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1 **Diagnostic Ultrasound: Physics and Equipment, 3rd edition - Book Review**

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23

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28 ISBN-13: 978138892934 (Paperback), £56.00

29

30 The publication of the first edition in 2002, followed by the second edition in 2009, of  
31 this book has been a resounding success. These books enhanced the ultrasound  
32 market by providing a detailed, succinct and applicable account of the physics and  
33 technology underpinning diagnostic ultrasound. Both books have become the  
34 standard introductory text for academics, clinicians, students and trainees throughout  
35 the world.

36

37 After nearly a decade, the need for a text to stretch the mind and imagination of  
38 medical and non-medical ultrasound practitioners (undergraduate and postgraduate  
39 students; and academics and clinicians), in the fundamental principles and  
40 'technological advances', remains. This third edition fits the brief admirably and is  
41 also available as an e-book. It allows the reader to gain a deep and broad  
42 understanding of the physics and technological perspectives. This is probably best  
43 represented by the addition of a new chapter on advanced techniques for imaging  
44 flow, which incorporates and expands upon the previous section on tissue Doppler.

45

46 All chapters have been re-visited and updated successfully, either through the  
47 addition of new figures or updating the bibliography. As before, all chapters include  
48 clear subheadings; ultrasound images of diagnostic quality, in grey-scale and colour;  
49 schematic diagrams; appropriate equations and a comprehensive bibliography. The  
50 editors have written with clarity and brevity on topics such as 'developments in

51 transducer technology' and 'recent developments in beam forming of array probes'.  
52 While the chapters on 3D ultrasound, contrast agents and elastography now  
53 describe the state of the art technology for clinical practice and the future potential  
54 for these modalities. A valuable learning aid is all chapters include questions and the  
55 model answers are provided at the end of the book. The appendices provide useful  
56 material on general topics integral to the field of ultrasound such as the decibel, the  
57 binary system, along with updated British Medical Ultrasound Society (BMUS)  
58 scanning guidelines. Multimedia elements might benefit from supplementary online  
59 materials particularly in the form of videos to capture the fourth dimension of  
60 ultrasound imaging: time.

61

62 This excellent textbook serves as a reference volume, which fulfils a major role in the  
63 diagnostic ultrasound field. This book is an important contribution to the education  
64 and instruction of any ultrasound practitioner. Continuing education is necessary  
65 given the type of professions and disciplines who will use this textbook, for the next  
66 ten years and beyond. We recommend you use this source in your educational  
67 programs.