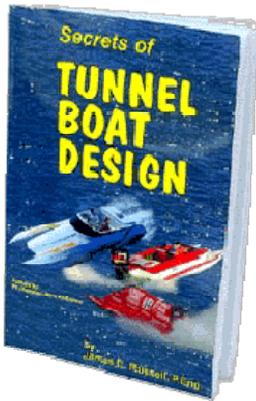


## [More Of A Good Thing: The Secrets of Tunnel Boat Design - 12th Edition](#)

A book review by Greg Terzian

Many of you will remember our first look at AeroMarine Research's fantastic tunnel hull manual, *The Secrets of Tunnel Boat Design*. This book is hailed by many (including us) as the premier tunnel boat enthusiast's resource. Well, Jim Russell has been hard at work on the latest edition, which brings us to the current offering.



For those of you that are unfamiliar with this book, it is recommended that you read our review of the 10th Edition [here](#). *The Secrets of Tunnel Boat Design* is what I believe to be the bible of the tunnel boat. I'm happy to report that all of the goodness of previous editions is present here, with much more to make this the best version yet.

After an interesting forward written by Formula 1 Champion Mark Rotharmel, the reader is first introduced to a fantastic history of both tunnel boats and modified-vee bottom designs. Here you'll learn about the early concepts in boat racing, dating back to 1905. Design evolution is extensively discussed - mono hull, stepped bottom designs, hydroplanes, catamarans, "wing" designs, and of course, the tunnel design. All that was learned through testing and racing of these designs has been chronicled into this book, and as we all know, some of these lessons were learned at great cost. It's all covered here, from mild to wild, and everything in between.

The new book now includes the complete history of tunnel boat design, the design of propellers, the history of the modified-vee hull, the history of the Wing In Ground effect, and the Ten Steps To Performance Powerboat Design. *Secrets of Tunnel Boat Design* now includes over one hundred photographs and many detailed illustrations to help the reader understand the physical properties that are taken into consideration for design analysis. Indeed this book will teach you how to design a tunnel hull with predictable performance.



A Winning Combination: [Secrets of Tunnel Boat Design](#) book and the [Tunnel Boat Design Program](#)

What impresses me about this book is its capacity to educate even the most casual performance boater, while making it very interesting at the same time. Every facet of performance boating is covered, and while the material is easy to digest for any reader, more advanced professionals will find that there's a lot to sink their proverbial teeth into.

Finally, it should be mentioned that now more than ever, this is not a book for just the tunnel boat crowd. While the Secrets of Tunnel Boat Design is a book that focuses on the tunnel hull, the knowledge contained in its pages

will educate all performance boaters. Understanding the forces that make our rigs fly opens up new possibilities for performance and safety.

With the holidays upon us, this would make a great gift for any performance boating enthusiast. The only way to take this one step further is with AeroMarine Research's Tunnel Boat Design Software, which is a living, breathing, interactive version of this book. Our review of this software can be viewed [here](#). In our tests, it was shockingly accurate, and dangerously addictive. Something to consider for those long winter months. Either way, the Secrets of Tunnel Boat Design is sure to please any performance boating enthusiast. Happy reading!

**Special Offer:** Any Scream And Fly registered forum member that orders the 12th Edition [Secrets of Tunnel Boat Design](#) book (\$69) **AND** the [Tunnel Boat Design Program](#), Version 6.5 software (\$379) will receive a \$70 discount. Any of these would make a great gift for the holidays!

If you're interested in purchasing these items, you may use the following links:

[12th Edition STBD book](#)  
[TBDP Software, Version 6.5](#)

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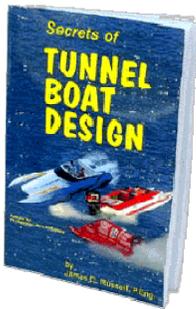
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THE MAGAZINE DEDICATED TO PERFORMANCE BOATING

## Required Reading: The Secrets Of Tunnel Boat Design (10<sup>th</sup> edition)

A book review by Greg Terzian



As many of us realize, part of boating - a large part - is interacting with other boaters. This comes in many forms - from meeting at the local lake boat ramp, to our discussions on the message forum. When our boats are in for the night, we turn to the more social and informative aspects of boating to satiate our craving to be on the water.

Throughout the years, most of us have learned a great deal through other boaters and the message forums. We've had countless testimonials from people that saved money on parts, received the right advice, or just feel at home interacting with people that enjoy our sport.

Recently, I have come into contact with James D. Russell, an engineer at [AeroMarine Research](#). Some of you may know that AeroMarine Research created the Tunnel Boat Design Software (which we'll be reviewing this month), as well as introduced their book, the Secrets Of Tunnel Boat Design.

Mr. Russell sent *Scream And Fly* a copy of this book, and once I started reading it, I was hooked. I don't know about most of you, but for a book to keep me glued to its pages for most of the night, it *must* be good. What makes this reading so worthwhile? Let's continue...

The Secrets Of Tunnel Boat Design was originally introduced in January of 1982. The book is now in its tenth printing, updated to July of 1999.



The book presents the reader with a history of racing, from the first powerboats all the way up to today's most advanced racing machines. The development of the tunnel and V bottoms are interestingly chronicled, with detailed explanations of hull design, function, potential, and characteristics. This is just the start - Secrets Of

Tunnel Boat Design takes the reader into domains that are sure to interest even the most dedicated and knowledgeable boating enthusiast. This fantastic book also details the ten design steps for analysis of hull performance and stability. These steps show the reader how the calculations are accurately performed, as well as detailed information about their relation to hull performance. The ten steps range from layout design dimensions, calculating lift and drag, power calculations, and stability. What's more; the

material covers all levels of technical understanding, from the casual reader to the technical guru.

In addition to what I would describe as one of the most comprehensive manuals covering tunnel boat design, Secrets Of Tunnel Boat Design also focuses on lower unit hydrodynamics, designs, and limitations, as well as drive system designs.

This book is highly recommended for the casual as well as the serious performance boating enthusiast. Let's face it, we can all learn something, and this book teaches a lot. The more we understand about what makes our rigs go, the safer and faster we'll all go. Don't hesitate to pick up a copy of this book and learn facts about our sport that are sure to inform as well as entertain.

Contact Information
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### **About AeroMarine Research:**

Jim Russell is a professional engineer with a mechanical and aeronautics background. Currently living in Canada, he has done extensive aerodynamic research at University of Michigan, OH and University of Toronto, Canada and marine research at the NRC water channel laboratory in Ottawa, Canada. His published papers are highly acclaimed, and are specifically related to the aerodynamics and hydrodynamics of high performance catamarans and tunnel boats. Russell has designed and built many tunnel boats. As a long-time professional race driver, he piloted tunnel boats to Canadian and North American championships. He has written power boating articles for many worldwide performance magazines and has covered UIM and APBA powerboat races. He has also appeared on Speed Channel's 'Powerboat Television Show' speaking on tunnel boat design. Russell is the author of the "Secrets of Tunnel Boat Design" book, "The Wing in Ground Effect – Their relation to Powerboats©", book, and the "History and Design of Propellers." His company has designed and published the well-known powerboat design software, "Tunnel Boat Design Program© ", specifically for the design and performance analysis of tunnel boats and powered catamarans.



Get your fully illustrated, 12th edition copy of the "**Secrets of Tunnel Boat Design**" book, with over 200 pages of design practices and formulae and over 150 photographs.

The publications "History of Tunnel Boat Design" book, "History of Propellers" e-book, the "Tunnel Boat Design Program©" software, and the "PropWorks2" software for speed prediction and propeller selection are available at the AeroMarine Research web site.

<http://www.aeromarineresearch.com>

"Secrets of Tunnel Boat Design©" book, 12<sup>th</sup> edition –  
<http://www.aeromarineresearch.com/stbd2.html>

"History of Tunnel Boat Design©" book -  
<http://www.aeromarineresearch.com/history.html>

"History & Design of Propellers©" e-book -  
<http://www.aeromarineresearch.com/historyofpropellers.html>

"Tunnel Boat Design Program© ", V7 software -  
<http://www.aeromarineresearch.com/tbdp6.html>

"PropWorks2©" software for propeller selection and powerboat speed prediction -  
<http://www.aeromarineresearch.com/prop2.html>