Library of Congress Cataloging-in-Publication Data

Electrical measurements, signal processing, and displays / John G. Webster, editor-in-chief.

p. cm. -- (Principles and applications in engineering) Includes bibliographical references and index.

ISBN 0-8493-1733-9 (alk. paper)

1. Electronic measurements. 2. Electric measurements. 3. Signal processing. I. Webster, John G., 1932- II. Series.

TK7878.E435 2003 621.3815'48—dc21

2003048530

This book contains information obtained from authentic and highly regarded sources. Reprinted material is quoted with permission, and sources are indicated. A wide variety of references are listed. Reasonable efforts have been made to publish reliable data and information, but the author and the publisher cannot assume responsibility for the validity of all materials or for the consequences of their use.

Neither this book nor any part may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, microfilming, and recording, or by any information storage or retrieval system, without prior permission in writing from the publisher.

All rights reserved. Authorization to photocopy items for internal or personal use, or the personal or internal use of specific clients, may be granted by CRC Press LLC, provided that \$1.50 per page photocopied is paid directly to Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923 U.S. The fee code for users of the Transactional Reporting Service is ISBN 0-8493-1733-9/04/\$0.00+\$1.50. The fee is subject to change without notice. For organizations that have been granted a photocopy license by the CCC, a separate system of payment has been arranged.

The consent of CRC Press LLC does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific permission must be obtained in writing from CRC Press LLC for such copying.

Direct all inquiries to CRC Press LLC, 2000 N.W. Corporate Blvd., Boca Raton, Florida 33431.

Trademark Notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation, without intent to infringe.

Visit the CRC Press Web site at www.crcpress.com

© 2004 by CRC Press LLC

No claim to original U.S. Government works
International Standard Book Number 0-8493-1733-9
Library of Congress Card Number 2003048530
Printed in the United States of America 1 2 3 4 5 6 7 8 9 0
Printed on acid-free paper