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11057 U.S. PTO

PATENT

11036 U.S. PTO
10/421180
04/23/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

<p>Applicant: YIDUO ZHANG et al. Serial No.: To Be Assigned Filed: Herewith For: HEAD SUSPENSION CONFIGURED FOR SOLDER BALL BONDING TO HEAD SLIDER</p>	<p>Docket No. 17310-279128</p>
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Box New Application
Commissioner for Patents
Washington, D.C. 20231

EXPRESS MAIL LABEL NO. EV257249453US
APRIL 23, 2003

TRANSMITTAL LETTER

Enclosed for filing are the following papers in connection with the above-identified patent application:

- New Application consisting of 11 pages Specification; 5 pages Claims (1-25); 1 page Abstract; 10 sheets Drawings (Figures 1-12)
- Combined Declaration and Power of Attorney (3 pages)
- Recordation Form with Assignment (4 pages)
- Credit Card Payment Form in the amount of \$880.00; \$840.00 filing fee and \$40.00 Recordation of Assignment fee.
- Postcard

A self-addressed return postcard in accordance with M.P.E.P. Section 503 itemizing all of the above-referenced documents filed with the United States Patent and Trademark Office.

Applicant requests that the above-noted application not be published under 35 U.S.C. § 122(b). The invention disclosed in the above-noted application has not been and will not be the subject of an application filed in another country or under a multilateral international agreement, that requires publication at eighteen months after filing.



In the event the amount submitted herewith is insufficient in any respect, the Commissioner is hereby authorized to charge the balance needed to our Deposit Account No. 06-0029 and is requested to notify us of the same.

Respectfully Submitted,

YIDUO ZHANG et al.

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Dated: April 23, 2003

M2:20538906.01

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HEAD SUSPENSION CONFIGURED FOR SOLDER BALL BONDING TO
HEAD SLIDER

This application claims the benefit of copending U.S. provisional patent application, Serial No. 60/375,596, filed on April 25, 2002 and entitled
5 HEAD SUSPENSION CONFIGURED FOR SOLDER BALL BONDING TO HEAD SLIDER.

Background of the Invention

Head suspensions are well known and commonly used within dynamic magnetic or optical information storage devices or drives with rigid disks.
10 The head suspension is a component within the disk drive that positions a head slider having a magnetic or optical read/write head over a desired position on the storage media where information is to be retrieved (read) or transferred (written). Head suspensions for use in rigid disk drives typically include a load beam that generates a spring force and that includes a gimbal region or supports a flexure to
15 which a head slider is to be mounted. Head suspensions are normally combined with an actuator arm or E-block to which a mounting region of the load beam is mounted with a base plate so as to position (by linear or rotary movement) the head suspension, and thus the head slider and read/write head, with respect to data tracks of the rigid disk. The rigid disk within a disk drive rapidly spins about an axis, and
20 the head slider is aerodynamically designed to "fly" on an air bearing generated by the spinning disk.

The head suspension typically includes electrical traces that electrically connect the read/write head to control electronics mounted external to the head suspension. The traces may be attached to the components of the head
25 suspension, such as the load beam and/or flexure, or they may be integrally formed with the components. The traces typically terminate in slider bond pads at a distal end of the head suspension in the head slider mounting region. The read/write head is then electrically connected to the traces through bonding of the

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