

Comprehensive and authoritative, this bestselling series is highly regarded among maritime educators around the world. Written by leading experts, each title maps the syllabus content of the relevant Certificate of Competence (CoC) for Marine Engineering and Deck Officers, following the STCW Code, including the 2010 Manila Amendments, laid down by the International Maritime Organization (IMO). An essential resource for students and professionals in the maritime industry, each volume distils the latest maritime technology and contains up-to-date technical drawings and specimen examination questions.

## BASIC ELECTROTECHNOLOGY

For Marine Engineers

This book provides comprehensive coverage of the basic theoretical work required by Marine Engineering Officers and Electrical Officers (ETOs), putting into place key fundamental building blocks and topics in electrotechnology before progressing to more complex topics and electromagnetic systems.

Revisions of Volume 6 include a modern reworking of essential basic electrotechnology principles for the 21st century, including the fundamentals of electron theory, AC and DC current, circuits, electromagnetism and electrochemistry, providing a firm foundation for complementary Volume 7 in the Marine Engineering Series to discuss emergent technology such as image intensifiers, the transistor, increased maritime use of LEDs, and references to modern ship systems such as GPS, ECDIS, Radar and AIS.

Christopher Lavers is a lecturer in Marine Engineering, and has taught Maritime and Remote Sensing topics at Britannia Royal Naval College since 1993. He is Subject Matter Expert (Radar and Telecommunications) at Britannia Royal Naval College, Dartmouth, UK.



Cover photograph © Getty Images

6

BASIC ELECTROTECHNOLOGY FOR MARINE ENGINEERS  
CHRISTOPHER LAVERS

REEDS

CHRISTOPHER LAVERS

6

REEDS MARINE ENGINEERING AND TECHNOLOGY

## BASIC ELECTROTECHNOLOGY

For Marine Engineers

5th Edition



# Basic Electrotechnology For Marine Engineers

**Raffaela Di Napoli**



## **Basic Electrotechnology For Marine Engineers:**

Thank you very much for downloading **Basic Electrotechnology For Marine Engineers**. As you may know, people have search hundreds times for their favorite readings like this Basic Electrotechnology For Marine Engineers, but end up in malicious downloads.

Rather than enjoying a good book with a cup of tea in the afternoon, instead they are facing with some harmful virus inside their desktop computer.

Basic Electrotechnology For Marine Engineers is available in our book collection an online access to it is set as public so you can get it instantly.

Our books collection saves in multiple countries, allowing you to get the most less latency time to download any of our books like this one.

Merely said, the Basic Electrotechnology For Marine Engineers is universally compatible with any devices to read

[https://automacao.clinicaideal.com/data/browse/Download\\_PDFS/silabus%20rpp%20prota%20dan%20promes%20sd%20mi%20ktsp%20semua%20apel%20kelas.pdf](https://automacao.clinicaideal.com/data/browse/Download_PDFS/silabus%20rpp%20prota%20dan%20promes%20sd%20mi%20ktsp%20semua%20apel%20kelas.pdf)

## **Table of Contents Basic Electrotechnology For Marine Engineers**

1. Understanding the eBook Basic Electrotechnology For Marine Engineers
  - The Rise of Digital Reading Basic Electrotechnology For Marine Engineers
  - Advantages of eBooks Over Traditional Books
2. Identifying Basic Electrotechnology For Marine Engineers
  - 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 Basic Electrotechnology For Marine Engineers
  - User-Friendly Interface

4. Exploring eBook Recommendations from Basic Electrotechnology For Marine Engineers
  - Personalized Recommendations
  - Basic Electrotechnology For Marine Engineers User Reviews and Ratings
  - Basic Electrotechnology For Marine Engineers and Bestseller Lists
5. Accessing Basic Electrotechnology For Marine Engineers Free and Paid eBooks
  - Basic Electrotechnology For Marine Engineers Public Domain eBooks
  - Basic Electrotechnology For Marine Engineers eBook Subscription Services
  - Basic Electrotechnology For Marine Engineers Budget-Friendly Options
6. Navigating Basic Electrotechnology For Marine Engineers eBook Formats
  - ePub, PDF, MOBI, and More
  - Basic Electrotechnology For Marine Engineers Compatibility with Devices
  - Basic Electrotechnology For Marine Engineers Enhanced eBook Features
7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Basic Electrotechnology For Marine Engineers
  - Highlighting and Note-Taking Basic Electrotechnology For Marine Engineers
  - Interactive Elements Basic Electrotechnology For Marine Engineers
8. Staying Engaged with Basic Electrotechnology For Marine Engineers
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Basic Electrotechnology For Marine Engineers
9. Balancing eBooks and Physical Books Basic Electrotechnology For Marine Engineers
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Basic Electrotechnology For Marine Engineers
10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
11. Cultivating a Reading Routine Basic Electrotechnology For Marine Engineers
  - Setting Reading Goals Basic Electrotechnology For Marine Engineers
  - Carving Out Dedicated Reading Time

12. Sourcing Reliable Information of Basic Electrotechnology For Marine Engineers
  - Fact-Checking eBook Content of Basic Electrotechnology For Marine Engineers
  - 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

### **Basic Electrotechnology For Marine Engineers Introduction**

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Basic Electrotechnology For Marine Engineers free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Basic Electrotechnology For Marine Engineers free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and

genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Basic Electrotechnology For Marine Engineers free PDF files is convenient, it's important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but it's essential to be cautious and verify the authenticity of the source before downloading Basic Electrotechnology For Marine Engineers. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether it's classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be cautious and verify the legality of the source before downloading Basic Electrotechnology For Marine Engineers any PDF files. With these platforms, the world of PDF downloads is just a click away.

### **FAQs About Basic Electrotechnology For Marine Engineers Books**

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Basic Electrotechnology For Marine Engineers is one of the best book in our library for free trial. We provide copy of Basic Electrotechnology For Marine Engineers in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Basic Electrotechnology For Marine Engineers. Where to download Basic Electrotechnology For Marine Engineers online for free? Are you looking for Basic Electrotechnology For Marine Engineers PDF? This is definitely going to save you time and cash in something you should think about.

**Find Basic Electrotechnology For Marine Engineers :**

[silabus rpp prota dan promes sd mi ktsp semua mapel kelas](#)

[short textbook of medical diagnosis and management pdf](#)

**si e gjykoni nje tekst letrar albforumi**

[service manual jeep cherokee wordpress](#)

[signal analysis wavelet transform matlab source code](#)

[sex gender of baby](#)

[selected problems and solutions colorado state university](#)

**shayad complete urdu novel by faiza iftikhar**

[simulasi pengaturan lampu lalu lintas menggunakan cellular](#)

[secondary solutions julius caesar literature guide answers](#)

[science fact file 2 teachers guide](#)

[sentence structure nigel fabb](#)

[schritte plus neu 1 2 kursbuch](#)

[selfish giant selfish giant](#)

[schlink pdf wordpress](#)

**Basic Electrotechnology For Marine Engineers :**

[outlining your novel workbook step by step exercises for](#) - Feb 27 2022

web oct 24 2020 brief summary of book outlining your novel workbook step by step exercises for planning your best book by k m weiland here is a quick description

**outlining your novel workbook step by step exercises for** - Sep 24 2021

**outlining your novel workbook step by step exercises for** - Oct 26 2021

[outlining your novel workbook step by step exercises for](#) - Dec 28 2021

web nov 11 2014 learn how to make your first draft easy award winning author k m weiland s previous book the bestselling outlining your novel showed writers how to

**outlining your novel workbook step by step exercises f** - Jul 15 2023



web outlining your novel workbook step by step exercises for planning your best book by weiland k m publication date 2014  
topics writing authorship fiction authorship

**outlining your novel workbook step by step** - Feb 10 2023

web award winning author k m weiland s previous book the bestselling outlining your novel showed writers how to embrace outlines in a way that makes the writing process fun

**outlining your novel workbook step by step exercises** - Jan 09 2023

web isbn 0985780428 learn how to make your first draft easy award winning author k m weiland s previous book the bestselling outlining your novel showed writers how to

outlining your novel workbook step by step exercises for - Jan 29 2022

web find helpful customer reviews and review ratings for outlining your novel workbook step by step exercises for planning your best book helping writers become

**outlining your novel workbook step by step exercises for** - Mar 31 2022

web nov 12 2014 outlining your novel workbook step by step exercises for planning your best book author k m weiland format paperback publish date nov 12 2014

**outlining your novel workbook step by step exercises for** - Dec 08 2022

web outlining your novel workbook step by step exercises for planning your best book weiland k m amazon com tr kitap

**outlining your novel workbook step by step exercises for** - Sep 05 2022

web create your own personalized outlining process brainstorm premise and plot ideas discover your characters choose and create the right settings organize your scenes

**outlining your novel workbook step by step exercises for** - May 01 2022

web containing hundreds of incisive questions and imagination revving exercises this valuable resource will show you how to create your own personalized outlining process

*outlining your novel workbook step by step* - Jun 02 2022

web jan 1 2014 building upon the principles you ve already learned the outlining your novel workbook presents a guided approach to getting the bones of your story down on

**outlining your novel workbook helping writers become authors** - Aug 04 2022

web outlining your novel workbook step by step exercises for planning your best book weiland k m 9780985780425 books amazon ca

outlining your novel workbook step by step exercises for - Jul 03 2022

web outlining your novel workbook step by step exercises for planning your best book free download as pdf file pdf text file

txt or read online for free learn how to

**pdf epub outlining your novel workbook step by step** - Nov 26 2021

outlining your novel workbook step by step exercises for - Oct 06 2022

web create your own personalized outlining process brainstorm premise and plot ideas discover your characters choose and create the right settings organize your scenes

**outlining your novel workbook step by step exercises for** - Apr 12 2023

web building upon the principles you ve already learned the outlining your novel workbook presents a guided approach to getting the bones of your story down on paper identifying

outlining your novel workbook step by step exercises - Aug 16 2023

web nov 12 2014 4 39 785 ratings70 reviews learn how to make your first draft easy award winning author k m weiland s previous book the bestselling outlining your

**outlining your novel workbook step by step exercises for** - May 13 2023

web nov 12 2014 learn how to make your first draft easy award winning author k m weiland s previous book the bestselling outlining your novel showed writers how to

**outlining your novel workbook step by step exercises for** - Jun 14 2023

web nov 11 2014 about this ebook learn how to make your first draft easy award winning author k m weiland s previous book the bestselling outlining your novel showed

**outlining your novel workbook step by step exercises for** - Mar 11 2023

web buy outlining your novel workbook step by step exercises for planning your best book 2 helping writers become authors workbook by weiland k m isbn

*outlining your novel workbook step by step exercises for* - Nov 07 2022

web award winning author k m weiland s previous book the bestselling outlining your novel showed writers how to embrace outlines in a way that makes the writing process fun

understanding plays barranger milly s free download - Nov 25 2021

web part i introduction from text to performance part ii types of drama tragedy comedy farce tragicomedy and new forms the well made play part iii

**understanding play springerlink** - Oct 05 2022

web jan 1 2020 this chapter turns the focus to understanding play that is providing a more focused and detailed investigation of playful creative informal and incidental

*what we know about the hamas attack and israel s response* - Dec 07 2022

web 3 hours ago understanding the besieged gaza strip the palestinian enclave home to some 2 3 million people has been under an israeli air land and sea blockade since 2007

**understanding play theories a guide for play based teachers** - Jun 01 2022

web understanding plays as texts for performance offers seventeen plays with critical commentaries that span the range of western writing for the theatre from the greeks to

understanding plays 3rd edition powell s books - Aug 03 2022

web oct 10 2023 until october 7 2023 many in palestine israel and elsewhere may similarly have dismissed or discounted the acuity of hamas s aims and ambitions its true

*understanding games all 4 episodes youtube* - May 20 2021

web understanding games explains the underlying concepts behing gaming by having you play a series of flash games simple and utterly charming all the 4 episode

understanding plays milly s barranger google books - Jul 02 2022

web understanding plays as texts for performance offers sixteen plays with critical commentaries that span the range of western writing for the theatre from the greeks to

*when i tried to play my hand spasmed and shook why* - Jul 14 2023

a list is different from a theory because it offers neither interpretation nor directive it merely advocates ingredients to inspire theatre makers the see more

**understanding play request pdf researchgate** - Nov 06 2022

web oct 8 2023 hamas the palestinian group that controls the gaza strip launched one of the broadest incursions into israeli territory in 50 years israel has retaliated with massive

*understanding plays 3rd edition amazon com* - Mar 10 2023

web jul 25 2003 imported from amazon com record understanding plays by milly s barranger july 25 2003 allyn bacon edition in english

**understanding plays worldcat org** - Apr 30 2022

web sep 11 2023 explore various play theories from piaget vygotsky erikson montessori reggio emilia and susan issacs see how they can inform your teaching in a play

*understanding plays barranger milly s free download* - Dec 27 2021

web jan 18 2017 or play is the creation of an enjoyable activity by the individual free from pressure result or consequence all these definitions were created using the themes

**how do you understand plays in basketball basketball fandom** - Jun 13 2023

web understanding plays milly s barranger allyn and bacon 2004 drama 738 pages understanding plays as texts for performance offers seventeen plays with critical

how to read a play dramatics magazine - Sep 16 2023

here s a fun category to play with everyone knows that if you give the audience what they expect you ll please some and bore most people want to be surprised try to figure out what expectations the play is building then delay subvert or upend them however if the point is to deliver the expected goods make sure see more

*play understanding games episode 1 a free online game on* - Jun 20 2021

web jan 29 2007 kongregate free online game understanding games episode 1 episode 1 is the first of four games explaining the basic concepts of video games it deals wi

understanding plays milly s barranger google books - Aug 15 2023

there are categories of plays where special rules apply musicals solo performance 10 minute plays etc these kinds of plays succeed under the guidance of gods who work differently from dionysus and his cohorts who see more

*live updates from the 2023 annular solar eclipse weather com* - Feb 09 2023

web jan 1 2003 understanding plays as texts for performance offers sixteen plays with critical commentaries that span the range of western writing for the theatre from the

*hamas s genocidal intentions were never a secret the atlantic* - Sep 04 2022

web jan 5 2021 this chapter turns the focus to understanding play that is providing a more focused and detailed investigation of playful creative informal and incidental

**james r hamilton basic theatrical understanding philpapers** - Feb 26 2022

web mar 10 2004 abstract this article reviews the current literature on play and play assessment in occupational therapy the concept of play and play theories are

**how to learn to read the plays during a football game** - Apr 11 2023

web mar 23 2023 how to understand plays 3 1 learn the basics 3 2 study plays 3 3 practice the plays 3 4 visualize the plays 3 5 watch professional games 4

*understanding plays by milly s barranger open library* - May 12 2023

web 10 hours ago by lynn hallarman tue 17 oct 2023 00 00 edt t he morning after performing the concert of my life i could no longer play the flute the pinky and ring

**understand on steam** - Jul 22 2021

web mar 30 2021 understanding about plays grade valley in the play the audience is essential because it produces a

particular element of responsiveness that

*understanding about plays grade valley* - Aug 23 2021

web understanding plays milly s barranger the demon lover by juliet dark sep 6 2021 2022 registration borrow 1 of 5 stars 2 of 5 stars 3 of 5 stars 4 of 5 stars 5 of 5 stars

**ppt understanding plays powerpoint presentation free** - Oct 25 2021

web barranger milly s publication date 1990 topics drama history and criticism drama drama history and criticism publisher boston allyn and bacon collection inlibrary

*mapping the israel palestine war major events on the ground* - Jan 08 2023

web 2 days ago much of north central and south america had the chance to see an annular solar eclipse on october 14 2023 in the lower 48 states of the united states some

*play defined the importance of understanding play medium* - Jan 28 2022

web understanding plays james r hamilton 2006 in saltz krasner ed staging philosophy

**understanding plays milly s barranger** - Sep 23 2021

web feb 26 2013 presentation transcript understanding plays a play is a written story meant to be acted out on stage how is a play different from a story most of a play is

*understanding play the implications for play assessment* - Mar 30 2022

web understanding plays barranger milly s 647443557 contents plays included are the tragedy of hamlet prince of denmark william shakespeare the glass menagerie

operation instruments photos and premium high res pictures - Feb 05 2023

web browse 59 329 operation instruments photos and images available or search for surgical tools to find more great photos and pictures browse getty images premium collection of high quality authentic operation instruments

general surgical instruments operating theatre basics geeky - Oct 13 2023

web jan 20 2020 an overview of the common surgical instruments you re likely to encounter in the operating theatre with an included quiz to put your knowledge to the test 1000 osce stations osce guides

*common surgical instruments the american college of surgeons* - Jul 10 2023

web the operating room contains a multitude of instruments fit for accomplishing a number of procedures note that this is not an exhaustive list of instruments but rather some that you will encounter frequently scalpel used for initial incision and cutting tissue consists of a blade and handle

*701 instruments operating theatre stock photos dreamstime* - May 28 2022

web download instruments operating theatre stock photos free or royalty free photos and images use them in commercial

designs under lifetime perpetual worldwide rights dreamstime is the world s largest stock photography community

*a surgical instruments list with names and uses steroplast* - Mar 06 2023

web apr 19 2023 see the breakdown below for a surgical instruments list with pictures organised by types of surgical instruments there are so many surgical instruments in use in modern surgery so we ve focused on an extensive list of basic surgical instruments pictures and names

*instruments used in general surgery wikipedia* - May 08 2023

web this page is dedicated specifically to listing surgical instruments used in general surgery instruments can be classified in many ways but broadly speaking there are five kinds of instruments scalpels scissors and saws are the most traditional elevators can be both cutting and lifting retracting

*operating room equipment list for operation theatre china care* - Apr 26 2022

web do you know the difference between cardiac operation theatre equipments orthopedic operating room emergency operating room and other operating room equipment this article will help you know more about that let us show you some pictures about the operating room modern operating room pictures simple operating room pictures

**operating theatre pictures images and stock photos** - Feb 22 2022

web browse 39 300 operating theatre stock photos and images available or search for surgery or empty operating room to find more great stock photos and pictures surgery empty operating room surgeon hospital surgeon in operating theatre operating room nurse operating theatre lights hospital operating theatre operating theatre icon

*operating room instruments handling and use of surgical* - Jun 09 2023

web apr 28 2022 handling surgical instruments in the operating room instrument handling is a critical part of surgical procedures proper technique can minimize the risk of injury to the worker and damage to the instrument here are some tips for safe handling of operating room instruments angles

*100 surgical instruments tools with names uses pictures* - Sep 12 2023

web mar 28 2023 100 common surgical instruments and tools with names uses pictures by cia medical updated march 28th 2023 surgical instruments the 100 most common tools and equipment

**learning in operating theatres royal college of surgeons of** - Jan 04 2023

web royal college of surgeons xray some operations use xrays to check positions of bones or implants magnification some surgeons operate using microscopes eg for eye surgery the patient s journey here is a typical patient journey for elective or planned surgery g p referral the patient s general practitioner decides that the patient has a condition

*operating theater wikipedia* - Jul 30 2022

web inside a modern operating room an operating theater also known as an operating room or operating suite or operation

suite is a facility within a hospital where surgical operations are carried out in an aseptic environment

**download free operating theatre instruments pictures and names** - Mar 26 2022

web demanding unusually small or large instruments unique playing techniques such as using the fingers coins a wire brush etc and the key examples of music requiring multiple timpani and two or more players in various configurations

**a complete guide to operation theatre essential equipment** - Oct 01 2022

web aug 26 2021 operation theatres should ideally have equipment like defibrillators oxygen concentrators sterilizer machine suction machine anaesthesia machine operation table and light at their disposal to ensure that all surgical procedures are conducted safely in

*surgical instrument ot instruments ppt slideshare* - Jun 28 2022

web may 26 2021 operation theatre and technique msn ot instruments surgicalinstruments 100717131407 phpapp02 pdf princebalhara101 144 views 46 slides operating instruments siva ganapathi

**basic surgical instruments with name and use operation theatre** - Dec 03 2022

web general surgical instruments video helps you to identify 40 image basic instruments which they use during all kind of surgical procedures in operation thea

surgical instrument pictures name and their uses pdf - Aug 31 2022

web dec 7 2020 in this article we have described the image name and work of some surgical instruments names that are used regularly while working in the hospital hope you like this information about surgical instruments pictures and names pdf rrb question paper 2020 ot instruments name list

**surgical instruments teachmesurgery** - Aug 11 2023

web mar 10 2021 there are a wide range of surgical instruments available all with varying designs and uses ensure to learn the names and advantages of all instruments available in the operating theatre

**the operating theatre an inside look today** - Nov 02 2022

web updated december 28 2016 singapore the operating theatre service at tan tock seng hospital ttsh is singapore s busiest trauma centre according to the ministry of health s moh

10 surgical instruments their names and how to use them - Apr 07 2023

web dec 18 2009 furthermore using any other grip will immediately mark you out to the surgeon s eye as a complete novice to the operating theatre surgical instruments are made in a vast number of types they frequently have eponymous names the name usually distinguishes the basic pattern of the instrument regardless of its size