



US005660909A

**United States Patent** [19]

Tachibana et al.

[11] **Patent Number:** **5,660,909**[45] **Date of Patent:** **\*Aug. 26, 1997**[54] **SHEET FOR MEASURING ULTRASONIC WAVES**[75] Inventors: **Katsuro Tachibana; Shunro Tachibana**, both of Fukuoka-ken, Japan[73] Assignee: **Ekos Corporation**, Bothell, Wash.

[\*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,440,914.

[21] Appl. No.: **530,671**[22] Filed: **Sep. 19, 1995**[30] **Foreign Application Priority Data**

Sep. 22, 1994 [JP] Japan ..... 6-228373

[51] Int. Cl.<sup>6</sup> ..... **B32B 3/02; G01N 29/00**[52] U.S. Cl. .... **428/76; 73/649; 181/139; 367/13; 428/68; 428/69; 428/320.2; 428/321.1; 428/323**[58] **Field of Search** ..... 428/76, 68, 69, 428/323, 320.2, 321.1; 73/1 DV, 649; 367/13; 181/139[56] **References Cited****U.S. PATENT DOCUMENTS**5,342,608 8/1994 Moriya ..... 424/9  
5,440,914 8/1995 Tachibana ..... 73/1 DV*Primary Examiner*—Nasser Ahmad  
*Attorney, Agent, or Firm*—Wilson Sonsini Goodrich & Rosati[57] **ABSTRACT**

A sheet for measuring ultrasonic waves with which it is possible to easily measure a 2-dimensional ultrasonic wave distribution comprises a fluid in which multiple bubbles, each consisting of a minute quantity of gas covered by an extremely thin covering, are dispersed and sealed in a transparent baglike sheet.

**4 Claims, 4 Drawing Sheets**