

## A "Solid, Sane" Stereo Receiver from Sherwood

**The Equipment:** Sherwood S-7310, a stereo FM/AM receiver (with Dynaquad four-channel simulation), in wood case. Dimensions: 17¼ by 5½ inches (case); 12¾ inches deep plus allowance for controls and connections. Price: \$369.95. Warranty: three years parts, one year labor, shipping not included. Manufacturer: Sherwood Electronic Laboratories, Inc., 4300 N. California Ave., Chicago, Ill. 60618.

**Comment:** If the S-7310 seems to resemble past receivers from Sherwood, let us reassure you immediately that the resemblance is more than front-panel deep. This is, as we have said of previous models, a solid design that dispenses with dramatic frills for the sake of honest quality. It is excellently thought-out in terms of both utility and performance within its price bracket—which today we would call the medium or even low-to-medium range in true high fidelity receivers.

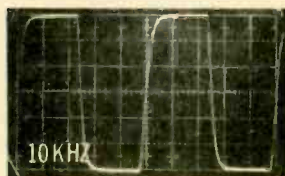
The upper portion of the dial is devoted to tuning (with a single meter displaying signal strength for AM, channel centering for FM), a series of lighting function indicators (built into the tuning dial), and the loudness/volume control (marked "loudness" since Sherwood has traditionally considered this the "standard" operation mode). The on/off switch is built into the volume knob. Below it are the remaining controls, neatly arranged in a single row. The speaker-selector knob has positions for off, the A speaker pair only, the B pair, both pairs, and Dynaquad—which converts the B output for speakers at the back of the room in simulating quad. The other knobs are for input selection, bass, treble, and balance. There are stereo phone jacks for headphone listening and for tape dubbing. And six pushbutton switches control tape monitor, four-channel, FM

muting, stereo/mono mode, high filter, and loudness defeat (so that the loudness knob becomes a regular volume control).

The four-channel button is wired just like a tape-monitor switch, "interrupting" the output circuit to insert whatever is connected to its input and output jack pairs at the back. The jacks can be used for a matrix-quad decoder (with a second stereo amp), a second tape deck, a Dolby-decode unit (for receiving Dolby FM broadcasts, for example), a speaker equalizer, or any similar add-on unit. The front-panel tape jack is wired in such a way that, when either the tape-monitor or the four-channel button is depressed, the signals from these inputs will be fed to the front-panel jack for recording, but, when neither button is depressed, the front-panel jack becomes an input feeding the deck(s) connected on the back panel. The jack therefore can be used for dubbing in either direction. Very clever.

The back panel also has pin jacks for phono and two aux inputs, plus one for four-channel FM reception (using some sort of adapter, should a discrete-quad broadcast system be adopted). The ground connection for the phono input doubles as that for 75-ohm FM antennas and is on a screw-terminal strip that also includes connections for 300-ohm FM and long-wire AM antennas. Knurled nuts with screwdriver slots are used on the speaker-output binding posts, which accept spade lugs or bared wires. The back panel also has a convenience AC connection, controlled by the S-7310's loudness-knob power switch.

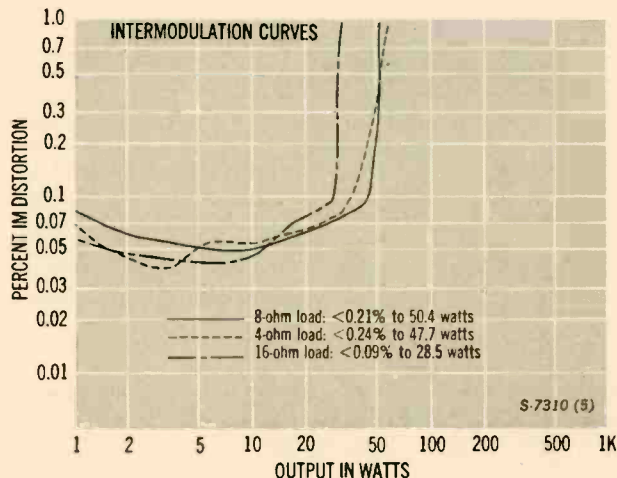
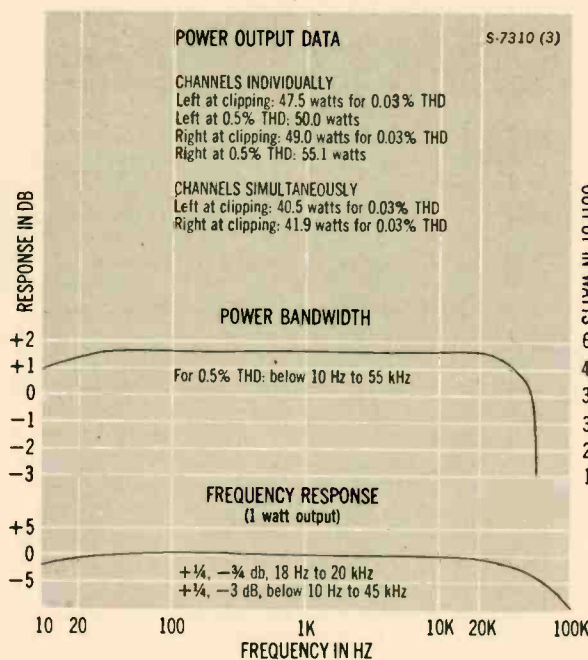
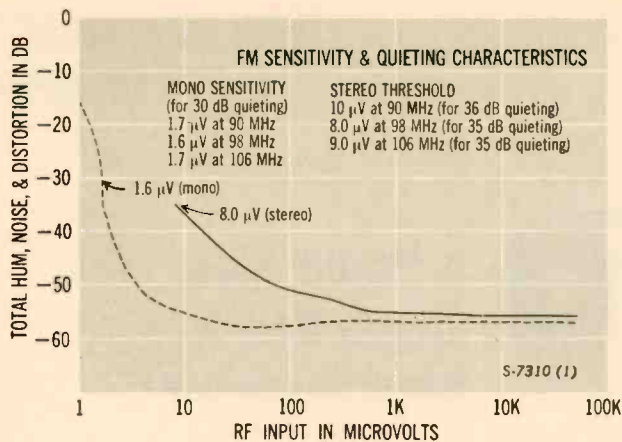
CBS Labs' measurements, like the receiver's cosmetics, proclaim this to be a unit that does its job well, without flourishes and without corner-cutting. Sherwood has consistently done this, while some of its competitors (as our test reports document) achieve more spectacular performance or features in one area only to embody a questionable design decision elsewhere. For example, Sherwood rates the tuner section's mono sensitivity at 1.8 microvolts. The lab data show that our sample measured 1.6 microvolts, and some units today are rated at even lower figures. But some of those that achieve more impressive numbers—perhaps higher price as well as better mono sensitivity—prove inca-



Square-wave response

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## Sherwood S-7310 Additional Data

Tuner Section			
Capture ratio	1.5 dB		
Alternate-channel selectivity	72 dB		
S/N ratio	74 dB		
THD	Mono	L ch	R ch
80 Hz	0.23%	0.27%	0.29%
1 kHz	0.15%	0.24%	0.21%
10 kHz	0.17%	3.2%	3.2%
IM distortion	0.17%		
19-kHz pilot	-66 dB		
38-kHz subcarrier	-67 1/2 dB		
Frequency response			
mono	$\pm 1\frac{1}{2}$ dB, 20 Hz to 15 kHz		
L ch	+1%, -1 dB, 20 Hz to 15 kHz		
R ch	+1%, -2 1/2 dB, 20 Hz to 15 kHz		
Channel separation	>45 dB, 90 Hz to 2.3 kHz >35 dB, 20 Hz to 8.5 kHz		
Amplifier Section			
Damping factor	45		
Input characteristics (for 38 watts output)			
phono	Sensitivity 2.0 mV	S/N ratio 65 dB	
aux 1 & 2	152 mV	86 dB	
tape monitor	152 mV	70 dB	
RIAA equalization accuracy	$\pm 1/4$ dB, 20 Hz to 20 kHz		
Total harmonic distortion			
at 38 watts	L ch: <0.19%, 40 Hz to 20 kHz	R ch: <0.26%, 40 Hz to 20 kHz	
at 19 watts	L ch: <0.12%, 20 Hz to 20 kHz	R ch: <0.11%, 20 Hz to 20 kHz	
at 0.38 watts	L ch: <0.16%, 20 Hz to 20 kHz	R ch: <0.11%, 20 Hz to 20 kHz	

pable of stereo quieting beyond the 50-dB mark that (roughly) separates good from so-so. This receiver's mono quieting is beyond this mark for all inputs above about 3.5 microvolts; its stereo quieting is better than 50 dB from about 70 microvolts up and very nearly as good as the mono quieting for inputs from about 500 microvolts up, the range in which a good antenna system will pick up reasonably strong stations. So the actual overall FM listening quality of the S-7310 is better than that of many units that might, at first glance, appear to be better.

And the measurements show the receiver to be better, over-all, than its published specifications (which, be it noted, were prepared before the present FTC power-rating rules went into effect)—sometimes by considerable margins. There are a few, however, that don't quite meet the specs. While we don't consider any of them significant, we'll point them out for the record. Stereo threshold is spec'd at 5 microvolts but measures 8 microvolts in the test sample. Capture ratio at 1.5 dB, is a hair shy of the 1.2-dB spec. Harmonic distortion in the amp is rated at 0.5% down to 40 Hz at 40 watts per chan-

nel or down to 20 Hz at 38 watts; our sample still couldn't quite make the bottom frequency at 38 watts without exceeding the distortion rating. This last is of course totally undetectable and unimportant in reproducing music.

We have no hesitation in describing the S-7310 as a solid value and an utterly sane design. It is, in fact, the sort of unit on which Sherwood's reputation has been built.

**CIRCLE 141 ON READER-SERVICE CARD**