

SolidWorks  
Electrical

2015

Hands-On  
Test Drive

# Solidworks Electrical 2015 User Manual

**David Planchard**



## **Solidworks Electrical 2015 User Manual:**

**Beginner's Guide to SolidWorks 2015 - Level II** Alejandro Reyes, 2015-02 Beginner's Guide to SolidWorks 2015 Level II starts where Beginner's Guide Level I ends following the same easy to read style and companion video instruction but this time covering advanced topics and techniques The purpose of this book is to teach advanced techniques including sheet metal surfacing how to create components in the context of an assembly and reference other components Top down design propagate design changes with SolidWorks parametric capabilities mold design welded structures and more while explaining the basic concepts of each trade to allow you to understand the how and why of each operation The author uses simple examples to allow you to better understand each command and environment as well as to make it easier to explain the purpose of each step maximizing the learning time by focusing on one task at a time This book is focused on the processes to complete the modeling of a part instead of focusing on individual software commands or operations which are generally simple enough to learn At the end of this book you will have acquired enough skills to be highly competitive when it comes to designing with SolidWorks and while there are many less frequently used commands and options available that will not be covered in this book rest assured that those covered are most of the commands used every day by SolidWorks designers The author strived hard to include the commands required in the Certified SolidWorks Associate test as listed on the SolidWorks website and some as well as several more

*SOLIDWORKS 2020 Reference Guide* David Planchard, 2019-12 A comprehensive reference book for SOLIDWORKS 2020 Contains 260 plus standalone tutorials Starts with a basic overview of SOLIDWORKS 2020 and its new features Tutorials are written for each topic with new and intermediate users in mind Includes access to each tutorial's initial and final state Contains a chapter introducing you to 3D printing The SOLIDWORKS 2020 Reference Guide is a comprehensive reference book written to assist the beginner to intermediate user of SOLIDWORKS 2020 SOLIDWORKS is an immense software package and no one book can cover all topics for all users This book provides a centralized reference location to address many of the tools features and techniques of SOLIDWORKS 2020 This book covers the following System and Document properties FeatureManagers PropertyManagers ConfigurationManagers RenderManagers 2D and 3D Sketch tools Sketch entities 3D Feature tools Motion Study Sheet Metal Motion Study SOLIDWORKS Simulation PhotoView 360 Pack and Go 3D PDFs Intelligent Modeling techniques 3D printing terminology and more Chapter 1 provides a basic overview of the concepts and terminology used throughout this book using SOLIDWORKS 2020 software If you are completely new to SOLIDWORKS you should read Chapter 1 in detail and complete Lesson 1 Lesson 2 and Lesson 3 in the SOLIDWORKS Tutorials If you are familiar with an earlier release of SOLIDWORKS you still might want to skim Chapter 1 to become acquainted with some of the commands menus and features that you have not used or you can simply jump to any section in any chapter Each chapter provides detailed PropertyManager information on key topics with individual stand alone short tutorials to reinforce and demonstrate the functionality and ease of the

SOLIDWORKS tool or feature The book provides access to over 260 models their solutions and additional support materials Learn by doing not just by reading Formulate the skills to create modify and edit sketches and solid features Learn the techniques to reuse features parts and assemblies through symmetry patterns copied components design tables configurations and more The book is designed to complement the Online Tutorials and Online Help contained in SOLIDWORKS 2020 The goal is to illustrate how multiple design situations and systematic steps combine to produce successful designs The author developed the tutorials by combining his own industry experience with the knowledge of engineers department managers professors vendors and manufacturers He is directly involved with SOLIDWORKS every day and his responsibilities go far beyond the creation of just a 3D model      *SolidWorks 2015 Tutorial with Video Instruction* David Planchard,2014-12 SolidWorks 2015 Tutorial with video instruction is target towards a technical school two year college four year university or industry professional that is a beginner or intermediate CAD user The text provides a student who is looking for a step by step project based approach to learning SolidWorks with video instruction SolidWorks model files and preparation for the Certified Associate Mechanical Design CSWA exam The book is divided into three sections Chapters 1 6 explore the SolidWorks User Interface and CommandManager Document and System properties simple machine parts simple and complex assemblies proper design intent design tables configurations multi sheet multi view drawings BOMs Revision tables using basic and advanced features Chapters 7 10 prepare you for the Certified Associate Mechanical Design CSWA exam The certification indicates a foundation in and apprentice knowledge of 3D CAD and engineering practices and principles Review Chapter 11 on Additive Manufacturing 3D printing and its benefits and features Understand the terms and technology used in low cost 3D printers Follow the step by step instructions and develop multiple assemblies that combine over 100 extruded machined parts and components Formulate the skills to create modify and edit sketches and solid features Learn the techniques to reuse features parts and assemblies through symmetry patterns copied components apply proper design intent design tables and configurations Learn by doing not just by reading Desired outcomes and usage competencies are listed for each chapter Know your objective up front Follow the steps in each chapter to achieve your design goals Work between multiple documents features commands custom properties and document properties that represent how engineers and designers utilize SolidWorks in industry      *SOLIDWORKS 2019 Reference Guide* David Planchard,2018-12-05 The SOLIDWORKS 2019 Reference Guide is a comprehensive reference book written to assist the beginner to intermediate user of SOLIDWORKS 2019 SOLIDWORKS is an immense software package and no one book can cover all topics for all users This book provides a centralized reference location to address many of the tools features and techniques of SOLIDWORKS 2019 This book covers the following System and Document properties FeatureManagers PropertyManagers ConfigurationManagers RenderManagers 2D and 3D Sketch tools Sketch entities 3D Feature tools Motion Study Sheet Metal Motion Study SOLIDWORKS Simulation PhotoView 360 Pack and Go 3D PDFs Intelligent Modeling techniques 3D printing

terminology and more Chapter 1 provides a basic overview of the concepts and terminology used throughout this book using SOLIDWORKS 2019 software If you are completely new to SOLIDWORKS you should read Chapter 1 in detail and complete Lesson 1 Lesson 2 and Lesson 3 in the SOLIDWORKS Tutorials If you are familiar with an earlier release of SOLIDWORKS you still might want to skim Chapter 1 to become acquainted with some of the commands menus and features that you have not used or you can simply jump to any section in any chapter Each chapter provides detailed PropertyManager information on key topics with individual stand alone short tutorials to reinforce and demonstrate the functionality and ease of the SOLIDWORKS tool or feature The book provides access to over 260 models their solutions and additional support materials Learn by doing not just by reading Formulate the skills to create modify and edit sketches and solid features Learn the techniques to reuse features parts and assemblies through symmetry patterns copied components design tables configurations and more The book is designed to complement the Online Tutorials and Online Help contained in SOLIDWORKS 2019 The goal is to illustrate how multiple design situations and systematic steps combine to produce successful designs The author developed the tutorials by combining his own industry experience with the knowledge of engineers department managers professors vendors and manufacturers He is directly involved with SOLIDWORKS every day and his responsibilities go far beyond the creation of just a 3D model

#### **SOLIDWORKS 2015 in 5 Hours with Video**

**Instruction** David Planchard, 2015-02 OLIDWORKS 2015 in 5 Hours with video instruction introduces the new user to the basics of using SOLIDWORKS 3D CAD software in five easy lessons This book is intended for the student or designer that needs to learn SOLIDWORKS quickly and effectively for senior capstone machine design kinematics dynamics and other engineering and technology projects that use SOLIDWORKS as a tool Engineers in industry are expected to have SOLIDWORKS skills for their company s next project Students need to learn SOLIDWORKS without taking a formal CAD course Based on years of teaching SOLIDWORKS to engineering students SOLIDWORKS 2015 in 5 Hours concentrates on the areas where the new user improves efficiency in the design modeling process By learning the correct SOLIDWORKS skills and file management techniques you gain the most knowledge in the shortest period of time You develop a mini Stirling Engine and investigate the proper design intent and constraints The mini Stirling Engine is based on the external combustion closed cycle engine of Scottish inventor Robert Stirling In addition to 3D modeling the engine can be used to teach and connect many engineering and physics principles You begin with an overview of SolidWorks and the User Interface UI its menus toolbars and commands With a quick pace you learn the essentials of 2D sketching part and assembly creation preform motion study develop detailed part and assembly drawings and much more View the provided videos for each section of the book to enhance your experience SOLIDWORKS Interface 2D Sketching Sketch Planes and Sketch tools 3D Features and Design Intent Creating an Assembly Fundamentals in Drawings Part 1 Fundamentals in Drawings Part 2

**SOLIDWORKS 2020 Quick Start** David Planchard, 2020 SOLIDWORKS 2020 Quick Start introduces new users to the

basics of using SOLIDWORKS 3D CAD software in five easy lessons This book is intended for the student or designer who needs to learn SOLIDWORKS quickly and effectively This book is perfect for engineers in industry who are expected to have SOLIDWORKS skills for their company's next project or students who need to learn SOLIDWORKS without taking a comprehensive CAD course Based on years of teaching SOLIDWORKS to engineering students SOLIDWORKS 2020 Quick Start concentrates on the areas where new users can improve efficiency in the design modeling process By learning the correct SOLIDWORKS skills and file management techniques you gain the most knowledge in the shortest period of time This book begins with an overview of SOLIDWORKS and the User Interface UI its menus toolbars and commands With a quick pace you learn the essentials of 2D sketching part and assembly creation perform motion study develop detailed part and assembly drawings and much more Throughout this book you develop a mini Stirling Engine and investigate the proper design intent and constraints

Official Guide to Certified SOLIDWORKS Associate Exams: CSWA, CSWA-SD, CSWSA-FEA, CSWA-AM (2017-2019) David Planchard, 2019-01-15 This book is written to assist you with passing the SOLIDWORKS associate level exams It provides you with detailed information and exercises that will aid you in passing the following exams Certified SOLIDWORKS Associate CSWA Certified SOLIDWORKS Associate Sustainable Design CSWA SD Certified SOLIDWORKS Simulation Associate Finite Element Analysis CSWSA FEA and the Certified SOLIDWORKS Associate Additive Manufacturing CSWA AM exam There are three goals for this book The primary goal of this book is not only to help you pass the CSWA CSWA SD CSWSA FEA and CSWA AM exams but also to ensure that you understand and comprehend the concepts and implementation details of the four certification processes The second goal is to provide the most comprehensive coverage of CSWA CSWA SD CSWSA FEA and CSWA AM exam related topics available without too much coverage of topics not on the exam The third and ultimate goal is to get you from where you are today to the point that you can confidently pass the CSWA CSWA SD CSWSA FEA and CSWA AM exams

**Engineering Graphics with SOLIDWORKS 2015 and Video Instruction** David Planchard, 2015-01-14 Engineering Graphics with SOLIDWORKS 2015 and video instruction is written to assist the technical school two year college four year university instructor student or industry professional that is a beginner or intermediate SOLIDWORKS user The book combines the fundamentals of engineering graphics and dimensioning practices with a step by step project based approach to learning SOLIDWORKS with video instructions Learn by doing not just by reading The book is divided into four sections Chapters 1 3 explore the history of engineering graphics manual sketching techniques orthographic projection Third vs First angle projection multi view drawings dimensioning practices ASME Y14.5 2009 standard line type fit type tolerance fasteners in general general thread notes and the history of CAD leading to the development of SOLIDWORKS Chapters 4 9 explore the SOLIDWORKS User Interface and CommandManager Document and System properties simple machine parts simple and complex assemblies proper design intent design tables configurations multi sheet multi view drawings BOMs and Revision tables using basic and advanced features Follow the step

by step instructions in over 80 activities to develop eight parts four sub assemblies three drawings and six document templates Chapter 10 provides a section on the Certified Associate Mechanical Design CSWA program with sample exam questions and initial and final SOLIDWORKS models Chapter 11 provides a section on Additive Manufacturing 3D printing and its benefits and features Understand the terms and technology used in low cost 3D printers Review individual features commands and tools using the video instruction and SOLIDWORKS Help The chapter exercises analyze and examine usage competencies based on the chapter objectives The book is designed to complement the SOLIDWORKS Tutorials located in the SOLIDWORKS Help menu Desired outcomes and usage competencies are listed for each project Know your objectives up front Follow the step by step procedures to achieve your design goals Work between multiple documents features commands and properties that represent how engineers and designers utilize SOLIDWORKS in industry The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers department managers vendors and manufacturers These professionals are directly involved with SOLIDWORKS every day Their responsibilities go far beyond the creation of just a 3D model

**Official Guide to Certified SOLIDWORKS Associate Exams: CSWA, CSWA-SD, CSWA-S, CSWA-AM (SOLIDWORKS 2019 - 2021)** David Planchard, 2020-11 This book is written to assist you with passing the SOLIDWORKS associate level exams It provides you with detailed information and exercises that will aid you in passing the following exams Certified SOLIDWORKS Associate CSWA Certified SOLIDWORKS Associate Sustainable Design CSWA SD Certified SOLIDWORKS Associate Simulation CSWA S and the Certified SOLIDWORKS Associate Additive Manufacturing CSWA AM exam There are three goals for this book The primary goal of this book is not only to help you pass the CSWA CSWA SD CSWA S and CSWA AM exams but also to ensure that you understand and comprehend the concepts and implementation details of the four certification processes The second goal is to provide the most comprehensive coverage of CSWA CSWA SD CSWA S and CSWA AM exam related topics available without too much coverage of topics not on the exam The third and ultimate goal is to get you from where you are today to the point that you can confidently pass the CSWA CSWA SD CSWA S and CSWA AM exams CSWA Exam The CSWA certification indicates a foundation in and apprentice knowledge of 3D CAD design and engineering practices and principles The intended audience for this section of the book is anyone trying to take and pass the CSWA exam with a minimum of 6 9 months of SOLIDWORKS experience and basic knowledge of engineering fundamentals and practices SOLIDWORKS recommends that you review their SOLIDWORKS Tutorials on Parts Assemblies and Drawings as a prerequisite and have at least 45 hours of classroom time learning SOLIDWORKS or using SOLIDWORKS with basic engineering design principles and practices CSWA SD Exam The Certified SOLIDWORKS Associate Sustainable Design CSWA SD certification indicates a foundation in and apprentice knowledge of demonstrating an understanding in the principles of environmental assessment and sustainable design This section of the book is intended for anyone interested in Sustainable design as well as life cycle assessment and trying to take and pass the

CSWA SD exam Although no hands on usage of SOLIDWORKS is required for the CSWA SD certification exam it is a good idea to review the SOLIDWORKS SustainabilityXpress and SOLIDWORKS Sustainability tutorials inside of SOLIDWORKS to better understand the actual workflow The CSWA SD is based off the SOLIDWORKS Sustainable Design Guide that incorporates concepts including sustainability environmental assessment and life cycle impact assessment CSWA S Exam The Certified SOLIDWORKS Associate Simulation CSWA S certification indicates a foundation in and apprentice knowledge of demonstrating an understanding in the principles of stress analysis and the Finite Element Method FEM The CSWA S section of the book is for anyone trying to take and pass the CSWA S with a minimum of 6 9 months of SOLIDWORKS experience and knowledge in the following areas Engineering Mechanics Statics Strength of Materials Finite Element Method Finite Element Analysis Theory Applied concepts in SOLIDWORKS Simulation namely Static Analysis Solid Shell and Beam elements Connections and Applying loads and boundary conditions and interpreting results The purpose of this section in the book is NOT to educate a new or intermediate user on SOLIDWORKS Simulation but to cover and to inform you on the types of questions layout and what to expect when taking the CSWA S exam CSWA AM Exam The Certified SOLIDWORKS Associate Additive Manufacturing CSWA AM certification indicates a foundation in and apprentice knowledge of today s 3D printing technology and market The intended audience for this section of the book is anyone trying to take and pass the CSWA AM exam and an interest in Additive Manufacturing The CSWA AM exam is meant to be taken after the completion of the 10 part learning path located on MySOLIDWORKS com The CSWA AM exam fundamentally covers two 3D printing technologies Fused Filament Fabrication FFF and STereoLithography SLA There are a few questions on Selective Laser Sintering SLS technology and available software based printing aids *Engineering Graphics with SOLIDWORKS 2020* David Planchard,2019-12 *Engineering Graphics with SOLIDWORKS 2020* is written to assist students designers engineers and professionals who are new to SOLIDWORKS The book combines the fundamentals of engineering graphics and dimensioning practices with a step by step project based approach to learning SOLIDWORKS The book is divided into four sections with 11 Chapters Chapters 1 3 Explore the history of engineering graphics manual sketching techniques orthographic projection Third vs First angle projection multi view drawings dimensioning practices ASME Y14 5 2009 standard line type fit type tolerance fasteners in general general thread notes and the history of CAD leading to the development of SOLIDWORKS Chapters 4 9 Comprehend the SOLIDWORKS User Interface and CommandManager Document and System properties simple machine parts simple and complex assemblies proper design intent design tables configurations multi sheet multi view drawings BOMs and Revision tables using basic and advanced features Follow the step by step instructions in over 80 activities to develop eight parts four sub assemblies three drawings and six document templates Chapter 10 Prepare for the Certified SOLIDWORKS Associate CSWA exam Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam Chapter 11 Provide a basic understanding between Additive



vs Subtractive manufacturing Discuss Fused Filament Fabrication FFF STereoLithography SLA and Selective Laser Sintering SLS printer technology Select suitable filament material Comprehend 3D printer terminology Knowledge of preparing saving and printing a model on a Fused Filament Fabrication 3D printer Information on the Certified SOLIDWORKS Additive Manufacturing CSWA AM exam Review individual features commands and tools using SOLIDWORKS Help The chapter exercises analyze and examine usage competencies based on the chapter objectives The book is designed to complement the SOLIDWORKS Tutorials located in the SOLIDWORKS Help menu Desired outcomes and usage competencies are listed for each project Know your objectives up front Follow the step by step procedures to achieve your design goals Work between multiple documents features commands and properties that represent how engineers and designers utilize SOLIDWORKS in industry The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers department managers vendors and manufacturers

**Engineering Graphics with SOLIDWORKS 2019** David Planchard, 2019 Engineering Graphics with SOLIDWORKS 2019 is written to assist students designers engineers and professionals who are new to SOLIDWORKS The book combines the fundamentals of engineering graphics and dimensioning practices with a step by step project based approach to learning SOLIDWORKS The book is divided into four sections with 11 Chapters Chapters 1 3 Explore the history of engineering graphics manual sketching techniques orthographic projection Third vs First angle projection multi view drawings dimensioning practices ASME Y14.5 2009 standard line type fit type tolerance fasteners in general general thread notes and the history of CAD leading to the development of SOLIDWORKS Chapters 4 9 Comprehend the SOLIDWORKS User Interface and CommandManager Document and System properties simple machine parts simple and complex assemblies proper design intent design tables configurations multi sheet multi view drawings BOMs and Revision tables using basic and advanced features Follow the step by step instructions in over 80 activities to develop eight parts four sub assemblies three drawings and six document templates Chapter 10 Prepare for the Certified SOLIDWORKS Associate CSWA exam Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam Chapter 11 Provide a basic understanding between Additive vs Subtractive manufacturing Discuss Fused Filament Fabrication FFF STereoLithography SLA and Selective Laser Sintering SLS printer technology Select suitable filament material Comprehend 3D printer terminology Knowledge of preparing saving and printing a model on a Fused Filament Fabrication 3D printer Information on the Certified SOLIDWORKS Additive Manufacturing CSWA AM exam Review individual features commands and tools using SOLIDWORKS Help The chapter exercises analyze and examine usage competencies based on the chapter objectives The book is designed to complement the SOLIDWORKS Tutorials located in the SOLIDWORKS Help menu Desired outcomes and usage competencies are listed for each project Know your objectives up front Follow the step by step procedures to achieve your design goals Work between multiple documents features commands and properties that represent how engineers and designers utilize SOLIDWORKS in

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**Engineering Graphics with SOLIDWORKS**

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SolidWorks Electrical 2020 Black Book Gaurav Verma, Matt Weber, 2019-12-16 The SolidWorks Electrical 2020 Black Book is 6th edition of SolidWorks Electrical Black Book written to help professionals as well as learners in performing various tedious jobs in Electrical control designing The book follows the best proven step by step methodology This book is more concentrated on making you able to use tools at right places The book starts with basics of Electrical Designing goes through all the Electrical controls related tools and ends up with practical examples of electrical schematics Chapters also cover Reports that make you comfortable in creating and editing electrical component reports In this edition two annexures are added to explain basic concepts of control panel designing Some of the salient features of this book are In Depth explanation of concepts Every new topic of this book starts with the explanation of the basic concepts In this way the user becomes

capable of relating the things with real world Topics Covered Every chapter starts with a list of topics being covered in that chapter In this way the user can easy find the topic of his her interest easily Instruction through illustration The instructions to perform any action are provided by maximum number of illustrations so that the user can perform the actions discussed in the book easily and effectively There are about 650 illustrations that make the learning process effective Tutorial point of view The book explains the concepts through the tutorial to make the understanding of users firm and long lasting Each chapter of the book has tutorials that are real world projects Project Free projects and exercises are provided to students for practicing For Faculty If you are a faculty member then you can ask for video tutorials on any of the topic exercise tutorial or concept

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Engineering Design with SOLIDWORKS 2021 David Planchard,2021 Engineering Design with SOLIDWORKS 2021 is written to assist students designers engineers and professionals The book provides a solid foundation in SOLIDWORKS by utilizing projects with step by step instructions for the beginner to intermediate SOLIDWORKS user featuring machined plastic and sheet metal components Desired outcomes and usage competencies are listed for each project The book is divided into five sections with 11 projects Project 1 Project 6 Explore the SOLIDWORKS User Interface and CommandManager Document and System properties simple and complex parts and assemblies proper design intent design tables configurations multi sheet multi view drawings BOMs and Revision tables using basic and advanced features Additional techniques include the edit and reuse of features parts and assemblies through symmetry patterns configurations SOLIDWORKS 3D ContentCentral and the SOLIDWORKS Toolbox Project 7 Understand Top Down assembly modeling and Sheet Metal parts Develop components In Context with InPlace Mates along with the ability to import parts using the Top Down assembly method Convert a solid part into a Sheet Metal part and insert and apply various Sheet Metal features Project 8 Project 9 Recognize SOLIDWORKS Simulation and Intelligent Modeling techniques Understand a general overview of SOLIDWORKS Simulation and the type of questions that are on the SOLIDWORKS Simulation Associate Finite Element Analysis CSWSA FEA exam Apply design intent and intelligent modeling techniques in a sketch feature part plane assembly and drawing Project 10 Comprehend the differences between additive and subtractive manufacturing Understand 3D printer terminology along with a working knowledge of preparing saving and printing CAD models on a low cost printer Project 11 Review the Certified SOLIDWORKS Associate CSWA program Understand the curriculum and categories of the CSWA exam and the required model knowledge needed to successfully take the exam The author developed the industry scenarios by combining his own industry experience with the knowledge of engineers department managers vendors and manufacturers These professionals are directly involved with SOLIDWORKS every day Their responsibilities go far beyond the creation of just a 3D model

**Engineering Design with SOLIDWORKS 2022** David Planchard,2022-02 A comprehensive introduction to

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