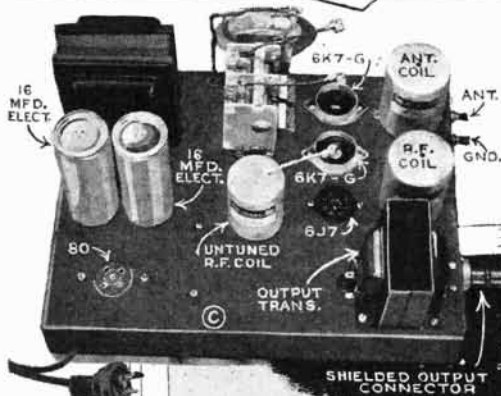
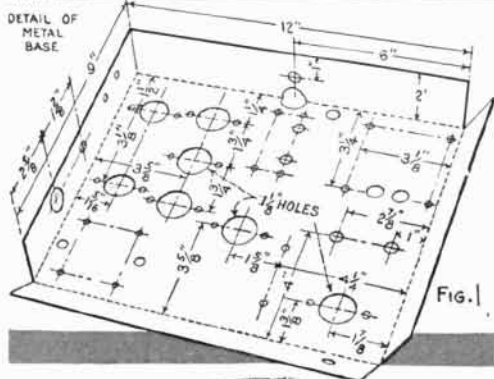
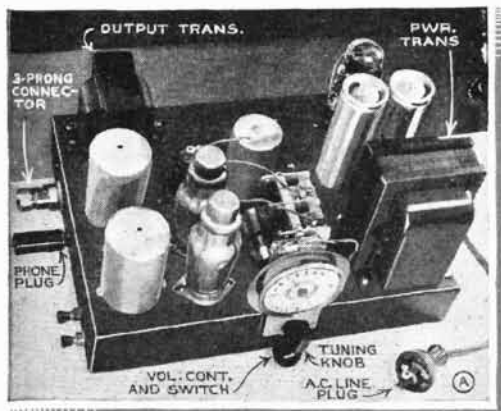


BUILDING A

By M. N. Beitman



DESIGNED especially for high-quality reception of local broadcasts, this easily built unit uses low-priced standard parts and serves a number of practical general-purpose applications. Suitable for use with any radio amplifier, or public-address system, it may be employed to bring educational programs into classrooms where they can be amplified by means of the school P.A. system, or, for regular broadcast distribution in hospitals, or similar public institutions where such amplifiers are available. The experimenter can use this quality radio tuner to bring old sets up to date. Many of the older console receivers had excellent audio amplifier stages that are still useful, or he may prefer to build one of the several good inexpensive amplifiers described in recent issues, as any a.f. amplifier with an output of 8 watts, or more, may be used. The type shown on page 135 of the January issue is one good example.

To eliminate inherent noises and simplify construction, a tuned radio-frequency circuit is employed in the tuner.



GENERAL-PURPOSE TUNER

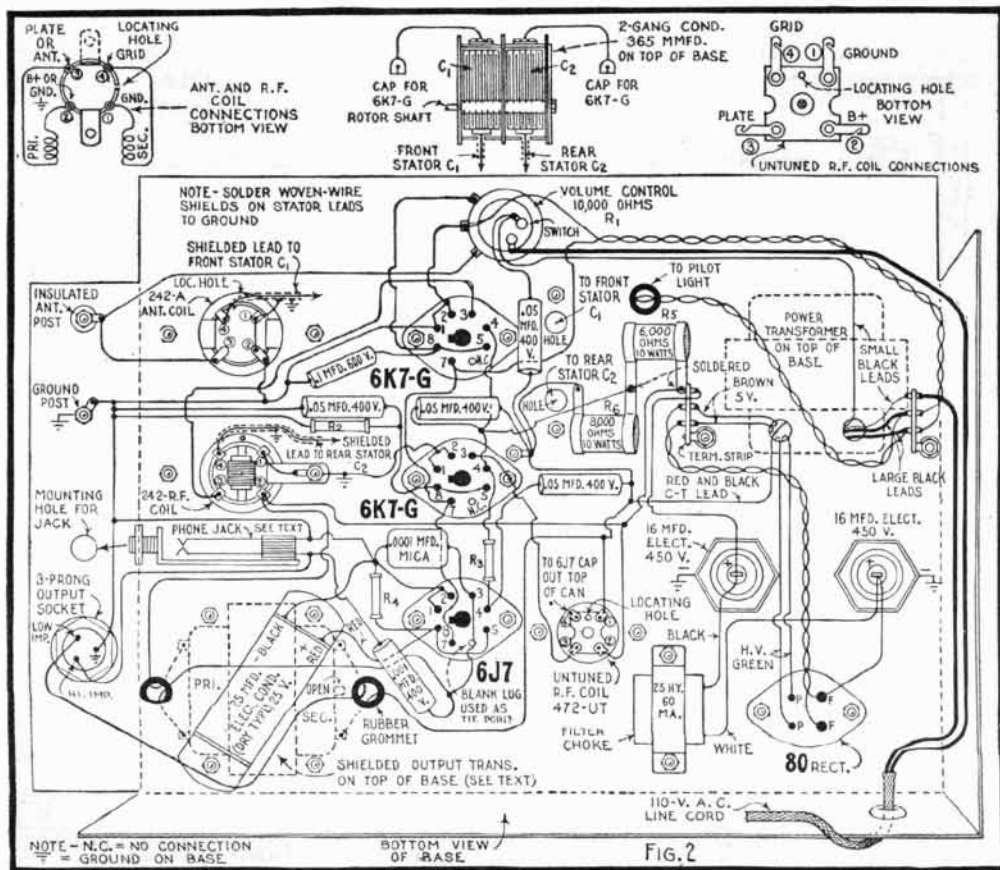
Shielded "Miller" coils are used, and the coil coupling the detector is of the un-tuned type. The circuit is just selective enough to separate the local stations, but is sufficiently broad to pass the entire group of side bands required for high-quality reception of musical selections.

Forming and drilling details for the sheet-metal base are given in Fig. 1 for those who wish to make their own. However, this chassis base drilled as shown, is available from several of the large radio mail-order parts houses. Photos A, B and C show various views of the completed unit, with and without the tubes in position. The builder should ex-



amine these and the underside view, photo D, carefully before starting construction. A simplified wiring diagram is given in Fig. 2 and the schematic circuit diagram

(Continued to page 132A)



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A General-Purpose Tuner

(Continued from page 297)

appears in Fig. 3. All soldered connections must be made carefully with rosin-core solder, and shielding used where specified on the leads running up to the front and rear stator sections of the 2-gang 365-mmfd. tuning condenser, as

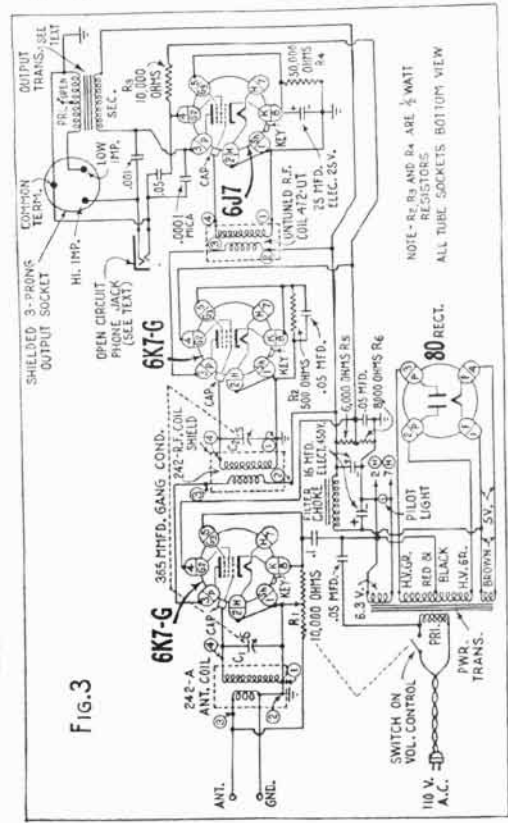


FIG. 3

indicated in simplified wiring diagram Fig. 2. It is also important that shielded cable be used for connecting the output of the tuner to the input of the audio amplifier that is to be used with it. The phone jack permits the use of headphones for direct reception and for monitoring purposes. This open-circuit jack is a type in which the contact blades are insulated from the frame. A detailed list of materials is available from Popular Mechanics radio department without charge. The output transformer is a shielded microphone type connected in reverse. In this manner either high-impedance output (Hi. Imp.) terminals or low-impedance 500-ohm output can

(Continued to page 134A)