



## RECEIVER OFFERS CLEAN SOUND, UNUSUALLY HIGH VERSATILITY

**THE EQUIPMENT:** Kenwood KR-4140, a stereo FM/AM receiver. Dimensions: front panel,  $5\frac{1}{8}$  by  $16\frac{5}{8}$  inches; chassis depth (less rear connectors),  $11\frac{5}{8}$  inches. Price: \$259.95. Manufacturer: Kenwood Electronics, Inc., 15711 S. Broadway, Gardena, Calif. 90247; 72-02 51st Ave., Woodside, N.Y. 11377.

**COMMENT:** With very competent performance that generally meets or exceeds its published specifications and a host of advanced features hardly expected of a unit in its price class, the new Kenwood KR-4140 shapes up as a worthy entry in the popular receiver market. It can serve as the control and power center of a fine home music system and, at the same time, provides enough options to delight the sound hobbyist.

Styling combines functionalism with more than a touch of the deluxe feeling. To begin with, the FM dial has its channel markings spaced so that the distances between each two numerical markings (88 MHz, 90 MHz, 92 MHz, etc.) decrease toward the center of the band and increase toward the ends. The entire tuning dial (FM, AM, and zero-to-ten logging scale) lights up blue-green when FM or AM is selected. At the same time, a signal-strength tuning meter (which works for both FM and AM) emits a pale blue glow, while the station pointer lights up orange. The stereo indicator also glows orange. When you switch to another source (phono, tape, or auxiliary), the tuning meter lamp goes off and the meter face becomes a decorative patch of dark blue. The station pointer also stops shining, although the dial remains lit. The main power-switch button is surrounded by an orange ring—there's no mistaking that control. Beneath it, a stereo headphone jack remains live regardless of the position selected on an adjacent speaker switch, which controls the two pairs of stereo speaker systems that may be connected at the rear (you can choose either, both, or none). Other front-panel knobs include bass and treble controls (these handle both channels simultaneously); a mode selector (left, right, stereo, reverse, and "mix" or mono); the signal selector (AM, FM, phono 1, phono 2/mike, auxiliary); and the volume control. The mike input jacks are just to the right of the volume knob. The bass and treble controls, incidentally, are stepped and numbered to permit precise and repeatable settings for different program material. Centered between the knobs is a row of pushbuttons for loudness contour, tape monitor, FM muting, low filter, and high filter; below this group there's a left-to-right slide control that regulates channel balance.

At the rear are the stereo inputs for phono 1, phono 2, and auxiliary (high-level) signals. The phono 2 input, which is shared by the front-panel mike jacks, is automatically cut out of the circuit when mikes are connected to the set and the selector switch is moved to phono 2 position. There's also a stereo pair of

inputs for tape monitor and for tape recording feed—plus a five-pin DIN connector for direct hookup of European recorders using the unitized type of cable.

The "circuit-interrupt" feature is worked out here by means of preamp-out and main amp-in jacks for each channel, in conjunction with a "normal/separate" switch. In the "normal" position, the Kenwood's circuitry remains internally connected, but you still can use the preamp-out jacks to drive, and the main amp-in jacks to monitor, another tape recorder. Or you can drive another stereo amplifier (basic) from the preamp-out jacks to pipe the sound to other parts of the house, or to beef it up in the same room. With the switch moved to its "separate" position, the Kenwood's internal circuit is disconnected to permit patching in auxiliary units (such as an electronic crossover for use in a multi-amp setup, or a room equalizer, and so on) whose output "re-connects" the set's signal path. Additionally, there's an output jack (live at all times) which makes available a mono signal (left plus right channels) that may be fed to yet another amplifier or tape recorder.

The rear also has terminals for connecting two pairs of stereo speaker systems, two AC convenience outlets (one switched), the main power-line fuse, a grounding post, and the set's line cord. For FM reception, hookups are provided to handle both 300-ohm and 75-ohm lead-in; for AM reception there's a swivel loopstick antenna plus connections for a long-wire antenna and ground.

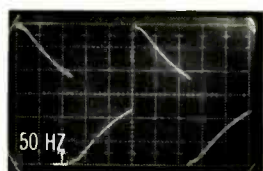
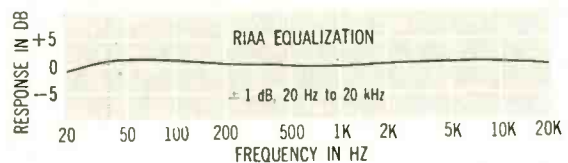
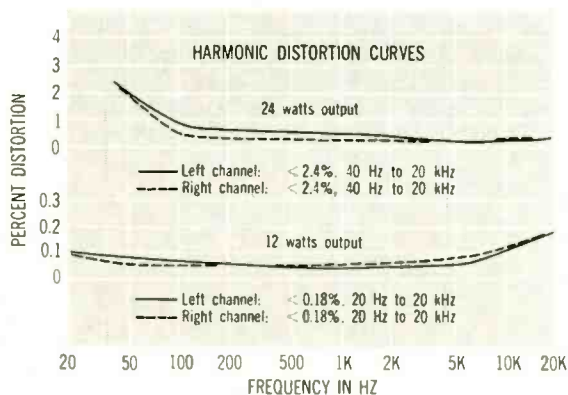
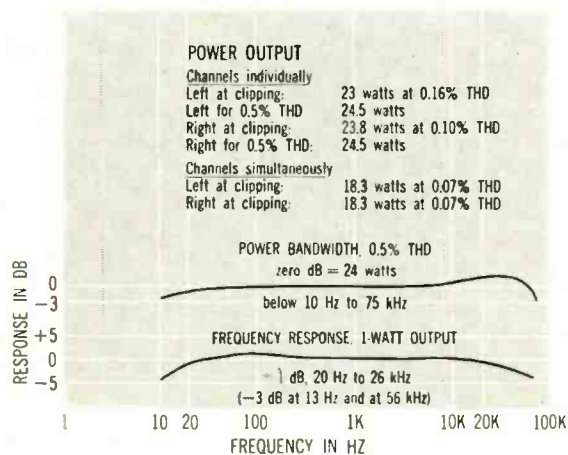
Lab tests of the Kenwood set add up to a general impression of better-than-average performance for a receiver in its price class, and especially so in view of all of its features. FM sensitivity was clocked at CBS Labs as 1.6 microvolts and showed a steeply descending curve that reaches full quieting of about 52 dB at well under 100 microvolts of input signal. Distortion is very low on both mono and stereo, with the latter mode showing no real increase as it does in most FM sets. Capture ratio was good; signal-to-noise, outstanding. FM frequency response was linear across the band and both channels were closely balanced and amply separated for the full stereo effect. In our cable-FM test the KR-4140 logged 49 stations, of which 40 were judged to be suitable for critical listening or off-the-air taping. AM reception was good in terms of number of stations received, and very good in terms of how they sounded.

The amplifier portion of the KR-4140 can be counted on to furnish close to 20 watts per channel with virtually no distortion. Note that for half-power demands, the vertical scale of the THD graph had to be expanded to show any values at all. Similarly, the IM measurements were so low up to rated output that they too required an expanded graph. Harmonic distortion at very low output was a shade higher than for half-power, but it still ran below 0.26 per cent from 20 Hz to 20,000 Hz. In a normal-size room the

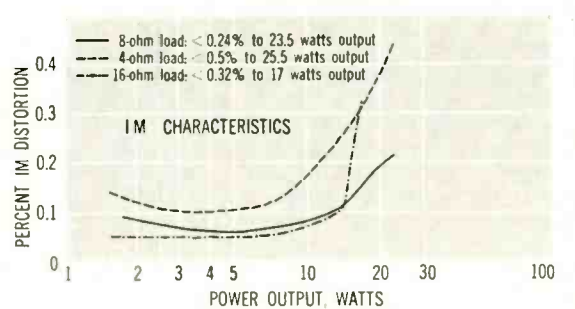
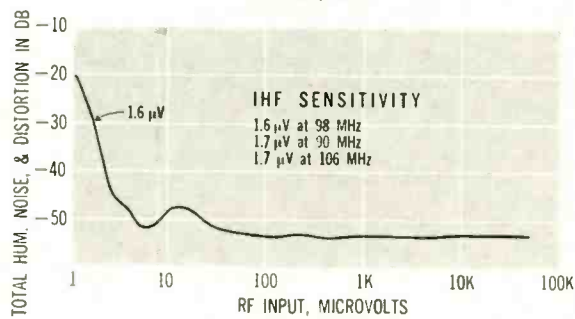
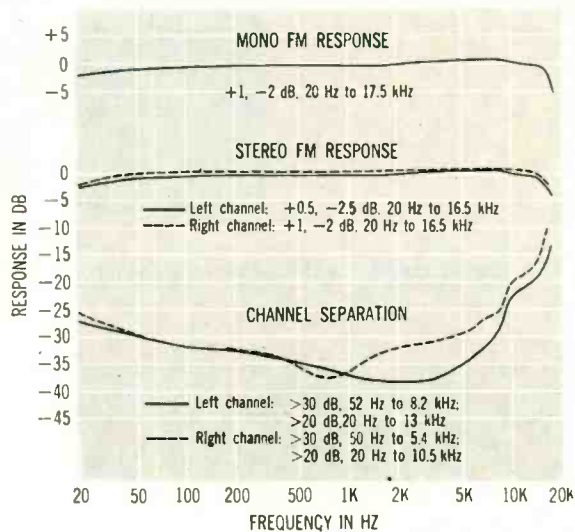
KR-4140 can drive very low-efficiency speakers with clarity and fullness of response. All input sensitivities and corresponding signal-to-noise figures are very good to excellent; the phono inputs were especially fine at better than 60 dB. Low-frequency square-wave response shows a roll-off in the deepest bass and some phase-shift; high frequency square-wave response has very fast rise-time and no ringing.

At its price, and considering its performance and all its versatility, the KR-4140 seems destined for a successful career in many a home stereo system. The set, which comes in a metal cover with four supports, may be installed "as is" or fitted into an optional wood case (Model SR-66, walnut wood, \$19.95).

**CIRCLE 141 ON READER-SERVICE CARD**



*Square-wave response.*



**Kenwood KR-4140 Additional Data**

Tuner Section			
Capture ratio	3 dB		
S/N ratio	73 dB		
IM distortion	0.3%		
THD	Mono	L Ch	R Ch
40 Hz	0.42%	0.42%	0.37%
400 Hz	0.25%	0.26%	0.38%
1 kHz	0.32%	0.42%	0.50%
19-kHz pilot	-63 dB		
38-kHz subcarrier	-42 dB		
Amplifier Section			
Damping factor	36		
Input characteristics (for 24 watts output)	Sensitivity	S/N	
phono 1	2.2 mV	64 dB	
phono 2	2.2 mV	62 dB	
mike	1.7 mV	54 dB	
tape play	148 mV	78 dB	
aux	150 mV	77 dB	