

RKFTIN

CASSETTIES

THE MAGAZINE OF THE HOME ENTERTAINMENT INDUSTRY

VIR

SEPTEMBER 1967 VOL. 3. NO. 3 ... 50c

DOLBY

WHAT'S HAPPENING IN TAPE RECORDING

OPEN-REEL

We re-invented tape recordin ng

The Constants of the solution of the solution

They all record on blank causette a and play buck the new pre-counced on entry of a phase buck the new pre-counced on entry. And they all will have been to proceed the are \$50 purchase, are made what are they they reall compatible with steep coasetter, the Notebo line gives you excellent trade up opport ty in tothin white and takents white only lifetime warranted cases the you case buy.

To make sure they sell, we're telling people

about the Nore Icolline this fall with the heavier t converter in a function the bullines. We Hin our con mercial sand, easin mixim our mag-lation as the Remember to ask your Norehoured

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the re-inventor of tape recording

North American Philips Company, Inc., High Fidelity Products Department, 100 Exit 42ne-Steed, New York, N.Y. 10011. Other Products: Electric Dover Teal organistics, Audio-Video Table Records to Dicting Machines: Electronic Educational Kiss, Medical Derital Xiras, Electronic Table Comment

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September 1967

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World Radio History

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OPINION

Must the shows go on?

S HOWS SERVE a useful purpose, so we will answer the question in the affirmative. Something must be done, however, to correct the conflicts, geographic and otherwise, that are wasting dealers' time and causing unnecessary expense for manufacturers. It's time to integrate the show circuit!

We wish to make two basic recommendations: Time and place of the Consumer Electronics Show and the NEW Show should be coordinated; and the New York High Fidelity Show should be strictly a consumer show.

Both CES and NEW will be in New York next year, but a full week intervenes between the closing of NEW on June 16 and the opening of CES on June 23. The two shows aren't basically competitive, but there are dealers who would attend both if they were held consecutively or concurrently. Likewise, it would help manufacturers that have overlapping lines.

Since space must be contracted for far in advance, nothing much can be done next year. A sensible solution must be found by 1969. The Electronic Industries Association's Consumer Products Division and Parts Division should call a truce in their intramural differences in the greater interest of the industry.

The National Association of Music Merchants probably will insist on continuing a separate Chicago Music Show. The Consumer Electronics Show, however, has already won that battle as far as home entertainment products are concerned. The Institute of High Fidelity's shows, including this month's New York and next month's Los Angeles events, are combination consumer and trade shows. September and October are great months to reach consumers, just as they are beginning to think about their fall buying plans. It's rather late in the season to show new lines to dealers.

This may be one of the reasons why at least twenty of the companies at the New York High Fidelity Show exhibited earlier at the Consumer Electronics Show. Some tape recorder firms and perhaps a few components manufacturers, who were at CES, are bypassing the September Show.

The New York High Fidelity Show has an important function as a consumer show. It is not an ideal trade show. A consumer sees a new product and tries to buy it right after the show. The dealer doesn't have it in stock because he first heard about it only one day before the consumer did. The result: A sure sale is lost.

When products are shown to the dealer in June, he can place his order and the factory can gear its production so that the products will be in the store at the time of the consumer show. We realize that this will be difficult for those companies that habitually keep working on new developments right down to the September show deadline. If they want to get full value out of the fall selling season, they must set carlier deadlines and get their products into the stores.



Crown Con pact Cassette, CTR 9000. More power, better tone than higher priced cassettes. List: \$74.50, includes mike, earphone, C-60 tape, batteries, patch cord, case.



CRC 9100F Cassette recorder with built-in AM/FM radio. Listen to either radio band and record simultaneously. List: \$109.95, includes C 60 tape, earphone, batteries.



CSC 9350 Stereo Cassette recorder, built-in AM/FM stereo radio. Listen and record at the same time. List: \$189.95, includes separate speakers, 2 Dynamic mikes, C-60 tape.



Crown Telephone Valet, CTA 4000. Answers phone, records Caller's message. Works with most AC tape recorders. List: \$99.50. So simple anyone can hook-up in minutes.

<text>

A number of developments, reported and analyzed in the current and August issues of <u>Sight & Sound Marketing</u>, can be summed up in a single word—<u>innovation</u>.

This innovation is taking many forms and is affecting many consumer electronics products, but it appears to be making its greatest impact in the field of <u>tape</u> <u>recording</u>. In fact, this could be the long-awaited year when the tape recorder takes its place as a <u>major item</u> in our stores, along with color television and stereo.

The key to bigger sales is, of course, convenience. Audio tape recorders are becoming simpler to use. Automatic reverse, once the exclusive of a single brand, is now almost commonplace. Bell & Howell's automatic tape threading feature and Sony/Superscope's promised reelchanging recorder are efforts to eliminate the fear that some people have when confronted with an open-reel recorder. And the cassette system is meeting with such enthusiastic acceptance that it may dominate the under-\$200 field this fall, instead of two or three years from now, as previously anticipated. The only problem is one of proliferation. Along with many excellent models from responsible manufacturers are some promoters' offerings of doubtful quality. These could have the same harmful effect in disillusioning customers as the rim-driven "toy" recorders had on the openreel market a few years ago.

Will the cassette eventually replace the open reel at higher price levels? It does not seem likely, but it could happen if a true high fidelity cassette instrument can be developed. Even so, the best guess is that both will <u>live side-by-side</u>—the cassette for convenience and the open reel for people who take their tape recording seriously and want the flexibility of this system.

Almost as important as convenience are the current efforts to <u>improve the signal-</u> <u>to-noise ratio</u> of tape (see page 13). Lower noise at slow speeds will result in economies in the use of tape, adding to the attractiveness of the medium for the consumer.

Dealers may not have to wait too long for a <u>true home market</u> for video tape recorders to develop. Predictions are being made that prices will come down enough to (Continued on page 32)

SCOPE





September 1967



When Walter D. Moses and Company began business in this building in 1879, there were no other music stores nearby. Today, almost every location on the block that is not a jewelry store is a music house.

"If the quality is there I don't mind the price"

says Chris Heindl of Walter D. Moses and Company

MANY DEALERS complained during the color television shortage that they could get high-end models but not enough of the moderately priced sets.

There was a different problem concerning stereo last fall at Walter D. Moses and Company, 103 East Broad Street, Richmond, Virginia, music store. The high-priced consoles were scarce because of a cabinet shortage.

"We had nothing over \$1,400 during the Christmas season," said Chris Heindl, vice president, "and that's when the big ones are sold."

When the big-ticket sets were available earlier this year, he didn't want too many of them. The company, a fine old music house that exudes quality, doesn't like to clear out merchandise at cut prices. "We always manage to sell out by the time the new models are introduced," Heindl said. "We don't miss too many sales in the spring, however, because we call the representative of the factory and get what we need in a hurry."

The store has a close working relationship with its sole supplier of console stereo, Fisher Radio Company, and it does a very respectable volume. "Our annual sales of Fisher products run about \$150,000," he said. "We have handled the Fisher line of consoles from the time they were first made. We used to sell Capehart until that company went out of business. We want to see Fisher hold the quality, rather than make too many models. If the quality is there, I don't mind the price."

With the expectation of adequate stock, he expects that the upcoming fall season will be a good one for stereo.

Along with the Fisher consoles, the Moses firm features KLH's line of compact stereo.

Although the store formerly sold

(Continued on page 24)



Chris Heindl emphasizes sound reproduction quality as he demonstrates a stereo compact system to a customer.



Sydney Allsop, record department manager, is well-known in Richmond musical circles as a reviewer for the Times-Dispatch.



Harman-Kardon Five-Twenty





Now THAT the receiver (tuner, amplifier, and controls) has largely taken over as the center of all but the most elaborate component high fidelity systems, it's hardly surprising that manufacturers should seek a competitive edge with their product by offering more versatility, more features, more sophistication of circuitry, or any of these.

For versatility, as an example, Bogen's TR100X FM/AM stereo receiver has its essential circuitry contained in six modular circuit boards, interconnected with push-on connectors for easy servicing. Like virtually all other receivers in this year's crop, the TR100X is solid state, has multiple-choice speaker switching, and has output circuit protection against shorted speaker leads. \$249.95.

Integrated circuits are the special feature of two new Fisher units. The stereo-FM 200-T offers a high and low level phono selector. The 550-T, an AM/FM stereo receiver, sports a full control complement, 90 watts output.

Hallicrafters has moved impressively into component hi-fi—while reminding us of its long association with radio—with the CR-3000, a 6band receiver (FM, stereo FM, AM, longwave, shortwave) featuring an illuminated rotary drum dial scale, also front-panel switched magnetic *and* ceramic phono inputs. Auxiliary speakers are available. \$269.95 net. The company has two table model receivers: S-214, a 6-bander, at \$89.95; and S-240, AM and FM, at \$109.95 net.

Harman-Kardon's new receiver entries are the model Five-Twenty, using ICs, modular construction, etc., and the Five-Thirty, essentially the same, but with AM as well (the AM tuner uses a MOSFET front end and separate AM board with its own IF strip and tuning capacitor). \$269 and \$299 minimum resale, available in September.

From five to eight pre-engineered matchbox-size module units contain 95% of the components of an Arena receiver, made in Denmark by Hede Nielsen and distributed here by International Importers, Inc. T2400 is FM only, offers a memomatic (mechanical memory) circuit for pushbutton preselection of five pretuned stations of the owner's choice, an electronic station scanner for program sampling, at \$499.95 list. T2500F, with the same features in FM, has duplex tuning (separate dial pointers) of FM and four AM bands. \$319.95. T2500H is the same, with built-in end speakers (the cabinet's 29½ inches wide) for \$339.95 list.

Featured in Magnavox's new line of receivers are step-type bass and treble controls usually associated with professional equipment. For \$15, dealers may obtain a distribution box for demo-switching the Magnavox units.

A considerable line of Telmar (Division of Martel) receivers is topped with the T-9 where both AM and FM bands utilize completely separate systems, including knobs, tuning bands, and sensitivity meters. \$329.50 list.

Pioneer breaks the \$200 price barrier with the SX-300T AM/FM/FM stereo solid state receiver, a direct descendant of the SX-1000TA. Manufacturer's specs are: 40 watts (IHF at 4 ohms) power on both channels; 3 microvolts sensitivity on FM; less than 1% harmonic distortion (at 1 kHz rated output) in the amplifier section. Plugs are provided for the speaker cables, permitting speakers to be plugged in easily. The retail list is \$199.95; an optional oiled walnut cabinet is available at \$30.

Roberts Model 30 FM stereo receiver offers a broad scale logging dial, a new concept in controlled injection AFC, and a walnut cabinet at \$199.95 list (\$159.95 minimum resale).

The half-dozen receivers in the H. H. Scott line use field effect transistors in the front end, integrated circuit IF strips (Models 344C and 342B), wideband automatic variable AM bandwidth (Models 384, 382B, and Scott's LR 88 AM-FM stereo receiver kit), and the Dynaural noise-filtering circuitry developed by Scott (Models LR 88 and 348B).

Sherwood's all-silicon transistor Model S-7600-FET receiver has a low-distortion linear FM detector, selected FETs in the RF and mixer stages; phono sensitivity is adjustable from 1.4 to 10 mv. There's a three-year warranty on all parts including transistors. Chassis: \$339.50; in walnut-grained leatherette case, \$348.50; walnut-wood case is available at \$28.

TEAC's sole receiver, the AS-60, has a front-panel-switched, two-unit tape deck input permitting simultaneous recording with two decks, and a center channel output. \$389.50; available in October.

Amplifiers

Newest amplifier in the Fisher Radio stable is the TX-1000, featuring all-silicon circuitry, pushbutton three-stage high filter, four-position tape monitor selector, and switchable center channel power output. 50 watts RMS (at 1 kHz) each channel. \$349.95 list.

The Grundig SV 80 amplifier, rated at 30 watts/channel RMS, offers some feature specials via the pushbutton route: contour I, contour II, and presence. The SV-40, without pushbutton features, bears a 15 watt/channel rating.

Arena, using the same plug-in module construction found in the company's receivers, has a compact amplifier unit, the F 210, with standard controls, \$139.95 list.

Sansui plays both sides of the street, offering an integrated power amplifier, but also a preamp and a power amplifier. AU-777 is the integrated unit, with 30 watts/channel RMS, flat operation when controls are in zero position, two phono inputs, presence switch. front-panel speaker switching, four special outputs (preamp, tape recorder, two center channel). Pre- and main amplifiers are designed to be used independently. Step-type tone controls. \$279.95.

H. H. Scott's 299F (65-watt) and 260B (120-watt) amplifiers use direct-coupled silicon circuitry and modular-type printed circuit boards. 260B has pushbutton selector switches, and a tone control by-pass switch.

Second model in Sony Corporation of America's amplifier line is the TA-1080, employing thirty silicon transistors to achieve its 90 watts (IHF) power ratings. There are two identical magnetic phono inputs. As with its earlier TA-1120 amplifier, Sony offers its unique quick-action lever switch for speedy selection of most often used inputs. There's a tone control defeat switch too for flat

(Continued on page 12)

A new home for the New York hi-fi show

THE SITE of this year's New York Component High Fidelity Music Show, to be held September 19–24, is only three blocks from last year's site, but the difference will be evident immediately to every visiting dealer and consumer.

Instead of the narrow corridors, bare walls, five floors and interminable stairways of the Trade Show Building, the Statler Hilton Hotel will offer a two-level show on its newly redecorated second and third floors. Directly across the street from the new Madison Square Garden (old Pennsylvania Station) now nearing completion, the hotel, at 33rd Street and Seventh Avenue, can be reached easily by IRT, BMT, and IND subways, as well as the Long Island and Pennsylvania railroads and PATH rapid transit.

While the acoustics and sound isolation, both important factors for this demonstrating show, are yet to be tested, the hotel atmosphere should be a marked improvement over the utilitarian Trade Show Building. That building, site of all New York shows within recent memory, contributed to the nutsy-boltsy image of components. The relatively luxurious Statler Hilton rooms should help exhibitors stress the good design of modern components and their adaptability to various room decors, features which the sponsoring Institute of High Fidelity has been stressing for several years.

For dealers and consumers alike, the main part of the show will be the new products displayed in the exhibit rooms. Approximately twenty of the companies did show their wares to dealers at last June's Consumer Electronics Show in New York. Some of these, however, will have additional products to unveil at the IHF event. And, of course, dealers who missed the earlier show and all consumers will be seeing the 1968 line of products for the first time.

In addition, there will be an expanded number of "side shows" for the public. Walter O. Stanton, IHF president, has announced that the traditional symposiums on equipment will be held, with separate sessions specifically geared to the novice and to the semi-technical and technical audio enthusiasts. Institute members will serve on the panels.

For the first time, there will also be a full schedule of seminars on musicology and home decoration. Arrangements for all these events are under the direction of William Stocklin, seminar committee chairman.

While dealers can attend the show without charge at any time, the first two days have been set aside exclusively for the trade. The doors will be open from 3 to 9 p.m. on Tuesday, September 19, and from 10 a.m. to 6 p.m. on Wednesday, September 20.

The public will be admitted from 3:30 to 10 p.m. on Thursday and Friday, September 21 and 22; from noon to 10 p.m. on Saturday, September 23, and from noon to 6 p.m. on Sunday, September 24.

The admission charge for the public will be \$2, with children under 12 years of age admitted for 50 cents. In an effort to build store traffic, discount tickets, reducing the box office price for adults to \$1, will be distributed through recognized audio dealers in the New York metropolitan area.

Room allocations had been assigned at press time to fifty-three manufacturers and distributors, not counting FM stations and consumer magazines. Several of these exhibitors have contracted for as many as three or four rooms each. More exhibitors are expected to come in before space reservations close, Mrs. Gertrude Nelson Murphy, IHF executive secretary, said.

High in fi; high in price

SOME REALLY high-end components \supset and systems, both price- and quality-wise, are coming from Japan. While Sony's version of the audiophile's fantasy is only partly new, nevertheless the complete Sony layout amounts to a pretty impressive package at \$2,500. For this sum, the consumer is treated to triamplification of each stereo channel, for which a total of six (three stereo) amplifiers is used. Unique? Universal, rather, as one discovered while checking out top-top systems offered by Hitachi, Sansui, Kenwood and TEAC. The most impressive preamp control unit ever constructed for consumer use (doesn't it have provision for *three* phono turntables?) was developed by TEAC. This is a made-to-order unit, with price indefinite. Scarcely less fancy is Sansui's preamp control unit at \$449.95, center of that company's system.

From Kenwood comes the Supreme 1 multi-channel stereo amplifier (\$695) and photo-electric cartridge (\$120). The amplifier drives the woofer, midrange and tweeter speakers in each stereo channel separately. The cartridge incorporates a lamp, a screen, photoelectric diodes and a pre-amp, but no magnetic parts. The operational theory: The movement of the screen controls the amount of light ray which passes through the screen to the diodes; the movement of the stylus on the record causes the screen to vibrate; the amount of light ray on the diodes changes the current of the diodes to sound current, a company spokesman explained.

Finally, Hitachi's pie-in-the-sky layout, another audio buff's wonder to behold, has a price tag of \$15,000. Not for everybody, these glorious extravagances, but very likely for somebody....



"No wonder we couldn't get anyone to give us information in the Elec-Sonics room. They're all over here scouting the competition."

Amplifiers

(Continued from page 11)

response. The independence of the preamp and amplifier circuits means that the unit is suitable for use with the TA-4300 electronic channel crossover preamp (\$199.50) and two TA-3120 stereo power amps for electronic control of speaker crossover frequency. \$299.50.

Tuners

Tuners are rightly high-performance units in today's newest versions. H. H. Scott's 312D, latest in that numerical series, has an FET front end; a three-way meter allowing the user to monitor signal strength, multipath, and center tuning; front-panel controls for varying the level of headphone and amplifier outputs independently, and output jacks for oscilloscope monitoring of multipath signals. A kit, the LT 112B-1, has similar quality. FETs also turn up in the front end of the 315B, with an IC IF strip and other plusses.

Two-microvolt sensitivity is not the most important feature of the new Sony Corporation of America ST-5000W tuner. Sensitivity apart. the unit is unusually insensitive to cross-modulation. A cadmium sulfide (CdS) band-pass RF attenuator prevents cross-modulation in cases of strong signals blanketing weaker ones. Another CdS device, a muting switch, suppresses interstation noise without wiping out weak stations. A third CdS switch automatically selects stereo or mono without any danger of false triggering. There's switchable AFC, provision for either 75-ohm or 300-ohm antennas, and "for this extravagance" as Sony puts it, a not outlandish \$349.50 price.

Headphones

In the age of peanut-sized amplifiers, why not put one in a headphone's earcup? So Telex has gone ahead and done it with two units. Its Amplitwin headphone packs amplifier, batteries, volume control, power switch, low level (for direct record player connection) and high level (tape deck, tuner, etc.) inputs in each ear cup! \$79.50.

(Continued on page 27)

What the lack of noise is all about

An analysis of efforts to clean up background of records and tapes

by Edwin S. Bergamini

T HE IMPORTANT matter of "cleaning up" background and other unwanted noises on records and tapes has shown some new developments of interest to consumer electronics dealers.

Foremost among the techniques attempting to widen the gap between the wanted recorded sound and the undesired noises of various sorts which creep into that sound's background is what is known as the Dolby System. Essentially, this system stretches with perfect linearity the signal level of the softest sounds further above the background noises during recording, and recompresses it-with further noise reductionduring playback. (Note, too, that this plavback can be onto yet another tape, from which a disc can be cut with additional Dolbyizing, if wished.) The signal-to-noise ratio reportedly is increased by 10 to 15 db.

The Dolby system is expected to turn up in consumer equipment for recording and playback. KLH, which has exclusive rights for its use in consumer products, is planning to bring out a tape recorder with Dolby electronics—before year's end if possible.

Actually, KLH is working on three products utilizing the Dolby system particularly at the 3¾ ips speed—an open-reel recorder, a separate device that will give the Dolby treatment to recordings made and played back on existing tape recorders and a tape cartridge system which is said to be different from any present endless loop or cassette approach.

"The castridge system," said John B. Milder, KLH advertising manager, "is far more speculative than the open-reel recorder. I am sure we will not have a cartridge machine this year, and we will really not be in a position to describe the system until our production and marketing plans are more firm."

Since feeding the correct signal level into the Dolby circuitry is absolutely critical for achieving noise reduction in recording and playback, KLH engineers indicated that they intend to make provision for easy setting of correct level controls by the consumer.

At the disc and prerecorded tape manufacturing end, Dolby has already been put to use by several labels, with the recorded product already starting to turn up in retail stores.

Ampex Corporation has developed EX+, a noise-reduction process applied to stretching the old S/N ratio when duplicate master tapes are made from an original tape and when single copy tapes for the consumer are made from these duplicates. On this basis, the company has noted that a tape release may be both Dolbyized and "EX+ed"—all to the end of reduction of unwanted noise.

Noise reduction is tied in with other matters. Slower speeds during tape recording mean a squeeze on the S/N ratio. (It's an engineer's rule of thumb that if you cut the speed in half, you lose 3 db.) One of the reasons the recently announced Newell

Does Dolby system improve records?

See reviews on page 28.

Principle (see Sight & Sound Marketing's June/July issue, page 27) caught interest was the expectation that this system's higher tape speeds (up to 1,000 ips in some applications) will cause a happy widening of the distance between signal and noise. While at this writing Newell apparently has not licensed the system to a manufacturer for home VTR or audio recorder production, it's an important future item for the dealer to file and remember.

The type and quality of tape for recording also fits into the background noise picture. Whatever the advances in the creating of lowernoise tape (and there have been advances), they have all been accomplished working with oxide of iron as the medium for magnetically recording the signal.

Recently Du Pont announced that it will manufacture and market a new tape called "Crolyn," in which the recording medium is chromium dioxide, a substance Du Pont has produced in highly pure form for the first time. It's low-noise, low-printthrough stuff which is said to give a 6 db or more S/N ratio improvement in connection with VTR, with corresponding plusses for audio applications. The word from Wilmington is that it will be "several months" before any audio tape is available. Video tape probably will be sold initially through video recorder manufacturers. The tape is expected to retail at 25% to 50% more than conventional oxide tape. But with the advantages already noted, plus a higher signal output than that of iron oxide tapes, wouldn't it be worth it? And then as the customer uses these plusses to make recordings at slower speeds, it's a bargain for everybody.



Whatever else it lacks, Boynton's basement has atmosphere.

BOYNTON'S CELLAR CLUB

by Ted Henke

H OW DO YOU START an audio store on a shoestring in a fiercely competitive market and in ten years build it up to a \$1 million annual business?

Dan Boynton did it with his Audio Lab, which he opened in Cambridge, Massachusetts, in 1957. What's more, he was under-capitalized at the beginning and the store was in a basement on a street with no foot traffic.

Today the store is in the same location, 16 Eliot Street, but he has expanded his space, now occupying about 3,000 square feet. He employs eighteen full-time people, plus a few part-time Harvard University students to handle the overflow.

He figures that he has competition from at least twelve other audio stores, including such large operations as Radio Shack, Lafayette Electronics and DeMambro.

Boynton has achieved his present success by identifying with the Harvard student body. The students who work in his store keep him up to date on campus activities.

Audio Lab is an informal store where students feel at home. They drop in even when they don't have a specific purchase in mind and they bring their friends. A sign prominently displayed says: "You are invited to handle this equipment."

To achieve this student identification, Boynton runs an extensive advertising campaign in the *Harvard Crimson* and other campus publications. The *Playboy*-type ads are often wild; sometimes they have a double meaning. An older, more sedate reader might be offended by some of the ads, but students react positively to them.

On occasion he has tried to vary his approach by using more conservative themes. But every time he has done so, customers stop him on the street and complain, "You didn't run the good ads."

He writes his own copy for the print ads, as well as for the radio commercials he uses. Actually there is very little copy in the radio spots, which are mostly combinations of intriguing and unusual sounds.

"The funny thing about this advertising is that it works," he said. "Students do come in and buy."

Currently working on the campaign for the fall semester, he will develop it along the same lines as last year. There's no point in arguing with success.



What to do with the poles? Put signs on them.

FOR HARVARD STUDENTS

In the fall of 1966, he opened with a full-page ad in the *Crimson's* registration is ue. Headlined "The Harvard Gui e to Installing a Stereo System i . Your Own Room," it was by-lined by four Harvard students who work in the store. It's a comparatively sedate ad; the wild ones come later in the term.

The conversational copy (condensed here because of space requirements): "Since no two people react to musical sounds in exactly the same way, you must plan on spending a whole afternoon comparing equipment. It is important to find a store that has natural livingroom acoustics and salesmen who will let you sample a number of components without pressuring you. . . There is just such a place in Harvard Square. It's called Audio Lab, and it's located in the cellar of an old office building."

Among the illustrations is a map, showing the location of the store in relation to Harvard Yard. "Save this map," says the caption, "you'll never be able to find Audio Lab without it."

Continuing, the copy describes several choices of equipment, starting at the high end with a dream system which "costs almost \$2,000 and is worth every penny of it."

Then "for people who gasp at this price" there is a \$600 rig consisting of a Thorens turntable, Pickering cartridge, KLH 16 stereo amplifier and two KLH 6 speakers.

"If you are like us," the ad copy notes, "and have even less money, there are two possibilities for good sound in your room. The first is to purchase one of the complete KLH integrated stereo systems . . . ranging from \$199.95 to \$525 in price. . . . The other way is very complicated; you shouldn't try it unless you know quite a bit about high fidelity components. . . . [Trade-in] equipment is sold very cheaply, and if you know how to assemble different parts yourself, it might be worthwhile to check Audio Lab's stock. You can put together a whole system of ancient monaural components for about fifty dollars. . . . Better grade equipment is rebuilt in Audio Lab's factory building and sold with a parts and labor guarantee for about half the original price."

In an attention-getting, smallspace ad, Boynton asks: "Why all the controversy about LSD 29? Audio Lab gladly sells it." It turns out (Continued on page 26)

Introducing the one color TV that won't be insulted if you fall asleep.

The show may be great. But it's late.

In the past, a sleepy Porta Color* TV viewer had to rouse himself, get up out of a soft, warm bed and shut the thing off.

Not any more.

General Electric introduces a new deluxe deluxe Porta Color. With a clock in its head. An automatic timer like the snooze switch on GE clock radios. But this one allows for a full 3-hour shut-off time.

Since General Electric Porta Color was the world's first *portable* portable color TV and since a bedroom is a likely place to find one, coming out with this model was only a question of time.

And new is the time to order yours. Every second counts. See your local General Electric distributor for full information and details.

GE knows: The better it's made, the less it's serviced.

Trademark of the General Electric Company





Southern dealers temper optimism with caution

THE SOUTHERN market for color television, comparatively soft even during strong periods in the past, looms big in dealers' pre-season projections. Some, however, are proceeding with caution, and there is very little evidence in any store of the overbuying that occurred last year.

Most of the surveyed dealers reported a soft spring, although they were able to work off the greater part of their excess inventory. Sales came suddenly to life in several stores during the first part of August, adding to the optimism.

Console stereo is expected to show reasonable strength, although dealers would like to see this profitable class of products do even better.

Dealers selling components are projecting good fall sales, although one sees a trend toward modular compacts instead of separately selected component systems.

Open-reel tape recorders are showing a great deal of life. The big impetus, however, will be provided by cassette recorders, in the view of several dealers. One is still placing his bets on the 8-track cartridge.

After conceding much of the radio business to drug stores, some dealers believe that FM stereo and other quality features will bring a good deal of the volume back to home entertainment stores.

Playing it cautiously

Joseph Martin, D. H. Holmes Company, New Orleans department store, hopes "fall will be as good as everybody is predicting, but will play color cautiously."

Observing that he and everybody else bought color abnormally last year, he said he will buy on a 45-day basis. Last year the practice was to anticipate 90 days or even, at the start of the season, 120 days. "I can't see any real change in the economic climate from last fall," he commented. "While the economy generally is good, I think the cream has been skimmed off the market. The customers for color today are people on a budget. Some may have fairly high incomes, but they have budgetary problems as we all do. Monthly payments, especially on the higher-priced sets, are too big for them. If the proposed surtax is enacted, it will hurt sales, as will anything that takes money out of the customer's pocket."

He is not optimistic about the fall network programs on the basis of what he has heard about them so far. During the summer months reruns hurt sales, he said.

Spring sales were satisfactory, exceeding last year's figures, but "we had to work hard and pay dearly in markdowns." Actually the first quarter was substantially ahead, while the second quarter was just about even with 1966. There was a slight increase in July. However, higherpriced color sets have not been moving despite substantial reductions.

Stereo, on the other hand, has been moving well. Each of the first seven months of the year saw sales topping the comparable month's figures last year. It looks good for fall, he said.

"Buying in anticipation"

"After a very soft spring, we expect a good fall in both stereo and color," said Charles L. Simmons, Coghill-Simmons Music Company, Dallas. "It was very soft from March through the end of June. Some signs of life showed up in July, but the first ten days of August were only slightly ahead of last year.

"We are buying in the expectation of a good fall. It had better be!"

The firm has shaken up its tape

recorder section, dropping a number of lines, including higher priced products. "Margins are too low: there is too much price competition," he said. "We now handle Craig at the low end and the full Magnavox open-reel line, plus Magnavox and Wollensak cassette units." He predicted that the future of the tape recorder business is in cassettes. They will eventually supplant open-rcel recorders, he asserted.

"Fall season can't miss"

"The employment level and other factors in the economy are so good that I don't see how the fall season can miss, unless something drastic happens," said A. L. Hecht, Ward's Company, Richmond chain operating its own stores in Virginia and leased departments in mass merchandising stores in the northeast, south and midwest.

"The impact of the new programs will help sell color. Every night the public is exposed to a tremendous barrage of publicity on the networks about the new fall programs. Besides, people are now seeing color $T\nabla$ in their friends' homes and will want their own sets."

Hecht is not concerned about the proposed 10% income tax surcharge. He believes the public has been expecting it and has absorbed the idea. "It didn't seem to make any difference after the President announced it. Even the stock market took it in stride, recovering from an initial flurry in the same day."

Color inventories are in good shape, he said. Sales during the summer were proportionate to last year.

He believes the most popular price points will be \$495 for consoles and \$395 for 18-inch table models. "These prices," he said, "are within the range of most people's pocketbooks." The stereo outlook is good, he noted. It sells steadily, though not in tremendous quantities.

"Tape recorders are selling a bit better every year," according to Hecht. "They are coming of age. Recorders now on the market are better than ever before; they have more features which we can sell. But I think it's the cassette which will really get the market to take off. It will do for tape recording what the Instamatic camera did for photography."

Replying to a question about radios: "We always do a tremendous business. No one buys just one radio anymore. With all the different types available—small transistors, clock, desk, FM, short wave—people buy radios that appeal to them although they already have several at home."

"... if prices are right"

"Color will sell if the prices are right," predicted J. W. Godwin, Godwin Radio Company, Birmingham, Alabama. "Last fall we had plenty of shoppers, but we didn't have merchandise at the prices they would pay. We had too much high-priced furniture, so they didn't buy.

"If we can get rid of stock on hand and buy enough new merchandise in the \$500-and-under range, we will have a good season. If we can't, we're dead. There's still some market for the \$600-\$700 models, but it's limited. We need 295-squareinch screens at the \$500 level, table models and smaller sizes at less."

Stereo, including both components and consoles, is a good year-'round business for Godwin. If it follows normal patterns, it should be somewhat stronger in fall. But he fears that the market may be getting "a little saturated." The trend, he said, is toward modular compacts. "They appeal particularly to housewives who couldn't care less about a complicated component system."

Cassette recorders are becoming very big. They will replace openreel this fall in the \$60-\$80 range, he said. He sees the development of a real mass market. There will be some sales of 4- and 8-track playback systems, but nothing to compare with cassette recorders. Because of the multiplicity of cassette products on the market, some of which he fears may be substandard, he will buy brand names to be assured of reliability.

Although cassettes will find a place as part of components systems, he doesn't think they will replace the professional-type open-reel in the near future. It could happen later if they can be upgraded to true high fidelity, he said. As for this fall, there will be some demand, though rather slow, for pro-type open-reel.

Godwin sells prerecorded tape for all systems along with LP records. Open-recl tape has been a "hard market to sell." He hopes to see more prerecorded cassette products which will help to sell the machines.

He has considered radios a necessary evil because they are sold in every drug store, but "it looks as if they are beginning to come back into our market." He likes high-grade portables such as Sony from \$80 to \$100 and is impressed by Sylvania's use of air-suspension speakers in table radios. FM-equipped radios will sell, as Birmingham has one fulltime stereo, one part-time stereo and and three mono FM staticns.

Enthusiastic about color

Fall looks like a good season, particularly for color, at **Pieratt's Applianceland, Lexington, Kentucky,** according to **H. F. Pieratt.** His inventory is in reasonably gooc shape for this time of the year, and he is open to buy. "I have made some heavy commitments, but I'm not taking the entire inventory into my store until I need it." Sets in the \$450-\$500 range should be most popular.

Stereo should sell well, running about even with last fall. "It won't, however, be the best season ever by any stretch of the imagination."

Open-reel tape recorders, while not Picratt's biggest department, are carried at all price levels from \$29.95 to \$500. Units under \$100 are always good movers at Christmastime, he said.

Business is picking up in auto cartridge tape players, but he has some service problems. He also is selling quite a few 8-track decks for home use. Cassettes have a long way to go before they find acceptance, he said. He sees the 8-track system as the best bet so far. "They must standardize the systems or get them down to a few types before the public starts buying in quantity." As the result of several requests for modular stereo, he has begun stocking items from Zenith and Motorola.

Pieratt doesn't try to compete with the drug stores on radios, but sells quite a few to his regular customers. As he is not in a downtown location, he has very little walk-in traffic.

"Business broke loose"

An augury of a good fall came during the first ten days of August at **Deason Radio Company, San Antonio, Texas.** "Business broke loose in those ten days," said **Charles Deason, Jr.,** "and the last three were marvelous. On one day alone we sold color sets for \$700, \$775 and \$825."

No special advertising or promotion was used to get this business. "In fact, we had been discouraged by slow sales and had reduced our advertising, using only reminder ads to keep our name before the public. Our advertising in late July and early August was less than in any previous period."

Stereo has been fairly good, but rather hit-or-miss, he said. "It does seem to be our only really profitable item. People know what they want and very few try to chisel the price. That certainly isn't true of color, where most customers are looking for a deal. So we are making a little money on stereo."

Stereo compacts don't sell, except to an occasional bachelor. Most people, he said, want furniture if they are spending \$200 or \$300.

Tape recorders have become remarkably good sellers. "In the past we just hated them; they took too much time to sell. People would play with them, call in grandma to hear her voice. Now they are real profitable. Sales have tripled in the last six or eight months."

Again there was no real advertising effort. One tape recorder ad was run in spring. The product is pushed by salesmen in the store. They tell stereo customers how they can save on records by recording off the air.

Radios have been selling very well and, unlike the experience of some other stores, they provide a good profit. "We don't have to give them away. There are so many different radios, so many different styles on the market that manufacturers' sug-

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Products for the future

A MONG THE PRODUCTS that can be expected in the future, some of them by next year, are a 7-inch color TV, a 1-inch pocketable black-andwhite set, a radio the size of a Dunhill cigarette lighter and an openreel tape recorder that changes and plays up to five reels automatically.

Sony expects to start U.S. distribution of the 7-inch color set by next spring. About the size of a woman's cosmetic travel case, it is 8 inches wide, 10 inches high and 13 inches deep. Weighing 18 pounds and operating either on AC house current or DC, it is easily transportable. It uses a Chromatron picture tube which is said to produce a highly luminant picture with high color fidelity. The price is expected to be about \$350.

Sony's second product of the future is a pocketable black-and-white television set with a 1-inch picture tube and a monolithic integrated circuit. No target date has as yet been set for distribution. The unit is about half the size of a cigarette carton and weighs approximately 2 pounds. Powered by a built-in rechargeable nickel cadmium battery, it will also operate on house current. A simple movement of the unit's cover turns the set on or off.

The lighter-sized radio was one of two shown by Hitachi. The company's second radio-of-the-future surrounds a 4-inch speaker.

Superscope expects to have by the fall of 1968 the Sony 760, described as an "auto thread/change/reverse solid state stereo tapecorder." This is a tape recorder with automatic reel-changing mechanism allowing up to five reels to be spindle-stacked and played in sequence.

It also incorporates automatic reel threading, automatic reel reversing and ejection of the completed reel after both sides have been played. Reel size can vary from 3 to 7 inches, and reels may be intermixed. Automatic reversing is managed through special Sony circuitry not requiring metallic sensing tape or subsonic signals.



Sony Corporation of America will market black-and-white TV set with 1-inch screen here, but no introduction date has been set.



Sony/Superscope's model 760 tape recorder will have automatic reel changing mechanism.

Southern dealers report

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gested list prices don't mean a thing. We can get \$10.95 or \$12.95 for a transistor instead of \$9.95. Or \$24.95 for a table radio instead of \$19.95."

Audio and recorders strong

Charles Womack, Stereo Center, Atlanta, expects "great business, a strong fall." Both spring and summer had been very good, he said.

Components, the mainstay of his business, are divided about 50/50 between the sales of complete systems and individual units. Best sellers are in the middle range to high end.

While very optimistic about components, he says about his console line: "I wish I could predict how it will move."

Tape recorder sales are running at double the rate of a year ago. The popular items are recorders priced at \$500 or more and Sony units up to \$300. There are not many sales between these levels, he said.

Womack underestimated the demand for cassette recorders and had sold out completely in mid-August. Placing orders for additional merchandise, he said: "Cassettes will take over at under \$200. There's an overwhelming trend in this direction."

"Fantastic, we hope"

Allan Davis, Sight and Sound, Inc., Tulsa, Oklahoma, predicts an excellent fall—"fantastic, we hope"—after a rather soft spring. "Now that there has been a partial drying out of inventory, we are sure business will jump back. In fact, color sales were very gratifying in the first two weeks of August."

Stereo sales, down about 8% from last year in the first seven-and-ahalf months, were running about 118% ahead of projection in the first half of August. He anticipates a 25% gain for the full year through December, with both consoles and components figuring in the compilation.

The trend in components is toward medium-priced systems in the \$500-\$600 range for a complete rig with house speakers made by Adler.

Open-reel tape recorders are holding their own, but sales are not spectacular, Davis said. A \$150 stereo unit is popular in complete stereo systems; other sales are mostly at the over-\$200 level.

"The tape recorder situation is somewhat confused," he said, "by the cassettes and endless loop cartridges, but I think the cassette recorders will pass 8-track players in sales in the early fall months. They have created a lot of excitement here."

He noted that "we have continually neglected radios, letting the business go to the drug stores." Now, with four multiplex stations in the area, he thinks FM stereo radios can sell.

Looking for something that has no competition?

Listen to this.

Here is an audio industry "first," the COMPASS TRIPHONIC "75".

A three—yes, three-channel system. Designed by Paul Weathers, eminent audio pioneer, it makes two-channel stereo old-fashioned.

The sound is superbly clean and natural, with unsurpassed fidelity. With 75 watts of music power, there's nothing like it in its price range.

The system includes an FM stereo Receiver, a complete audio control center with three separate amplifiers and three specially designed separate speakers.

Ycu can sell the TRIPHONIC "75" with full confidence. The warranty is two years on the receiver and five years on the speakers. It is strictly fairtraded at \$399.95, walnut receiver cabinet included. Extensive national advertising will appear in major consumer publications, plus special local promotions, co-op advertising and exhibits at all major hi-fi shows.

Designed by Paul Weathers

To introduce this revolutionary music system, we have a SPECIAL OPENING CEAL which means greater profits for you.



For franchise information, write: COMPASS COMMUNICATIONS CORPORATION, 27 Haynes Avenue, Newark, N. J. 07114



E. G. Van Leeuwen, president of Magnetic Recorders Company. was on hand to answer questions during VTR show staged by his store in cooperation with Sony Corporation of America.

WAIT 'TIL NEXT YEAR

VTR prices may come down enough to launch a true consumer market

How LONG will it be until the video tape recorder becomes a true consumer product? Some observers believe it will take quite a few years for a home market to develop, but others foresee the beginnings of a market within a year's time.

The key, of course, is lower price.

John Trux, marketing manager of the Ampex consumer and educational products division, is among those who believe prices may get down to the upper limits of the consumer market by June 1968, in time for showing at the next Consumer Electronics Show. "At that time Ampex and most certainly foreign manufacturers will be announcing units in the \$450 to \$700 pricing area," he said. "This pricing will see the beginnings of consumer involvement in our products."

Until the home market opens up, relatively few consumer electronics dealers will find it advisable to get into the VTR field. It requires a high degree of specialized product knowledge and a different type of salesmanship. According to Ampex, education represents 30% of the present

market, industry 50%, medicine 5% and various other uses 15%. Few of the people buying VTRs for these purposes will walk into the store and ask to see a system. The dealer or a well-trained salesman will have to spend much of his time in the field. He will have to analyze a company or institution, determine its need for VTR, convince the purchaser of that need and tailor a system for the specific purpose. Individual sales can be substantial, amounting to several video recorders, cameras and associated equipment, but the start-up and selling costs can be high. Some dealers could be hurt by channeling too much time into VTR at the expense of their main consumer business.

There are success stories, some of which have been reported by this magazine. No one, however, should jump in at this time without full awareness of the problems.

Nevertheless, the long-term rewards can be great for the pioneer. As Trux puts it: "For the merchant who has risk capital and a desire to probe a new and difficult market, there is a once-in-a-lifetime opportunity to get the experience that will be preparation for the lower priced products to come."

One dealer, a tape recorder specialist, who is going after the video recorder market aggressively is E. G. Van Leeuwen, president of Magnetic Recorders Company, Hollywood, California. In cooperation with the Sony Corporation of America he recently staged a three-day Sony Videocorder show at the Holiday Inn in Los Angeles.

A large attendance was achieved through the use of a direct mail teaser campaign, Cap Kierulff, board chairman and chief executive afficer of Magnetic Recorders, explained. The company obtained the use of the Greater Los Angeles Chamber of Commerce's master list of executives in one hundred different industries, including advertising, aerospace, banking, chemicals, department stores, engineering, food markets, hospitals, insurance, oil, packaging, railroads, schools, trucking, and training and development.

Three separate mailings were sent to each executive, Kierulff said. The

first was a card saying only, "The Magnetic Man is coming !" Glued to it was a stirring stick "for your rest break to follow." A few days later, a second card urged, "Take ten on us." It was accompanied by a packet of coffee and a tea bag, with the suggestion that "while you're waiting for the water to boil, let us tell you why vou should have a Sony Videocorder." The last message said, "Oops, we almost forgot to make your coffee break complete." Enclosed was a packet of sugar, along with an invitation to the VTR show and an order card for literature or a sales call if the executive could not attend.

The mail campaign evidently attracted attention and the product line created interest, for the show was visited by management personnel from the U.S. Navy Hospital, a computer company, high schools, Marine Corps, medical profession, manufacturers, universities, airlines, entertainment business, city government and other fields.

Magnetic Recorders followed up by sending personalized letters to all who registered in the guest book. It expects to convert a number of these leads into sales of video tape recorders ranging in price from \$695 to \$12,000.

The educational market, which accounts for 30% of present sales, is expected to expand greatly by 1975. A report on Educational Technology, prepared by the research department of Predicasts, Inc., Cleveland, indicates that sales of video equipment will reach \$89 million in 1975, compared with \$19 million in 1965 and \$3.3 in 1955. These figures, of course, include all types of television equipment. The first VTR did not appear until 1956 and it was an extremely expensive unit for broadcast purposes. With VTRs in the \$1,000-\$2,000 range beginning to become available in 1965, the figure for that year undoubtedly included some VTR units. It is likely that recorders and associated equipment will account for a large part of the \$89 million projected for 1975.

Interestingly, estimated video equipment sales for education will surpass audio equipment sales in 1975. According to Predicasts, audio equipment sales to schools and col-

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September 1967







NEW IDEAS IN VTR

The pretty girls are using Sony's portable VTR and hand-held camera, both due in November. Shoulder-hung VTR unit weighs only twelve pounds, including battery and tape. At left are GBC's View Finder TV camera which provides a screen for instant monitoring and Panasonic's WV-600 Special Effects Generator. This permits special effects, such as superimpositions, fadein, fade-out, and split screens. Concord's VTR-600, below, can be used with the MR-700 11inch monitor and the MTC-15 standard television camera.





Typical window display at Walter D. Moses and Company includes a variety of merchandise, with KLH stereo compact system taking center stage.

"I don't mind the price"

(Continued from page 9)

as much as \$300,000 worth of blackand-white television in a year (before the advent of color) it pulled out of that market because "we didn't make a cent." It got back into television with color. "It appealed to us as a high-ticket line," Heindl explained, "but, of course, it doesn't give us as much margin as stereo."

He objects to frequent changes of model numbers in color TV. "The numbers were changed last January, although there were few improvements and in some cases none. Every three or four months we receive new sheets for the catalog. The changes are often minor. But the 'new' models are advertised, tending to obsolete the older stock in the public's mind."

The store's policy of avoiding price cuts applies even to the record department. Sydney Allsop, department manager, said that Moses is able to get full list price on records because "we inspect all records, provide listening facilities and offer delivery."

Another factor which helps Moses hold the price line is completeness of inventory in the areas in which it specializes. No 45-rpm discs are stocked. Exclusively long-play, the department stocks classical music in depth and provides a wide selection of imports. A representative selection of popular and folk records are earried, but no rock-and-roll.

Allsop, a knowledgeable man in his field, reviews music events for the *Richmond Times-Dispatch*. In the store, he is ready to offer advice and assistance to any customer who requests it.

Prerecorded tape also comes within Allsop's jurisdiction. He is concerned about confusion caused by the various cartridge and cassette systems, along with the increase of open-reel material recorded at 3³/₄ ips. He does feel that 3³/₄-ips tapes can sound very good when played on good equipment.

Despite the list price policy, Chris

Heindl isn't sure whether the record department is a money maker. "It costs a lot to operate. The important thing is that, along with the sheet music department, it brings a lot of traffic into the store."

The store was founded in 1879 and has been in the same location ever since. Eventually, other music stores began clustering around it, and the area today is Richmond's piano and organ district. Most of the other stores do not carry home entertainment lines, although there is competition from the city's leading department stores within easy walking distance.

T. Armistead Heindl, president of the company, concentrates primarily on the piano and organ part of the business. Chris Heindl, his brother, serves as vice president and handles the consumer electronics lines. Their father ran the store for fifty-five years until his death in 1940.

Wait 'til next year

(Continued from page 23)

leges were \$7.1 million in 1955; \$42 million in 1965, and will be \$85 million in 1975. The rapid growth of audio-visual equipment sales to the educational market is due to the increased availability of federal funds, the research organization said.

While most of the companies already producing video tape recorders are working on lower priced units for the home, other manufacturers are prepared to enter the field.

"Arvin will produce a consumer product in the field of video tape recording," Robert G. Nau, vice president and general manager of that firm's Electronic Systems Division, recently told a group of New York securities analysts. He refused to go into details, except to indicate that it will record in color, will be lower in price and simpler to operate than systems now on the market. He added that Arvin expects to preview it at a press conference this fall.

From Britain come reports that EMI is about to announce development of a mechanism for video playback through a conventional home TV set.

The consumer market breakthrough will come, whether in 1968 or after several years have passed.

"Business deserves consumer confidence"

This past year, American consumers made 3,296,293 calls to 126 Better Business Bureaus across the country.

For every one complaint there were nine inquiries—people who simply wanted to check on the reputation or reliability of a company, or find out about some business practice.

Compare that to 30 years ago, when the opposite was true: most people called the Bureaus to complain.

Besides, Bureau records show that not all consumer complaints are serious or justified. Frequently even serious complaints are the result of a company's unintentional mistake.

In the vast majority of cases, whether the mistake was intended or not, the Bureaus obtain *voluntary* corrections.

Despite these favorable signs, business today faces a crucial need to do a still better job of self-regulation of advertising and selling, and to do more to inform both government and the public concerning business progress in serving customers in the public interest.

Hence the Better Business Bureaus, drawing on their unique 54-year experience, have launched an expanded action program. It features these developments:

1. Expanded Service By Individual Bureaus. In city after city BBBs are broadening the geographic areas they serve, adding more telephone lines, installing automated filing and reporting systems—so they can give more consumers better and faster service.

Increasingly, individual Bureaus are called upon to testify before state legislatures.

In some cities, Bureaus are setting up Consumer Affairs Councils to provide local forums for discussion of consumer problems.

And each year new Bureau offices are opened.

All this costs money; but it demonstrates the spirit of a great business community which understands that it can survive only if it enjoys the confidence of its customers, and which will go beyond any possible law in protecting this relationship.

2. BBBs' Research and Education Foundation. Activated under the direction of a distinguished Board of Trustees, this foundation will conduct urgently-needed studies to shed the light of objective fact on issues of concern to consumers. Under its aegis the BBB will initiate new programs to protect both the consumer and the enterprise system.

3. Office of National Affairs. This office has been opened in Washington. It will use the goldmine of information gathered by Better Business Bureaus across the nation. providing federal officials – for the first time on a systematic, continuing basis – with reliable data based on more than three million consumer contacts per year.

It will also offer facts on how business

regulates its marketplace activities in the public interest, and report back to business on government activities and plans affecting business-government relations in the consumer area.

4. Stepped-Up Mass Communication. This program will express industry's concern for the consumer, explain industry's self-regulation efforts, apgrade consumer buying skills. and increase public understanding of the enterprise system.

How can you as a businessman cooperate with this expansion program?

Bear this in mind: the heart of the BBB complex remains the individual Better Business Bureau.

It works to improve the business clinate, to safeguard your community's buying power and maintain a market environment in which your business can operate profitably.

And it supplies data now being relayed to both federal and state governments to show why *business deserves consumer confidence*.

Write or call the manager of your nearest BBB. Tell him your reaction to the Bureaus' expanded action program.

See how you can help to make it succeed. Association of Better Business Bureaus International, Chrysler Building, New York, New York 10017.





Hip happening lures traffic inside store

IMPULSE SALES cannot be made until you get the customer into the store. Thearle Music Company, San Diego, California, accomplished this by transforming its up-front record department into a happening.

Five free-form designs, suspended from the ceiling, announced the "Record Happening" in carnival lettering, providing repetition of the message without monotony. The various record bins were labeled "folk happening," "popular happening," etc.

The gaily-colored signs drew traffic into the record department from the shopping mall. Once inside the store, prospective customers were only a few steps away from the stereo department.

Boynton's cellar club

(Continued from page 15)

to be a \$29.95 speaker system. Then the copy explains: "LSD stands for Loud-Speaker Dynamics, an Audio Lab front organization."

Two romantically-involved couples, a fancy turntable and amplifier provide the pictorial setting in another ad, with the message: "Your friends will think you are rich." The pitch is for used equipment, received as trade-ins. "Some of this is junk . . . but other equipment turns out to be of good design and only a few years old."

Many audio dealers have made profitable use of the McIntosh amplifier clinics as a good will and traffic builder. Add the Boynton touch: A photo of a student stripped to the waist doing the weight-lifter bit with a 67½-pound McIntosh 275 stereo power amplifier as his admiring girl friend looks on. The headline reads: "Test your power at Audio Lab's free clinic."

Upper classmen, remembering

these ads from last year, are looking forward to the wild, new ideas that Dan Boynton is cooking up for this semester. And freshmen will know that they at last are college men when they are first exposed to the esoteric (and erotic?) secrets of audio.

One final note: Prosaic, unromantic old Ma Bell assigned Audio Lab the phone number 491-0930. Harvard students reach the store by dialing HYsteria 1-0930.

New microphone

Electro-Voice has introduced the Model 627 Hand-and-Stand entertainer's microphone. As its name implies, it can be held in the hand or placed on a stand.

A cardioid dynamic type, it reportedly emphasizes low frequencies when held close to the mouth or the instrument. It has a built-in pop and dust filter. Response is rated at 80-11,000 Hz; output at -58 db. It is available with high or low impedance. The \$60 list price includes cable and a Model 310 stand clamp. If a matte satin nickel finish is preferred to satin chrome, it is available as Model 627N at the same price.

"Adaptable" radio drive

AC power adaptors for four Norelco portable radios will be supplied to dealers at no additional charge by North American Philips Company. The offer applies to models L638, L962, P463 and L573, according to William B. Keepin, manager of the Norelco Radio Department.

With each of these models included in any \$2,000 order of assorted radios placed before September 30, the dealer will receive a suitable Norelco AC adaptor, valued at \$14.95, he said.

The company's cooperative advertising policy for these four models has been modified to include the adaptor "at no extra charge" in advertised prices. "By passing the bonus on to the consumer, dealers can generate increased sales and profits," Keepin said.

Headphones

(Continued from page 12)

Superex's SW-1 Swinger is a hifi stereo phone, lightweight, colorresearched to appeal to young adult tastes. \$19.95 net.

Also color-conscious, Sharpe Instruments is now offering its HA-660-PRO and HA-10-Mark II models in distinctive hues, including 24karat gold plating for the HA-670-PRO (advanced version of 660-PRO). This fall a 500-ohm version of the 660 will be introduced.

Sansui's headphone entry, the SS-1, employs a diaphragm only 50 microns in thickness, with the edgewound voice coil directly attached. Lightweight. \$16.95.

To go with the Sony TA-1120 and TA-1080 amplifiers. there's the TAH-10 headphone adaptor with harmonizing faceplate, jacks for two phones, volume controls, and speakers/phones selector switch. \$19.95 net.

The Clark/1000 headphone from the David Clark Company combines

impressive specs with fancy packaging at an \$85 price tag. It has 14karat gold plated hardware, braided nylon cord with gold plated plug, walnut grain domes and matching walnut grain carrying case. For less affluent customers, there is the Clark/250 with volume controls at \$29.95. The frequency response of this model is reportedly 20–17,000 Hz.

New phono parts firm

Amertest Products Corporation has been established to market a wide range of replacement parts for record changers, phonographs and tape recorders.

Larry Post, formerly national sales manager of Robins Industries Corporation, is president of the new firm, which is located at 144-27 Jamaica Avenue, Jamaica, New York.

In addition to selling replacement parts, Amertest will offer dealers such sales aids as easy-to-use replacement charts, Post said. The line will be sold nationally through representatives.

Tape recording guide

Factors to be considered in selecting a tape recorder or a microphone are outlined in clear, simple-to-understand language in *The Tape Re*cording Omnibook, a sixteen-page brochure published by Elpa Marketing Industries.

The booklet also contains specifications for the Revox Mark III tape recorder, EDITall tape splicing equipment and Beyer microphones, all of which are distributed in the United States by Elpa.

Microphone catalog

Sonotone describes its line of microphones in an eight-page illustrated catalog, entitled *A Microphone for Every Purpose*, No. SAH-115.

The inside front cover is ar index page, listing and illustrating every microphone in the catalog. Sonotone parts and accessories are listed on the last page.



OFF THE RECORD

Putting Dolbyized discs to the listening test

T HE DOLBY SYSTEM of noise reduction in recordings is now with us in an intriguing handful of recordings. When I reviewed the London set of the Mahler Symphony No. 2 ("Resurrection") in July, no comment was made on its really remarkable sound. Now Ampex has given us its tape version for comparison, and the battle is joined!

The original London tape was, I understand, Dolbyized — treated to the precise electronic stretch-andsqueeze that is claimed to reduce noise more successfully than any other system has done up to now. Whether Dolby circuitry may have entered further down the line toward the finished, commercially available disc (CSA 2217, stereo; CMA 2217. mono), I don't know.

The Ampex/London tape (LCK 80187, $7\frac{1}{2}$ ips)—presumably possessing the Dolbyized benefits of the London original—has Ampex's own noise-reduction process, known as EX+, added as tape duplicates were made, also when tapes for commercial release were made from these duplicates. Therefore, with *two* noise-cutting processes going, theoretically the consumer should benefit doubly, one might think.

It didn't exactly work out that way. Careful A-B comparison of the disc and tape versions found the background actually quieter in the disc, although the tape was cleaner of bass, sweeter of high string sound. To what extent my own rig may have been introducing its own tilts into the result I wouldn't hazard a guess. In either case though the sound was remarkable, with the differences noted.

Turning to a new batch of Dolbyized releases from a just-introduced label, Elektra Records' Checkmate, other things began to emerge. Listening to Brahms's First Symphony with Charles Mackerras leading the Hamburg Philharmonic Orchestra, one began to feel aware of a curious improvement in what might be called interior clarity. Various other discs show as low an apparent residual noise level (as with the Checkmate, no scratch, hash, or whatever you hear when you put your ear close to the speaker). But somehow, with the new Checkmates the interior picture was subtly quieter. (Note that no tape version has yet been released to provide a comparison!)

This quality obtained throughout the new Checkmate releases, which are priced at \$3.50 retail and issued only in stereo. It was a bit startling to hear the second horn part so clearly in the Beethoven "Eroica" Symphony's third-movement horn trio (tell your customer the second horn here is the guy with the hard part!), even if brasses did tend to be a touch prominent throughout the series.

To this, one might add that the performances are most reliable from the stick-wavers' standpoint, well done but not stunningly rendered by the orchestras involved, and that the records are neatly packaged in a fold-over envelope. The Beethoven is my special recommendation here. Finally, I must credit Elektra with offering a newly-developed technique on a new label, with standard greats in the repertoire. So treated, they shine forth as sonic spectaculars in their own right!

The Checkmate releases:

BRAHMS: Symphony No. 1 C. Mackerras, Hamburg Philharmonic Orch. C 76001.

HAYDN: Symphonies No. 100, 103. L. Jones, The Orchestra of London. C 76002.

BEETHOVEN: Symphony No. 3. K.

Ristenpart, South German Philharmonic Orch. C 76003.

TCHAIKOVSKY: Symphony No. 4. Mackerras, Hamburg Philharmonic Orch. C 76004.

TCHAIKOVSKY: Souvenir de Florence. Borodin String Quartet, with G. Talalyan, viola; M. Rostropovich, cello. Melodiya/Angel SR 40036 (S), 40036 (M). Sound: sumptuous—gorgeously rich and well separated stereo. Music: quality Tchaikovsky, familiar yet fresh. Interpretation: the big, flowing approach matches the sound. Competition: some; this one really gets the nod, however—for which one should thank the vitality that Rostropovich (getting to be a household name among U.S. record buyers!) adds with his presence.

MOZART: Piano Concertos: No. 8 in C, K. 246; No. 9 in E Flat, K. 271; Rondo in A, K. 386. V. Ashkenazy, piano; I. Kertesz, London Symphony Orch. London CS 6501 (S), CM 9501 (M). Sound: exquisite—sets a high standard for stereo and for recording the piano. Music: wonderful (K. 271) to less interesting (K. 246) to attractive-jewelet in a recorded debut (K. 386). Interpretation: tenderness and love throughout. Competition: some for K. 246. This is now the best version available of the E Flat concerto.

ELIOT-RAWSTHORNE: Practical Cats. Robert Donat, A. Rawsthorne, Philharmonia Orch. SHAKE-SPEARE: Twenty Sonnets. Dame Edith Evans. Seraphim 60042, mono only. Sound: very good. Music and verse: poignant to delicious Rawsthorne settings for narrator and orchestra of seven of Eliot's poems from the cherishable "Practical Cats" collection, and a gathering of Shakespeare's greatest sonnets. Interpretation: definitive for Rawsthorne by the late Donat, moving for Shakespeare (made late in Dame Edith's long and continuing career, one would think from her voice). Competition: none, really; great that both these appearances are available again.

BEETHOVEN: Symphonies 1, 4, and 6, Leonore Overture No. 1. BRAHMS: Tragic Overture. MO-ZART: Magic Flute Overture. Toscanini, BBC Symphony. Seraphim IC 6015 (mono only), three discs. Sound: warm and winey 1937-39 stuff, excellently transferred. Music: from the great repertory-even Leonore No. 1! Interpretation: exciting performances, enjoyably more plastic and less rigid than one hears in Toscanini's later-recorded Beethoven readings. Competition: none for such a fine packaging of these historic collector-cherished performances.

HAYDN: Salve Regina in G Minor (1771). MOZART: Litaniae Lauretanae, K. 109; Church Sonatas, K. 278 and 329. Soloists, R. Reinhardt, Tölzer Children's Choir, Collegium Aureum Orch. RCA Victrola VICS 1270 (S), VIC 1270 (M). Sound: very good. Music: Happy early Mozart and mature if not super-great Haydn. A worthwhile pairing to investigate. Interpretation: thoughtful for the choral works, bright and bouncy for the instrumental Mozart sonatas. Competition: apparently none on stereo, negligible on mono.

"Odetta." Verve FTS 3014 (S), FT 3014 (M). Sound: highish level with sturdy bass; Odetta's voice might have a bit more prominently miked. Music: all kinds of beguilements, such as the cute "Little Red Caboose,". a far-out lullaby-type "Strawberry Fields Forever," "Oh Papa," and nine others. Interpretation: wondrous to the ear's beholding. Competition: the lady's in a class by herself.

MOZART: Fantasy in F Minor, K. 608. FRANCK: Final in B Flat, Op. 21. MENDELSSOHN: Sonata No. 1 in F Minor, Op. 65. Virgil Fox, organist (Symphony Hall organ, Boston). Command CC 11036 SD (S), 11036 (M). Sound: the thing here, with big dynamic range, deep organ bass. Music: important organ staples, all quality pieces. The interesting Franck is the special item on this record. Interpretation: forceful, perhaps a touch too showy at times. Competition: strong for the two M's; negligible for Franck.

RACHMANINOFF: Symphonic Dances; Vocalise, D. Johanos, Dallas Symphony Orch. Turnabout TV 34145S (S), 34145 (M). Sound: dark, clear, with a wide dynamic range. Music: late Rachmaninoff (the Dances) and early (Vocalise)-affecting music from this wonderful and strange musical personality. Much to ponder in the Symphonic Dances. Interpretation: very good indeed, even noting the . . . Competition: the Dances were dedicated to Eugene Ormandy, the orchestral arrangement of the Vocalise was made at the request of Serge Koussevitsky. Both have had their say in available recordings. Donald Johanos' way with this music still merits serious consideration.

HANDEL: "Silete Venti" (Cantata for Soprano and Orch.): overture to "Joseph." Halina Lukomska, soprano; R. Reinhardt, Collegium Aureum Orch. RCA Victrola VICS 1264 (S), VIC 1264 (M). Sound: high level and a trifle rough. Music: exciting. The overture to the oratorio "Joseph" is one of Handel's most concentrated and affecting efforts. And the soprano's dramatic entrance, silencing the stormy strings' hurly-burly is an unforgettable stroke. Interpretation: Miss Lukomska is exciting too, if vocally pure one moment, inclined to scoop the next. Her words don't come through well; lucky thing the jacket gave the text. Competition: none.

"West meets East." ENESCO: Sonata No. 3. Y. Menuchin, violin: H. Menuhin, piano. SHANKAR: Three Ragas. Ravi Shankar, tabla and sitar, Y. Menuhin, violin: Alla Rakla, tabla. Angel S 36418 (S). 36418 (M). Sound: very fine, even when tracing the complex intensities of violin and sitar (a long-necked plucked-string instrument of some antiquity) together. No problems for the Enesco! Music: the title is right.

(Continued on page 30)



Off the record

(Continued from page 29)

Perhaps Enesco seems to lean more Eastward than Shankar to the West, but that just could be a Western point of view. The ragas have a way of fascinating after a half-dozen hearings. **Interpretation**: Shankar is the greatest for his art. Hephzibah and Yehudi Menuhin are highly sympathetic to Enesco, who had a role in introducing the violinist to Oriental music. **Competition**: alternate version of Enesco on smaller label. For Shankar, not a factor.

"To Sir, With Love." Original motion picture soundtrack. Music by Ron Granier. With the Mindbenders, Lulu (vocalist), etc. Fontana SRF 67569 (S), MGF 27569 (M). Sound: exceedingly with it. Music: some good original thinking for a movie score by Ron Granier. Interpretation: provocative Granier, winning where singer Lulu is concerned. "Off and Running" by the Mindbenders is good, too. Competition: no.

SCHUBERT: Sonata, E flat, D. 568. SCHUMANN: Waldscenen, Op. 83. Peter Serkin, piano. RCA Victor LSC 2955 (S), LM 2955 (M). Sound: limpid. Music: the sonata's calm songfulness recommends it highly. "Waldscenen" is a bit uneven, with memorable sections. Interpretation: thoughtful, poetic. High spot is "Entrance," first piece in Schumann suite. Competition: Serkin's current choice for both works.

DVORAK: Symphonies 1-5 (new listing), and 9, four overtures. I. Kertesz, London Symphony Orch. London. No. 1: CS 6523 (S), CM 9523 (M). No. 2: CS 6524/CM9524. No. 3 & "Husitska" overture: CS 6525/CM9525. No. 4 & "In Nature's Realm:" CS6526/CM9526. No. 5 and "My Home:" CS6511/CM 9511. No. 9 ("New World") and "Othello:" CS 6358/CM9358. Sound: rich, ruddy; full-bodied stereo. Tops. Music: 30 years of Dvorak, ranging from provocative early works to the later masterpieces. Interpretation: sympathetic, imaginative. Kertesz is the first to record all the Dvorak symphonies (Nos. 6-8 have already been issued). Competition: Kertesz has

the field virtually to himself for the first six symphonies; competition is significant for No. 7, considerable for No. 8, and overwhelming for No. 9. The "Husitska" and "My Home" overtures can be found nowhere else on discs.



BRUCKNER: Symphony No. 6. E. Jochum, Bavarian Radio Symphony Orch. Ampex/Deutsche Grammophon DGA 9136, 71/2 ips. BRUCK-NER: Symphony No. 7; Motets "Os justi," "Vexilla regis," "Christus factus est;" Psalm 150. M. Stader, sop.; E. Jochum; Bavarian Radio Chorus; Chorus of the German Opera, Berlin; Berlin Philharmonic Orch. Ampex/Deutsche Grammophon DGK 9138 (double play), 71/2 ips. Sound: rich, warm; carefully miked for top stereo. Music: Great (No. 7) and near-great Bruckner symphonies, exquisite choral selections. Interpretation: Eugen Jochum continues his documentation of Bruckner symphonies and choral pieces in loving perusals to the idiom born. His forces are first-quality. **Competition:** not important on the tape medium (Jochum's among the top two or three for the symphonies where discs are considered).

SIBELIUS: Symphonies 5 and 7. L. Maazel, Vienna Philharmonic Orch. Ampex/London LCL 80185, 7½ ips. Sound: beautifully clear; possibly the best of several tapes for this work. Music: Sibelius' two grandest symphonies, the popular Fifth pairs up well with the uncompromising, one-movement Seventh. Interpretation: able in each case, particularly so for the Fifth. Competition: strong in the Fifth, not serious in the Seventh.

"The Best of (A) Tommy Dorsey (B) Artie Shaw." RCA Victor TP3 5021, mono only, 3¾ ips. Sound: excellent, if it shows its age in a little roughness. The two tracks are sonically identical. Music: Nostalgia! Each leader has a dozen shots at you: there's Dorsey with "Star Dust" (yes, that's Sinatra doing the vocal), "Marie", and "Song of India"; Shaw with "Frenesi", "Indian Love Call", and the tremendous "Begin the Beguine." Interpretations: those were great days. Competition: competition?

"Irish Night at the Pops," "Old Timers' Night at the Pops." Fiedler, Boston Pops Orchestra. RCA Victor TR3 5009, 3¾ ips. Sound: virtually indistinguishable from 7½ ips stuff, therefore darned good. Music: an enjoyable potpourri in each case, going from medleys to Bach and Bizet (suite from "Carmen"). Interpretation: vintage Fiedler—long may his remarkable career continue! Competition: no one matches the atmosphere of the Boston Pops.

SCHUBERT: Die schoene Muellerin; 7 lieder. Fritz Wunderlich, tenor; Hubert Giesen, piano. Ampex/ Deutsche Grammophon DG 9220 (double play), 7½ ips. **Sound:** very good. Stereo separation rightly mild. **Music:** magnificent song-cycle, plus some of Schubert's greatest single songs (To Music, Who is Sylvia, etc.). All texts included. **Interpretation:** clear-voiced, tasteful; not as probing and communicative as the music requires. **Competition:** none on tape; too much on disc (especially for the songs).

BRUCKNER: Symphony No. -4 (original version); five motets. E. Jochum, Bavarian Radio Choir, Berlin Philharmonic Orch. Ampex/ Deutsche Grammophon DG 9135 (double play), 71/2 ips. Sound: very spacious, deep and rich of bass, dark-hued. Near-ideal stereo setting. Music: Bruckner's most immediately engaging symphony dominates, but the motets (with a bow to Bruckner's Wagner here and there) shine with their own light and glory. Interpretation: remarkable. It's hard, very hard, to better this specialist's Bruckner, the work of his chorus, and the great Berlin orchestra. Competition: none for the motets, some for the symphony-although this is firmly the choice version.

Video tape splicers

Robins has introduced two video tape splicers, each of which lists for under \$20. Model TSV-50 handles ½inch tape as used on Sony and Concord systems. Model TSV-100 is for the 1-inch tape as used on Ampex systems.

The splicers use pressure sensitive patches to make a strong, permanent splice. Extra patches are available at \$1.65 for a package of sixty of the $\frac{1}{2}$ -inch size or a package of fortyeight of the 1-inch type.

Recorders with radios

Three tape recorders with built-in AM/FM radios from Crown Radio Corporation are being introduced by Industrial Suppliers Company. One is open-reel, and two are cassette types.

The open-reel model, Crowncorder CRC6150F, is packaged in an attache case. A remote-control switch on the outside of the case permits placement of the microphone (supplied



with unit) inside for recording with the lid closed.

With the FM radio tuned to a wireless microphone, recordings can be made at a great distance. The radio can also be used for direct listening or for recording off the air.

Operating at 3³/₄ or 1⁷/₈ ips, the recorder takes reels up to 5 inches. The suggested list is \$149.95. Model CRC-6250F, available in September, is identical except that it has a 10second message repeater. \$169.95.

Crowncorder CSC9350M combines a stereo cassette recorder with AM/ FM/FM stereo radio. A two-stage switch permits the user to monitor sound through the speakers or stereo headphones. The 11-pound portable is powered by four D-cells and has a built-in AC adaptor. Two dynamic microphones are included in the \$189.95 suggested list. September availability.

Model CRC9100F is a mono cassette unit with AM/FM radio, weighing just over 5 pounds. Off-the-air recording can be monitored from the speaker or through earphones. With one dynamic microphone, it lists at \$109.95.

New from Jerrold

Among Jerrold Electronics' new products are three indoor and two outdoor antennas and an antenna signal preamp.

Indoor units (JIN-2-4) are all 300-ohm, for all TV and FM channels. JIN-3 has a 12-position switch for optimum tuning; JIN-4 adds to that feature 2 db gain to improve indoor color reception. Also 300-ohm, the outdoor types are the 82-channel VUfinder and the VHF-TV/FM ColorPeak series. Both are highgain periodic types with flat response across the full frequency range. VUfinders range from \$17.95 to \$79.95; the ColorPeak models, designed for local to deepest fringe use, list from \$15.95 to \$79.95.

Jerrold's antenna-signal preamp, the Powermate CPM-197, is recommended for areas more than 15 miles from the signal source. has 75-ohm input and output.

Rep adds rep

The R. Mark Markman Company, Los Angeles area manufacturers' representative, has acquired the C. E. Chorpening Company.

Chuck Chorpening, former owner of the Chorpening rep firm, becomes vice president of Markman's distributor division.

Apartment-size console

New from Telex-Phonola is model 6117 solid state credenza console stereo in a Mediterranean cabinet of oak solids and veneers.

It incorporates an AM/FM/FM stereo tuner; record changer with 11-inch turntable, diamond needle and 45-rpm spindle, and two speaker systems, each consisting of an 8-inch woofer and two 4-inch tweeters with



crossover network. Controls include bass, treble, loudness, balance, mode selector with AFC and band selector. Tape inputs and external speaker outputs are provided.

The unit is 42 inches wide by 27 inches high by 17 inches deep. The suggested list price is \$279.95.

Tape aids available

Duotone has introduced a Tape Care Kit for cleaning and lubricating tape recorder heads.

Packaged in a plastic box are a head cleaning solution, head lubricant, nylon brush, two chemicallytreated flannel cloths and a supply of cotton swabs. It is priced at approximately \$2.95.

The company also offers E-Z Splice splicing tape, packaged in envelopes containing thirty-six splices and a splicing block at a retail price of 79 cents.

Nickel-cad batteries

General Electric has announced the availability of its nickel cadmium rechargeable batteries.

Two sizes are offered initially: GE-X17 (AA-size penlight) and GE-X18 (D-size flashlight). According to a G.E. entertainment semiconductor spokesman, the popular C-size battery will be added soon.

Philadelphia hi-fi show

The Cherry Hill Mall shopping center in Cherry Hill, New Jersey, will be the site of the Greater Philadelphia Home Entertainment and Stereo Show. The dates are November 14–18.

The heavy traffic in the enclosed mall had led to a prediction from Ted M. Gallo, general manager of the show, that over 200,000 people will attend. Admission is free.

(Continued from page 6)

reach the top of that market within a year.

Will either or both the audio and video tape recorder ever become a mass market item in the sense that television is? Most industry observers say "no," but we were struck by a comment made during the Consumer Electronics Show by Howard P. Ladd, president of Concord Electronics. Commenting on radio-tape recorder combinations, he described them as radios with built-in magnetic memory. "If these had been available from the beginning of radio," he asked, "can you imagine anyone being without one?" The fact that tape recording came relatively late in the evolution of consumer electronics, along with its seemingly complicated operation, has kept it from developing into a mass item.

Simplified operation, lower prices and greater consumer awareness of the home benefits of tape recording could conceivably lead to a mass market in the future. Consumer ignorance of the full potential of the tape recorder is matched only by the inability of many salesmen to demonstrate it properly. How many purchasers have never been told that they can record directly off the air without the use of microphones? If this shocks you, you are one of the minority of dealers who does an effective selling job.

<u>Innovation is not limited to tape re-</u> <u>cording.</u> It is occurring in every area of consumer electronics. Consider several manufacturers' efforts to facilitate the <u>servicing of color TV</u> through the use of modules or handy placement of the electronics. Another example is the increasing use in <u>console stereo</u> of features formerly found only in components.

Innovation through the use of <u>inte-</u> <u>grated circuits</u> is still in its infancy. Present applications provide only a hint of what can be expected. They are providing a challenge for the engineers, who undoubtedly will come up with some uses that today exist only in dreams.

Essentially, innovation is a sign of a <u>healthy</u>, <u>vital industry</u>. If at first glance we wonder where we are going to put these new products in our already overcrowded stores, we must remember that a <u>steady flow</u> of interesting new merchandise will keep customers coming into the store to buy more and more.

SCOPE



The Sony for Soccer Fans

People who like the unusual shouldn't share TV. They should own a Sony.

Then they could watch whatever they want. Whenever and wherever they want.

This new one's about the size of a sixpack and as easy to carry. (With a neat new tuck-away handle that lies flush with the top when it's not being carried.)

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A man never knows when there's going to be something on TV he won't want to see.

SONY 500U TV





Panasonic, today's leader in tomorrow's ideas, introduces a complete home entertainment line for 1968...now over 100 products! With Panasonic you get "tomorrow's look" plus advanced (and exclusive) features in radios, phonographs, tape recorders, color TV, B. W TV – you name it. Because of new ideas like these, Panasonic sales are rising by more than 50% a year. Full profit margin for the dealer, too. See for yourself. Call your Panasonic sales representative *now*.

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