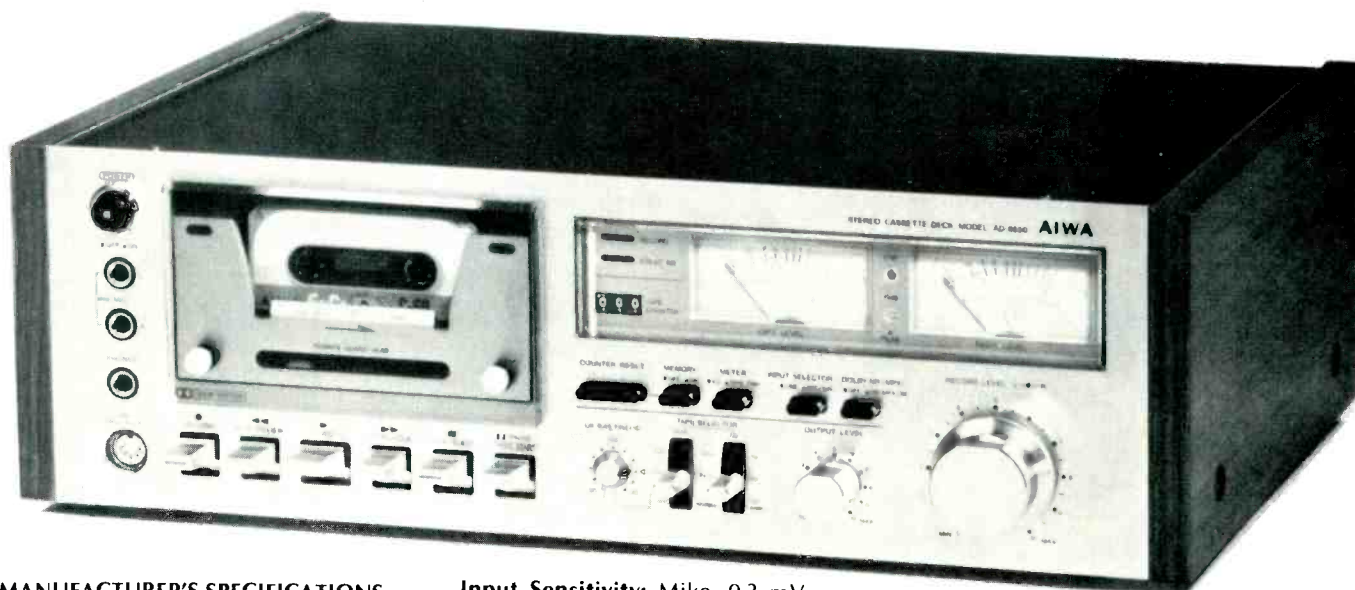


## Aiwa Model AD-6550 Stereo Cassette Deck



### MANUFACTURER'S SPECIFICATIONS

**Frequency Response:** 20 Hz to 15 kHz, 20 Hz to 17 kHz with FeCr and CrO<sub>2</sub> tapes.  
**S/N Ratio:** 65 dB with FeCr tape and Dolby NR.

**Input Sensitivity:** Mike, 0.3 mV; Line, 50 mV.

**Output Level:** Line, 775 mV.

**Wow & Flutter:** 0.05 W rms.

**FF & RWD Times:** 90 seconds for C-60 cassettes.

**Dimensions:** 16 <sup>9</sup>/<sub>16</sub> in. (42 cm) W x 5 <sup>15</sup>/<sub>16</sub> in. (15 cm) H x 13 in. (33 cm) D.

**Weight:** 16.5 lbs. (7.47 kg).

**Price:** \$450.00.

100

The Aiwa AD-6550 is an attractive, smooth-working cassette deck. The friction roller-damped door of this front loader allows easy loading, and, with removal of the front glass, maintenance tasks are quite simple. The good-sized tape-motion control levers provide the essential interlocking, but also provide some conveniences in operation. *Review* and *Cue* modes are obtained with the *Rewind* and *FFWD* controls when in *Play*. It is also possible to go directly from either wind mode to *Play*. The same lever performs both stop and eject functions; a second push is required for ejection when the tape is moving. The pause lever also performs as the timer start switch, possible in either play or record. To the left of the illuminated cassette compartment are the power switch and the jacks for microphones, headphones, and a DIN-type plug. Between the two large, well-illuminated meters are peak indicators for +3 (yellow) and +7 (red). The indicator lamps for record mode and Dolby NR are to the left, as is the counter.

Pushbutton switches control counter reset, memory *On/Off*, left meter function (VU or tape time remaining), line or microphone input, and Dolby NR. The dual concentric record-level

pots have very large knobs with fine knurling and a smooth friction clutch, producing a high-quality feel. The smaller output level control also has fine knurling and a smooth feel. The tape selector switches provide three settings of bias and EQ. Bias can be set for LH (low noise), FeCr, or CrO<sub>2</sub> tape types. The EQ settings are labelled 120, 70, and 70 microseconds, so the switches will line up for the great majority of cases. Associated with the LH bias position is an adjustment pot which can be set anywhere from 90 to 110 percent of normal bias, with a detent at 106 percent. This is a very useful feature for any user who might use tape that does not match a fixed setting. The particular implementation by Aiwa is well thought out in the range of bias offered and in the use of a small knurled-bevel knob. This design detail allows adjustments to be made when needed, but is immune to inadvertent changes.

The line-in and line-out phono jacks are on the rear panel along with a ground post and a record player sync jack. The latter is for connection to Aiwa turntables which will release the deck's *Pause* when the tonearm sets down. The majority of the circuitry is on one large PCB, with a few other PCBs of

Fig. 1—Record/playback response with BASF Studio tape in Normal and Dolby N/R modes.

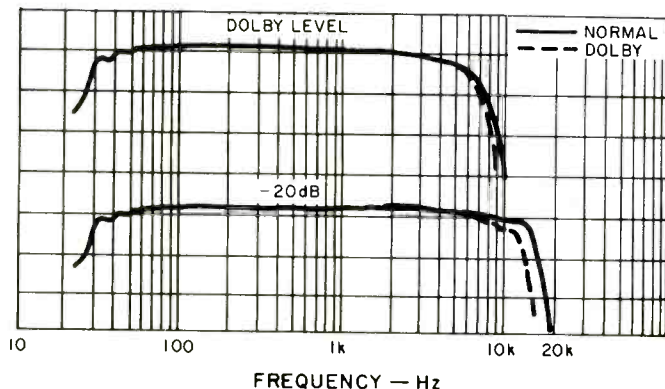
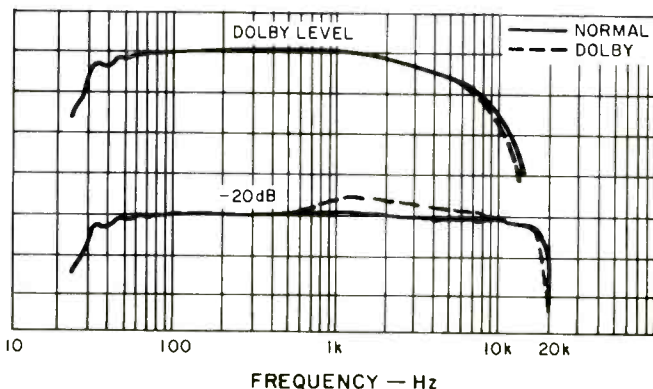
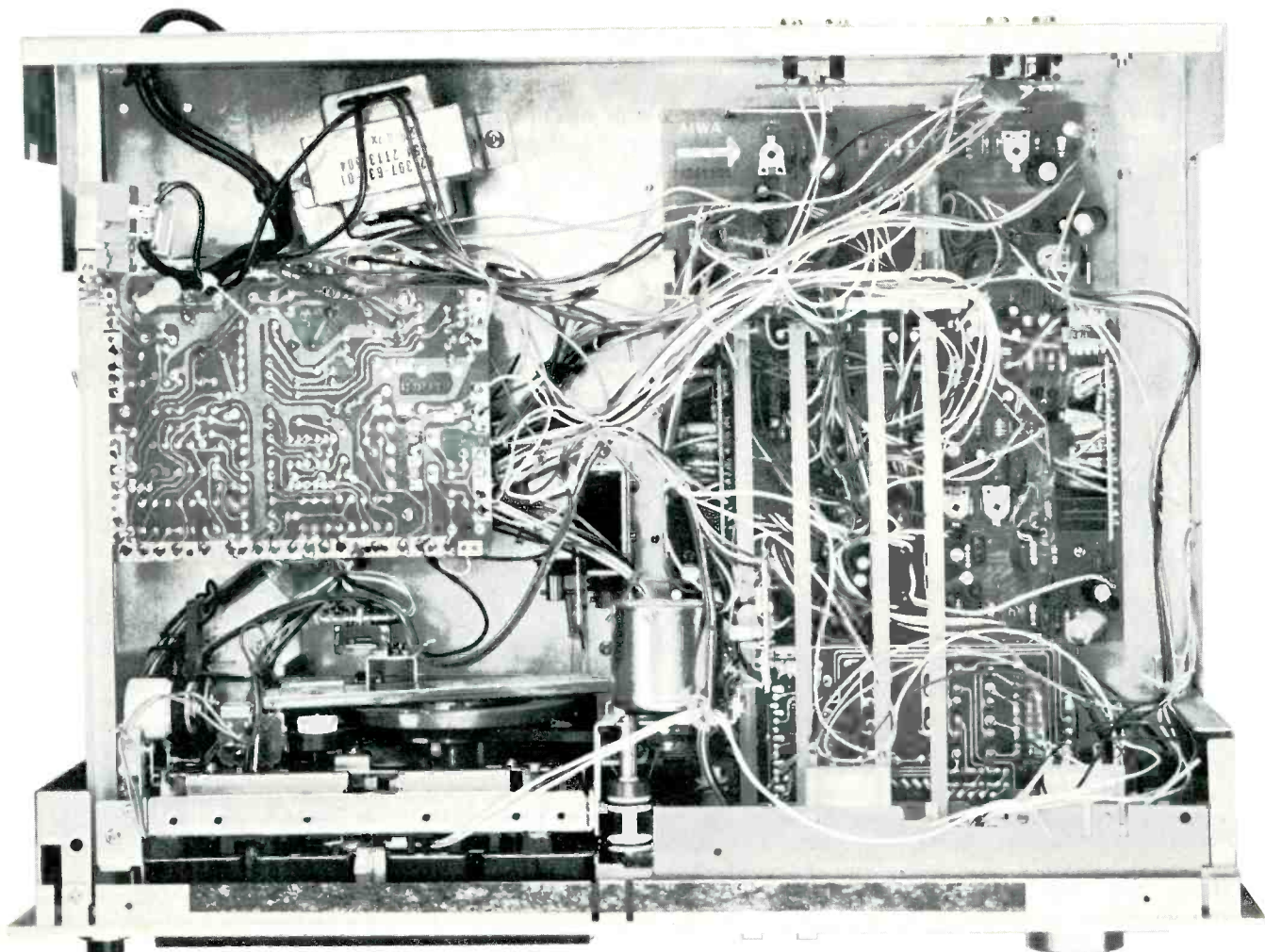


Fig. 2—Record/playback response of Scotch Master III FeCr tape in Normal and Dolby N/R modes.





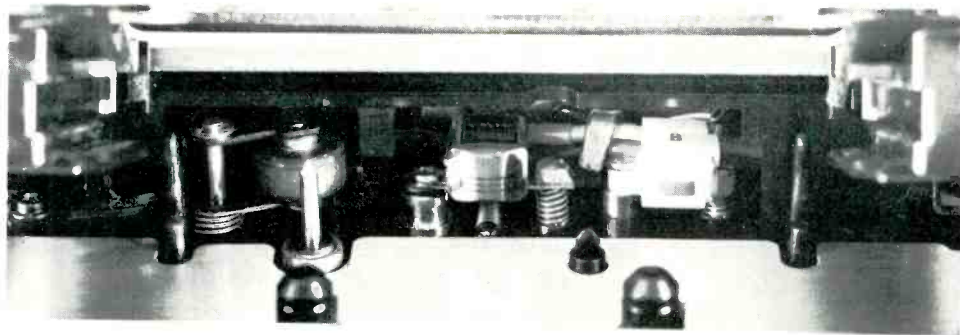
faces are well illuminated and of good size, but they seemed a little "busy." Part of that impression was probably from the inclusion of the tape-time-remaining scales on the left meter, which were proven to be accurate for this purpose. The thresholds of the "+3" and "+7" indicators were within 0.5 dB with a CW signal. With very short tone bursts, the turn-on points remained substantially the same, which shows excellent design, and is not as common as it ought to be.

Tape speed was about one per cent fast, and there was no change in speed from 100 to 130 V line power. Tape speed variations and wow & flutter were measured at the beginning, middle, and end of a cassette (see Fig. 6). There were some slight variations in tape speed, but nothing ever occurred that was audible. The flutter was always lower than the specified 0.05 per cent W rms with the exception of a couple peaks at the beginning of the cassette. A typical value was about 0.03 per cent W rms, and just 0.035 per cent Wtd

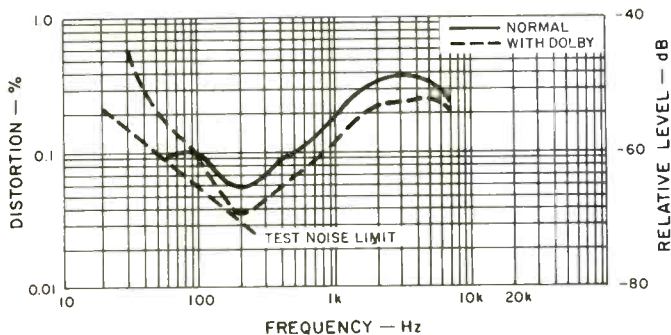
Peak, superb performance for a cassette deck. Winding for a C-60 cassette took 90 seconds, on the slow side, albeit done smoothly.

#### Listening & Use Tests

Cassette loading and unloading was very easy with the AD-6550 deck. The accessibility for maintenance tasks was fairly good with the door open and was very good with the heavy glass cover off, easily removed by loosening two thumb screws. The fine knurling of the pots and the flats at the index points, in conjunction with the smooth rotation, gave a continuing impression of high quality. The lever action of the bias and EQ switches was quite good, and there were no miscues with the button switches. All tape motion controls worked smoothly and without any sort of failure, despite the purposeful punching around by this reviewer. It was discovered that it was possible to go directly from either



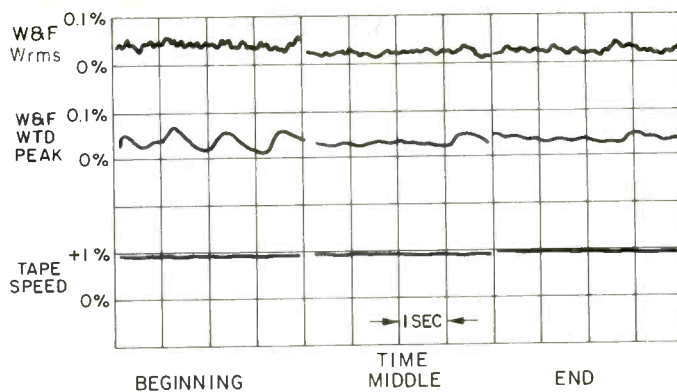




**Fig. 5—Third harmonic distortion vs. frequency for normal and Dolby modes at 10 dB below Dolby level (200 nWb/m) with Scotch Master III FeCr tape.**

wind mode to *Play*. It was smoothest when *Play* was pushed slowly, which automatically stopped the tape before resuming tape motion. Timer start worked as stated with use of the pause control. The LH (low-noise tape) bias control was essential in matching some of the tapes tried, and the range provided was sufficient to peak up the performance of every tape formulation checked. For the potential user who might want to try different tape types, this is one of the best features that Aiwa has included. As misadjustment of the bias control can be very detrimental, the bevel-headed knob was poked and bumped to make certain of its resistance to inadvertent changes. No changes were detected, proving the good human engineering for this function.

The text and illustrations of the instruction book were good, in general, but there should be more detail on setting



**Fig. 6—Tape speed variation and wow & flutter measured at the beginning, middle, and end of a cassette.**

bias. Some illustrations had a confusing layout, and there was no schematic. Recording various sources for listening tests was greatly facilitated with the VU meters and the +3 and +7 peak indicators, which emitted bright flashes even for very short transients. Record levels were set lower than originally planned, but the playback was quite noise-free in Dolby mode. At these levels, the tape saturation effects shown in the 200 nWb/m record/playback response for Scotch Master III were not apparent. The general impression was of smooth reproduction, aided no doubt by the flat frequency responses and the low flutter. It would be nice to have mike/line mixing and some things different as indicated earlier, but the AD-6550 cassette deck as it is combines excellent performance with special features of its own.

Howard A. Roberson

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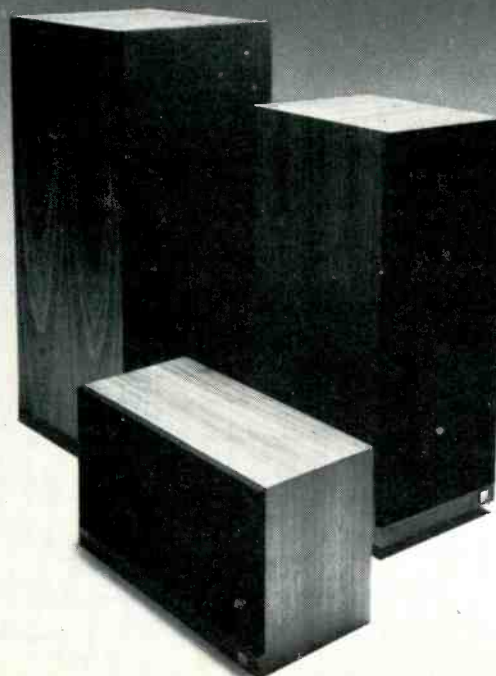
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