

Equipment Report

Heathkit WA-A1 Williamson-type Amplifier

EASILY THE MOST economical way to obtain a high-quality amplifier, the Heathkit WA-A1 main amplifier and power supply in combination with the WA-P1 preamplifier measures up to the performance requirements for a satisfactory home system.

The complete amplifier includes a control unit and preamplifier which is 2¼ in. high, 10¼ in. wide, and 7¼ in. deep, and which connects to the main amplifier by two cables—one which provides plate and filament power as well as the a.c. leads to the power switch, while the other is a co-axial lead for the signal. The preamplifier utilizes the two halves of a 12AX7 or 12AY7 in a conventional equalized feedback arrangement with two turnover frequencies—400 and 800 cps, labeled on the control panel as LP and 78 respectively. The second tube in the control unit provides sufficient gain for the tone controls.

A total of five controls are employed—turnover frequency for magnetic pickups, a selector switch with three positions (magnetic, crystal, and radio), a volume control combined with the a.c. switch, and separate bass and treble tone controls. The amplifier is supplied in kit form, and requires some-

where around four to six hours to assemble.

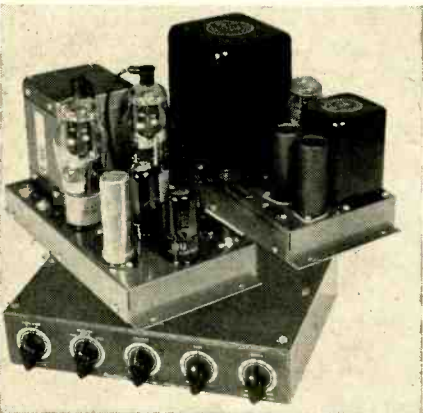
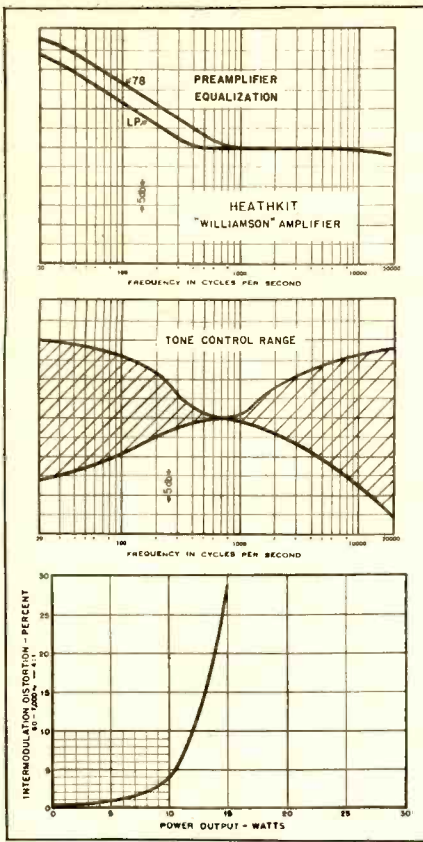
The selector switch is so arranged as to short out the radio and crystal inputs when playing records with a magnetic pickup, thus silencing the tuner completely without any further switching. Bass and treble tone controls are non-interacting, and the curves provided work out well from the listening standpoint.

The power supply and the main amplifier are on similar chassis, 5½ × 11, and the maximum height is 7 in. The output transformer is a special unit made by Peerless for this application, and the power transformer and filter choke are both Chicago Transformer products. The circuit of the main amplifier is essentially identical with the now-famous Musician's Amplifier, first introduced in *Æ* in November 1949.

SIGNAL INPUT VOLTAGES for 1-watt output

(1000 cps, volume control maximum, tone controls "flat.")

Input	Voltage
Mag. PU, 78	.0024
Mag. PU, LP	.0028
Crystal	.08
Radio	.08



Response and distortion curves for the Heathkit Williamson-type amplifier (left) and the complete schematic of the three sections (below). Note a.c. outlets on both preamp and power supply to provide for tuner and phonograph turntable.

