

# Bmw N20 Manual

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*Microsoft Excel 2010* Wayne L. Winston 2011 An award-winning business professor and corporate consultant shares the best of his real-world experience in this practical, scenario-focused guide--

fully updated for Excel 2010.

[Memoirs of a Hack Mechanic](#) Rob Siegel 2013 For over 25 years Rob Siegel has written a monthly column called "The Hack Mechanic" for the BMW Car Club of America's magazine Roundel. In

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Memoirs of a Hack Mechanic, Rob Siegel shares his secrets to buying, fixing, and driving cool cars without risking the kids' tuition money or destroying his marriage. And that's something to brag about considering the dozens of cars, including twenty-five BMW 2002s, that have passed through his garage over the past three decades. With a steady dose of irreverent humor, Memoirs of a Hack Mechanic blends car stories, DIY advice, and cautionary tales in a way that will resonate with the car-obsessed (and the people who love them).

**Porsche 911 (Type 996) Service Manual 1999, 2000, 2001, 2002, 2003, 2004 2005** Bentley Publishers 2012

The full-color Porsche 911 Carrera (Type 996) Service Manual: 1999-2005 is a comprehensive source of service information and specifications for Porsche 911 (Type 996) Coupe, Targa and Convertible models from 1999 to 2005. The aim throughout this manual has been simplicity and

clarity, with practical explanations, step-by-step procedures and useful specifications. Whether you're a professional or a do-it-yourself Porsche owner, this manual will help you understand, care for and repair your Porsche. Engines covered: 1999-2001: 3.4 liter (M96.01, M96.02, M96.04) 2002-2005: 3.6 liter (M96.03) Transmissions covered: G96 (6-speed manual) A96 (5-speed automatic)

**BMW X3 (E83) Service Manual: 2004, 2005, 2006, 2007, 2008, 2009, 2010: 2.5i, 3.0i, 3.0si, Xdrive 30i**  
Bentley Publishers 2015-01-26 The BMW X3 (E83) Service Manual: 2004-2010 contains in-depth maintenance, service and repair information for the BMW X3 from 2004 to 2010. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW.

Engines covered: M54 engine: 2.5i, 3.0i (2004-2006)

N52 engine: 3.0si, xDrive 30i (2007-2010)

Transmissions covered: Manual: ZF GS6-37BZ (6-speed) Automatic: GM A5S390R (5-speed)

Automatic: GM GA6L45R (6-speed)

BMW E30 3 Series Ralph Hosier 2012-11-13 Having

this book in your pocket is just like having a real marque expert at your side. Benefit from Ralph Hosier's years of BMW experience, learn how to spot a bad car quickly, and how to assess a promising one like a true professional. Get the right car at the right price!

Bioenergy Production by Anaerobic Digestion

Nicholas Korres 2013-08-29 Interest in anaerobic digestion (AD), the process of energy production through the production of biogas, has increased rapidly in recent years. Agricultural and other organic waste are important substrates that can be treated by AD. This book is one of the first to

provide a broad introduction to anaerobic digestion and its potential to turn agricultural crops or crop residues, animal and other organic waste, into biomethane. The substrates used can include any non-woody materials, including grass and maize silage, seaweeds, municipal and industrial wastes.

These are all systematically reviewed in terms of their suitability from a biological, technical and economic perspective. In the past the technical competence and high capital investment required for industrial-scale anaerobic digesters has limited their uptake, but the authors show that recent advances have made smaller-scale systems more viable through a greater understanding of optimising bacterial metabolism and productivity.

Broader issues such as life cycle assessment and energy policies to promote AD are also discussed.

Porsche 911 Carrera (Type 993) Service Manual 1995, 1996, 1997 1998 Bentley Publishers 2013

"Service and repair information for Porsche 911 vehicles, Type 993, applicable to model years 1995, 1996, 1997, and 1998"--

**The Hasselblad Manual** Ernst Wildi 2012-09-10  
Discover the great advantages and benefits of working in the medium film format or with the large digital sensor units in Hasselblad digital cameras and digital backs. Presented in an easily accessible format, this book shows the working and manipulation of the various cameras. Detailed illustrations dissect the equipment and provide insight into the ways in which these superb cameras and lenses are best utilized to create professional quality images. This edition of the Manual will bring you up to date with the latest features available within the popular Hasselblad camera systems emphasizing that camera and lens are the most important tools for creating exciting images whether you work digitally or with film.

The complete Hasselblad camera system is discussed by renowned author and Hasselblad insider, Ernst Wildi, who provides a solid foundation of both traditional photography and digital capture techniques. Inside you'll also find inspiring photographs from well-known photographers, illustrating a variety of photographic techniques using a Hasselblad camera.

[BMW 4 Series \(F32, F33, F36\) Service Manual](#)  
Robert Bentley 2017-01-11 The BMW 4 Series Service Manual: 2014-2016 contains in-depth maintenance, service and repair information for the BMW 4 Series from 2014 to 2016. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your 4 Series. The do-it-yourself BMW owner will

find this manual indispensable as a source of detailed maintenance and repair information. Even if you have no intention of working on your vehicle, you will find that reading and owning this manual makes it possible to discuss repairs more intelligently with a professional technician. Features: \*Maintenance procedures from changing the cabin microfilter to replacing and registering a new battery. This manual tells you what to do and how and when to do it. \*Front-to-rear fluid and lubricant service, including xDrive transfer case fluid and ATF. \*Cylinder head cover gasket and crankshaft seal replacement. \*Cooling system, thermostat and radiator service. \*Gasoline fuel and ignition system diagrams and explanations for turbo-valvetronic-direct injection (TVDI) engines. \*Service and repair information on BMW EfficientDynamics technology, such as Valvetronic, xDrive, TwinPower turbo, and DSC (dynamic

stability control). \*Twin scroll (gasoline) turbocharger replacement for 4- and 6-cylinder engines. \*Step-by-step variable camshaft timing (VANOS) service. \*Suspension repairs, including wheel bearing replacement. \*Brakes, steering and ABS troubleshooting and repair. \*Heating and air-conditioning repair, including A/C component replacement. \*Body and lid repairs and adjustments, including Gran Coupe tailgate and rear doors. \*Retractable hardtop service, including electrical, mechanical and hydraulic component operation, locations and replacement. \*Electrical system service, with an easy-to-use illustrated component locator section. \*Comprehensive wiring schematics, including fuses and grounds. \*BMW OBD II diagnostic trouble codes, SAE-defined OBD II P-codes, as well as basic scan tool operation. \*BMW factory tolerances, wear limits, adjustments and tightening torques. Engines: \*N20 engine: 428i,

including xDrive\*N26 (SULEV) engine: 428i  
including xDrive\*N55 engine: 435i, including  
xDriveManual transmissions:\*GS6-17BG (4-cylinder  
models)\*GS6-45BZ (6-cylinder models,  
RWD)\*GS6X-45BZ (6-cylinder models, with  
xDrive)Automatic transmissions:\*ZF GA8HP45Z

Study and Master Accounting Grade 11 Teacher's  
Guide Elsabe Conradie 2006-11-01 Study & Master  
Accounting was developed with the help of  
practising teachers, and covers all the requirements  
of the National Curriculum Statement for  
accounting.

**The Hack Mechanic Guide to European Automotive  
Electrical Systems** Rob Siegel 2016-06-27 Electrical  
issues in European cars can be intimidating. The  
Hack Mechanic Guide to European Automotive  
Electrical Systems shows you how to think about  
electricity in your car and then take on real-world  
electrical problems. The principles discussed can be

applied to most conventional internal-combustion-  
engined vehicles, with a focus on European cars  
spanning the past six decades. Drawing on The Hack  
Mechanic's wisdom and experience, the 38 chapters  
cover key electrical topics such as battery, starter,  
alternator, ignition, circuits, and relays. Through a  
practical and informal approach featuring hundreds  
of full-color illustrations, author Rob Siegel takes the  
fear-factor out of projects like making wire repairs,  
measuring voltage drops, or figuring out if you  
have a bad fuel pump relay. Essential tools such as  
multimeters (DVOM), oscilloscopes, and scan tools are  
discussed, with special attention given to the  
automotive multimeter needed to troubleshoot  
many modern sensors. You'll get step-by-step  
troubleshooting procedures ranging from safely  
jump starting a battery to diagnosing parasitic  
current drain and vehicle energy diagnosis. And  
you'll find detailed testing procedures for most

problematic electrical components on your European car such as oxygen sensors, crankshaft and camshaft sensors, wheel speed sensors, fuel pumps, solenoids, and actuators. Reading wiring diagrams and decoding the German DIN standard are also covered. Whether you are a DIY mechanic or a professional technician, *The Hack Mechanic Guide to European Automotive Electrical Systems* will increase your confidence in tackling automotive electrical problem-solving. This book applies to gasoline and diesel powered internal combustion engine vehicles. Not intended for hybrid or electric vehicles.

**Competing for Advantage** Robert E. Hoskisson  
2012-07-26 Discover what it takes to create a sustainable competitive advantage in management and business today with this straightforward, powerful strategic management resource. *COMPETING FOR ADVANTAGE, 3E* focuses

specifically on the issues most important to today's current or future practitioner. The book details the processes and tools you need to better understand and effectively contribute to your organization's strategic management process. Applied examples illustrate the latest thinking, practices, and research in strategic management today with in-depth discussions that examine critical topics such as innovation, professional service and crisis management. Access to relevant cases, a focus on the emerging issues such as ethics, and an emphasis on technology throughout prepare you for success in the fast-paced, ever-changing global economy in which today's firms compete. Take your students to a new level of understanding strategic management concepts and practices with *COMPETING FOR ADVANTAGE, 3E*. Straightforward, focused, and concise, this edition presents the latest strategic management research and practices, now with

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more in-depth discussions of the most current strategic topics in business today. Detailed real-life examples and instant access to relevant cases keep the book focused on issues most important to current or future practitioners. Crafted to meet the special needs to MBA and executive MBA students, the book details the processes and tools used in strategic analysis to create a sustainable competitive advantage. Full chapters on strategic leadership, corporate governance, and a new chapter on real options examine issues most critical in today's business environment. Comprehensive new instructor support with electric solutions help you effectively prepare a powerful course that addressed traditional and relevant emerging topics that are shaping strategic management today. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

**BMW 5 Series Service Manual** Bentley Publishers  
2010-01-01 The BMW 5 Series (E60, E61) Service Manual: 2004-2010 contains in-depth maintenance, service and repair information for the E60 and E61 platform BMW 5 Series models from 2004 to 2010. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW. Models covered 525i and 530i \* M54 engine (2004-2005) \* N52 engine (2006-2007) 528i \* N52K engine (2008-2010) 535i \* N54 twin turbo engine (2008-2010) 545i \* N62 V8 engine (2004-2005) 550i \* N62 TU V8 engine (2006-2010)  
**Mechanical Ignition Handbook** Rob Siegel 2017  
Mechanically timed ignition is easy to understand and wonderfully straightforward to diagnose and repair, which is good because it's one of the most

likely things on an older car to die and leave you in the lurch. Rob Siegel--better known as the Hack Mechanic-- explains how mechanical ignition works and discusses in detail how to set timing and advance. There is also a full chapter on troubleshooting mechanical ignition problems. Illustrated with over 100 photos and diagrams and supported by clear, step-by-step instructions, the Mechanical Ignition Handbook features sections on:

- \*mechanical ignition basics and components
- \*common repairs and recommended tools
- \*adjusting point gap
- \*setting dwell angle
- \*locating the timing mark
- \*finding top dead center
- \*setting static and dynamic ignition timing
- \*using both a standard and an advance timing light
- \*testing coil resistance

**Retrofitting breakerless electronic ignition** (for those who say "enough!") Applies to vintage cars from the 1950s up through the mid 1980s that have either points and

breakers or mechanical ignition advance, including: Porsche 356, Mechanically-timed Porsche 911, BMW 1600, BMW 2002, Ferrari 365, MGB, Austin-Healey Sprite, Jaguar E-Type, Triumph Spitfire, Triumph TR3, Mercedes models including the Mercedes 190 SL, Volkswagen Beetle, early Volvo, Pontiac GTO, vintage Chevrolet Camaro and other American muscle cars.

[The Complete Book of BMW](#) Tony Lewin  
[Elements of Gas Turbine Propulsion](#) Jack D.

Mattingly 2005-01-01 This text provides an introduction to gas turbine engines and jet propulsion for aerospace or mechanical engineers. The text is divided into four parts: introduction to aircraft propulsion; basic concepts and one-dimensional/gas dynamics; parametric (design point) and performance (off-design) analysis of air breathing propulsion systems; and analysis and design of major gas turbine engine components

(fans, compressors, turbines, inlets, nozzles, main burners, and afterburners). Design concepts are introduced early (aircraft performance in introductory chapter) and integrated throughout. Written with extensive student input on the design of the book, the book builds upon definitions and gradually develops the thermodynamics, gas dynamics, and gas turbine engine principles.

**Making Choices about Hydrogen** Lynn Krieger Mytelka 2008 Since the mid-1990s, the emergence of hydrogen economy and the speed with which it will arrive have been vigorously debated. As a disruptive technology, dominant designs for the production, storage and distribution of hydrogen have not yet been established. Not have performance characteristics been achieved to compete with the existing combustion engine, though the efficiency and durability of hydrogen fuel cells are improving. This publication highlights

the uncertainties involved in making choices about hydrogen and fuel cells in planning the development policies on national energy, environment and transport sector.

*Service-Oriented Computing* Munindar P. Singh 2006-02-22 This comprehensive text explains the principles and practice of Web services and relates all concepts to practical examples and emerging standards. Its discussions include: Ontologies Semantic web technologies Peer-to-peer service discovery Service selection Web structure and link analysis Distributed transactions Process modelling Consistency management. The application of these technologies is clearly explained within the context of planning, negotiation, contracts, compliance, privacy, and network policies. The presentation of the intellectual underpinnings of Web services draws from several key disciplines such as databases, distributed computing, artificial intelligence, and

multi-agent systems for techniques and formalisms. Ideas from these disciplines are united in the context of Web services and service-based applications. Featuring an accompanying website and teacher's manual that includes a complete set of transparencies for lectures, copies of open-source software for exercises and working implementations, and resources to conduct course projects, this book makes an excellent graduate textbook. It will also prove an invaluable reference and training tool for practitioners.

**Common Sense** Thomas Paine 2011-06-01 Addressed to the Inhabitants of America, on the Following Interesting Subjects, viz.: I. Of the Origin and Design of Government in General, with Concise Remarks on the English Constitution. II. Of Monarchy and Hereditary Succession. III. Thoughts on the Present State of American Affairs. IV. Of the Present Ability of America, with some

Miscellaneous Reflections

**Advanced Engine Diagnostics** Avinash Kumar Agarwal 2018-11-07 This book describes the discusses advanced fuels and combustion, emission control techniques, after-treatment systems, simulations and fault diagnostics, including discussions on different engine diagnostic techniques such as particle image velocimetry (PIV), phase Doppler interferometry (PDI), laser ignition. This volume bridges the gap between basic concepts and advanced research in internal combustion engine diagnostics, making it a useful reference for both students and researchers whose work focuses on achieving higher fuel efficiency and lowering emissions.

**Road & Track** 1972

Mathematics & Science in the Real World 2000  
*Automobile Electrical and Electronic Systems* Tom Denton 2017-09-12 This textbook will help you

learn all the skills you need to pass all Vehicle Electrical and Electronic Systems courses and qualifications. As electrical and electronic systems become increasingly more complex and fundamental to the workings of modern vehicles, understanding these systems is essential for automotive technicians. For students new to the subject, this book will help to develop this knowledge, but will also assist experienced technicians in keeping up with recent technological advances. This new edition includes information on developments in pass-through technology, multiplexing, and engine control systems. In full colour and covering the latest course specifications, this is the guide that no student enrolled on an automotive maintenance and repair course should be without. Designed to make learning easier, this book contains: Photographs, flow charts, quick reference tables, overview descriptions and step-by-

step instructions. Case studies to help you put the principles covered into a real-life context. Useful margin features throughout, including definitions, key facts and 'safety first' considerations.

**Shi'ite Lebanon** Roschanack Shaery-Eisenlohr 2011  
Annotation By providing a new framework for understanding Shi'ite national politics in Lebanon, Roschanack Shaery-Eisenlohr recasts the relationship between religion and nationalism in the Middle East.

BMW 5 Series (E60, E61) Service Manual: 2004, 2005, 2006, 2007, 2008, 2009, 2010: 525i, 525xi, 528i, 528xi, 530i, 530xi, 535i, 535xi, 545i, 550i Bentley Publishers 2011-09-23 The BMW 5 Series (E60, E61) Service Manual: 2004-2010 contains in-depth maintenance, service and repair information for the BMW 5 Series from 2004 to 2010. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and

accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW. discuss repairs more intelligently with a professional technician. Models covered 525i and 530i \* M54 engine (2004-2005) \* N52 engine (2006-2007) 528i \* N52K engine (2008-2010) 535i \* N54 twin turbo engine (2008-2010) 545i \* N62 V8 engine (2004-2005) 550i \* N62 TU V8 engine (2006-2010)

### **Trying to See Round Corners** Reg Morris

2021-06-24 This offers honest and largely unedited glimpses into the world of social work of 40 years or so ago. Illustrated by the professional practice of one Colin Millwood, an enthusiastic but otherwise green social worker, it coincides with the early beginnings of his arrival at his local Social Services Department.

Traffic Congestion Alberto Bull 2003

### **BMW 5 Series (E39) Service Manual 1997-2002, Volume 2: 525i, 528i, 530i, 540i, Sedan, Sport Wagon**

Robert Bentley Publishers 2003-10-01 The ultimate service manuals! Bentley manuals are the only comprehensive, single source of service information and specifications available for BMW cars. These manuals provide the highest level of clarity and completeness for all service and repair procedures. Enthusiasts, do-it-yourselfers, and professional technicians will appreciate the quality of photographs and illustrations, theory of operation, and accurate step-by-step instructions. If you are looking for better understanding of your BMW, look no further than Bentley. Even if you do not repair your own vehicle, knowledge of its internal workings will help you when discussing repairs and maintenance with your professional automotive technician. This Bentley Manual is the only comprehensive, single source of service information

and specifications available specifically for BMW 5 Series from 1997 to 2002. The aim throughout this manual has been simplicity, clarity and completeness, with practical explanations, step-by-step procedures and accurate specifications. Whether you are a professional or a do-it-yourself BMW owner, this manual will help you understand, care for and repair your E39 5 Series. Though the do-it-yourself BMW owner will find this manual indispensable as a source of detailed maintenance and repair information, the BMW owner who has no intention of working on his or her car will find that reading and owning this manual will make it possible to discuss repairs more intelligently with a professional technician.

Autocar 2004

*Motoring the Future* Engelbert Wimmer  
2011-11-30 The crisis in the auto industry has resulted in a race between Volkswagen, as

challenger, and Toyota, as tattered global market leader. Whether it is the German or the Japanese firm that takes pole position, the winner will change the balance of power in the automotive industry and lead the way to the automobiles of the future.

### **A Series of Original Portraits and Caricature**

**Etchings** John Kay 1838

**Machine Learning** Jason Bell 2020-03-10 Dig deep into the data with a hands-on guide to machine learning with updated examples and more! **Machine Learning: Hands-On for Developers and Technical Professionals** provides hands-on instruction and fully-coded working examples for the most common machine learning techniques used by developers and technical professionals. The book contains a breakdown of each ML variant, explaining how it works and how it is used within certain industries, allowing readers to incorporate

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the presented techniques into their own work as they follow along. A core tenant of machine learning is a strong focus on data preparation, and a full exploration of the various types of learning algorithms illustrates how the proper tools can help any developer extract information and insights from existing data. The book includes a full complement of Instructor's Materials to facilitate use in the classroom, making this resource useful for students and as a professional reference. At its core, machine learning is a mathematical, algorithm-based technology that forms the basis of historical data mining and modern big data science. Scientific analysis of big data requires a working knowledge of machine learning, which forms predictions based on known properties learned from training data. Machine Learning is an accessible, comprehensive guide for the non-mathematician, providing clear guidance that allows readers to: Learn the languages

of machine learning including Hadoop, Mahout, and Weka Understand decision trees, Bayesian networks, and artificial neural networks Implement Association Rule, Real Time, and Batch learning Develop a strategic plan for safe, effective, and efficient machine learning By learning to construct a system that can learn from data, readers can increase their utility across industries. Machine learning sits at the core of deep dive data analysis and visualization, which is increasingly in demand as companies discover the goldmine hiding in their existing data. For the tech professional involved in data science, Machine Learning: Hands-On for Developers and Technical Professionals provides the skills and techniques required to dig deeper.

**Study and Master Accounting Grade 11 CAPS**

**Study Guide** Elsabe Conradie 2014-08-21

**Principles and Practice of Anesthesia for Thoracic**

**Surgery** Peter Slinger, MD, FRCPC 2011-07-12

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Principles and Practice of Anesthesia for Thoracic Surgery will serve as an updated comprehensive review covering not only the recent advances, but also topics that haven't been covered in previously published texts: extracorporeal ventilatory support, new advances in chest imaging modalities, lung isolation with a difficult airway, pulmonary thrombo-endarterectomy, and chronic post-thoracotomy pain. Additionally, the book features clinical case discussions at the end of each clinical chapter as well as tables comprising detailed anesthetic management.

*The Motor* 1986

**Lean Auto Body** Chris A. Ortiz 2017-02-28 Take your business to a new level with this comprehensive, Auto Body Repair industry specific implementation guide. By adapting the techniques of Lean manufacturing for the Auto Collision Industry, Mr. Ortiz guides you through the steps

necessary to turn your shop into a Lean place of business. Lean Auto Body sets the stage for a sustainable Lean improvement by not only discussing, but showing examples of wastes, flow, and visual cues within the shop in an easy to understand manner.

**A Handbook on Sustainable Urban Mobility and Spatial Planning** Economic Commission for Europe 2020-10-29 This publication has been designed to assist member States in integrating transport, health, quality of life and environmental objectives into urban and spatial planning policies. It provides many references to case studies, good practices and examples from cities across the Euro-Asian region (and beyond) covering a wide array of thematic areas, including: the future of sustainable urban mobility; spatial planning in function of sustainable urban mobility and accessibility; public transport planning as a cornerstone of sustainable urban

mobility; active mobility and how it promotes health and the environment; and the potential of Intelligent Transport Systems in an urban context. The publication puts forward a methodology for sustainable urban transport planning and introduces a concise set of key messages and recommendations as an input to the Fifth High-level Meeting on Transport, Health and Environment which takes place in Vienna from 26-27 November 2020.

**BMW 3-Series (E30) Performance Guide** Robert Bowen 2013-02-15 The model that truly launched BMW into the performance arena in the United States were the second generation of 3-series cars. Today, the E30 family of BMWs are both readily affordable, and are popular with enthusiasts wanting to personalize them.

**BMW 3 Series (F30, F31, F34) Service Manual: 2012, 2013, 2014, 2015: 320i, 328i, 328d, 335i, Including Xdrive** Bentley Publishers 2016-02-16  
The BMW 3 Series (F30, F31, F34) Service Manual: 2012-2015 contains in-depth maintenance, service and repair information for the BMW 3 Series from 2012 to 2015. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your 3 Series. Engines (Gasoline): N20 engine: 320i, 328i, including xDrive N26 (SULEV) engine: 328i including xDrive N55 engine: 335i, including xDrive  
District Hospitals 1996