

# Control Line Scale Modeling



## Comprehensive Guide for Control Line Scale Model Aircraft

Electronic Controls, Model Selection, Flight Testing,  
Competition and Documentation

By: Fred Cronenwett

Volume 1

First published in 2001 in the United States  
By the author

Volume 1  
Copyright 2001

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying recording or by an information storage and retrieval system, without prior permission in writing from the publisher.

**Published by:**  
Fred Cronenwett

**Distributed by:**  
Fred Cronenwett  
Wichita, Kansas

### **Printing history**

First Printing – May 2001  
Second Printing – Dec 2002  
Electronic Copy – February 2009

Dedicated in Memory to Luciano Nustrini who inspired me to  
build and fly model airplanes at an early age

**Edited by:** Grant Hiestand & Kimberly Kingman

All photographs taken by Fred Cronenwett

Special Thanks to Grant Hiestand, Steve Davis, Ken Long, Lynn Boss & Merle Mohring

# Table of Contents

Introduction .....	1
<b><u>Section 1 - Electronic Controls</u></b>	
Chapter 1 - System Overview .....	5
Chapter 2 - Flying Line Construction .....	7
Chapter 3 - Single Channel .....	13
Chapter 4 - Multi-Channel .....	19
Chapter 5 - Direct Servo Connection .....	23
Chapter 6 - The Bill Young handle .....	35
Chapter 7 - A Look at Electric Power for Control Line Models .....	41
Chapter 8 - Trouble Shooting .....	53
Chapter 9 - Operation at the Flying Site .....	55
Chapter 10 - Installation Ideas for Profile Scale .....	57
<b><u>Section 2 - Model selection and flight testing</u></b>	
Chapter 11 - The C/L Scale Model From an R/C Kit .....	61
Chapter 12 - Picking Models for CL Scale .....	65
Chapter 13 - C/L Scale Model – Stabilizer & Wing Incidence .....	69
Chapter 14 - Trimming the CL Scale Model .....	73
Chapter 15 - The Control Line ARF.....	75
Chapter 16 - Throttle Control & Test Flying .....	77
Chapter 17 - Multi-Engine CL Models .....	83
<b><u>Section 3 - Control Line Scale Competition</u></b>	
Chapter 18 - CL Scale Competition .....	87
Chapter 19 - Flaps and Retractable Landing Gear .....	89
Chapter 20 - CL Scale Documentation .....	93
Chapter 21 - Documenting the Color of your Subject Aircraft .....	99
Chapter 22 - All 3-views are not Created Equal .....	101
Contacts .....	105
Conclusion .....	109
Photo Gallery .....	111
Glossary .....	127