



*Conventional transistors are packaged in plastic with prefabricated leads (left). To achieve the shortest possible signal path, Sony uses bare MOS FETs and employs molecular bonding to connect each lead to the circuit board. The bare transistors and their connections are then encapsulated for protection.*

Even the method of attaching the MOS FETs to the circuit board is remarkable. Instead of using conventional, packaged transistors, Sony uses "bare" transistors and molecular bonding. While expensive and time consuming, this approach makes for the shortest possible signal paths. Sony then protects the assembly with encapsulation in a protective compound.

### **Motherboard Topology (STR-DA9000ES)**

To shorten the signal paths and optimize the circuit topology, the STR-DA9000ES uses an internal configuration that's rare in home audio, but common in computers. The receiver features a large motherboard that forms a "floor" and provides interconnections to daughterboards that process the signal. Input signals go directly into an input board, of which one edge is mounted to the back panel and one edge is mounted to the motherboard. Then the input board signal flows through the motherboard to the S-Master Pro power amplifier.

Power supply voltage travels a similar route, from the opposite side. In this way, Sony keeps signal leads to a minimum, protecting the music from the radiation of spurious hum and noise.