

RADIO — ELECTRONICS

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**RADIO
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**CUSTOM SOUND
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LATEST IN RADIO — ELECTRONICS — TELEVISION

Custom Sound Installation

Profitable opportunities are waiting

By *for capable sound technicians in the*

WILLIAM RIVKIN*

field of individually engineered home

phonograph (and also radio) equipment

MORE and more owners and purchasers of radio and phonograph equipment are looking with favor on the idea of "built-in" radios and music systems. There are advantages both of style and economy. Custom sound installation is accounting for a continually increasing portion of our business, and a correspondingly larger share of the profits. The field offers an excellent opportunity for the average radio technician, particularly if he has ability and experience with sound. While he should generally confine himself to the electronic and acoustic angles of the installation, leaving the woodworking to a skilled carpenter or cabinetmaker, he should have a knowledge of what can be done, and what provisions must be made in the construction for housing the electronic equipment. Then he

can act as a consultant to the customer, or to the carpenter or cabinetmaker who does the work. In many cases, alterations in bookcases or other existing construction can be made by anyone handy with woodworking tools—and the radioman may find himself capable of doing the complete job.

The illustration on this month's cover is a good example of one type of custom installation. The wall unit was built specifically to house a complete high-fidelity system and blend perfectly with the room decoration. Although the room was designed with the help of an architect, the construction was done by carpenters with materials commonly available at any lumber yard. The radio unit, matching bookcases along the other two walls, and the room and cabinet doors all are finished in combed plywood paneling. For the door panels the plywood was cut in pie-slice sections to form the corrugations into concentric squares.

The system installed in the radio unit consists of a Webster-Chicago three-speed changer, an RJ-20 Browning FM-AM tuner, a Lafayette high-fidelity amplifier, and a 15-inch Stephens speaker. The record changer, mounted on slide-drawer brackets, is housed in the upper left of the cabinet spaces. The door is hinged on the left side to allow easy access to the changer. On the right, also behind a side-hinged door, is the tuner unit. Both these units are placed at convenient operating height. The amplifier is mounted below the tuner unit so that its controls and the remote speaker jack can be brought up to the tuner control panel. All units are connected by plug-in cables and are easily extractable for servicing. This is an important feature. Proper provision for future servicing included in the planning and installation stage can save many headaches later on.

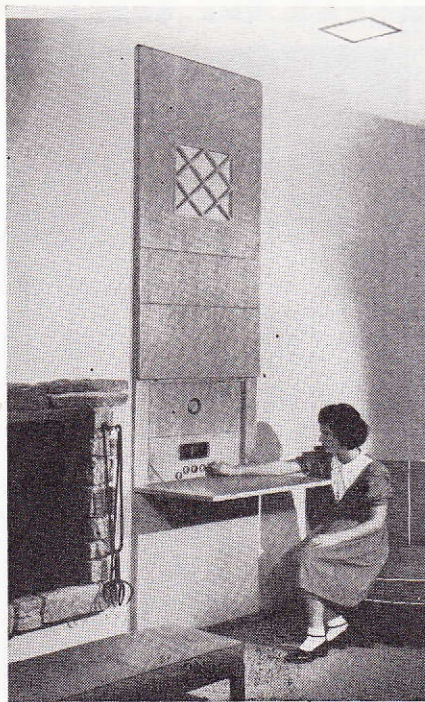
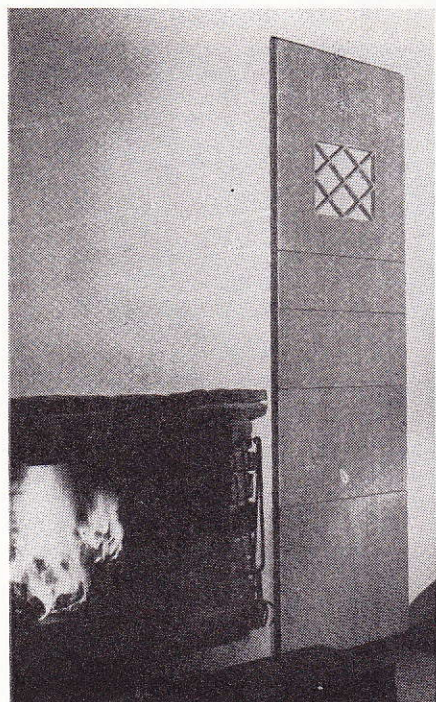
The large speaker baffle at the top of the unit has a Venetian-blind grille which blends well with the over-all design. Walls and sides behind the baffle are insulated with Tufflex sound-absorbing material to reduce vibrations. A portable speaker was also installed to bring listening pleasure to either of the two porches adjoining the room. It is rigged with a remote volume control on a T-pad hookup. Convenience features like these are often big selling points.

Another feature is a sliding shelf just above the generous and well-placed record spaces. Records and albums may be set on the shelf while making selections and loading the changer. The shelf slides back into the unit when not in use.

An installation may be improved almost without limit. For instance, in this case the lower-left cabinet section is not now being used, but perhaps it could be utilized to increase the convenience of the installation as a storage space for the remote speaker or for small items such as record cleaner.

A neat installation

In another recent installation, a complete system was housed within the wall itself (see Fig. 1), saving floor space and avoiding blocking a rather



All photographs courtesy Lafayette Radio

Fig. 1—Two views of an installation which makes the most of available space.

narrow passageway. A deep wall was used in building this ceiling-to-floor unit which is directly opposite a set-in bookcase of similar design. The system includes a Radio Craftsmen RC-8 tuner and amplifier, an Altec 603B speaker, and a Webster-Chicago 356-27 record changer with G-E variable-reluctance cartridges, and a G-E pre-amplifier.

The controls and record changer are mounted at a convenient height for tuning and record handling, with the amplifier and preamp behind the tuner unit. This provides service accessibility to all three units at the same time and leaves more space for storage. The large storage spaces above and below the units will accommodate almost any record library.

Good results were obtained with the FM dipole and AM loop mounted on the inside wall behind the amplifier. This eliminated the need for concealing lead-in wires from the outside.

The baffle for the 15-inch speaker is mounted behind the grille panel. It is a separate piece set at an angle to direct the sound down into the room. The grille panel opens on a piano hinge to provide access to the speaker. Varied effects and more flexibility in speaker arrangement can be obtained in this way.

Demountable Custom Installation

Still another installation recently developed by the engineering staff of Lafayette Radio consists of rather simple bookcase sections set into a wall recess (Fig. 2) giving the effect of an in-the-wall job. The units included a Browning FM-AM tuner, an Altec amplifier, a Webster-Chicago 356-1 record changer, and an Altec speaker and cabinet. Due to room layout, it was decided to place the system in the recessed section at one end. But arranging the components presented a problem. The speaker cabinet alone was not wide enough to fill the wall space and the tuner and amplifier together were too wide for the top of the speaker cabinet.

The arrangement which finally proved satisfactory consisted of cabinets and bookcases built around the speaker cabinet in four separate sections. Convenient and sufficient record space was provided, the controls are readily available, the finished job is attractive and can be disassembled easily. This is an important feature for apartment dwellers, since the entire system can be removed whenever necessary. The front panels on the tuner and on the amplifier are also removable to permit easy servicing. Good results and short lead-in wires were obtained by mounting the FM and AM antennas in the cabinet closet to the left.

In this case the record changer was installed as a chairside piece to suit the owner's personal taste. This is another important point: the personal preference of the owner, where practi-

cal, is the primary consideration in determining the over-all layout.

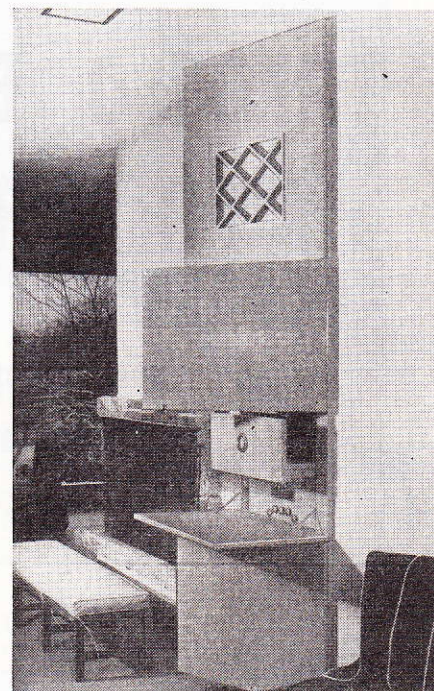
Various Techniques

Other ideas have been used to personalize and improve custom-built systems. In one case involving a very large record collection, the available space was too small for sufficient storage. A small cabinet was built into the unit to accommodate the records most often used and a drawer for 3 x 5-inch file cards was built into it. A convenient card index was kept at the installation, and the records were stored elsewhere.

Frequently small items such as a cleaning brush, liquid renewer, or perhaps replacement needles, are to be kept near a phonograph. Where a magnetic recorder is used, there will be recording tape, wire, or spools. In such cases a small drawer, rack, or cabinet space for these things will add real convenience to the installation.

Special features can sometimes be added by taking into consideration the height of the control panel and record changer. Installation a little lower than usual will make operation by children easier; a little higher than usual may be more convenient for a particularly tall customer. A remote speaker—stationary or portable—or remote controls are often added attractions.

Many of the techniques suggested here are not possible in all cases. They do serve to show how custom installations can be adapted to fit widely different conditions and how advantage can be taken of existing conditions. Whether installed completely within the wall, in cabinets, or in a combination of both, the components can be ar-



Installation of Fig. 1 with phono extended and record cabinet door open.

ranged to improve the performance and appearance of the installation. Special features can be added to give the customer a job specifically designed to please him. This type of work is usually done for a customer who wants excellent results and is willing and able to pay for them. Quality work and apparatus is therefore indicated and prices which yield a fair return for the work may be charged. Emphasis should be placed on fulfilling the requirements of the owner.

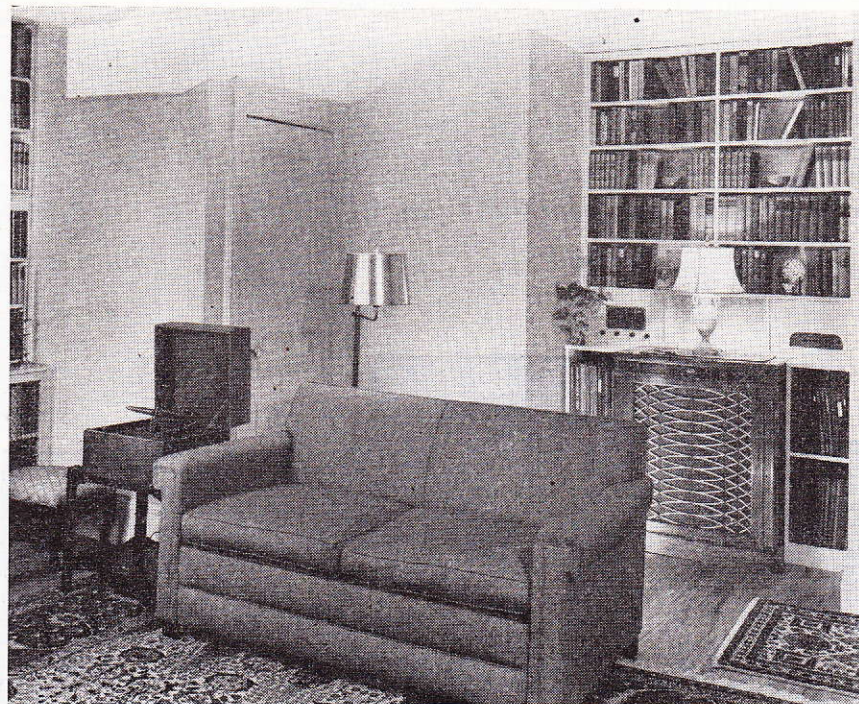


Fig. 2—removable installation which gives the effect of an in-the-wall job.