

---

# Text Fields

User Experience: Controls



2004-02-09



Apple Inc.  
© 1997, 2004 Apple Computer, Inc.  
All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without prior written permission of Apple Inc., with the following exceptions: Any person is hereby authorized to store documentation on a single computer for personal use only and to print copies of documentation for personal use provided that the documentation contains Apple's copyright notice.

The Apple logo is a trademark of Apple Inc.

Use of the "keyboard" Apple logo (Option-Shift-K) for commercial purposes without the prior written consent of Apple may constitute trademark infringement and unfair competition in violation of federal and state laws.

No licenses, express or implied, are granted with respect to any of the technology described in this document. Apple retains all intellectual property rights associated with the technology described in this document. This document is intended to assist application developers to develop applications only for Apple-labeled computers.

Every effort has been made to ensure that the information in this document is accurate. Apple is not responsible for typographical errors.

Apple Inc.  
1 Infinite Loop  
Cupertino, CA 95014  
408-996-1010

Apple, the Apple logo, Mac, and Mac OS are trademarks of Apple Inc., registered in the United States and other countries.

Simultaneously published in the United States and Canada.

**Even though Apple has reviewed this document, APPLE MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS DOCUMENT, ITS QUALITY, ACCURACY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS DOCUMENT IS PROVIDED "AS IS," AND YOU, THE READER, ARE ASSUMING THE ENTIRE RISK AS TO ITS QUALITY AND ACCURACY.**

**IN NO EVENT WILL APPLE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY**

**DEFECT OR INACCURACY IN THIS DOCUMENT, even if advised of the possibility of such damages.**

**THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. No Apple dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.**

**Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.**

# Contents

---

## **Introduction to Text Fields 5**

Who Should read This Document 5

Organization of This Document 5

See Also 5

---

## **About Text Fields 7**

---

## **About Secure Text Fields 9**

---

## **Document Revision History 11**

---

## **Index 13**

---



# Introduction to Text Fields

---

*Text Fields* discusses the two types of text fields: regular and secure. A regular text field is a control that displays text that the user can select or edit. A secure text field lets the user enter secure data, like a password, so that others can't see it.

## Who Should read This Document

You should read this document if you need to understand what text fields do and which classes implement them.

## Organization of This Document

This document contains the following articles:

- ["About Text Fields"](#) (page 7) gives basic information on text fields.
- ["About Secure Text Fields"](#) (page 9) gives basic information on secure text fields.

## See Also

For more information related to text fields, refer to the following documents:

- ["Text Fields, Text Views, and the Field Editor"](#) provides basic descriptions of these important text objects.
- ["Using Keyboard Interface Control in Windows"](#) describes how to set up text fields so the user can shift focus one to the next by pressing the Tab key.
- ["Using the Window's Field Editor"](#) describes the field editor, which is shared by all the text fields in a window, and which handles the editing of text in the field.



# About Text Fields

---

A text field is a control, instantiated from the class `NSTextField`, that displays text that the user can select or edit, and that sends its action message to its target when the user presses the Return key while editing. Like other controls, it also performs validation on its value when edited. If the value isn't valid it sends a special error action message to its target.

There are several types of objects that display text, and in some cases, a text field may not be the right choice. If you need to enter more than one line of text, use a text view. If you need several related text fields, use a form.

You can link text fields together in their window's key view loop, as described in "Implementing a Document-Based Application".

An `NSTextField` object can be assigned a delegate, which is then sent delegate messages by the window's field editor, such as `textShouldEndEditing:`. See "Using the Window's Field Editor" for more information on a window's field editor.

A text field allows you to set the attributes of its text, the text background color, whether it draws the background, and whether it draws a bezel or border around its text. Note that the text and background colors of selected text are configurable. The selected text color overrides any actual text color applied to the text while it's selected (this is generally the case with controls).

A text field is implemented by two classes: `NSTextFieldCell`, the cell which does most of the work, and `NSTextField`, the control that contains that cell. Every method in `NSTextFieldCell` has a cover in `NSTextField`. (A cover is a method of the same name that calls the original method.) An `NSTextField` can have a delegate that responds to such delegate methods as `textShouldEndEditing:`.



# About Secure Text Fields

---

A secure text field is a type of text field that hides its text from display or other access via the user interface. It's suitable for use as a password-entry object, or for any item in which a secure value must be kept. Your code can get the text field's string value using the standard `stringValue` method, but users can't see it or access it. It overrides many aspects of text editing to prevent passing of the object's value out by mechanisms available to the user (namely, through Cut, Copy, and Paste commands, and the Services facility). This object also overrides the text system's drawing routine to draw no text at all.

A secure text field is implemented by two classes:

- `NSSecureTextFieldCell`, a subclass of `NSTextFieldCell` and the cell which does most of the work
- `NSSecureTextField`, a subclass of `NSTextField` and the control that contains that cell

Every method in `NSSecureTextFieldCell` has a cover in `NSSecureTextField`. (A cover is a method of the same name that calls the original method.)



# Document Revision History

---

This table describes the changes to *Text Fields*.

Date	Notes
2004-02-09	Rewrote introduction and added an index.
2002-11-12	Revision history was added to existing topic. It will be used to record changes to the content of the topic.



# Index

---

## C

---

cover methods [7,9](#)

## D

---

delegates  
of text fields [7](#)

## F

---

field editors [7](#)

## N

---

NSSecureTextField class [9](#)  
NSSecureTextFieldCell class [9](#)  
NSTextField class [7](#)  
NSTextFieldCell class [7](#)

## S

---

secure text fields, defined [9](#)  
stringValue method [9](#)

## T

---

text attributes  
text fields and [7](#)  
text fields  
defined [7](#)  
secure, defined [9](#)  
textShouldEndEditing: method [7](#)