

# The Audio Fair Review

**T**HE SECOND AUDIO FAIR has come and gone—with appreciably more success than its forerunner, the First Audio Fair. Again, for three days, the halls of the fifth and sixth floors of the Hotel New Yorker were more than filled with a milling throng interested in audio to the extent that they were willing to spend long hours on their aching feet to hear the newest in speakers, amplifiers, pickups, and recorders. And the new items were there *en masse*, along with the time-tested-and-tried devices that are always interesting to the enthusiast when demonstrated under what are the best conditions possible, in the opinion of the manufacturers, for their particular equipment. Actually, from the listeners viewpoint, it is doubtful if this is an ideal condition, because of the background of noise from the many exhibition rooms. However, there is no doubt about the over-all value of this type of exhibit, because—even though the conditions are not perfect—the visitors do get an impression of the quality of performance of the many items, and the interest awakened by it is sufficient to warrant further investigation under more intimate conditions.

For the professional engineer, the exhibits of tape recorders were of great interest, with many types being displayed for the first time. Microphones suitable for all purposes were seen, speakers of the highest quality for monitoring purposes, and all types of recording machines, tape, and discs. One complete display of a broadcast console attracted the broadcast engineers almost as much as the tape recorders—of which there were many more than one.

On the whole the Second Audio Fair was a much greater success than the first, with a fifty per cent increase in exhibitors and in registration—the preliminary figures for the attendance indicate that approximately 4700 visitors were present over the three-day exhibit, with many of them being on hand two or even three days.

The photographs of the various exhibit rooms will give to those unable to attend an idea of the highlights of the Fair—every exhibitor has something interesting to show, and each one of them spent a long and arduous three days of explaining and demonstrating, so that all felt a sense of relief each day when the

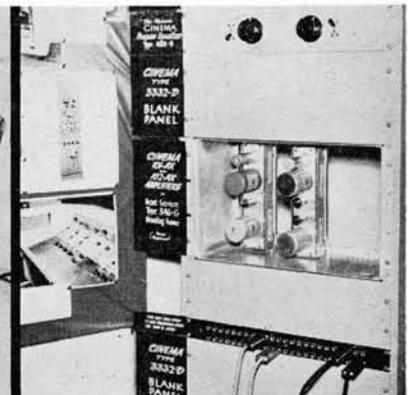
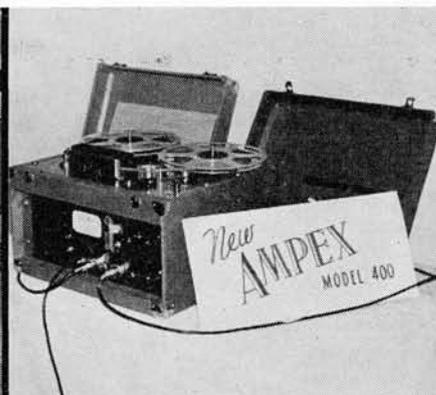
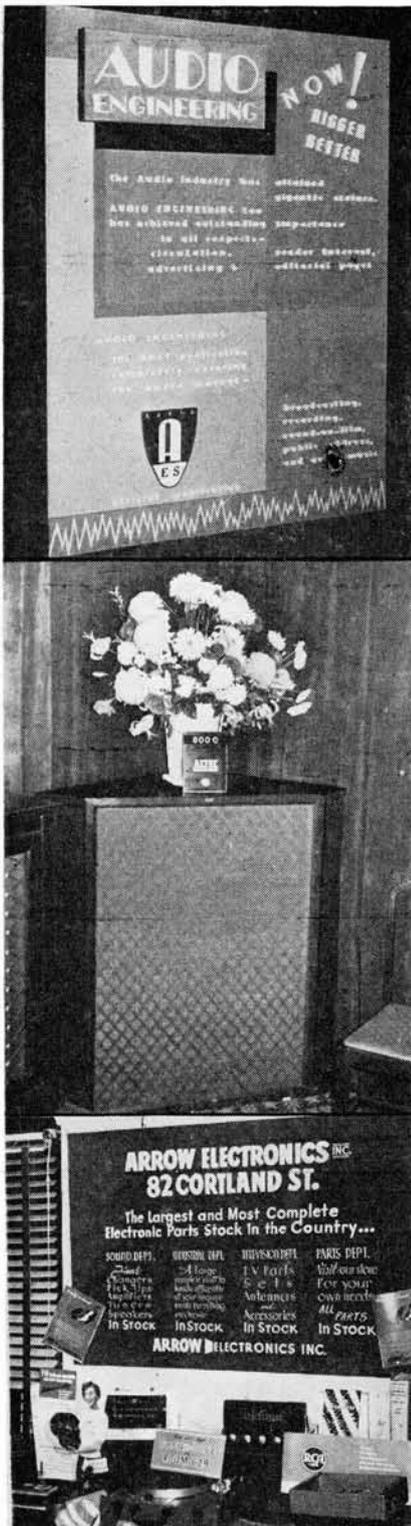
a.c. power was cut off signifying the end of the exhibit hours. Without this drastic means of signalling the closing hour, it is doubtful if the visitors would have left at all—especially on Friday evening, the only time many were able to attend. The following paragraphs will cover the exhibits in detail, with each exhibitor's display being described briefly.

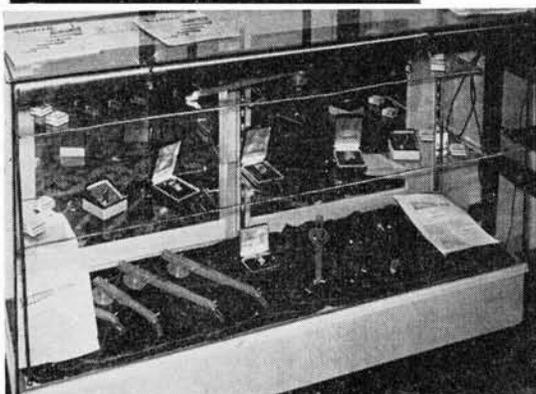
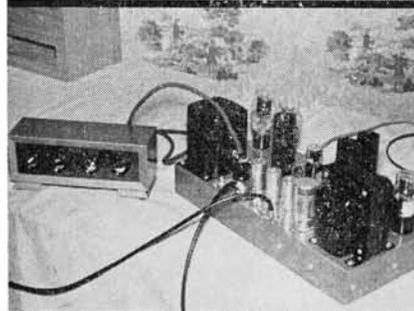
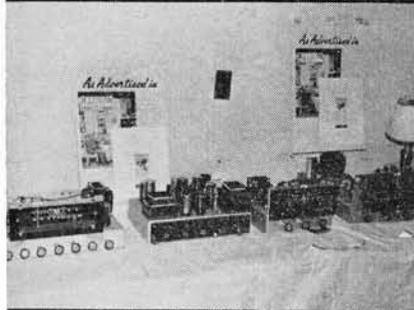
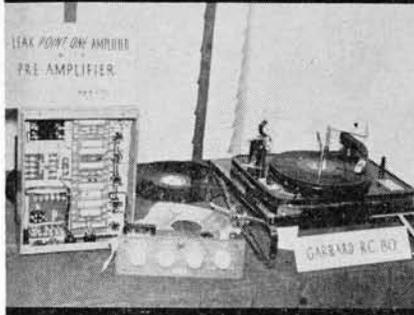
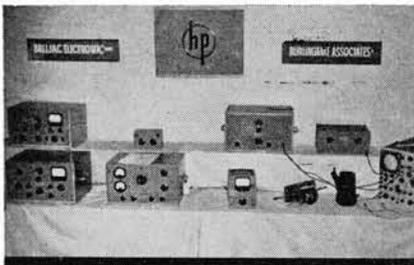
**Altec Lansing Corporation** exhibited a new corner cabinet housing two 15-inch driver units and a multicellular horn, along with the other more familiar members of its line—the 800, the 604B, the 603, the 600, and the 8-inch model 800. The new unit, with the advantage of two low-frequency drivers, showed excellent response characteristics, and an extremely large power handling ability. The interest in this entire exhibit was so great that it was usually difficult to get into the room, but nearly everybody did at one time or another, and the demonstration of the strength of the field magnet used in one of the larger speakers was convincing—even to anyone who did not understand what it all meant to the performance of the speaker. The always-present-but-little-seen condenser microphone was also on hand for display, while others were in continual service for sound reinforcement during the technical sessions and the banquet.

**Ampex Electric Corporation's** new Model 400 Tape Recorder—of which much has been heard during the past few months—proved that it lived up to its specifications as to quality. The demonstration consisted of playing a tape on the big Ampex, re-recording it on the 400, and reproducing the output of the playback head of the smaller machine on an A-B test with the signal being recorded. This was a truly convincing method of demonstrating the quality of a new product in comparison to that of the already well established performance of the leader of the line. After hearing this demonstration, the listener had no doubts of the ability of the small machine to perform completely in accordance with its specifications, which are sufficiently stringent for practically any professional application.

**Amplifier Corporation of America** presented a 24-hour, 3¾-in. per second recorder with quality considerably better than most 7½-inch machines of a year ago. The improvements in slow-speed tape

From the top, reading counterclockwise: Audio Engineering, Altec Lansing Corp., Arrow Electronics, Inc., Amplifier Corporation of America, Ampex Electric Corp., Cinema Engineering Co.





recorders has been truly remarkable in the last twelve months, and for applications requiring a high quality source of sound for long periods, a machine of the type exhibited here would certainly serve the purpose admirably. With such an installation, hotels and restaurants could be freed from the need for wired services, and would be able to schedule the kind of music or entertainment that was most suitable for the hour or location. In addition to the long-playing machine, a large number of other types of recorders were on display, of sufficiently wide variation of cabinet, styling, and facilities to fill the needs of most semi-professional users.

**Arrow Electronics, Inc.**, a New York City jobber, kept its display room full of visitors during most of the show hours, and well it might, because of the wide variety of components for high-quality music systems that were on display. The jobbers had somewhat of an advantage over some manufacturers because they have available all types of equipment, and are therefore able to make comparisons right on the spot. Tuners, turntables, amplifiers, even television parts, all were on display here.

**Audax Company**, preferring to demonstrate for quality of sound rather than quantity, conducted its displays of performance behind closed doors. To many visitors, this was a welcome change from the somewhat overpowering sound which filled the corridors of the fifth and sixth floors of the hotel. Using a choice of two recognized amplifiers and a high-quality two-way speaker system, the performance of the Audax Polyphase pickup was shown at normal living room levels, and with the finest of taste in selection of program material. Available now with special adapters to fit the Webster and Garrard changers, the Audax Polyphase—with two styli and therefore capable of reproducing all types of home records without changing arms or heads—is rapidly gaining favor, both for its quality and for its convenience in use.

**Audio Devices, Inc.** had only two items to exhibit—but each of these was available in so many varieties that their display was still quite elaborate. First, the famous Audiodiscs were there in full force, in many diameters and in all grades from the perfection required for masters to the smaller and lighter-base types used by the amateur. Second, the variety of magnetic tapes on display was so great as to surprise those who have previously known only of the standard ¼-in. plastic

or paper tape used on conventional tape recorders. Types shown included plastic-base tape from ¼ to 2 inches wide, several widths of paper-base tape, 16-mm film with single and double perforations, 17.5-mm film with single perforations, and 35-mm film with double perforations. All it takes to bring out a special tape is to show a need for it, and anything imaginable can be made.

**Audio Instrument Company** showed a new device intended to generate a signal, composed of both low and high frequencies, which could be used with any oscilloscope to give a qualitative measurement of intermodulation distortion, as well as with the Bridger—an instrument designed to permit the measurement of small audio voltages without appreciable loading of the source. This instrument has fulfilled the need for an a.f. coupling unit of extremely high impedance, a necessity in development and laboratory work, and a useful accessory in the service and experimenter's shop. The Intermodulation Set offers in compact form a source of signal for IM measurements which is entirely suitable for most developmental work.

**The Audio Master Company** displayed a number of portable record and transcription players which fill the need for a small unit suitable for the salesman who has a product which is best demonstrated by the use of records, or by a salesman for the records or transcriptions themselves. These units are also well adapted for p.a. system use, as well as for schools and other educational applications.

**Bell Sound Systems Inc.** displayed for the first time a new amplifier of exceptional merit, Model 2145. This all-triode unit with an output in excess of 15 watts combines a number of useful features, principal of which is the use of a remote control unit which is connected to the main chassis by a single cable. All inputs are plugged directly into the amplifier chassis, and by the use of cathode followers the signal can be fed to the control unit by a cable as long as 25 feet without frequency discrimination. The high-gain input employs a two-stage preamplifier on the main chassis, thus isolating the low-level signals from the cable. The selector switch on the remote control assembly makes a choice between phono and radio signals, compensates for record characteristics, and adjusts high-frequency roll-off. Bass and treble tone controls and a compensated volume con-

From the top, reading counterclockwise: Burlingame Associates, British Industries Corp., Browning Laboratories, Inc., Bell Sound Systems, Inc., The Audio Master Co., Audax Company, Inc., Audio Instrument Co., Audio Devices, Inc.

trol complete the remote unit complement, with the signal being fed back through the cable from the output of another cathode follower in the remote box. In all, this unit appears to have had much thought in its design, and was apparently planned with the needs of the user well in mind.

**British Industries Corporation** had a number of imported items on display, including the Garrard RC80 record changer, the Leak "Point One" amplifier, and the complete line of Wharfedale speakers. Both the changer and the amplifier are well known in this country by this time, but the Wharfedale line is relatively new. This group of speakers, ranging from an 8-inch model up to a 15-inch heavy-duty job, provide a full range of types for all applications where quality is a requisite. Most of the models are built with cloth surrounds, resulting in lowered resonant frequencies, and giving an extremely flexible cone mounting. The Point One amplifier, of a type similar to the "Williamson" now so famous in this country, derives its name from the distortion at rated output, 0.1 per cent.

**Browning Laboratories** had on display its entire line of tuners, just recently improved with the addition of automatic frequency control. Two models of the AM-FM receivers were shown, one with a power supply on the same chassis and with complete tone control facilities, and another consisting solely of a tuner for both bands and designed for systems where the control of tone and volume is incorporated in a separate amplifier unit. The smaller FM-only chassis is primarily intended for use where a suitable AM chassis is already available, or for those critical listeners who do not want anything but FM. This unit has its own power supply, but does not have the tone controls. All models have exceptional sensitivity on the FM band, and the quality is above normal on either type of receiver.

**Burlingame Associates and Brujae Electronic Corporation** exhibited a number of unusual items, among them being a Danish importation in the form of an elaborate oscilloscope. The entire standard line of Hewlett-Packard products was shown, with prominence being given to the newer types of combined gain sets and oscillators. Laboratory power supplies, high-gain a.f. voltmeters, and the versatile Tektronix oscilloscope filled out the line of equipment shown.

**Cinema Engineering Company** had a number of useful and practical items of

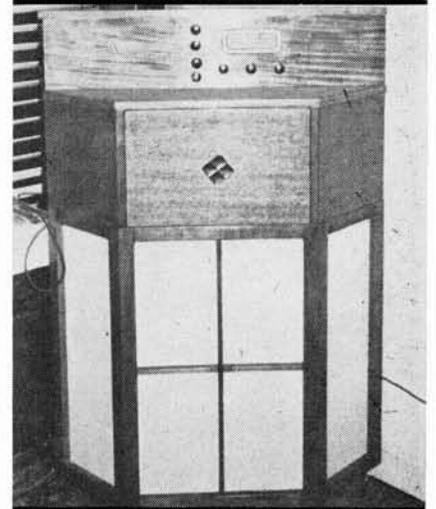
particular interest to the professional, although the advanced experimenter is also likely to find many uses for the convenient chassis available from this company. In addition to these shock-mounted, quick change chassis, a wide line of attenuators, filters and equalizers was shown, all designed with the needs of the particular application uppermost in the requirements for the product.

**The Daven Company**, long established as one of the "standard" manufacturers, exhibited its newer line of instruments, topped off by the distortion and noise measuring set described in these pages last month. The Daven line of laboratory instruments is expanding gradually, and each new addition lives up to the reputation of the builder and further enhances it. The 11-A Gain Set, announced last year, is now a familiar item, and many of them are in continuous service. It is expected that the new distortion measuring instrument will soon achieve wide use among those who require high precision in measurements.

**Electronic Workshop** exhibited a variety of equipment ranging from a cleverly designed miniature audio oscillator to complete custom equipment for the home. Their own design of amplifier was presented in a highly polished chrome plated model for the Fair or for those who enjoy having equipment which may be shown off as a prized possession. With a preamplifier having the same knob spacing as the Browning tuners usually employed by EW in their custom work, the resulting appearance of the installation is well above average.

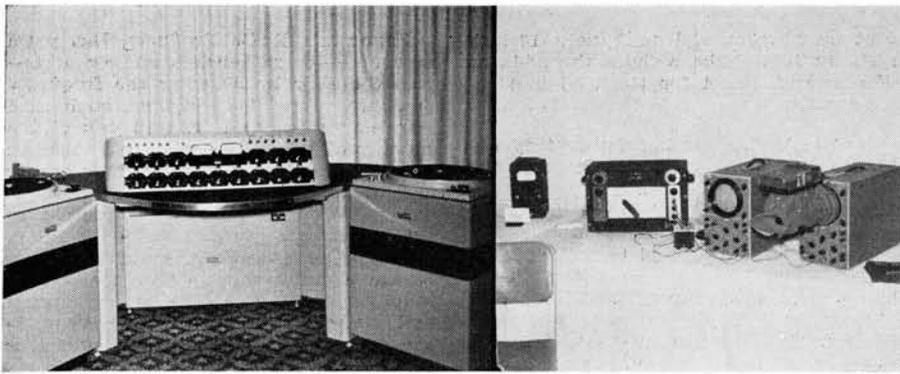
**Electronics of Staten Island**, a newcomer to the audio field this year, had two new corner speaker cabinets on display, one containing the speaker alone and another with a built-in tuner, amplifier, and record changer. The performance from these cabinets was above average, indicating the advantage of using the room corner as an element of the speaker housing by reducing the solid angle into which the speaker must radiate. Cabinetry and finish on both models displayed were of excellent appearance, and because of their relatively small size these units would make welcome additions to most living rooms.

**Electro-Voice, Inc.** displayed its entire line of microphones, pickup cartridges, and speakers, the latter including mechanisms only as well as a number of furniture cabinets. Outstanding among the line is the Patrician, a massive corner cabinet constructed under license from Klipsch, and incorporating a low-fre-



From the top, reading clockwise: Electronic Workshop, Electronics of Staten Island, Electro-Voice, Inc., The Daven Company, Fairchild Recording Equipment Corp., Fisher Radio Sales Co., Inc.





From the top, reading clockwise: Gates Radio Company, Gawlor-Knoop Co., Hudson Radio & Television Corp., General Electric Co., Harvey Radio Co., Inc., Harrison Radio Corp.

quency horn folded into the corner, two direct-radiating cones, and two multi-cellular horns, the smaller covering the range from around 3500 cps as far as the signal source required.

**Fairchild Recording Equipment Corporation** exhibited a complete line of high-quality disc recording apparatus, together with a rack of equipment designed for the better quality transcription studio where off-the-air recordings are made as a regular business. Outstanding interest was shown in an equalizer which featured continuously variable peak frequencies at both low and high ends of the spectrum, and with continuously variable amounts of equalization at the frequencies selected.

**Fisher Radio Corporation** showed their line of high-quality radio receivers and amplifiers along with the new Concertone tape recorder, which is the most compact model yet shown which will handle the standard 10-inch reels on NAB hubs. Incorporating a three-motor chassis of cast aluminum, with the amplifiers mounted directly on the unit, the entire recorder can readily be carried in a single case. This model is made with two speeds—7½ and 15 inches per second—and with either single or double track heads, either type of which is readily changed for the other in a matter of minutes.

**Gates Radio Company** had on display a complete console for broadcast station use, along with several types of amplifiers and remote input equipments. One model of remote amplifier, designed for use with either a.c. or batteries, is equipped with an automatic changeover feature which connects the battery supply immediately in case of failure of the power source. The station console, with two turntables, is so arranged as to provide for comfortable operation and has facilities for two separate programs, or for one program and one audition channel. Neatness of design and construction features the entire Gates line, and accessibility for maintenance is one of the strong features of the equipment.

**Gawlor-Knoop Company**, manufacturers' representatives, showed the lines of Allen B. DuMont Laboratories, Ballentine Laboratories, and Clough Brengle Co., with cathode ray oscilloscopes with attached Polaroid Land camera for permanently recording the traces under observation, a product of the DuMont organization. From Ballentine, the new models of electronic voltmeters—always so popular in the field—were shown, together with a number of accessories which extend their usefulness. The Clough Brengle Audiomatic sweep gen-

erator, which provides a frequency swept signal over the entire audio range or over any selected part of it, was also a hit with the visitors who are engaged in any sort of development work.

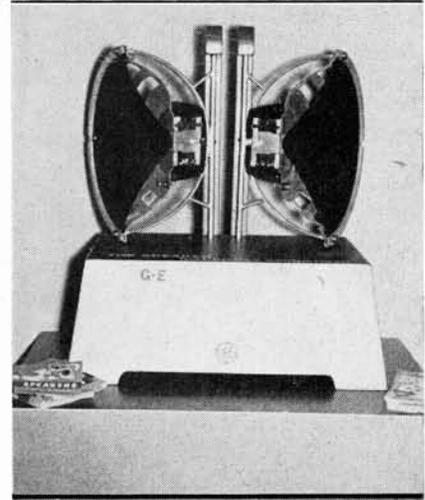
**General Electric Company** exhibited two of its major products in the audio line—pickups and loudspeakers. A mammoth phonograph cartridge employing the quick-change stylus assembly was an attractive feature, since it showed the method by which the styli were changed for standard or LP records, and in a form large enough for everyone to see the actual working of the device. The display of a S-1201 speaker actuated by a 60-cps a.c. source and illuminated by means of a Strobotac gave convincing demonstration of the operation of the speaker cone under high-level excitation. A moving cutaway of one of the same speakers served to show the features of the internal construction, with the magnet, polepieces, voice coil and support being plainly visible when the unit split apart.

**Harrison Radio Corporation** featured the Electronic Workshop A-18 amplifier, shown for the first time at the Fair. In addition, the current most popular lines of equipment—including turntables, phonograph pickups, speakers, and radio tuners, were all there in abundance. Harrison also had a novelty item as a giveaway which was the source of fun for the visitors all through the Fair days.

**Harvey Radio Company, Inc.**, featured the Magnecorder in its various forms, together with the Lansing corner speaker, Rek-O-Kut turntables, and the Audak Polyphase pick-up, and with this assembly of components which are now familiar to the music lover and audio hobbyist alike produced a quality of sound which was only to be expected from such distinguished equipment.

**Hudson Radio & Television Corporation**, another New York City jobber, exhibited a wide variety of components for sound systems, ranging from the Audio Pacific, Bell, Electronic Workshop, and H. H. Scott amplifiers through Radio Craftsmen AM/FM tuners, a selection of speakers, and the Masco tape recorder. The Audio-Pacific amplifier, exclusive at Hudson, was shown to have exceptionally flat frequency response and low distortion throughout the entire range.

**Langevin Manufacturing Corporation**, showed a full line of quality transformers along with a number of professional type plug-in amplifiers and two power amplifiers designed for home or professional use. One of these latter units, encased in a convenient wall mounting cabinet, and of excellent quality, is



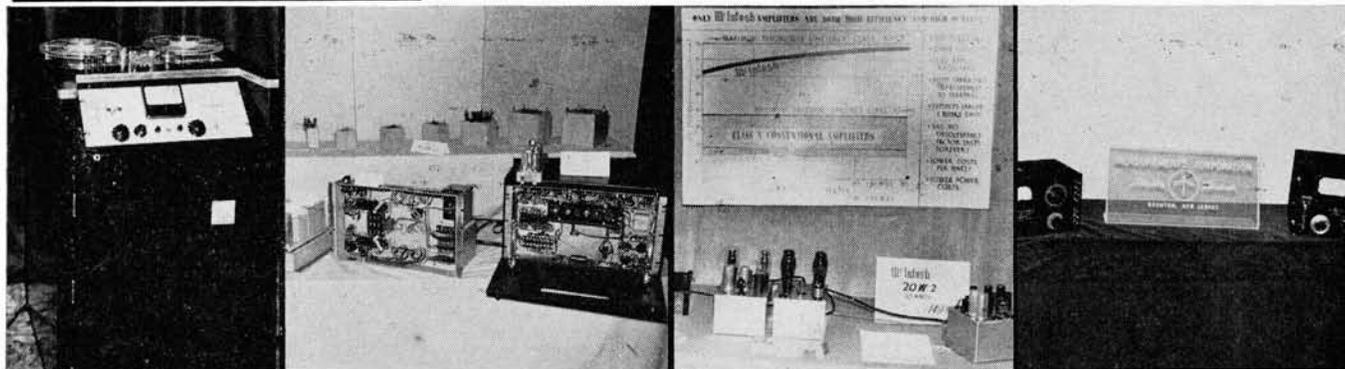


first standard model to handle 10-inch reels on NAB hubs without the addition of a special panel for the feed and rewind reels.

McIntosh Engineering Laboratory exhibited its two amplifier models, the 50-W-2 and the 20-W-2, along with the new preamplifier AE-2 which incorporated the input stages and controls necessary for a complete reproducing system. The McIntosh amplifier circuit has been proven more efficient than most others, and it is of unquestionable quality. The smaller model, using two 6V6's in the output stage, has an output of 20 watts, which is remarkable for 6V6's. The unit is compact, being housed in a single chassis unit of unconventional design. The 50-W-2 model, using 6L6's, consists of two similar chassis, the power supply being separate from the amplifier. These models are extremely flexible,

Panoramic Radio Products, Inc. put a new note—or rather lots of new notes—into the Fair by showing the frequency structure of various signals, such as a number of musical instruments and a number of human voices. The Panoramic sound analyzer continually sweeps over the audio spectrum and indicates the amplitude of all frequencies present on the screen of a c-r tube, thus permitting the user to observe the characteristics of the signal present or in the case of amplifier testing, to observe the amount and character of distortion present in the output signal. A number of similar instruments for a wide variety of different purposes were also on display, but the analyzer attracted the most attention.

Peerless Electrical Products Division of Altec Lansing Corporation had a large number of interesting items on display. The now-famous Musicians amplifier, described in *AE* in November 1949, leads



Upper left, Leonard Radio, Inc. Center, left to right, Magnecord, Inc., Langevin Mfg. Corp., McIntosh Engineering Laboratory, Measurements Corp.

especially suitable for use in wired music systems or for p.a. use in such places as restaurants, dance halls, skating rinks, and other such locations where the highest quality and reliability are requisite.

James B. Lansing Sound, Inc. had on display one of their largest speaker systems for home use, although from its quality and output power it would definitely be suitable for monitoring in professional applications. This model, the D-1005, incorporates two woofers and an eight-cell horn with a crossover in the vicinity of 1000 cps. It was finished in a light blond hardwood, and presented a very attractive appearance. The entire line of speaker mechanisms was also shown, ranging from the 8-inch model up to the heavy-duty 15-inch woofers.

Leonard Radio, Inc., with a complete line of radio tuners, amplifiers, speakers, turntables, and even a TV console suitable as an entertainment center for the home, featured the Markham-Williamson amplifier, a new 15-watt unit with a remote control unit permitting adjustment of tones and volume to the user's satisfaction without the need for him to leave his favorite easy chair. This amplifier is built along the lines of the entire Williamson circuit—from low-level input to output stages—and is sure to be another contender for amplifier honors.

Magnecord, Inc. had several models of its recorders available and all on demonstration, ranging from the portable PT63J through its various forms up to the new console PT7-AX in a cabinet which contains all the amplifiers necessary with the machine. This model has attracted considerable attention, largely because of its mechanical features and the convenience of operation. It is the

and are readily adaptable to a wide variety of requirements.

Measurements Corporation displayed its line of precise laboratory instruments, with the intermodulation meters—two of them and both new—taking the spotlight. These instruments, which were described in last month's issue, incorporate several new and useful features, and serve to round out the line of measuring instruments designed for the laboratory or for the advanced experimenter—if his needs warrant the most accurate instrumentation.

Midway Radio and Television Corporation, another New York jobber recently to enter the field, displayed the Radio Craftsmen tuner, and offered to visitors a stroboscope disc useful in checking accuracy and constancy of turntable speed. Midway also featured the Rauland 1825 amplifier with its unique preamplifier which can be mounted in a number of methods so that the user can select the mounting which best fits his requirements. When a relatively small space is available for the controls of the amplifier, the Rauland is especially attractive.

Milo Radio & Electronics Corporation offered as its most interesting exhibit a display of the new ModulaR amplifiers and components which incorporate a new style of construction which permits the joining of several units or component assemblies together to make a single, solid chassis. Thus a power supply can be placed on a chassis along side the power amplifier, and other parts or sections of amplifier can be added as required or as the need for them develops. The Garrard changer was also featured by Milo, along with the new Audax head mounting for this changer.

the line for popularity, and it is now followed by the Musicians Amplifier, Senior, which is a theatre-type 50-watt unit employing 845's. This unit is intended to be driven by the original Musicians unit. Also shown was a new amplifier using the space-charge-grid tubes which have finally reached the market. This model will be described shortly in these pages, and will undoubtedly follow the Musicians amplifier into the Hall of Fame for good audio equipment.

The Permoflux Corporation proved how good their Royal Eight speaker could be, with performance essentially comparable to that from earlier 12-inch speakers. In a small cabinet with a single speaker, the performance was better than would be expected from standard console radio receivers, and when four units were mounted in a single housing, the output at the lower frequencies was remarkable considering the size of the basic cone speaker. Also on display were the high-fidelity headphones, which consist essentially of a pair of minute cone speakers mounted in receiver cases and equipped with sound-proof pads to ensure good coupling between the units and the eardrums.

Pickering & Company, Inc. presented a modern display showing drawings of their units in normal position, and augmented with the actual components alongside. A number of the model 180L column loudspeakers adorned the room, and the choice of music showed off the performance of the speakers to advantage. Most striking of the demonstrations was the performance of the model 190 arm playing on a turntable an angle of 45 deg. from the horizontal, showing the remarkable balance of the arm, with its

cartridge, during the playing of records on normal turntables.

**Presto Recording Corporation** displayed a full line of recording equipment for both tape and disc. A new professional model of tape recorder, designed to mount either on a rack or on a conventional recorder console, was shown for the first time, and its many features pointed out in detail. The smaller Model PT900 was also on display, as were a number of different models of disc recording machines of varying capabilities. The large tape machine is designed to operate either directly or remotely, and it provides for the 10-inch reels on NAB hubs. Both of the basic Presto chassis are three-head models, and permit simultaneous monitoring of the recorded signal during recording.

**Radio Corporation of America** exhibited two physical arrangements of its tape recorder, one being rack mounted so that

performance better than would normally be expected from a study of the cabinet dimensions.

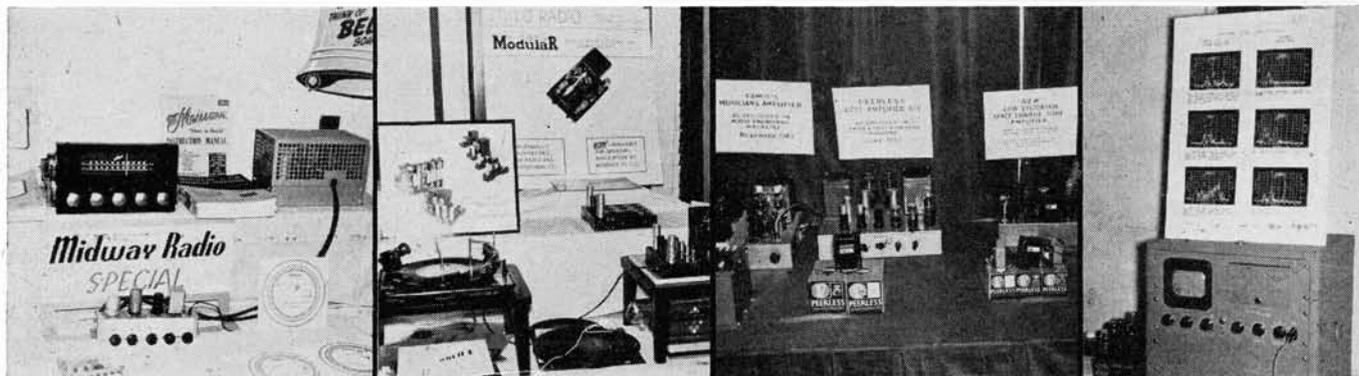
**Rangertone, Inc.** exhibited their lip-sync system which permits the use of 1/4-in. magnetic tape with sprocket hole driven motion picture film at a considerable saving in cost over the use of optical film for the sound recording. By recording a 60-cps signal from the camera motor supply at the same time as the sound is recorded, it is possible on playback to compare the 60-cps recorded signal with the frequency of the power supply driving the projector and to vary the speed of the tape recorder so as to keep the sound track in exact synchronism with the picture. This is an important improvement in tape recorders, and is resulting in their widespread use in motion picture production.

**Reeves Soundcraft Corporation** presented a modern display of magnetic tape

LP's and other plastic records. The basic 210-B amplifier is a complete unit, with provision for phonograph equalization and has, in addition, tone controls giving a wide range of variation of both bass and treble response.

**Scully Machine Company** displayed one of their famous recording machines, complete on its own console table, and with microscope, elapsed-time meter, and control switches. This machine, well known for its reliability and ease of operation, still remains one of the finest instruments of its type. It will cut either inside-out or outside-in, with both standard and microgrooves, and has an automatic spiralling feature which contributes to its adaptability in recording studios of the highest quality.

**Mark Simpson Mfg. Co. Inc.** featured their new Masco Sound-Reel magnetic recorder, with a number of interesting features for a small and inexpensive ma-



Reading clockwise; Midway Radio & Television Corp., Milo Radio & Electronics Corp., Peerless Electrical Products Div. of Altec Lansing Corp., Panoramic Radio Products, Inc., The Permoflux Corp., James B. Lansing Sound, Inc.

the functioning of the mechanism could be studied readily without the necessity of crawling into a console. Mounted in a console cabinet, the same chassis becomes a more-familiar design of recorder, and can be controlled remotely if desired by a similar set of operating controls. Also shown in the room occupied by the Engineering Products Department was the new Starmaker microphone, a miniature ribbon microphone designed for use on audience participation shows or on television where the performer should not be hidden by the microphone. Two cabinet mountings for the LC1A speaker were also shown and, with a signal of undoubted quality from the tape recorders, showed excellent characteristics.

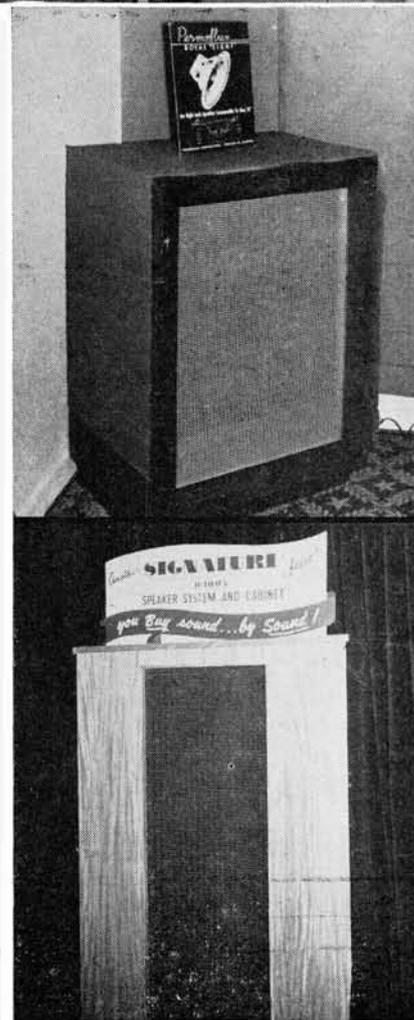
In another of RCA's rooms the new model of the duo-cone speaker—the 515S2—was on display, both visual and aural. This unit is lower priced than the LC1A, but gives the listener who wants good quality a high degree of performance with a two-way unit combined in a single housing.

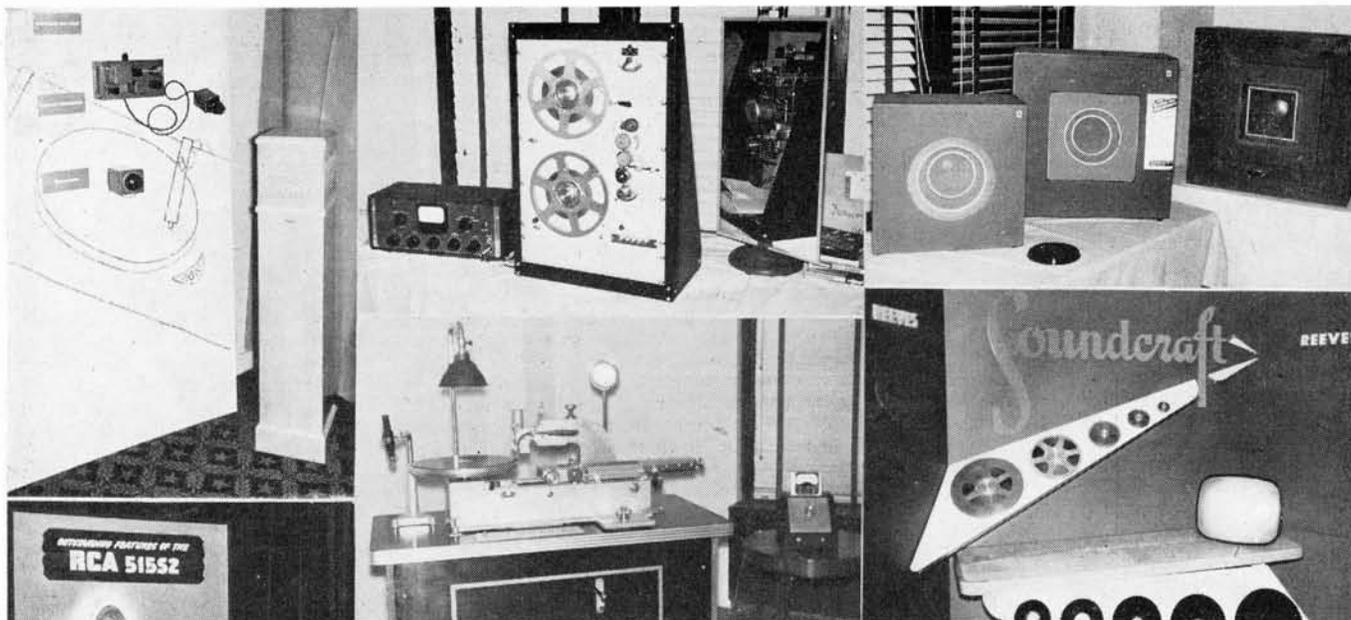
**Radio Music Corporation** displayed a number of professional-type transcription pickups, using a single arm and three interchangeable heads. One head is designed solely for lateral transcriptions, another solely for vertical, and a third serves to play both about equally well. Also on display were a number of amplifiers for wired music systems, restaurants, and other such applications where continuous reliable operation is required. A new line of speakers and speaker housings were shown, with per-

formance in several dimensions and spoolings along with a variety of recording discs ranging from 6 inches up to 17 1/2 inches in diameter. Newest products of this company include a line of TV picture tubes, principally of the dark face rectangular types which are being used almost exclusively in current production sets. With this diversification, the Reeves line is now usable in practically all branches of the electronic entertainment field.

**Rek-O-Kut Company, Inc.** displayed a variety of turntables and disc recording mechanisms, together with amplifiers for use in recording and playback. Outstanding among the turntables is the heavy-duty type with hysteresis motor drive, having the smoothest of drives and a minimum of external hum fields. The use of a 6-inch speaker in an especially designed cabinet was noted as an eye-opener as to the quality of tone obtainable. For applications where an inexpensive monitor speaker is desired—as in schools or other places where the budget does not permit the use of more elaborate systems—this model would be ideally suited. The Rek-O-Kut line also includes a variable speed turntable, adjustable over a wide range, and several transcription players designed for portable use.

**Hermon Hosmer Scott, Inc.** exhibited the model 210-B Dynaural Amplifier, along with several smaller items of equipment intended for use with phonograph reproduction systems to reduce the needle scratch usually heard from shellac records. The new units also operate to reduce pops and crackles from





Left, from top to bottom: Pickering & Co., Inc., RCA, (Harrison, N. J.), Rangertone, Inc., RCA (Camden). Above: upper left, Presto Recording Corp.; upper right, Radio-Music Corp.; lower left, Scully Machine Co.; lower right, Reeves Soundcraft Corp.

chine. Extremely compact, the Sound Reel will record at  $3\frac{3}{4}$  or  $7\frac{1}{2}$  inches per second, and is reversible so as to record on two tracks. Also shown was the small tweeter designed to mount in front of a 12- or 15-inch cone and to be connected across the voice coil of the large cone without any crossover network.

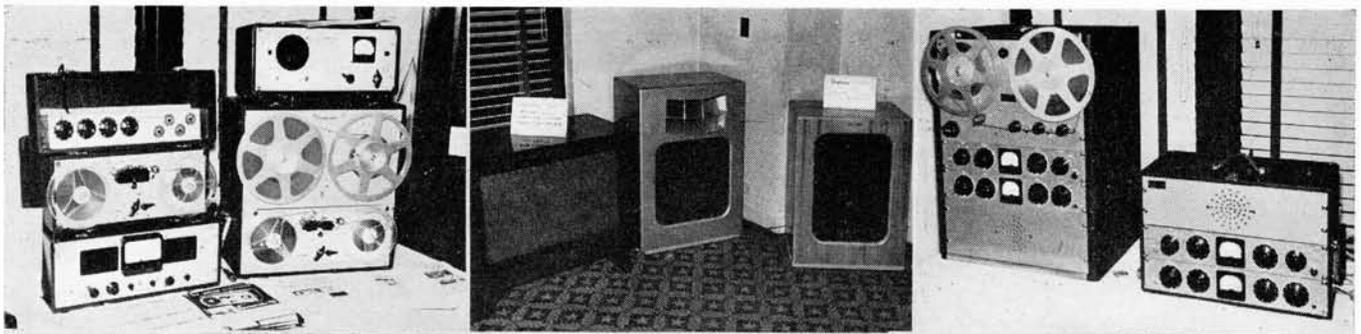
Somerset Laboratories, Inc. displayed their new noise suppressing amplifier with a remote control unit designed to permit the user to adjust volume, tone, and suppression from his easy chair. Also shown were several models of the noise suppressor unit separate from the main amplifier and for use with existing equipment. In one form of the complete equipment a separate control panel is supplied which can be mounted in a cabinet at

some suitable spot, permitting the placement of the amplifier at some more convenient location than is usually available at the desired control panel.

Sonar Radio Corporation demonstrated a new tape recorder equipped to handle 10-inch reels and of quality superior to the usual home-type machine. This model is equipped with three heads, permitting simultaneous monitoring of the recorded tape during the actual recording process. Complete in four panels for rack mounting, the unit is approximately 24 inches high, providing for the recorder chassis, record and playback amplifiers, and the loudspeaker and power supply panels. In another model, the recorder chassis is separate, and the amplifiers and speaker are rack mounted units which may be

Below: upper left, Rek-O-Kut Co., Inc.; upper right, Hermon Hosmer Scott, Inc.; lower left, Mark Simpson Mfg. Co., Inc.; lower right, Somerset Laboratories, Inc.





Top row, left to right: Sonocraft Corp.; Stephens Mfg. Co. Inc.; Sonar Radio Corp.; at right, Tech Laboratories, Inc. At left, upper, Sun Radio & Electronics Co. Inc.; lower, University Loudspeakers, Inc. Below, upper row, left to right: Terminal Radio Corp.; The Tetrad Corp.; Transit Sound Systems, Inc.; lower row, Triad Transformer Mfg. Co.; United Transformer Co.; U. S. Recording Co.



located remote from the recorder unit. Sonocraft Corporation featured the entire line of Magnecorder equipment, for which they are one of the jobbers in the New York area. On display were both the PT6 and PT63 recorder units, the auxiliary chassis for large reels with the NAB hubs, and several models of amplifier-speaker-power supply units, along with the multichannel mixer for up to four microphones.

Stephens Manufacturing Corporation exhibited its complete line of speakers and cabinet models, with the two-way systems taking the lead in favor among the visitors. The Hy-Son super tweeter, first shown at the 1949 Fair, is now in complete production, and the addition of this unit to a regular two-way system improves the performance in the upper-highs to a remarkable degree. Stephens models include crossovers at both 600 and 800 cps, and multicellular horns are available in a wide variety of sizes and shapes to fit every requirement.

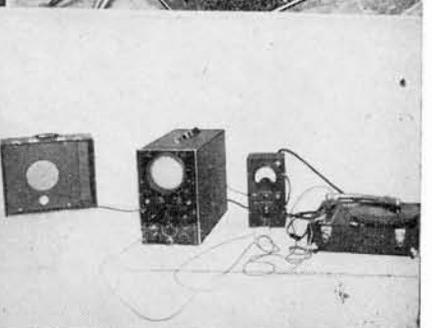
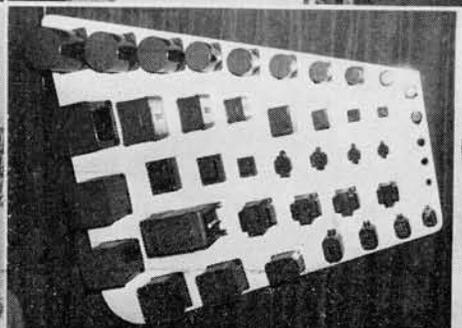
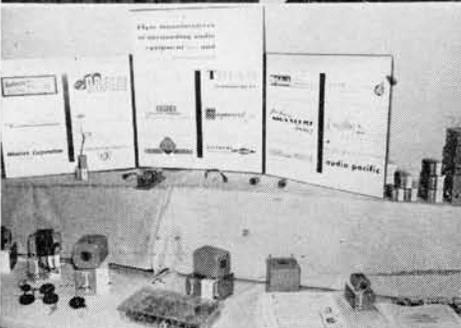
Sun Radio & Electronics Co. Inc., one of the most aggressive jobbers in the New



York area, exhibited a new unit known as the Realist—a corner cabinet incorporating a high-frequency speaker directed upwards at an angle from the rear of the unit. In usual hard-walled living rooms, this model gives a remarkable distribution of sound, and by the very realism of the sound source makes the unit live up to its name. Another feature of this display was the presence of a shadowgraph unit on which visitors could compare their own styli with the standard shape for a given type in order to determine if wear had progressed to a degree which would make replacement advisable.

Tech Laboratories, Inc. displayed the artificial reverberation generator developed by Audio Facilities Corporation and marketed solely by Tech. This unit is capable of introducing a controllable amount of reverberation to any signal, and eliminates the need for costly echo-chamber equipment setups for radio sta-

[Continued on page 53]



## THE AUDIO FAIR REVIEW

[from page 32]

tions and recording studios. The machine employs a continuous loop of magnetic tape with suitable amplifiers and control circuits so as to add any desired amount of reverberation with a controllable decay time. Also shown was a complete line of attenuators, both of the conventional type and the newer lever type, believed by many engineers to be more convenient in use.

**Terminal Radio Corporation** exhibited only a small number of the many lines they represent in New York, but featured in their display was the Ampex line of magnetic recorders. Both the 300 in portable cases and the newer model 400 were shown, with performance of the high quality to be expected from the Ampex machines.

The **Tetrad Corporation** brought a valuable collection of diamonds to the Fair and displayed them in a glass case under the protection of a uniformed patrolman from the city police force. These diamonds were industrials which will be processed into styli for use in pickups, and the total value of the collection was claimed to be \$102,000. Also on display were a number of charts showing the faulty tracking resulting from worn styli, together with a number of photos showing the stylus wear resulting from the use on a relatively small number of plays, using both diamonds and sapphires.

**Transit Sound Systems Co. Inc.** exhibited a new machine which uses a 1 $\frac{3}{4}$ -in. tape which plays back and forth on twelve parallel tracks, permitting the playing of a continuous program from 10 to 20 hours long. The machine uses multiple heads, making it possible to play any of six different tracks as selected, on a single channel, or to have six different programs playing on a number of channels, thus giving the listeners a choice of programs. Operation is as simple as a home radio, with a single switch to turn the machine on or off; after running the tape through in one direction, it re-

verses automatically, and continues. Production of this machine is to be started immediately, with completed models expected in from 90 to 120 days.

**Triad Transformer Mfg. Co.** exhibited a full line of transformers for high-quality audio use as well as for a number of geophysical applications. The popularity of the line of audio and power transformer is attested by the list of users, which includes such names as Gates, Concertone, McIntosh, Magnecord, Presto, Newcomb, Lear, Audio Pacific, Westrex, and others of equal importance in the field. The Triad line, although relatively new to audio, is well established on the Pacific coast, largely because of the ability and reputation of the designer and chief engineer, Lou Howard, who has been responsible for the design and production of quality transformers for many years.

**U. S. Recording Company** introduced a new portable transcription and record player employing an all-play stylus and reproducing through a small speaker mounted in the cover of the case. The quality of reproduction would serve admirably in applications where a portable equipment would be used, and was considerably above the average for similar equipment. An item of great interest to most visitors was the spring-driven magnetic recorder designed for portable use, and shown as a sample of the work being done in Germany at the present time. It is said that negotiations are being carried on for the manufacture of this device in the United States, and it is thought that such a device would be well received.

**United Transformer Company** exhibited a complete line of audio and power components ranging from the smallest models used in hearing aids up to the largest used in amplifier service. Also shown were a number of completed amplifiers, following the circuits published in UTC literature. From the performance obtained, it is obvious that the equipment will satisfy the needs of most users, and the wide variety of transformers in the line ensures full coverage of all requirements.

**University Loudspeakers, Inc.** displayed a number of speakers for p.a. systems of various power requirements, as well as the line of cone speakers, coaxial units, tweeters and horns. One feature of the exhibit was the display of a cabinet containing a three-way speaker system with separate controls on the three ranges. The "highs" channel covered the range from 3000 to 15,000 cps, the "middles" channel covered the range from 300 to 3000 cps, while the "lows" channel covered from 45 to 300 cps. Separate control of these channels made it possible for the listener to determine for himself the effect of varying the response of the sections, and pointed out the need for good balance throughout the entire audio spectrum.

With the closing of the exhibits on Saturday afternoon, both exhibitors and visitors alike began to plan for the third Audio Fair, which will be held in the same place on Nov. 1, 2, and 3, 1951. Many exhibitors have already expressed their desires for the same or for more space, and will of course have first choice of the rooms they occupied this year. Several other organizations not yet represented at the Fairs have already indicated their intention of being in next year, so it is certain to be bigger and better as time goes on.