

Revision C:
- TEST POINT DIAGRAM AND VOLTAGE has
been corrected. (8-7)
Please void OB448 REVISED EDITION-B.

INDOOR UNIT SERVICE MANUAL

**No. OB448
REVISED EDITION-C**

Models

MS-A09WA
MS-A09WA - 
MS-A12WA
MS-A12WA - 

Outdoor unit service manual
MU-A-WA Series (OB449)



NOTE:
RoHS compliant products have "G" mark on the spec name plate.
For servicing of RoHS compliant products, refer to the RoHS PARTS
LIST (RoHS compliant).

CONTENTS

1. TECHNICAL CHANGES	2
2. PART NAMES AND FUNCTIONS	3
3. SPECIFICATION	5
4. OUTLINES AND DIMENSIONS	6
5. WIRING DIAGRAM	7
6. REFRIGERANT SYSTEM DIAGRAM	7
7. SERVICE FUNCTIONS	8
8. TROUBLESHOOTING	9
9. DISASSEMBLY INSTRUCTIONS	21
10. PARTS LIST	24
10-1. PARTS LIST	24
10-2. RoHS PARTS LIST	27
11. MICROPROCESSOR CONTROL	30

Mr. SLIM™

Mitsubishi Mr Slim Repair Manual

David Kirk



Mitsubishi Mr Slim Repair Manual:

Old-House Journal ,2005-06 Old House Journal is the original magazine devoted to restoring and preserving old houses For more than 35 years our mission has been to help old house owners repair restore update and decorate buildings of every age and architectural style Each issue explores hands on restoration techniques practical architectural guidelines historical overviews and homeowner stories all in a trusted authoritative voice *ASHRAE Journal* ,1993 **The Canadian Architect** ,1991 **Old House Interiors** ,2005-04 National architectural magazine now in its fifteenth year covering period inspired design 1700 1950 Commissioned photographs show real homes inspired by the past but livable Historical and interpretive rooms are included new construction additions and new kitchens and baths take their place along with restoration work A feature on furniture appears in every issue Product coverage is extensive Experts offer advice for homeowners and designers on finishing decorating and furnishing period homes of every era A garden feature essays archival material events and exhibitions and book reviews round out the editorial Many readers claim the beautiful advertising all of it design related no lifestyle ads is as important to them as the articles *Architecture* ,1993-04 Hotel & Catering Review ,1991 **Building Services Journal** ,2004 **The Old-house Journal** ,2006 **India Today** ,2008 **Thomas Register** ,2004

Unveiling the Power of Verbal Art: An Emotional Sojourn through **Mitsubishi Mr Slim Repair Manual**

In a world inundated with monitors and the cacophony of instantaneous transmission, the profound power and mental resonance of verbal artistry usually disappear into obscurity, eclipsed by the continuous barrage of noise and distractions. Yet, situated within the lyrical pages of **Mitsubishi Mr Slim Repair Manual**, a captivating work of fictional brilliance that impulses with natural feelings, lies an wonderful journey waiting to be embarked upon. Published by way of a virtuoso wordsmith, this mesmerizing opus guides readers on an emotional odyssey, gently exposing the latent possible and profound affect embedded within the delicate web of language. Within the heart-wrenching expanse with this evocative examination, we can embark upon an introspective exploration of the book is key subjects, dissect its fascinating writing style, and immerse ourselves in the indelible effect it leaves upon the depths of readers souls.

https://staging.conocer.cide.edu/files/book-search/fetch.php/Feminine_Fascism_Women_In_Britains_Fascist_Movement_1923_1945.pdf

Table of Contents Mitsubishi Mr Slim Repair Manual

1. Understanding the eBook Mitsubishi Mr Slim Repair Manual
 - The Rise of Digital Reading Mitsubishi Mr Slim Repair Manual
 - Advantages of eBooks Over Traditional Books
2. Identifying Mitsubishi Mr Slim Repair Manual
 - 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 Mitsubishi Mr Slim Repair Manual
 - User-Friendly Interface
4. Exploring eBook Recommendations from Mitsubishi Mr Slim Repair Manual

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

- Fact-Checking eBook Content of Mitsubishi Mr Slim Repair Manual
- 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

Mitsubishi Mr Slim Repair Manual Introduction

Mitsubishi Mr Slim Repair Manual Offers over 60,000 free eBooks, including many classics that are in the public domain.

Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Mitsubishi Mr Slim Repair Manual Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain.

Mitsubishi Mr Slim Repair Manual : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications.

Internet Archive for Mitsubishi Mr Slim Repair Manual : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books.

Free-eBooks

Mitsubishi Mr Slim Repair Manual Offers a diverse range of free eBooks across various genres. Mitsubishi Mr Slim Repair Manual Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes.

Mitsubishi Mr Slim Repair Manual Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF.

Finding specific Mitsubishi Mr Slim Repair Manual, especially related to Mitsubishi Mr Slim Repair Manual, might be challenging as theyre often artistic creations rather than practical blueprints.

However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Mitsubishi Mr Slim Repair Manual, Sometimes enthusiasts share their designs or concepts in PDF format.

Books and Magazines Some Mitsubishi Mr Slim Repair Manual books or magazines might include. Look for these in online stores or libraries. Remember that while Mitsubishi Mr Slim Repair Manual, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading.

Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Mitsubishi Mr Slim Repair Manual eBooks for free, including popular titles.

Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods

for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Mitsubishi Mr Slim Repair Manual full book, it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Mitsubishi Mr Slim Repair Manual eBooks, including some popular titles.

FAQs About Mitsubishi Mr Slim Repair Manual Books

What is a Mitsubishi Mr Slim Repair Manual 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 Mitsubishi Mr Slim Repair Manual 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 Mitsubishi Mr Slim Repair Manual 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 Mitsubishi Mr Slim Repair Manual 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 Mitsubishi Mr Slim Repair Manual 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 Mitsubishi Mr Slim Repair Manual :

feminine fascism women in britains fascist movement 19231945

festivals through the year spring festivals through the year

femininity and domination studies in the phenomenology of oppression

feminism and the final foucault

ferrari by pininfarina technology and beauty

feeling valuing and the art of growing insights into the affective

feedback loop stability analysis

feldenkrais method teaching by handling

federal taxation 1995 federal taxation

festivals of arizona

felicity wishes fairy care fashion

ferrets in your home

federal managers survival guide

~~female orgasm psychology physiology fant~~

fertility and infertility in the domestic animals; aetiology diagnosis and treatment

Mitsubishi Mr Slim Repair Manual :

envision mathematics common core 2020 2021 edreports - Feb 23 2023

web learners to achieve the level of rigor required by the common core state standards have confidence that envisionmath

common core realize edition is fully aligned to the

envision mathematics k 5 2020 common core my savvas - Jun 15 2022

web the common core concentrates on a clear set of math skills and concepts students will learn concepts in a more

organized way both during the school year and across grades

common core state standards for mathematics savvas - Mar 24 2023

web dec 3 2020 the instructional materials reviewed for envision mathematics common core grade 3 5 meet expectations

for alignment to the standards and usability the

envision math common core standards correlation copy - Oct 07 2021

envision math common core 6 8 savvas learning company - Apr 13 2022

web common core state standards for mathematics pearson en english deutsch français esp  ol portugu  s italiano rom  n
nederlands latina dansk svenska norsk magyar

common core state standards for mathematics grades k 6 - Jan 22 2023

web a correlation of envisionmath common core to the common core state standards for mathematics 1 se student edition te
teacher edition common core state

a correlation of pearson education - Aug 29 2023

web a reverse correlation of envision mathematics common core 2020 to the common core standards for mathematics
kindergarten 7 envision mathematics common

common core state standards for mathematics grade 4 - Nov 20 2022

web the instructional materials reviewed for envision mathematics common core grade 8 meet expectations for alignment to
the ccsm the instructional materials meet

common core state standards for mathematics pearson - Jun 27 2023

web a correlation of envisionmath2 0 2016 to the common core state standards for mathematics 4 se student edition te
teacher s edition common core state

envision mathematics common core grade 8 2021 edreports - Oct 19 2022

web envisionmath2 0 common core is a comprehensive mathematics curriculum for grades k 5 it offers the flexibility of print
digital or blended instruction envisionmath2 0

envision math common core k 5 savvas learning company - Jul 16 2022

web now envision is even better with over 200 new lessons a newly redesigned teacher s edition and new instructional
strategies like 3 act math modeling tasks educator

envisionmath common core 2012 savvas formerly pearson - Apr 25 2023

web a correlation of envisionmath common core to the common core state standards for mathematics 1 se student edition te
teacher edition common core state

envisionmath2 0 common core k 5 savvas learning company - Sep 18 2022

web envisionmath common core was built to fully address the common core state standards for mathematics ccsm the
program is organized by the same domains

common core state standards for mathematics pearson - May 26 2023

web request info correlations envisionmath common core scope and sequence grade k envisionmath common core correlation to the common core state standards

envision math common core standards correlation copy - Feb 11 2022

web california common core state standards california department of education 2013 envision mathematics 2020 national student edition grade 2 scott foresman 2018

common core 2012 pearson education - Dec 21 2022

web envisionmath2 0 is a comprehensive k 6 mathematics curriculum that provides the focus coherence and rigor required by the ccssm envisionmath2 0 offers a balanced

envision math common core standards correlation copy - Nov 08 2021

web envision math common core standards correlation below assessment sourcebook addison wesley educational publishers incorporated 1998 sourcebook contains end of

common core state standards for mathematics pearson yumpu - Mar 12 2022

web mathematics common core mathematics in a plc at work mar 14 2021 this teacher guide illustrates how to sustain successful implementation of the common core state

envision math common core standards correlation - Jan 10 2022

web jun 18 2023 envision math common core standards correlation by online you might not require more period to spend to go to the books commencement as competently as

a reverse correlation of savvas - Jul 28 2023

web envisionmath2 0 is a comprehensive k 6 mathematics curriculum that provides the focus coherence and rigor required by the ccssm envisionmath2 0 offers a balanced

envision math common core standards correlation copy - Dec 09 2021

web feb 19 2023 envision math common core standards correlation by online you might not require more time to spend to go to the book start as competently as search for them

envisionmath common core 2015 pearson realize - Aug 17 2022

web new k 5 envision mathematics common core is the only math program that combines problem based learning and visual learning to deepen students conceptual

mathematics standards common core state standards initiative - May 14 2022

web it s like nothing you ve seen it s problem based learning plus visual learning it s digital print and differentiated learning all new envision mathematics common core for

a good indian wife a novel cherian anne free download - Jun 12 2023

web jun 8 2009 anne cherian w w norton company jun 8 2009 fiction 400 pages an absorbing tale of contrasts cherian tells the story with quiet strength san

a good indian wife a novel anne cherian byn piopend info - Oct 24 2021

anne cherian author of a good indian wife - Jan 07 2023

web w w norton 2008 anesthesiologists 376 pages handsome anesthesiologist neel prides himself on his decisiveness both in and out of the operating room so when he agrees to

a good indian wife a novel cherian anne free download - Jul 13 2023

web a good indian wife a novel by cherian anne publication date 2009 topics anesthesiologists arranged marriage culture conflict publisher new york w w

a good indian wife a novel by anne cherian google play - Dec 06 2022

web may 1 2008 a good indian wife by anne cherian release date may 1 2008 there s nothing memorable about this watered down jhumpa lahiri style novel but

a good indian wife by anne cherian open library - Feb 08 2023

web a good indian wife a novel ebook written by anne cherian read this book using google play books app on your pc android ios devices download for offline reading

a good indian wife a novel anne cherian google books - May 11 2023

web jun 2 2009 san francisco chronicle handsome anesthesiologist neel is sure he can resist his family s pleas that he marry a good indian girl with a girlfriend and a career

a good indian wife a novel kindle edition amazon in - Feb 25 2022

web jul 23 2008 384 pages language english publisher

pdf epub a good indian wife download oceanofpdf - Aug 14 2023

web download options no suitable files to display here 14 day loan required to access pdf files

a good indian wife by anne cherian goodreads - Nov 05 2022

web jun 8 2009 a good indian wife a novel kindle edition by cherian anne download it once and read it on your kindle device pc phones or tablets use features like

a good indian wife a novel apple books - May 31 2022

web anne cherian appears to be channeling jane austen in her wonderful novel a good indian wife set in contemporary america and india the book celebrates the cultural

a good indian wife a novel amazon com - Mar 29 2022

web a good indian wife as it s meant to be heard narrated by dylan lynch discover the english audiobook at audible free trial available

a good indian wife a novel amazon co uk cherian anne - Nov 24 2021

book review anne cherian s a good indian wife curled up - Jul 01 2022

web jun 8 2009 story circle book reviews anne cherian appears to be channeling jane austen in her wonderful novel a good indian wife set in contemporary america and

a good indian wife a novel cherian anne amazon ca books - Jan 27 2022

web nov 17 2021 a good indian wife a novel anne cherian four places a play joel drake johnson called unto liberty charles wakers the best darn hypothyroidism

a good indian wife a novel anne cherian google books - Oct 04 2022

web a good indian wife anne cherian w w norton paperback 400 pages june 2009 this quietly brilliant novel is a joy to read the melding of two vastly different cultures

a good indian wife by anne cherian open library - Mar 09 2023

web aug 28 2020 2 want to read 0 currently reading 0 have read this edition doesn t have a description yet can you add one publish date 2009 publisher w w norton co

a good indian wife a novel kindle edition by cherian anne - Aug 02 2022

web jun 8 2009 anne cherian appears to be channeling jane austen in her wonderful novel a good indian wife set in contemporary america and india the book celebrates the

a good indian wife by anne cherian audiobook audible com - Dec 26 2021

a good indian wife a novel by anne cherian paperback - Apr 29 2022

web jun 2 2009 this quietly brilliant novel is a joy to read curled up with a good book engaging and thought provoking a combination of india and america tradition and

a good indian wife a novel anne cherian google books - Apr 10 2023

web may 7 2008 availability 1 a good indian wife a novel may 7 2008 w w norton w w norton hardcover in english 0393065235 9780393065237 aaaa borrow listen

a good indian wife kirkus reviews - Sep 03 2022

web an absorbing tale of contrasts cherian tells the story with quiet strength san francisco chronicle handsome anesthesiologist neel is sure he can resist his family s

information technologies department en goc gov tr - Aug 15 2023

web duties of information technologies department 1 to set up and operate and outsource operation of information technologies it system related to area of responsibility of

ministry of electronics and information technology wikipedia - Nov 25 2021

web sep 6 2023 the 10 week trial set to begin tuesday amps up efforts to rein in big tech by targeting the core search business that turned google into a 1 7 trillion behemoth

in its first monopoly trial of modern internet era u s sets - Sep 23 2021

web september 8 2023 at 6 16 am pdt listen 4 47 the us government has begun an official probe into an advanced made in china chip housed within huawei technologies co s

department of information technologies isikun edu tr - Jun 13 2023

web department of information technologies istanbul galata university department of information processing is responsible for ensuring that the staff and students use the

salad chain sweetgreen accused of race sex bias at nyc stores - Mar 18 2021

information security technology academic school of - Feb 26 2022

web sep 13 2023 department of information technology harvard t h chan school of public health department of information technology news and announcements

computer and information technology occupations - Mar 30 2022

web all departments İtÜ has a total of 99 undergraduate programs including 13 uolp programs in 13 faculties and 1 conservatory list all maslak taşkışla gümüşsuyu

information technology united states department of state - Nov 06 2022

web hosting services enterprise active directory services n c identity management ncid enterprise endpoint management services microsoft 365 collaboration services all

dhs announces new policies and measures promoting - Aug 23 2021

web sep 12 2023 a court battle kicks off on tuesday in which the u s justice department will argue that google abused its power as a monopoly to dominate the search engine

united states takes on google in biggest tech monopoly trial of - Jun 20 2021

web türk deniz ticaret filosunun üst düzey insan gücü gereksinimini karşılamaya yönelik ilk eğitim öğretim kurumu olan bugünkü İtÜ denizcilik fakültesi 5 aralık 1884 tarihinde

ministry of electronics and information technology government - Jun 01 2022

web sep 6 2023 overall employment in computer and information technology occupations is projected to grow much faster than the average for all occupations from 2022 to 2032

[İtÜ denizcilik fakültesi](#) - Apr 18 2021

information technology it what does an it - Jul 14 2023

web department of information technologies in recent years the use of information technologies in the business world as in every field has been constantly expanding

[n c department of information technology](#) - Sep 04 2022

web jan 13 2023 the use of information technology it and internet devices has become something of a necessity for modern businesses of all sizes as a result many of these

İtÜ all departments anasayfa - Jan 28 2022

web the ministry of electronics and information technology meity is an executive agency of the union government of the republic of india it was carved out of the ministry of

[department of information technology](#) - Dec 27 2021

web aug 27 2021 tüm ilçelerimizle birlikte süreci hızla tamamlayarak typ kapsamında çalışacak personelin tüm kademelerin eğitim öğretimin başlayacağı 06 eylül 2021

[us probes made in china huawei chip as alarm in washington](#) - Jul 22 2021

web İstanbul teknik Üniversitesi 250 yılına doğru yol alan dünyanın en eski teknik üniversitelerinden biridir

[department of information technology uppsala university](#) - Dec 07 2022

web it management refers to the monitoring and administration of an organization s information technology systems

hardware software and networks it management focuses on how

directorate of information technology - Apr 30 2022

web information security technology program has cooperation protocol with the leading institutions of the sector such as havelsan airborne electronic industry and commerce

[İtÜ Öğrenci İşleri daire başkanlığı](#) - May 20 2021

web 1 day ago companies sweetgreen inc sept 14 reuters sweetgreen inc sg n is being sued by a group of black and female employees at seven of the salad chain s new

İtÜ faculty of computer and informatics engineering - Mar 10 2023

web faculty of economics administrative and social sciences departments and programs department of information technologies undergraduate programs b sc in

[information technology wikipedia](#) - Jan 08 2023

web u s department of state releases a request for proposals for multi billion dollar evolve acquisition to modernize u s diplomatic technology december 3 2022 media note

toplum yararına Çalışma programı typ başvuruları başladı - Oct 25 2021

web sep 14 2023 dhs announced new policies to ensure responsible use of artificial intelligence ai by the department the policies developed by the dhs artificial

directorate of information technologies branch İstanbul - Aug 03 2022

web content owned provided by ministry of electronics information technology government of india to promote e governance for empowering citizens promoting the

b sc in management information systems english isikun edu tr - Feb 09 2023

web information technology it is the use of computers to create process store retrieve and exchange all kinds of data 1 and information it forms part of information and

what is it management ibm - Oct 05 2022

web aug 7 2019 web sitemizi ziyaret etmeniz dolayısıyla elde edilen kişisel verileriniz kişisel verilerinizin işlenme amaçları doğrultusunda iş ortaklarımıza tedarikçilerimize kanunen

department of information technologies İstanbul galata - May 12 2023

web our department was found in 1997 and our masters degree was introduced in 2003 currently our department has 74 masters 6 masters distant education and 48 phd

İstanbul university - Apr 11 2023

web departments computer engineering artificial intelligence and data engineering information systems engineering suny general information courses course

[the different it department roles and responsibilities atera](#) - Jul 02 2022

web mission karabük university education training research and development and scientific activities as well as administrative and managerial functions necessary for the support of