able to demonstrate true high fidelity — something that is rarely heard, even today. □

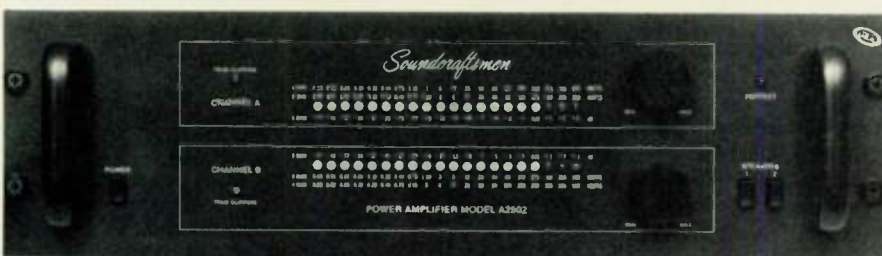
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**Tom Carlile** has been named president of **Gauss Loudspeakers** for **Cetec Gauss**, manufacturer of professional loudspeakers and high-speed tape duplicating systems. The company also has named **Hans Freytag** European sales manager for **Gauss Loudspeakers**. Mr. Carlile rejoins the company's Sun Valley, Calif., office after five years as president of **New West Audio Marketing Inc.** Prior to that position, he had been national sales manager of **Gauss Loudspeakers**. Mr. Freytag, based in England, has been in the professional audio field more than 10 years, serving with **ATC Ltd.**, **Pace Co.** and **Eastmill Systems Ltd.**, all based in England. The company says the appointments will enable it to expand its commitment to serve the professional loudspeaker market around the world.

**Robert H. Millice** has joined the marketing staff of **Sound Technology**. His duties include managing sales in the Western United States and coordination of general sales and marketing activities nationally. Mr. Millice brings five years of sales experience in various high technology fields to his new position.

**Scott Llewellyn** has been appointed director of marketing at **DataSoft Inc.**, a supplier of computer software for home management and recreational use. Mr. Llewellyn is responsible for developing and implementing appropriate marketing strategies to handle the growth expected by the company. Most recently he was vice president of **Kross Inc.**, a manufacturer and distributor of consumer products.

**Robert Pfeiffer** has been appointed the new national sales manager for the Richardson, Texas-based video games manufacturer, **Games by Apollo Inc.** Mr. Pfeiffer will develop and oversee a national sales orga-

nization for the company. Most recently, he was central divisional sales manager for **Fidelity Electronics** of Miami, Fla., a manufacturer and marketer of self-contained microprocessor-type games. He also has worked with the **Time Products Division** of **Casio Inc.** and with **Fairchild Camera and Instrument Corp.**

**Gary J. Shapiro** has been selected as legislative and regulatory counsel of **EIA's Consumer Electronics Group**. The appointment is designed to strengthen CEG's government relations capabilities on congressional and regulatory fronts. Mr. Shapiro recently served as an associate with the Washington office of **Squire, Sanders & Dempsey**, one of the nation's largest law firms. There he worked with CEG on many issues.

**Walter P. Semonoff** has been appointed to the newly created position of vice president/sales and marketing for **American Audio Corp.**'s line of car stereos and automotive sound products. With 23 years of consumer electronics experience, particularly with car stereos, Mr. Semonoff is responsible for the reorganization of **American Audio's** domestic dealer and rep network. His credentials include executive positions for **Audiovox Corp.**, **Automatic Radio**, **Zenith** and, most recently, **ESS**.

**David Robin** has been promoted to senior product manager at **Jensen Car Audio**, having served as product manager since July 1981. He joined the company in December 1979 as technical services manager, having worked before that as vice president for a car stereo distribution company and as a studio musician and record producer.

**John C. Cavalier** has been named president of the Home Computer Division of **Atari Inc.**, replacing **Roger H. Badertscher**, who resigned in June. Mr. Cavalier is re-

sponsible for worldwide operations of the **Atari** division that designs, manufactures and markets home computers, software programs and peripheral devices for use in the home and in a variety of educational applications. His experience in the marketing of consumer goods includes 13 years in the **American Can Co.** executive ranks.

**Milton E. McNally** has been appointed director of marketing and sales for **Carver Corp.**, an audio electronics manufacturer based in Woodinville, Wash. Formerly general manager/sales of **Audio Control**, Mr. McNally brings 16 years of experience in audio marketing to Carver. His credits include the **International Products Division** of **Empire Scientific Corp.** and **Maryland Electronics Marketing Inc.**

**Chuck Watkins** has been named manager of the new **Texas Instruments Learning Center** in Dallas. As manager of the fourth TI learning center in the country, Mr. Watkins directs more than 900 computer and electronic product training courses annually, supervising an initial staff of 15 instructors and two assistants. He formerly was training manager for **Business Systems** in the **Digital Systems Group** at TI, having joined the company in 1973 as a digital design engineer.

**Marsh Penning** has been appointed vice president/marketing for **Kraco Enterprises**. With more than 20 years managerial experience in consumer retailing, Mr. Penning has held executive positions with a number of major companies, including **J. C. Penney**, **Target Stores**, **May Department Stores** and **Fedmart**.

**William P. Fox**, vice president/operations and finance, staff of the deputy president and chief operating officer of the **CBS/Records Group**, has been assigned responsibility for worldwide activities in-



volving CX. Based at CBS headquarters in New York, Mr. Fox works with the CBS Technology Center and the Columbia, Epic/Por-trait/Associated, Masterworks and other record companies in overseeing release of CX encoded products. He also serves as CBS's liaison with CX audio and video hardware licensees.

**Nolan Oakes** has been appointed national service manager for **Sam-sung Electronics America**. With 25 years of electronic service experience, Mr. Oakes directs a coast-to-coast service network that currently includes nearly 2,000 outlets.

**Tom Robbins** has been promoted to the position of vice president/domestic sales for **Infinity Systems Inc.** The company hopes this sales department reorganization and Mr. Robbins' retail sales and field experience will result in closer ties between the company and its dealer network. Mr. Robbins has been with Infinity for eight years, serving as service manager, North-west sales manager and, most recently, as Eastern sales manager.

**Fred Fehlauer** has been named to the newly created position of general manager of **CBS/Fox Video** plant operations in Farmington Hills, Mich. He is responsible for all plant operations, including video-tape duplication, studio production, research and development, facilities management and commercial products. Previously, Mr. Fehlauer was in charge of three major plants for Fundimensions, a division of General Mills.

**Meredith Gregg** has been named editorial assistant for the **Roger C. Parker Advertising Resource Center** of Hampton, N.H. The firm produces newsletters for use by retailers and manufacturers in the consumer electronics field. Ms. Gregg assists the firm with copy-writing, scheduling and production details.

**James Finke** has resigned his position as chairman and chief executive officer of a newly established independent computer retailing affiliate within the **VideoVision Inc.** group of companies and as a director of VideoVision, a high technol-

ogy consumer electronics and entertainment conglomerate. Mr. Finke's resignation was attributed to the decision of the VideoVision board of directors to alter the conglomerate's strategic direction.

**Al Husted** has been appointed to the new position of director/public relations for **Hearst/ABC Video Services**. Most recently Mr. Husted was vice president of March Five Public Relations, overseeing broadcast and cable accounts. He also directed media relations for Dick Cavett's Daphne Productions and directed publicity at NBC for "The Tonight Show Starring Johnny Carson," serving as Mr. Carson's press agent during much of that time.

**Joan Morra** has been named director of public relations for **Data Age Inc.**, a new video game software manufacturer that designs, produces and markets cartridges compatible with the Atari Video Game System and Sears' Video Arcades. Ms. Morra is responsible for all corporate and product communications.

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## CALENDAR OF EVENTS

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**January 6-9 — 1983 International Winter Consumer Electronics Show**, Las Vegas Hilton, Las Vegas, Nev. With more than 1,000 exhibitors and more than 65,000 attendees, the 1983 Winter CES will feature thousands of the newest consumer electronics products and technologies in video, audio and personal electronics. The show also features 15 hours of "Outlook '83" conferences and workshops. *Contact:* Consumer Electronics Show, Two Illinois Center, Suite 1607, 233 N. Michigan Ave., Chicago, Ill. 60601.

**January 9-12 — Retail Directions: National Retailers Business and Equipment Exposition**, New York Hilton Hotel and Sheraton Centre Hotel Exhibition Hall, New York, N.Y. Conducted by the NRMA in conjunction with its 72nd Annual Convention, the exposition will emphasize the impact of new technologies and marketing procedures on retailers. *Contact:* Dan Soskin, NRMA Enterprises, 100 W. 31st St., New York, N.Y. 10001.

**January 24-26 — LPTV Programming Festival**, LPTV West, Disneyland Hotel, Anaheim, Calif. The

Festival will respond to the boom in the low power television industry by allowing attendees to view programming options and by putting lptv professionals directly in touch with distributors, independent producers and syndicators. *Contact:* Frank Camoro, 203 852-0500.

**February 11-13 — Hi Fi Stereo & Video Show**, Washington Convention Center, Washington, D.C. Teresa Rogers has renamed her Washington, D.C., consumer show for 1983 to reflect trends in the industry during recent years. The Rogers hi-fi show, first presented in March 1954, will encourage manufacturer and dealer participation with emphasis on direct sales. *Contact:* High Fidelity Music Show Inc., P.O. Box 67, New Hope, Va. 24469.

**March 6-9 — 13th Annual International Tape/Disc Association Seminar**, Diplomat Hotel, Hollywood, Fla. *Contact:* International Tape/Disc Association, 10 Columbus Circle, Suite 2270 New York, N.Y. 10019.

**March 11-13 — 1983 Houston Hi Fi Stereo & Video Show**, Houston Convention Center. A similar format

to the Rogers' Washington, D.C., show in February, the Houston consumer hi-fi show is the first for the organization in that city. *Contact:* High Fidelity Music Show Inc., P.O. Box 67, New Hope, Va. 24469.

**April 16-19 — Professional Audio Retailers Association Conference**, Sheraton, Mallard Beach, Jamaica. *Contact:* Professional Audio Retailers Association, 9140 Ward Parkway, Suite 200, Kansas City, Mo. 64114.

**June 5-8 — 1983 Summer Consumer Electronics Show**, McCormick Place, Chicago. EIA/CEG's second installment for 1983 will include more of the newest consumer electronics products in every category. *Contact:* Consumer Electronics Show, Two Illinois Center, Suite 1607, 233 N. Michigan Ave., Chicago, Ill. 60601.

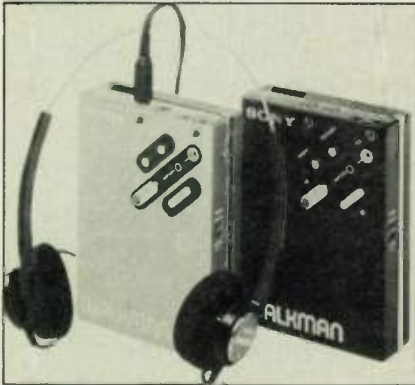
**June 9-14 — Sim-Hi-Fi-Ives: International Exhibition of Music, High Fidelity, Video and Consumer Electronics**, Milan Fair Centre, Milan, Italy. This is the largest European exhibition dedicated to the industry. The last two days will be reserved for the trade.



## AUDIO

### Sony Introductions

The expansion of Sony's Walkman personal stereo line, with a new range of features and price points, highlights the company's fall audio product introductions. Three new Walkman cassette players were added to the line. The WM-5



(\$129.95 suggested retail) is Sony's smallest metal-case compact cassette. The WM-7 (\$169.95), with an assortment of deluxe features, is the first Walkman to incorporate auto tape reverse. The WM-4 becomes the first Sony stereo cassette player to break the \$99.95 suggested-retail price point.

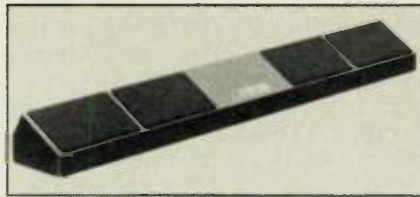
The "mini" category of stereo radio cassette-corders now includes the mid-priced CFS-450 (\$179.95),



with rear-drive woofer. Its special three-speaker arrangement creates a "3-D" effect. The CFS-F10 (\$279.95) features feather-touch controls, three-step Automatic Music Sensor and play-repeat. The slim lightweight CFS-6 (\$169.95), a stylish "mini," is targeted at the women's market.

Another introduction is the ICF-S30W AM/FM single-"chip" portable radio (\$44.95). Sony says the total one-IC design of the pocket-sized receiver contributes to un-

usually reliable and efficient operation. **Sony Consumer Products Co.**, 9 W. 57th St., New York 10019. (212) 371-5800.



### Linear Auto Speaker

The 37½-inch linear design of Canton's Pullman auto speakers produces greater volume and more efficient reproduction than passive speaker design, the company claims. Still its low profile leaves the driver a clear view through the rear window. A T-bolt in the base of the aluminum-profile speaker case allows the installer to locate the mounting bolts at any point over the length of the case. Electrical connection is via the Permatix spring-loaded push terminal. Two woofer drivers, one midrange and one tweeter dome driver are mounted on each side of the partitioned linear array. Operating power is below 5 watts, so the unit can be easily connected to any auto radio, with or without a booster amp. \$400 suggested retail. **Canton North America**, 254 First Ave. N., Minneapolis, Minn. 55401. (612) 333-7250.



### Jensen Receiver

Jensen's switchable triple-function Automatic Program Control is designed to assure optimum FM performance in the Model RE530 in-dash cassette receiver by continually sampling the strength and quality of the broadcast signal reaching the car antenna and making constant adjustments to the tuner section. Jensen says APC, in conjunction with a double-tuned, double-balanced mixer and four-element tuner, results in a superior level of FM performance. The unit is priced less than \$500, but includes state-of-the-art technology in amplifier, tuner and cassette design. Features include Dolby Noise Reduction and Dynamic Noise Reduction, five AM and five FM electronic station presets and a preset

memory scan feature that allows the user to scan the selected frequencies automatically. Jensen's receiver offers total system power of 10 watts and minimum continuous average power of four watts per channel into four ohms from 50 Hz to 20 kHz with no more than 2.5% distortion. Frequency response of the tuner section is 50 Hz to 15 kHz (+/- 3 dB). Frequency response in the tape section is 50 Hz to 18 kHz using metal tape. **Jensen Sound Laboratories**, 4136 N. United Parkway, Schiller Park, Ill. 60176. (312) 671-5680.



### Slimline Personal Stereo

Besser Electronics MX-7 personal stereo cassette player features slimline dimensions (it's 1 5/8 inches thick), plastic molded enclosure, headphone jack with deluxe mini stereo headphones and an automatic stop function. It is priced at \$29.95, suggested list, and is packaged in a full-color carton that doubles as a point-of-purchase display tool. **Besser Electronics of America Inc.**, 10353 Los Alamitos Blvd., Los Alamitos, Calif. 90720. (213) 493-2461.

## VIDEO

### Sales Training Videodisc

A LaserVision sales training videodisc has been produced by N.A.P. Consumer Electronics Corp. for dealers of its Magnavision and Sylvania videodisc players. The disc features tips and demonstrations to use when selling LaserVision players, with much of the sales training requiring active participation by the viewer. The demonstrations highlight the LaserVision players' interactive capabilities, which, the disc explains, are the unit's number one selling point. The disc has 27 chapters that can be accessed through



the frame/chapter search feature on the remote control unit. More than 1,500 of the discs were sent to Magnavox and Sylvania dealers who met established program requirements. **N.A.P. Consumer Electronics Corp.**, P.O.Box 6950, Knoxville, Tenn. 37914. (312) 266-7200.



### Compact Camera

Measuring only 3.7 by 6.3 by 2 inches, Crest Electronics' right-angle video camera has a 90-degree rotatable lens system. The Peeping Tom can be mounted upside-down, horizontally, inside walls, at the backs of vehicles or behind doors, screens or curtains. It can be used for video monitoring and, in conjunction with Crest's RF modulator, attaches directly to a home TV set for viewing. **Crest Electronics Inc.**, 4921 Exposition Blvd., Los Angeles 90016 (213) 731-1105.

### Mini Cassette

Maxell brings its high-grade epitaxial video formulation to the mini video cassette format with its HGX TC-20 video cassette. Developed for use with the VHS-C mini VCRs, or with standard VCRs with adaptors, the TC-20 is useful for portable use. Record/play time is 20 minutes in the standard play mode. The company says its epitaxial process yields magnetic particles of more uniform size and shape, allowing for tighter packed density. This frees the tape from drop-outs and video noise. **Maxell Corp. of America**, 60 Oxford Drive, Moonachie, N.J. 07074. (201) 440-8020.

## VIDEO SOFTWARE

### Holiday Releases

Media Home Entertainment has released four video cassettes for family viewing. *Challenge To Be Free* is the legend of a man who struggles

to outwit 100 dogs and 12 men pursuing him across 1,000 miles of frozen wilderness. *Puss 'N Boots* is the classic children's adventure tale of a clever, brave cat. *The Night Before Christmas* is the familiar Christmas poem told in a music-filled animated film. *Silent Night* is the true story of how the favorite Christmas song was written, packed with seasonal music that features the Oberndorf Boys' Choir. The first two cassettes have suggested retail prices of \$49.95 each; the last two are priced at \$39.95 each. **Media Home Entertainment Inc.**, 116 N. Robertson Blvd., Suite 909, Los Angeles 90048. (213) 855-1611.

### Secret Agent Game

Players of *Infiltrate*, the Atari-compatible video game from Games by Apollo, are secret agents who must penetrate the enemy fortress and capture secret documents. In their way is a maze of blind corridors and automatic elevators, watched over by laser-toting robot assassins programmed to shoot on sight. Defenses include a laser gun and the ability to anticipate enemy fire and duck below the laser blasts. The game carries a suggested list price of \$31.95. **Games by Apollo, c/o Frank Barth Inc.**, 500 Fifth Ave., New York 10110. (212) 398-0820.

## COMPUTERS



### Talking Computer

The Alien Group has introduced a programmable speech synthesizer that converts typed or stored text into speech and exciting sound effects on the Apple II, Apple II Plus, Atari 400 and Atari 800 home computers. The Voice Box comes with diskette- or tape-based pronunciation dictionaries for thousands of commonly used words and word fragments and can be programmed for an unlimited number of pronunciations for unusual words, names, foreign languages and sound effects. It features a random sentence generator that creates gram-

matically correct sentences, a "talking face," lip-sync animation and an easy-to-use screen menu. Both pitch and speed can be varied to create different computer "personalities." The AL-5001 model for use with Atari computers talks directly through the TV set, eliminating the need for special interfaces, external speaker, power supply or connectors, and is priced at \$169. The AL-3001 Voice Box requires a 32K or larger Apple II or Apple II Plus with Applesoft and DOS 3.3 and is priced at \$215. **The Alien Group**, 27 W. 23rd St., New York 10010. (212) 741-1770.



### Carrying Bags

A line of adjustable bags for carrying personal computer gear is designed with padded nylon partitions that adjust to any contour or angle using self-stick Velcro. The partitions protect equipment from outside shock and internal bumping. Kiwi uses DuPont Cordura Nylon to make the bags waterproof, washable, lightweight, ballistic strength and stain and mildew resistant. They include 2,000-pound test webbed handles and shoulder straps, weatherproof, self-healing zippers, bonded nylon thread and oversized hardware. The bags are available in regular, large and extra large sizes. **Kiwi**, 1030 E. 30th St., Hialeah, Fla. 33013. (305) 835-8228. (800) 327-7524.

### Portable Processor

With Sony's Typecorder, a personal word processor that fits into a briefcase, the user can work on a plane or train, in an airport or a hotel and then send information from a phone booth. The battery-operated Typecorder has a standard-sized typewriter keyboard but is about the size of a notebook and weighs only three pounds. It is based on a microcassette recording and text storage system and features LCD display. **Sony Office Products**, Sony Drive, Park Ridge, N.J. 07656.



## HI-FI/VIDEO LIBRARY

### Retailing Newsletter

*Inside Retailing* provides retailers and manufacturers with a quick run-down of the fast-changing consumer retail market. The newsletter, delivered every two weeks, spotlights how retailers are coping with sagging sales and climbing operating costs, consumer buying trends and success strategies. It is designed to keep retailers aware of their competition and manufacturers aware of their dealers. \$79 per year. **Inside Retailing**, 425 Park Ave., New York, N.Y. 10022.



### Speaker Brochure

Design Acoustics has made available a brochure featuring its newly introduced line of Point Source Loudspeaker Systems. The brochure is designed for the consumer and explains in detail the company's claim that its Point Source engineering offers improvements over conventional loudspeakers in sound and stereo imaging. Audio-Technica, U.S. Inc., 1221 Commerce Drive, Stow, Ohio 44224.

### Video Releases

Embassy Home Entertainment has begun distributing to its distributors a series of four-color brochures spotlighting its monthly video releases. The brochures are made available to video retailers, providing them with information and consumer giveaways. Free. **Embassy Home Entertainment**, 424 N. Center St., Northville, Mich. 48167.

### Video Lighting

Acme-Lite Manufacturing Co. has made available copies of "Your

Basic Guide To Video Lighting," a booklet that explains in simple language the use of the key light, the side light and the back light for better video production. The booklet, packaged with every Acme-Lite video light, also describes all the lights the company manufactures, noting light output and rated lamp life. Free. **Mel Levy, sales manager, Acme-Lite Manufacturing Co., 3401 Madison St., Skokie, Ill. 60076.**

### Software How-To

An in-depth analysis of present retail software trends for the growing personal and home computer market is outlined in **How To Start Your Own Computer Software Store**, released by Future Computing Inc. The book presents firm guidelines, based on available market data, to use when planning, financing, stocking and operating a retail computer software store for maximum retail success. Future Computing forecasts a retail software market of a thousand stores by 1986. \$495. **Future Computing Inc., 900 Canyon Creek Center, Richardson, Texas 75080. (214) 783-9375.**

### Computer Books

**BASIC Exercises for the IBM Personal Computer** offers programming exercises written in IBM Personal Computer BASIC. Covering a broad range of tasks, from tax computations and statistical calculations to sales forecasting, the exercises go through the steps necessary to solve programming problems effectively. It is written by J. P. Lamoitier and is published by SYBEX. 232 pages. \$13.95.

SYBEX also has published **The Apple Connection**. Aimed at Apple computer owners with a foothold in BASIC, this book shows how to interface the computer to home appliances and devices, describing hardware and software necessary for simple control applications. It is suitable for beginner or advanced user and is written by James W. Coffron. 288 pages. \$14.95.

**SYBEX, 2344 Sixth St., Berkeley, Calif. 94710 (415) 848-8233.**

An extensive catalog of computer books is available from Ingram Book Co. Titles range from **An Introduction to Microcomputers** to **How To Build Your Own Working 16-Bit Microcomputer**. **Ingram Book Co., P.O. Box 17266, Nashville, Tenn. 37217-9989.**

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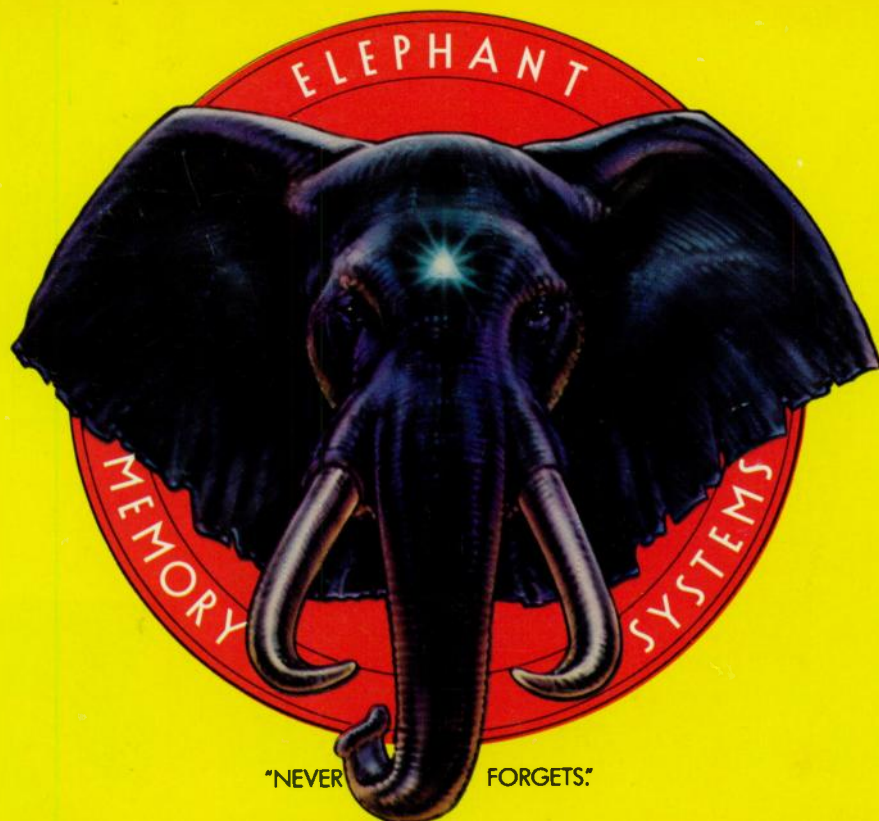
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