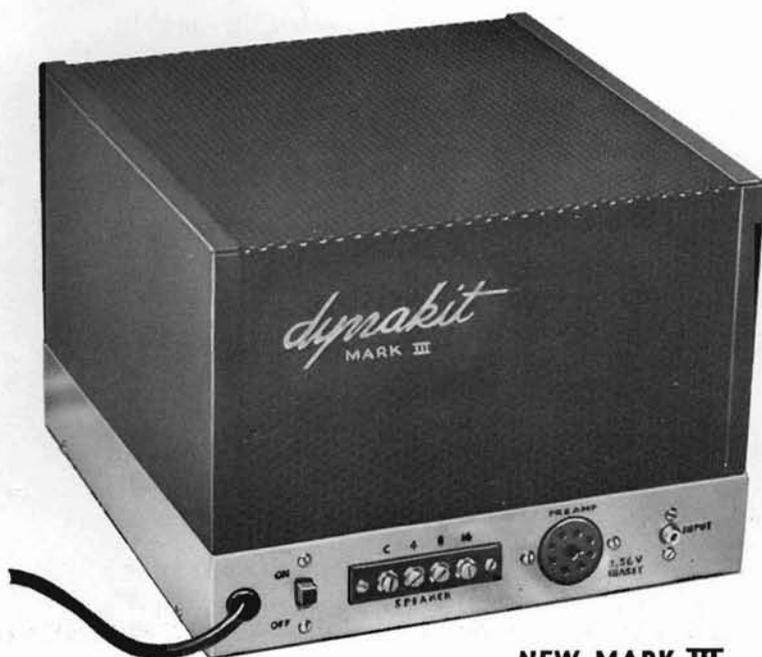


dynakit

**HIGH FIDELITY
AMPLIFIER
KITS**

HIGH STABILITY, WIDE BAND AMPLIFIERS



NEW MARK III



POPULAR MARK II

FOR THE

AUDIO

PERFECTIONIST

DYNACO INC. 617 N. 41st STREET, PHILADELPHIA 4, PA.

DYNAKIT AMPLIFIER KITS

The Dynakit Mark II and Dynakit Mark III are 50 and 60 watt amplifier kits respectively using patented Dynaco circuitry which provides outstanding performance in an essentially simple arrangement which delivers high power, low distortion sound of a quality to suit the most discriminating musical listener. The popularity of this circuit has arisen because of its extremely natural and clean sound and its crisp, solid performance under transient conditions which is obtained because of the high stability characteristics of the circuit at both high and low frequencies.

The use of a 50 or 60 watt amplifier is a revelation to the high fidelity enthusiast who tries it for the first time. The sound is audibly smoother and cleaner, and the overall effect is one of effortless naturalness. It does not matter whether the amplifier is used with a 10 watt loudspeaker or one of 50 watt rating, the high powered amplifier

will produce better sound. This is true even when average power levels are far below the amplifier's rated power. The amplifier's ability to deliver clean sound into a loudspeaker load is better when the amplifier's power capability is increased even when the listening levels do not appear to be loud.

Both Dynakit amplifiers can be built in less than three hours since the major part of the wiring is contained on a printed circuit board which is supplied with parts factory mounted and dip soldered. Both amplifiers feature Dyna Biaset (patent pending) which simplifies adjustment of the unit and completely eliminates the need for critical balancing adjustments in order to achieve peak performance. Each represents a superlative piece of equipment in its power bracket—a unit designed for longtime enjoyment and listening pleasure which cannot be exceeded by any high fidelity equipment regardless of price.

SPECIFICATIONS

MARK II

Power output:	50 watts continuous 120 watts peak
Intermodulation distortion:	less than 1% at 50 watts, less than .5% at 35 watts, less than .15% at 1 watt
Frequency response:	$\pm .5$ db 6 cps to 60 kc $\pm .5$ db 16 cps to 25 kc at 50 watts output
Power response:	20 cps to 20 kc without exceeding 1% distortion within 1 db of 50 watts
Sensitivity:	1.5 volts rms input for 50 watts output
Hum and noise:	80 db below 50 watts (resistive filtering)
Damping factor:	15
Output impedances:	8 and 16 ohms
Tubes:	EL-34 (2), 6AN8, 5U4GB, selenium rectifier
Finish:	cadmium plate chassis, black lacquer cover
Special features:	on-off switch, preamp power socket, Dyna Biaset for non critical adjustment
Size:	9" by 9" by 6 $\frac{3}{4}$ " 27 pounds
Net price including protective cover (Prices slightly higher in the West)	\$69.75

MARK III

60 watts continuous 140 watts peak
less than 1% at 60 watts, less than .5% at 50 watts, less than .05% at 1 watt
$\pm .5$ db 6 cps to 60 kc $\pm .5$ db 16 cps to 25 kc at 60 watts output
20 cps to 20 kc without exceeding 1% distortion within 1 db of 60 watts
1.6 volts rms input for 60 watts output
96 db below 60 watts (choke filtering)
15
4, 8 and 16 ohms
KT-88 (2), 6AN8, GZ-34, selenium rectifier
bright nickel chassis, vinyl coated charcoal brown cover
same as Mark II plus matched tubes, extra heavy duty parts, and a fuse holder
9" by 9" by 6 $\frac{3}{4}$ " 28 pounds
\$79.95



Tested in the Home

Equipment reports appearing in this section are prepared by members of HIGH FIDELITY's staff, on the basis of actual use in conjunction with a home music system, and the resulting evaluations of equipment are expressed as the opinions of the reviewer only. Reports are usually restricted to items of general interest, and no attempt is made to report on items that are obviously not designed for high-fidelity applications. Each report is sent to the manufacturer before publication; he is free to correct the specifications paragraph, to add a comment at the end of the report, or to request that it be deferred (pending changes in his product), or not be published. He may not, however, change the report. Failure of a new product to appear in TITH may mean either that it has not been submitted for review, or that it was submitted and was found to be unsatisfactory. These reports may not be quoted or reproduced, in part or in whole, for any purpose whatsoever, without written permission from the publisher.

Dynakit Mark III Amplifier

SPECIFICATIONS (furnished by manufacturer): a single-chassis basic power amplifier kit. **Rated power:** 60 watts. **IM distortion:** less than 1.0% @ 60 watts out; less than 0.5% @ below 50 watts out. **Frequency response:** ± 0.1 db, 20 to 20,000 cps; ± 0.5 db, 6 to beyond 60,000 cps. **Power response:** ± 1 db from 60 watts, @ below 1% harmonic distortion, 20 to 20,000 cps. **Square wave response:** essentially undistorted 20 to 20,000 cps on loudspeaker load. **Sensitivity:** 1.6 RMS in for 60 watts out. **Hum and noise:** over 90 db below 60 watts. **Damping factor:** 15. **Input:** high-level high-impedance from control unit. **Controls:** output tube bias adjust; AC power. **Outputs:** 4, 8, and 16 ohms to speaker. **Tubes:** 6AN8, 2-KT-88, GZ-34. **Dimensions:** 9 in. long by 9 wide by 6 $\frac{3}{4}$ high. **Price:** \$79.95. **MANUFACTURER:** Dynaco, Inc., 617 N. 41st St., Philadelphia 4, Pa

Offering 10 more watts of power at a going rate of a dollar per watt, the Mark III Dynakit aspires to—even lower distortion at normal operating levels than the 50-watt Mark II, that was TITHed in the May 1956 issue. And, although it may be difficult for Mark II users to believe, the Mark III Dynakit does sound a shade better than its predecessor.

The new model has some refinements that were not found in the Mark II; a B+ filter choke, an additional filter stage on the bias supply; a 4-ohm output tap, and KT-88 output tubes in place of the Mark II's 6CA7s. The kit comes with most of its components already attached and soldered to a compact printed-circuit board, and even the transformer leads are pre-cut to length, stripped, and solder-tinned. Construction entails nothing more than bolting the transformers, sockets, and circuit board to the steel chassis, wiring them together, and adding a few other small parts under the chassis. Total working time: about 3 hours.

No problems were encountered in wiring our sample unit. Everything went into place cleanly and neatly, the instructions were lucidly written and free of ambiguities, and even the output tube bias adjustment procedure has been made about as foolproof as it can be. When certain types of output tube are operated at or near their maximum output power capacity, their bias voltage is likely to be extremely critical—a slightly incorrect setting will increase distortion or wear out the output tubes in a matter of months. The manufacturer had found that some Dynakit Mark II owners were having troubles as the direct result of measuring the bias voltage with inaccurate test meters. To avoid this problem, the Mark III and later model Mark IIs are equipped with a precision resistor connected in series with the output tube cathodes, and brought out to a test point at the preamp-power outlet socket. The value of this resistance was so chosen that, when the output tubes are properly biased, they will pass just enough current to produce 1.56 volts across the resistor, and 1.56 happens to be the exact voltage available from a fresh flashlight battery. Consequently, the accuracy of your test meter is of no significance; you merely take note of its reading from a new flashlight cell, and then adjust the amplifier's bias control until the same reading is obtained between the bias test point and the amplifier chassis.

The extra B+ and bias-supply smoothing are welcome additions to the new Dynakit, too, since they make the amplifier's hum level much less dependent upon output tube balance, and give more assurance that the hum specification will still be met after many months of use.



The Mark III: 60 watts for \$80.

On our instrument tests, the completed Mark III exceeded all its specifications by a healthy margin. Low-frequency square-wave tests showed a slight downward tilt (indicating a few degrees of bass phase shift and normal sub-sonic attenuation), while high-frequency square waves came out of the Mark III with scarcely a trace of modification. The amplifier's high-frequency stability was found to be almost completely unaffected by typical or atypical loads, including the heavy capacitive load imposed by an electrostatic tweeter. Bass stability was close to perfect, also regardless of output loading.

Direct comparison between the sound of the Mark II and Mark III Dynakits revealed a very slight difference in character, but I found it hard to decide which I preferred. Subjectively, the Mark III seemed to have a subtly sweeter high end, and a better-defined, but slightly less sumptuous low end than the Mark II. Both amplifiers are equally transparent and lucid, both are almost totally free of coloration, and both can deliver persuasively effortless, clean, and very musical sound at low or very high listening levels.

On the basis of its sound alone, I think I would choose the Mark III. Its other characteristics would simply strengthen my conviction that this amplifier is an excellent choice for the kit-building music listener who considers the best present-day sound reproduction to be not quite good enough.—J. G. H.

MANUFACTURER'S COMMENT: The Mark III Dynakit costs only \$4.95 more than the 4-ohm-output model of the Mark II. Therefore, its increase in price represents a cost of less than 50¢ per watt—certainly an all-time low price for increased power. In addition to the increased power, we would like to mention that the appearance of the Mark III has been improved over that of the Mark II, and its finish has been designed to harmonize with that of the Dynakit pre-amplifier.