RADIO CONTROL MODEL HANDBOOK



An in-depth guide to R/C helicopter design, including performance parameters and scratchbuilding techniques!

BY DON LODGE

Radio Control Model Helicopter Handbook

Bruno Siciliano, Oussama Khatib

Radio Control Model Helicopter Handbook:

Radio Control Model Helicopter Handbook Don Lodge, 1983 The Radio Control Hobbyist's Handbook Edward L. Helicopter Aerodynamics Volume II Ray Prouty, 2009 This is a collection of the Ray Prouty s columns in Safford, 1984 Rotor and Wing and American Helicopter Society's Vertiflite magazine from 1992 to 2004 **Model Helicopters** Malcolm Messiter, 2007 This concise booklet guides the beginner through every aspect of getting started ion building maintaining and flying radio controlled model helicopters Back cover Der RC-Hubschrauber Ernst Bernet, Dieses Buch ist eine Neuauflage des zuvor in der Schweiz im Eigenverlag in kleiner St ckzahl erschienenen Buches Der RC Hubschrauber Der Autor behandelt hier alle Themen des Hubschrauber Modellbaus von der Theorie ber die Baupraxis bis zum Fliegen des fertigen Modells Erstmals wird Schritt fr Schritt die Funktionsweise der Rotorsteuerung beschrieben so dass auch der Anf nger eine Einf hrung in diese interessante Technik bekommt Der Helikopter Fan wird die Beherrschung seiner raffinierten Flugger te schneller und effizienter erlernen k nnen Die theoretischen Betrachtungen und die aus der Praxis stammenden langj hrigen Erfahrungen des Autors sind frjeden Interessierten wertvoll egal welchen Helikopter er besitzt oder zu kaufen Manuals Combined: UH-1 HUEY Army Helicopter Maintenance, Parts & Repair Manuals, Contains the following current U S Army Technical Manuals related to repair and maintenance of the UH 1 Huey series helicopter 23P 1 Level AVIATION UNIT AND INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS FOR HELICOPTER UTILITY TACTICAL TRANSPORT UH 1B UH 1C UH 1H UH 1M EH 1H BELL UH 1V 31 October 2001 921 pages 23P 2 Level AVIATION UNIT AND INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS FOR HELICOPTER UTILITY TACTICAL TRANSPORT UH 1B UH IC UH IH UH IM EH IH BELL UH IV 23 November 2001 970 pages 23P 3 Level AVIATION UNIT AND INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS FOR HELICOPTER UTILITY TACTICAL TRANSPORT UH 1B UH IC UH IH UH IM EH IH BELL UH IV 23 November 2001 715 pages 23 1 Level AVIATION UNIT AND INTERMEDIATE MAINTENANCE INSTRUCTIONS ARMY MODEL UH 1H V EH 1H X HELICOPTERS 15 October 2001 1 176 pages 23 2 Level AVIATION UNIT AND INTERMEDIATE MAINTENANCE INSTRUCTIONS ARMY MODEL UH 1H V EH 1H X HELICOPTERS 1 November 2001 836 pages 23 3 Level AVIATION UNIT AND INTERMEDIATE MAINTENANCE INSTRUCTIONS ARMY MODEL UH 1H V EH 1H X 14 June 1996 754 pages UH 1H V and EH 1H X Aircraft Preventive Maintenance Daily Inspection Checklist 27 April 2001 52 pages UH 1H V and EH 1H X AIRCRAFT PHASED MAINTENANCE CHECKLIST 2 October 2000 112 pages Manuals Combined: U.S. Army TECHNICAL MANUAL OPERATOR'S MANUAL FOR UH-60A HELICOPTER UH-60Q HELICOPTER UH-60L HELICOPTER EH-60A HELICOPTER, BOTH MANUALS Approved for public release distribution unlimited DESCRIPTION This manual contains the complete

operating instructions and procedures for UH 60A UH 60Q UH 60L and EH 60A helicopters. The primary mission of this helicopter is that of tactical transport of troops medical evacuation cargo and reconnaissance within the capabilities of the helicopter. The observance of limitations performance and weight and balance data provided is mandatory. The observance of procedures is mandatory except when modification is required because of multiple emergencies adverse weather terrain etc. Your flying experience is recognized and therefore basic flight principles are not included IT IS REQUIRED THAT THIS.

MANUAL BE CARRIED IN THE HELICOPTER AT ALL TIMES.

Whitaker's Cumulative Book List, 1984.

Recreational Pilot and Private Pilot Written Test Book, 1990.

Monthly Catalog of United States Government Publications, 2004.

Airline Transport Pilot Question Book, Airplane--FAR Part 135, Helicopter--FAR Part 135, 1988 Monthly Catalogue, United States Public Documents, 1990-03 Springer Handbook of Robotics Bruno Siciliano, Oussama Khatib, 2008-05-20 With the science of robotics undergoing a major transformation just now Springer's new authoritative handbook on the subject couldn't have come at a better time Having broken free from its origins in industry robotics has been rapidly expanding into the challenging terrain of unstructured environments Unlike other handbooks that focus on industrial applications the Springer Handbook of Robotics incorporates these new developments Just like all Springer Handbooks it is utterly comprehensive edited by internationally renowned experts and replete with contributions from leading researchers from around the world The handbook is an ideal resource for robotics experts but also for people new to this expanding field The Complete Book of Model Aircraft, Spacecraft and Rockets Louis Heilbroner Hertz, 1967

The Mammoth Book Of Weird Records Jim Theobald, 2015-09-17 Everyone's heard of Usain Bolt but how many people know about Dineka Maguire Like Bolt the Irish woman is a world record holder but in the rather lesser known sport of bog snorkelling She is just one of the hundreds of unsung heroes featured in this book chronicling the people who go to bizarre lengths to break world records in the weirdest categories people who devote hours of intense training to spitting dung eating cockroaches sniffing feet or tossing tuna in the hope of one day being recognised as the best in the world This astonishing compendium of the weirdest wackiest and most disgusting world records will amuse and astound in equal measure Entries include Longest ear hair Fastest marathon while wearing a deep sea diving suit Fastest bog snorkeller Farthest distance skateboarding by a goat Most bees on body Most milk crates balanced on head Fastest 5 km run while dressed as a penguin and juggling Heaviest airplane pulled with teeth Fastest shopping trolley Longest backwards motorcycle ride Most stairs climbed by bicycle Fastest 30 metres on a scooter by a dog First water skiing squirrel

The Zombie Chronicles - Book 7 - Trepidation Chrissy Peebles, 2014-11-23 This book is 86 00 words When a deluded scientist a crazy gang leader and Max all but heads chaos is bound to arise Armed conflict develops among the rivals fighting each other for the control of Fairport the safest city to be in the zombie apocalypse Z strikes hard but Dean and the gang fight back with everything they have Can Dean and the others keep Fairport safe from impending doom KEYWORDS free horror young adult free horror books to read

free ebooks freebies free stories free zombie stories free zombie fiction adventure free teen books free teen horror zombie stories dystopian zombie apocalypse walking dead dark fantasy humor paranormal romance scary stories zombie series zombie stories supernatural free supernatural free horror free dystopian free fantasy free teen books free adventure books free action books free zombie books zombie apocalypse series zombie thriller post apocalyptic zombie horror zombie Armageddon zombie series dystopian Field Manuals United States. War Department, 1946 Engineering Masterpiece with 10 Practice Sets (6 in Book + 4 Online) 6th edition Prem Mohan, GATE Civil Engineering Masterpiece 2019 with 10 Practice Sets 6 in Book 4 Online Tests 6th edition for GATE exam contains exhaustive theory past year questions practice problems and Mock Tests Covers past 14 years questions Exhaustive EXERCISE containing 100 150 questions in each chapter In all contains around 5200 MCQs Solutions provided for each question in detail The book provides 10 Practice Sets 6 in Book 4 Online Tests designed exactly on the latest pattern of GATE exam *The Big Book of Drones* Roland Büchi, Drones or more precisely multicopters have opened a whole new way of model making Highly developed control electronics powerful electric motors and high performance batteries make things possible that were still science fiction until recently At the same time completely new applications have emerged Photo and film flights automated flights and action packed FPV races make these models interesting for technology enthusiasts Roland B chi a drone expert from the very beginning provides all the information you need in this book if you want to get involved with multicopters He offers beginners the information they need for a successful start and advanced pilots the basics for special missions In short Anyone who wants to fly drones successfully need this book From the content Development history of quadrocopters and drones Control functions and technical background Sensors and GPS GPS system Automated flight flying from waypoints Photo and film flight telemetry and FPV First Person View FPV FPV Race Remote control and intelligent operation Applications and legal issues Some flight mechanics and control technology Design of the propulsion system Design and construction of multicopters First flight and flight school Marine Analytical Chemistry Julián Blasco, Antonio Tovar-Sánchez, 2022-11-03 This textbook offers a comprehensive and authoritative introduction to the latest analytical methods tools and techniques used in the marine environment bringing together the two fields of chemical oceanography and analytical chemistry Divided into 11 chapters the book starts with an overview of the main parameters of the marine carbon system and it covers different sampling strategies used by the marine scientific community and the different chemical analyses to measure trace metals radionuclides and organic matter in the marine environment Particular attention is given to the identification and quantification of marine persistent organic pollutants emerging organic contaminants and microplastics Readers will also find accessible explanations and real life examples of the application of remote sensing and in situ sensing technologies to monitor the marine environment The textbook finishes with a chapter on data treatment that outlines the relevant statistical approaches uncertainty estimation and quality assurance of marine chemical measurements This textbook provides both

students and professionals alike with a transdisciplinary and comprehensive foundation for the chemical analysis of our oceans and seas

Enjoying the Song of Term: An Psychological Symphony within Radio Control Model Helicopter Handbook

In a global used by screens and the ceaseless chatter of fast connection, the melodic splendor and psychological symphony created by the written term usually fade in to the back ground, eclipsed by the persistent sound and disruptions that permeate our lives. But, located within the pages of **Radio Control Model Helicopter Handbook** a stunning literary value overflowing with organic thoughts, lies an immersive symphony waiting to be embraced. Constructed by a masterful musician of language, that interesting masterpiece conducts viewers on a psychological journey, skillfully unraveling the hidden tunes and profound affect resonating within each cautiously constructed phrase. Within the depths of this touching assessment, we will explore the book is main harmonies, analyze their enthralling publishing style, and surrender ourselves to the profound resonance that echoes in the depths of readers souls.

https://pinsupreme.com/book/uploaded-files/Download PDFS/Qualitative Psychology.pdf

Table of Contents Radio Control Model Helicopter Handbook

- 1. Understanding the eBook Radio Control Model Helicopter Handbook
 - The Rise of Digital Reading Radio Control Model Helicopter Handbook
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Radio Control Model Helicopter Handbook
 - Exploring Different Genres
 - o Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
- 3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Radio Control Model Helicopter Handbook
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Radio Control Model Helicopter Handbook
 - Personalized Recommendations

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

- 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

Radio Control Model Helicopter Handbook Introduction

In the digital age, access to information has become easier than ever before. The ability to download Radio Control Model Helicopter Handbook 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 Radio Control Model Helicopter Handbook has opened up a world of possibilities. Downloading Radio Control Model Helicopter Handbook 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 Radio Control Model Helicopter Handbook 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 Radio Control Model Helicopter Handbook. 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 Radio Control Model Helicopter Handbook. 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 Radio Control Model Helicopter Handbook, 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 Radio Control Model Helicopter Handbook 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 Radio Control Model Helicopter Handbook Books

- 1. Where can I buy Radio Control Model Helicopter Handbook books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
- 2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
- 3. How do I choose a Radio Control Model Helicopter Handbook book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
- 4. How do I take care of Radio Control Model Helicopter Handbook books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
- 5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.
- 6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.
- 7. What are Radio Control Model Helicopter Handbook audiobooks, and where can I find them? Audiobooks: Audio

- recordings of books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.
- 8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores. Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media or recommend them to friends.
- 9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.
- 10. Can I read Radio Control Model Helicopter Handbook books for free? Public Domain Books: Many classic books are available for free as theyre in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

Find Radio Control Model Helicopter Handbook:

qualitative psychology

quantum reading the power to read your best

quantum information ii

putsy gets into trouble

quality yearbook 1994

putting humpty dumpty together again

quantum theory of radiation 3ed

quantum journey training course 2

quantum mechanics for applied physics and engineering

putting money to work

quadrupoles in electron lens design.

qualitative analysis and the properties of ions in aqueous solution

putting the family first identities decisions and citizenship

quality of work and employee involvement in europe

puzzle of the haunted camera polly the p

Radio Control Model Helicopter Handbook:

Engineering Mechanics Dynamics (7th Edition) ... Dynamics, Seventh Edition, J. L. Meriam, L. G. Kraige, Virginia Polytechnic Institute and State University ... This book is printed on acid-free paper. Founded in ... Engineering-mechanics-dynamics-7thedition-solutions ... Download Meriam Kraige Engineering Mechanics Dynamics 7th Edition Solution Manual PDF file for free, Get many PDF Ebooks from our online library related ... Engineering Mechanics Dynamics 7th Edition Solution ... Fill Engineering Mechanics Dynamics 7th Edition Solution Manual Pdf, Edit online. Sign, fax and printable from PC, iPad, tablet or mobile with pdfFiller ... Engineering mechanics statics - j. l. meriam (7th edition) ... Engineering mechanics statics - j. l. meriam (7th edition) solution manual ... free-body diagrams-the most important skill needed to solve mechanics problems. Engineering Mechanics Statics 7th Edition Meriam ... Engineering Mechanics Statics 7th Edition Meriam Solutions Manual -Free download as PDF File (.pdf), Text File (.txt) or read online for free. Instructors Solution Manual, Static- Meriam and L. G. Kraige Read and Download PDF Ebook engineering mechanics statics 7th edition solution manual meriam kraige at Online Ebook Libr. 2,307 79 40KB Read more ... Meriam J.L., Kraige L.G. Engineering Mechanics Statics. ... ENGINEERING MECHANICS STATICS 7TH EDITION SOLUTION MANUAL MERIAM KRAIGE PDF · Engineering Mechanics Statics Solution Manual Meriam Kraige PDF · Meriam Instructors ... Dynamics Meriam Kraige 7th Edition? Sep 9, 2018 — Where can I download the solutions manual of Engineering Mechanics: Dynamics Meriam Kraige 7th Edition? ... Dynamics (14th ed) PDF + Instructors ... Engineering Mechanics - Dynamics, 7th Ed (J. L. Meriam ... I have the comprehensive instructor's solution manuals in an electronic format for the following textbooks. They include full solutions to all the problems ... Engineering Mechanics Dynamics (7th Edition) Sign in. Lost-wax Casting: Old, New, and Inexpensive Methods Lost-wax Casting: Old, New, and Inexpensive Methods Lost-Wax Casting: Old, New, and Inexpensive Methods This book is a basic introduction to lost-wax casting with emphasis on jewelry making. It is designed to be used both as a textbook and a reference book and ... Old, New, & Inexpensive Methods by Fred R. Sias Jr., PhD Sias Jr., PhD, is a basic introduction to lost-wax casting with a large focus on jewelry making. Designed to be used as a textbook and as a reference book, it ... Lost Wax Casting: Old, New and Inexpensive Methods, By Dr ... This book is a basic introduction to lost-wax casting with emphasis on jewelry making. Designed to be used as a textbook and as a reference book, it is ... Lost-Wax Casting: Old, New, & Inexpensive Methods by Fred ... This book, written by Fred R. Sias Jr., PhD, is a basic introduction to lost-wax casting with a large focus on jewelry making. Lost-Wax Casting: Old, New, and Inexpensive Methods ... Mar 1, 2006 — This book is a basic introduction to lost-wax casting with emphasis on jewelry making. It is designed to be used both as a textbook and a ... Lost Wax Casting: Old New and Inexpensive Methods by Dr. This book is a basic introduction to lost-wax casting with emphasis on jewelry making. Designed to be used as a textbook and as a reference book, it is ... Lost-Wax Casting by F. R. Sias - Books-A-Million Lost-Wax Casting: Old, New, and Inexpensive Methods. by F. R. Sias and Fred ... This book is a basic introduction to lost-wax casting

with emphasis on jewelry ... Lost-Wax Casting - Shop Edition: Old, New, and Inexpensive ... Lost-Wax Casting - Shop Edition: Old, New, and Inexpensive Methods - Softcover; Publisher: Woodsmere Press, LLC, 2012; Buy Used Condition: Good; Condition · Good Lost-Wax Casting: Old, New, and... book by F.R. Sias Buy a cheap copy of Lost-Wax Casting: Old, New, and... book by F.R. Sias. This book is a basic introduction to lost-wax casting with emphasis on jewelry ... Push Mowers for Sale - PowerPro Equipment Searching for a self propelled lawn mower? PowerPro Equipment has all of the best push mower brands to choose from - schedule a test drive today! Outdoor Power Equipment Company PA & NJ PowerPro is a lawn equipment supplier providing everything for both residential & commercial projects. Browse our inventory now! K-Gro PowerPro Lawnmower Repair The K-Gro Power Pro Push mower, manufactured by Modern Tool and Die Company. K-Gro PowerPro Lawnmower troubleshooting, repair, and service manuals. K-grow or Power Pro riding mowers Oct 7, 2004 - Ihave a PowerPro 42 in riding mower and i'm trying to find new blades or at least some info on who or where they are sold. My best guess is K- ... K-Gro PowerPro Repair The K-Gro PowerPro is a riding lawnmower with a 12 or 18 HP engine option. This ridable lawnmower was produced by MTD and Murray for K-Mart in 1997. The 12 HP ... Pro Power - Professional Power Products Pro Power is family owned and operated with 3 active ... Lawn Mowers · Spartan Mowers · Parts · Service · Articles · Contact Us · Promotions · Pro Power © Go Pro ... PowerPro Riding Mowers Parts with Diagrams All models of PowerPro Riding Mowers. Fix it fast with OEM parts list and diagrams. Free Power Pro Riding Mower Part 1 - YouTube PowerPro Lawn Mower, Quantum 5 HP E... PowerPro Lawn Mower, Quantum 5 HP Engine, Model# RBSP225QAM, Serial# 051696M 002111. Details; Terms; Directions; Shipping. Please call Mike at 612-432-1321 with ...