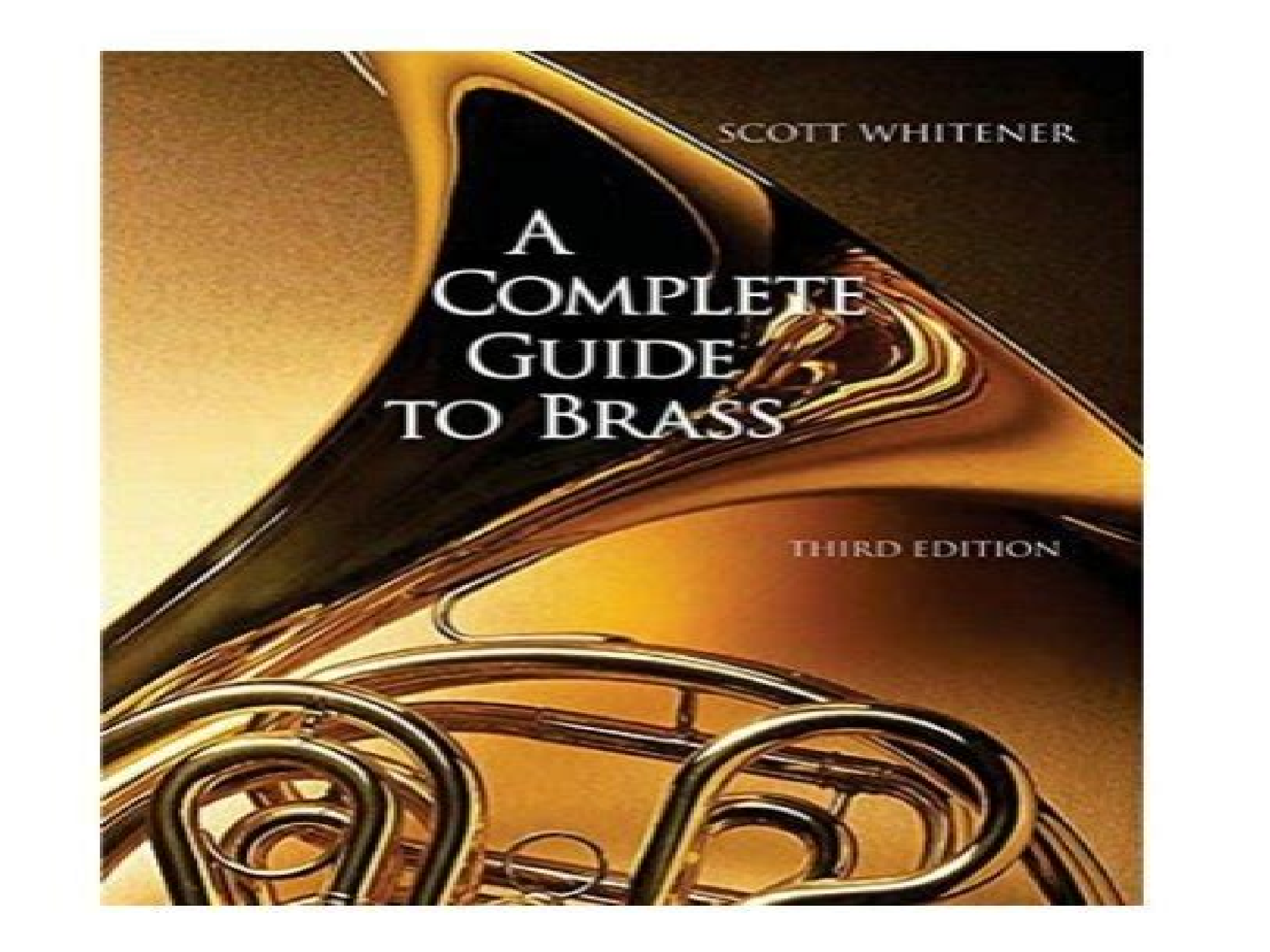




SCOTT WHITENER

A COMPLETE GUIDE TO BRASS

THIRD EDITION

Complete Guide Brass Instruments Technique

Scott Whitener, Cathy L. Whitener



Complete Guide Brass Instruments Technique:

A Complete Guide to Brass Scott Whitener, 1990 Presents up to date and detailed information on brass instruments together with a practical approach to learning to play The present work serves as a text in college brass methods courses to prepare teachers of instrumental music

A Complete Guide to Brass Scott Whitener, Cathy L. Whitener, 2006 provides all the pedagogical historical and technical material necessary for the successful instruction of brass Chapters discuss the historical development of individual brass instruments and focus on technique including guidance for teachers and a complete method for brass playing Individual instrument chapters include lists of recommended study material and reference sources An audio CD of concert hall recordings of all the exercises in the book is new to this edition from publisher description

A Complete Guide to Brass Scott Whitener, 1997 This book is the first to combine detailed technical historical acoustical and pedagogical information and material in one volume Presenting an accurate and up to date overview of the field the author documents the historical development of major brass instruments in a unique cross referenced format The book is organized in two parts chapters 1-9 discuss individual brass instruments and their historical development the remaining five chapters focus on technique including guidance for teachers of brass instruments as well as a complete method of brass playing Such topics as embouchure formation the use of the airstream common tone production problems and instrument care are covered in depth and in detail Individual chapters for each instrument include lists of recommended repertoire for study and importance reference books It provides numerous musical examples and exercises including 200 unison studies and easy ensembles 15 progressive ensemble pieces for class use and 50 studies for individual practice for each instrument In addition to its comprehensive text the book is generously illustrated with numerous photographs and drawings that demonstrate good embouchure formation and playing position for each instrument The second edition has been revised and updated throughout and includes the following new features in particular a complete rewritten and expanded discussion of tone production incorporating results of the latest research revised and expanded discussion of mouthpiece design new material on teaching brass instruments to beginners expanded coverage of the acoustics of brass instruments updated discography bibliography and list of sources for instruments music and information

Guide to the Euphonium Repertoire R. Winston Morris, Lloyd E. Bone, Jr., Eric Paull, 2007-03-01 Guide to the Euphonium Repertoire is the most definitive publication on the status of the euphonium in the history of this often misunderstood and frequently under appreciated instrument This volume documents the rich history the wealth of repertoire and the incredible discography of the euphonium Music educators composers arrangers instrument historians performers on other instruments and students of the euphonium baritone horn tenor tuba etc will find the exhaustive research evident in this volume's pages to be compelling and comprehensive Contributors are Lloyd Bone Brian L Bowman Neal Corwell Adam Frey Marc Dickman Bryce Edwards Seth D Fletcher Carroll Gotcher Atticus Hensley Lisa M Hocking Sharon Huff Kenneth R Kroesche R Winston Morris John

Mueller Michael B O Connor Eric Paull Joseph Skillen Kelly Thomas Demondrae Thurman Matthew J Tropman and Mark J Walker **Complete Guide to Brass : Instruments and Technique** Scott Whitener, A Dictionary for the Modern Trumpet Player Elisa Koehler,2015-03-01 Titles in Dictionaries for the Modern Musician series offer both the novice and the advanced artist key information designed to convey the field of study and performance for a major instrument or instrument class as well as the workings of musicians in areas from conducting to composing Unlike other encyclopedic works contributions to this series focus primarily on the knowledge required by the contemporary musical student or performer Each dictionary covers topics from instrument parts to playing technique and major works to key figures A must have for any musician s personal library Trumpeters today perform a vast repertoire of musical material spanning 500 years much of it in a variety of styles and even on a number of related instruments In A Dictionary for the Modern Trumpet Player scholar and performer Elisa Koehler has created a key reference work that addresses all of the instruments in the high brass family providing ready answers to issues that trumpeters conductors and musicians commonly and sometimes not so commonly encounter Drawing on a broad range of scholarly sources A Dictionary for the Modern Trumpet Player includes entries on historic instruments like the cornetto keyed bugle and slide trumpet jazz trumpet techniques mutes and accessories and ancient ancestors of the trumpet and related non Western instruments In addition to its concise and detailed definitions this work includes biographies of prominent performers teachers instrument makers and composers of trumpet solo and ensemble literature often omitted from other musical references Carefully labeled illustrations illuminate the inner workings of various valve mechanisms allowing readers to visualize the more technical points of high brass instruments Appendixes include a time line of trumpet history a survey of valve mechanisms a list of prominent excerpts from the orchestral and operatic repertoire and an extensive bibliography From quick definitions of confusing terms in a musical score to an in depth overview of trumpet history A Dictionary for the Modern Trumpet Player is an ideal reference for students professionals and music lovers *Practical Guide to Microphone Techniques* Testi Creativi,2024-03-06 Microphone Techniques Practical Guide for Sound Technicians If you dream of becoming an expert in the magical art of microphone techniques this manual is your passport to the fascinating world of sound Microphone Techniques Practical Guide for Sound Technicians is a comprehensive book that guides you through advanced microphone techniques both in live concerts and recording studios What You ll Find in This Manual This book is more than just a guide it s your personal mentor on the journey to success as a sound technician specializing in microphone techniques Every page is filled with detailed instructions practical examples and concrete techniques to help you master this captivating profession Learn from Scratch and Become an Expert Even if you start from scratch this manual provides you with a solid foundation explaining the fundamentals of microphone techniques clearly and accessibly You will learn to use specialized equipment understand microphone characteristics and master positioning techniques for each musical instrument Advanced Techniques with Detailed Examples From recording techniques

in acoustically complex environments to the secrets of perfectly positioning microphones for various sound sources this manual guides you through advanced techniques with practical and detailed examples Get hands on and learn winning strategies directly from industry professionals Practical Applications for the Craft This manual goes beyond providing theoretical knowledge Instead it immerses you in the real life experiences of a sound technician offering practical applications to tackle everyday challenges Get ready to handle unwanted feedback during a concert solve interference issues and achieve top notch recordings Essential Accessories and Perfect Setup Discover essential accessories for microphone techniques and learn how to prepare the perfect setup for both a live concert and a studio recording session From choosing cables to managing background noise this manual provides everything you need to achieve extraordinary results The Future of Microphone Techniques Advanced Technologies and Innovative Perspectives Furthermore explore the exciting future of microphone techniques from advanced technologies to innovative perspectives Tune in to what the world of microphone techniques will offer in the coming years and get ready to be part of this evolution If you re ready to turn your passion for sound into an exciting career Microphone Techniques Practical Guide for Sound Technicians is your compass Buy now and start your journey to success in microphone techniques Buy Now and Begin Your Adventure in the World of Microphone Techniques

Starting Out Right Si Millican, 2012-08-09 Starting Out Right Beginning Band Pedagogy is the only complete resource for organizing planning and teaching beginning woodwind brass and percussion students The book covers every aspect of teaching beginning band students from the first sounds on the instruments through the first full band performances It is the only comprehensive reference that offers step by step guidelines for teaching each beginning band instrument as well as organizing and running a successful beginning band program Based on the public school teaching experience of the author the book is designed for use in undergraduate methods and pedagogy classes as well as for clinics and workshops at the undergraduate and graduate levels This book is also designed to be a reference for the many novice teachers who lead beginning bands or those teachers whose expertise is not in the band realm While the focus of the book is on teaching beginning band much of the book can be of use to band instructors at any grade level The book is divided into several parts which cover the sound to sign to theory approach to teaching musical literacy child development as it relates to teaching music recruiting and retaining students developing fundamental sounds and skills on each woodwind brass and percussion instrument teaching students to read tonal and rhythmic music notation and selecting and rehearsing beginning band solo ensemble and full band music The book also addresses curriculum design scheduling and staffing of band programs Ideas about managing student records inventory and equipment are also given special attention Written in a casual narrative style the book features real world examples of how the principles in the book might be applied to actual teaching situations Another special feature of the book is a set of early field experience application exercises Starting Out Right guides readers as they explore a comprehensive individual and ensemble approach to teaching each woodwind brass and percussion

instrument **The Teaching of Instrumental Music** Richard Colwell, Michael Hewitt, 2015-08-20 This book introduces music education majors to basic instrumental pedagogy for the instruments and ensembles most commonly found in the elementary and secondary curricula This text focuses on the core competencies required for teacher certification in instrumental music The first section of the book focuses on essential issues for a successful instrumental program objectives assessment and evaluation motivation administrative tasks and recruiting and scheduling including block scheduling The second section devotes a chapter to each wind instrument plus percussion and strings and includes troubleshooting checklists for each instrument The third section focuses on rehearsal techniques from the first day through high school

The Theorist's Toolbox: A Comprehensive Guide to Music Fundamentals Pasquale De Marco, Music theory is the foundation of musical knowledge providing a framework for understanding and creating music This comprehensive guide offers a thorough exploration of the essential elements of music theory from the basics to advanced concepts Whether you are a beginner musician seeking to build a solid foundation or an experienced composer looking to refine your skills this book will serve as an invaluable resource It covers a wide range of topics including The fundamentals of music theory including scales chords and rhythm Harmony building blocks such as chord construction progression and diatonic harmonization Counterpoint essentials including two voice writing and nonharmonic tones Melodic development techniques such as creating memorable melodies and using ornamentation Orchestration and arranging principles including instrument families and blending timbres Music analysis techniques such as Schenkerian analysis and harmonic analysis Advanced harmonic concepts such as extended chords and polychords Composition techniques such as developing musical ideas and utilizing instrumentation Music technology for theorists including digital audio workstations and algorithmic composition With numerous examples and exercises throughout this book provides a practical approach to learning and applying music theory It is an indispensable guide for composers performers teachers and music enthusiasts alike Key Features Comprehensive coverage of all essential music theory topics Clear and concise explanations with numerous examples Exercises to reinforce concepts and develop skills In depth exploration of advanced topics such as extended chords and counterpoint Discussion of the role of music technology in theory and composition This book is your key to unlocking the mysteries of music theory With its comprehensive coverage and practical approach it will empower you to understand analyze and create music with greater confidence and skill If you like this book write a review

Decoding **Complete Guide Brass Instruments Technique**: Revealing the Captivating Potential of Verbal Expression

In a time characterized by interconnectedness and an insatiable thirst for knowledge, the captivating potential of verbal expression has emerged as a formidable force. Its power to evoke sentiments, stimulate introspection, and incite profound transformations is genuinely awe-inspiring. Within the pages of "**Complete Guide Brass Instruments Technique**," a mesmerizing literary creation penned with a celebrated wordsmith, readers attempt an enlightening odyssey, unraveling the intricate significance of language and its enduring affect our lives. In this appraisal, we shall explore the book is central themes, evaluate its distinctive writing style, and gauge its pervasive influence on the hearts and minds of its readership.

http://antonioscollegestation.com/data/virtual-library/Download_PDFS/ccss%20ela%20pacing%20guide%206th%20grade.pdf

Table of Contents **Complete Guide Brass Instruments Technique**

1. Understanding the eBook **Complete Guide Brass Instruments Technique**
 - The Rise of Digital Reading **Complete Guide Brass Instruments Technique**
 - Advantages of eBooks Over Traditional Books
2. Identifying **Complete Guide Brass Instruments Technique**
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an **Complete Guide Brass Instruments Technique**
 - User-Friendly Interface
4. Exploring eBook Recommendations from **Complete Guide Brass Instruments Technique**
 - Personalized Recommendations
 - **Complete Guide Brass Instruments Technique** User Reviews and Ratings
 - **Complete Guide Brass Instruments Technique** and Bestseller Lists

5. Accessing Complete Guide Brass Instruments Technique Free and Paid eBooks
 - Complete Guide Brass Instruments Technique Public Domain eBooks
 - Complete Guide Brass Instruments Technique eBook Subscription Services
 - Complete Guide Brass Instruments Technique Budget-Friendly Options
6. Navigating Complete Guide Brass Instruments Technique eBook Formats
 - ePub, PDF, MOBI, and More
 - Complete Guide Brass Instruments Technique Compatibility with Devices
 - Complete Guide Brass Instruments Technique Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Complete Guide Brass Instruments Technique
 - Highlighting and Note-Taking Complete Guide Brass Instruments Technique
 - Interactive Elements Complete Guide Brass Instruments Technique
8. Staying Engaged with Complete Guide Brass Instruments Technique
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Complete Guide Brass Instruments Technique
9. Balancing eBooks and Physical Books Complete Guide Brass Instruments Technique
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Complete Guide Brass Instruments Technique
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Complete Guide Brass Instruments Technique
 - Setting Reading Goals Complete Guide Brass Instruments Technique
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Complete Guide Brass Instruments Technique
 - Fact-Checking eBook Content of Complete Guide Brass Instruments Technique
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

Complete Guide Brass Instruments Technique Introduction

In the digital age, access to information has become easier than ever before. The ability to download Complete Guide Brass Instruments Technique has revolutionized the way we consume written content. Whether you are a student looking for course material, an avid reader searching for your next favorite book, or a professional seeking research papers, the option to download Complete Guide Brass Instruments Technique has opened up a world of possibilities. Downloading Complete Guide Brass Instruments Technique provides numerous advantages over physical copies of books and documents. Firstly, it is incredibly convenient. Gone are the days of carrying around heavy textbooks or bulky folders filled with papers. With the click of a button, you can gain immediate access to valuable resources on any device. This convenience allows for efficient studying, researching, and reading on the go. Moreover, the cost-effective nature of downloading Complete Guide Brass Instruments Technique has democratized knowledge. Traditional books and academic journals can be expensive, making it difficult for individuals with limited financial resources to access information. By offering free PDF downloads, publishers and authors are enabling a wider audience to benefit from their work. This inclusivity promotes equal opportunities for learning and personal growth. There are numerous websites and platforms where individuals can download Complete Guide Brass Instruments Technique. These websites range from academic databases offering research papers and journals to online libraries with an expansive collection of books from various genres. Many authors and publishers also upload their work to specific websites, granting readers access to their content without any charge. These platforms not only provide access to existing literature but also serve as an excellent platform for undiscovered authors to share their work with the world. However, it is essential to be cautious while downloading Complete Guide Brass Instruments Technique. Some websites may offer pirated or illegally obtained copies of copyrighted material. Engaging in such activities not only violates copyright laws but also undermines the efforts of authors, publishers, and researchers. To ensure ethical downloading, it is advisable to utilize reputable websites that prioritize the legal distribution of content. When downloading Complete Guide Brass Instruments Technique, users should also consider the potential security risks associated with online platforms. Malicious actors may exploit vulnerabilities in unprotected websites to distribute malware or steal personal information. To protect themselves, individuals should ensure their devices have reliable antivirus software installed and validate the legitimacy of

the websites they are downloading from. In conclusion, the ability to download Complete Guide Brass Instruments Technique has transformed the way we access information. With the convenience, cost-effectiveness, and accessibility it offers, free PDF downloads have become a popular choice for students, researchers, and book lovers worldwide. However, it is crucial to engage in ethical downloading practices and prioritize personal security when utilizing online platforms. By doing so, individuals can make the most of the vast array of free PDF resources available and embark on a journey of continuous learning and intellectual growth.

FAQs About Complete Guide Brass Instruments Technique Books

What is a Complete Guide Brass Instruments Technique PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Complete Guide Brass Instruments Technique PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Complete Guide Brass Instruments Technique PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Complete Guide Brass Instruments Technique PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Complete Guide Brass Instruments Technique PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. **How do I compress a PDF file?** You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. **Can I fill out forms in a PDF file?** Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any

restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Complete Guide Brass Instruments Technique :

ccss ela pacing guide 6th grade

ccna security instructor lab manual 1 1

ccv207 student manual

cbse science lab manual 2013class 10

~~*celebration the book of jewish festivals*~~

cci rvs study guide

ccnp instructor lab manual

cello music the ultimate collection part 2 romantic and early modern 9x12

ccsf placement test vocabulary

cell biology and geneticsbiology the unity and diversity of life vol 1

ccna 2 v4 instructor lab manual

cedar rapids iowa school calendar 2014

ceb california criminal law forms manual

~~*edf 4300 manual*~~

ceb numerical test answers

Complete Guide Brass Instruments Technique :

1970 Johnson Mq 13m Service Manual Pdf Web1970 Johnson Mq 13m Service Manual is available in our book collection an online access to it is set as public so you can get it ... Johnson Outboard Motor Model Numbers & Codes Aftermarket outboard repair manuals are available covering 1958 through 2014. See contents and order aftermarket Johnson Evinrude outboard repair manuals. Maintaining Johnson/Evinrude 9.5 hp 2 cycle outboards Sep 4, 2023 — Possibly if you could find a late 9.5hp (67 to 73) factory service manual it could shed some light on this issue. I may be off base here ... Outboard Motors Johnson Evinrude Downloadable Service ... 1970 Johnson 1.5 HP Outboard Motor Service Manual. Original Johnson service ... Original high-resolution Johnson PDF service manual covers all maintenance and ... General Parts Reference Guide (1964)

Service Manual General. Stock Inventory Cards. Service Repair Tags. Service Bulletin Binder Reverse Lock Repair Kit - V4S-12 thru 15R, V4A-13 thru 15R. 1965 9.5 HP Johnson MQ-11 Step 4 of 10 Full Restore. Johnson Evinrude Outboard Service Manual | 1956-1970 This is an original Evinrude Service Manual. Contains everything you need to service or repair your outboard motor. You will receive a link to download your ... 1958-1972 Johnson Evinrude Service Manual - Boating Forum Dec 18, 2010 — This PDF adobe file is 525 pages of old school service manual goodness....covers 1958 to 1972 Johnson and Evinrudes (and will help with ... Johnson 9.5 HP 1967 Model MQ-13, MQL-13 Johnson 9.5 HP 1967 Model MQ-13, MQL-13 · Clymer - Evinrude Johnson Outboard Shop Manual 1.5 to 125 Hp 1956-1972 · SELOC - Johnson/Evinrude Outboards 1958 - 72: ... CAT - C10-C12-MBJ-MBL-Diesel-Engine-Service-Manual Center Position for No. 1 Piston". ... transfer pump. Repair any leaks that are found. cylinder 1 at TC compression stroke. ... b. Loosen the jam nut. ... - Test". Caterpillar CAT C10 & C12 Truck Engine Shop Service ... Find many great new & used options and get the best deals for Caterpillar CAT C10 & C12 Truck Engine Shop Service Repair Manual at the best online prices at ... Caterpillar Engine Manuals, C10, C12, C15 Mar 23, 2022 — I have collected and now posting some manuals for Caterpillar Engines, covering C10, C12, C15 engines. I understand some Newell coaches have ... Caterpillar C10, C12 Engine Service Manual Download Oct 14, 2018 — Oct 15, 2018 - Caterpillar C10, C12 Engine Service Manual Download Caterpillar C10, C12 Engine Service Manual Download Thanks for taking the ... Caterpillar C10 / C12 Service Manual 1YN / 2PN Caterpillar C10 / C12 Service Manual 1YN / 2PN. This manual will cover all of your needs to service, diagnose, troubleshoot & repair this engine. Caterpillar C10, C12 Engine Workshop Repair & Service ... Complete digital workshop manual contains service, maintenance, and troubleshooting information for the Caterpillar C10, C12 Engine. Diagnostic and repair ... Caterpillar C10, C12 Truck Engine Service Manual (S/N ... Downloadable 14 volume service manual set for Caterpillar C10 and C12 truck engines with serial number prefixes CPD, 2KS and 3CS. This digital download contains ... Caterpillar CAT c12 Marine Engine Service Repair Manual ... We have for sale most of Caterpillar service manuals. If you can't find the right one just contact us with serial number. Manual covers: disassembly and ... Caterpillar C10/C12 Disassembly & Assembly Manual ... Caterpillar C10/C12 Disassembly & Assembly Manual (MBJ/MBL). \$109.95. Print version. OEM factory disassembly & assembly manual for the Cat C10 & C12 ... Caterpillar C12 TRUCK ENGINE Service Repair Manual ... The information in this manual covers everything you need to know when you want to service and repair Caterpillar C12 TRUCK ENGINE. ... Instant Download - You ... Ornament: The Politics of Architecture and Subjectivity Though inextricably linked with digital tools and culture, Antoine Picon argues that some significant traits in ornament persist from earlier Western ... Ornament: The Politics of Architecture and Subjectivity Once condemned by modernism and compared to a 'crime' by Adolf Loos, ornament has made a spectacular return in contemporary architecture. This is typified by ... Ornament: The Politics of Architecture and Subjectivity Though inextricably linked with digital tools and culture, Antoine Picon argues that some significant traits in ornament persist from earlier

Western ... (PDF) Ornament: The Politics of Architecture and Subjectivity The book shows that ornament, as an integral element, is integrated to material, structure, and form, rather than being extrinsic and additional, which brings ... Ornament: The Politics of Architecture and Subjectivity by D Balık · 2016 · Cited by 2 — At first glance, Ornament: The Politics of Architecture and Subjectivity gives the impression of focussing merely on the popular issue of ... Ornament: The Politics of Architecture and Subjectivity - Everand Ornament: The Politics of Architecture and Subjectivity. Ebook 297 pages 2 hours. Ornament: The Politics of Architecture and Subjectivity. Show full title. By ... the politics of architecture and subjectivity / Antoine Picon. Title & Author: Ornament : the politics of architecture and subjectivity / Antoine Picon. Publication: Chichester, West Sussex, United Kingdom : Wiley, A John ... Is Democratic Ornament Possible? Ornament visibly displays the social order and its architectural application incorporates it within the political landscape. It is no coincidence that, as ... Ornament : the politics of architecture and subjectivity Summary: Once condemned by Modernism and compared to a 'crime' by Adolf Loos, ornament has made a spectacular return in contemporary architecture. (PDF) Ornament: The Politics of Architecture and Subjectivity The aim of this study is to construct the theoretical framework of ornament in the twenty-first century architectural domain. The paper intends to investigate ...