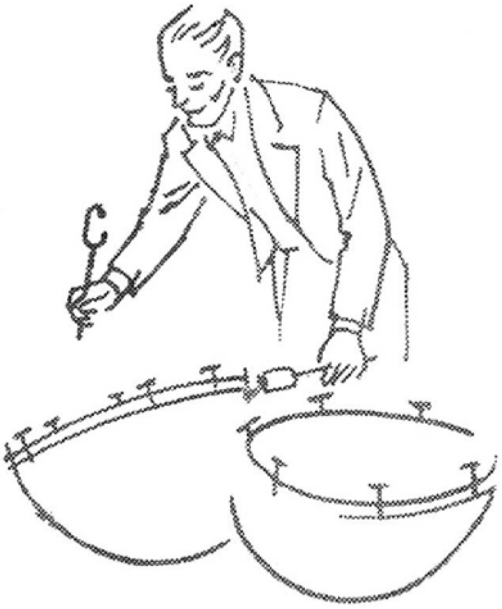
DYNAKIT
MARK II



50 WATT
POWER
AMPLIFIER
KIT

FOR THE
AUDIO
PERFECTIONIST

DYNA COMPANY DYNACO
5142 MASTER STREET
PHILADELPHIA 31, PA.

THE DYNAKIT MARK II

The DYNAKIT Mark II is a compact 50 watt power amplifier kit designed for the finest possible listening quality in modern high fidelity installations. Both auditory tests and laboratory measurements show that the DYNAKIT offers performance superior to that of amplifiers selling for many times its cost. The economy of the DYNAKIT is due to the essential simplicity of the unique design used — which leaves out unnecessary gingerbread but includes the important features which contribute to quality sound.

The functional simplicity of the DYNAKIT amplifier makes it practical to offer it in kit form with the resultant economies which accrue to the purchaser. A novel physical arrangement has been developed which uses a printed circuit assembly (supplied factory wired) so that the kit can be readily constructed within three hours with complete reproducibility of performance specifications. There is nothing critical in the assembly process, and the constructor is assured of outstanding performance even if he is a novice at electronic assembly.

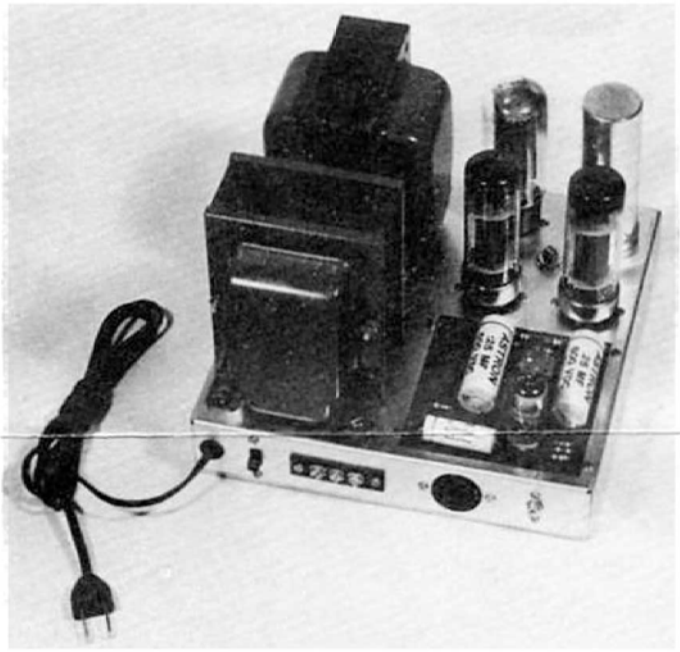
The 50 watt power capability of the DYNAKIT amplifier furnishes a reserve of power which adds to listening ease. Modern program sources have far greater dynamic range than formerly. This has increased the power requirements of amplifiers, particularly since many of the speaker systems which have the widest and smoothest response are of relatively low efficiency. The combination of musical dynamics and power losses in the loudspeaker causes a 50 watt amplifier to *sound better* than one of lesser power when realistic listening levels are maintained.

In addition to high power, the DYNAKIT has been designed for extremely low distortion, for uniform stability, for clean overload and instantaneous recovery, and for satisfactory reproduction of non-sinusoidal wave forms such as square waves and saw-tooth pulses. Thus on musical content, which is constantly changing and composed of intricate sonic waveforms, the DYNAKIT does not change the character of the signals fed through it. Pulsing the DYNAKIT into a loudspeaker load does not cause a condition of cone bounce or flutter. Thus a drumbeat, for example, comes through without the spurious overhang which causes blurred reproduction.

The quality of the DYNAKIT amplifier is due to the fact that in every possible way it shows superiority over existing equipment. Its circuit has unique new features which create excellent fidelity, its components are the finest available — the same as a buyer would specify for a custom constructed unit, and the physical arrangement is set up for the greatest ease of assembly and assurance of success.

QUALITY OF DESIGN

The DYNACO circuit used in the DYNAKIT is a high stability circuit using the new EL-34/6CA7 output tubes, one of the most linear tube types available. These tubes are operated with fixed bias from a low impedance supply in order to avoid the transient distortion which would occur if the bias shifts as signal levels change, as happens in conventional cathode biased circuits.



A low distortion, precisely balanced signal is presented to the output grids from a combined voltage amplifier and phase inverter tube, the pentode-triode type 6AN8. These two stages and all associated components are combined in the printed circuit assembly. This is pre-wired at the factory and includes accurately matched components for balanced drive to the output stage. Compensation is included to shape the gain and phase characteristics of the circuit to provide a wide margin of stability under feedback conditions.

20 decibels of stable negative voltage feedback is carried around all stages and the output transformer to reduce the distortion at average levels to below the residual noise level (80 db down) and to obtain an optimum damping factor.

The power and bias supplies are of a design in which peaks can be handled without drastic voltage shifts, and recovery from overload signals is instantaneous. Side by side comparison with other amplifiers of nominally equal power rating reveals that the DYNAKIT provides more *usable* power with less irritation when overloaded than other designs.

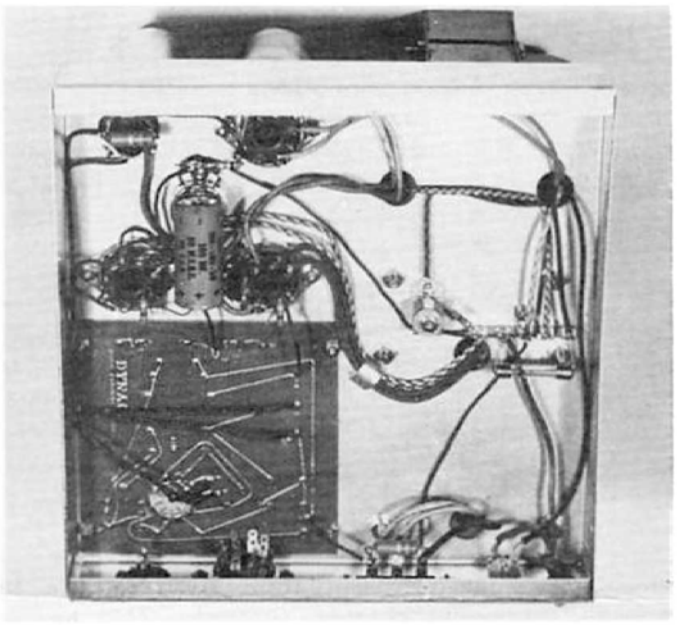
THE FINEST COMPONENTS

All premium components are used in the DYNAKIT to insure permanence of characteristics without failures and to provide neat clean appearance. Some of these "extra" features which are normally only available in custom built equipment are:

- DYNACO A-430 output transformer. This unit sells separately from the kit for $29.95 net. It is the finest of its type
- A heavy duty, conservatively rated power transformer with capacity to power a pre-amplifier if desired
- Ceramic cased and plastic paper capacitors
- 500 volt specially formed electrolytic capacitor
- 1000 volt mica capacitor
- Dependable highly linear EL-34/6CA7 tubes
- Heavy duty rectifier tube
- XXXP etched circuit board with parts mounted and dip soldered. Metal eyelets for external connections to eliminate strain on plated wiring.
- Underwriter approved line cord
- On-off switch
- "Wired in" fuse
- Bias setting control
- Nickel plated, binder (flat) head screws
- High temperature insulation, solid hookup wire
- Spot welded heavy gauge chassis
- Protective cover and bottom plate
- Spare socket for pre-amp power, remote on-off switching, etc.

THE EASIEST TO ASSEMBLE

The use of the pre-assembled printed circuit board eliminates two-thirds of the work. An inexperienced constructor can figure on about three hours of enjoyable and interesting assembly time in mounting parts and soldering the connections. The work is simplified by detailed point-by-point instructions included with the DYNAKIT and by two-step pictorial diagrams which show the placement of every lead and every part.



THE DYNAKIT'S PERFORMANCE

The measured specifications show that the DYNAKIT rates with the very best of amplifier equipment in the highest price brackets. What these specifications cannot show, however, is how the DYNAKIT amplifier sounds. The clarity, crispness, and smoothness that are attained because of its low distortion, high stability, and superior transient response can only be described through demonstration and comparison with other equipment.

The person who uses a DYNAKIT amplifier will find that familiar music has less stridency and harshness at high frequencies and less muffled quality in the lower frequency passages.

Percussive sounds will have more "snap" while strings will have a more natural sheen. Distortion which was formerly attributed to record breakup or to speaker overload will vanish when the 50 watt DYNAKIT replaces a lower powered amplifier. The advantage of the large power reserve shows up most readily in reproducing large choral works and massive string ensembles, and yet even solo instruments will be reproduced more naturally because of the performance attributes of the DYNAKIT amplifier. We believe that the DYNAKIT Mark II provides listening quality unequalled by any amplifier regardless of price, size, or degree of complexity.

SPECIFICATIONS

Power Output	50 watts *continuous*, 100 watts peak
Intermodulation Distortion	Less than 1% at 50 watts; less than .25% below 35 watts. These figures apply for any conventional combination of test frequencies.
Frequency Response	± .5 db 6 cps to over 60 kc ± .1 db 20 cps to 20 kc at any level between 1 milliwatt and 50 watts
Power Response	20 cps to 20 kc within 1 db of 50 watts without exceeding 1% harmonic distortion over this range.
Square Wave Response	Essentially undistorted 20 cps to 20 kc *on loudspeaker load.*
Sensitivity	1.5 volts rms input for 50 watts output.
Damping Factor	15
Output impedances	8 and 16 ohms (no restrapping required for changing output impedances)
Tubes	EL-34/6CA7 (2), (6550's can be substituted in output without wiring changes), 6AN8, 5U4GB (or GZ-34).
Size	9" by 9" by 6⅝" high
Weight	27 pounds
Price	$69.75 net includes *all* components (slightly higher in the West)

THE BEST FOR LESS
– ONLY $69.75

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