

# Human Interface Notes

Note #11: Mixed Settings for Controls and Menus

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How to display menus and controls which describe a selection containing mixed attributes.

## Introduction

Controls and menus are often used to display and set the attributes of a selection of text or group of objects. A problem arises, however, when the selection contains a mixed set of attributes, such as a selection of text that is formatted partially in Bold and partially in Italic. This note discusses the appearance and behavior of mixed state menus, radio buttons, check boxes, and pop-up menus.

## Menus

In menus, a dash to the left of a menu item is used to indicate a mixed setting. For example, if two or more items with different labels are selected in the System 7.0 Finder, a dash appears next to each menu item in the Label menu that describes the label setting for at least one, but not all, of the selected items. Menu behavior depends on whether the menu items are mutually exclusive, such as text size, or independent, such as text style. (The exception in the Style menu is the Plain menu item, which is mutually exclusive with other styles.)

Mutually exclusive items follow the same guidelines as radio buttons: one selection deselects all items in the group except the one selected. The selected item is then marked by a check to the left of the menu item.

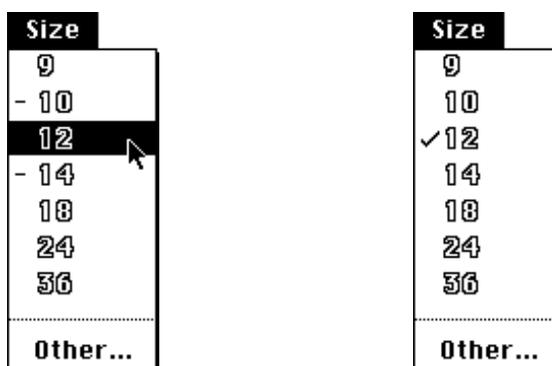


Figure 1-Mutually exclusive menu items, before and after selection

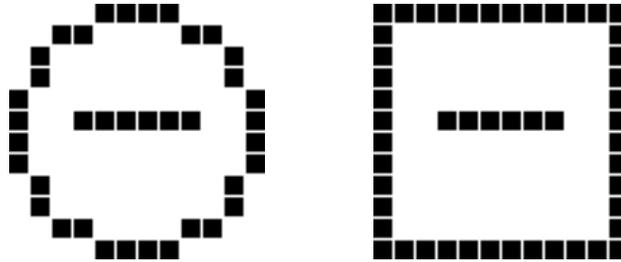
Selecting an independent menu item does not affect the settings of other menu items. The selected menu item is marked by a check and that attribute is applied to the current selection.



Figure 2 - Independent Menu items, before and after selection

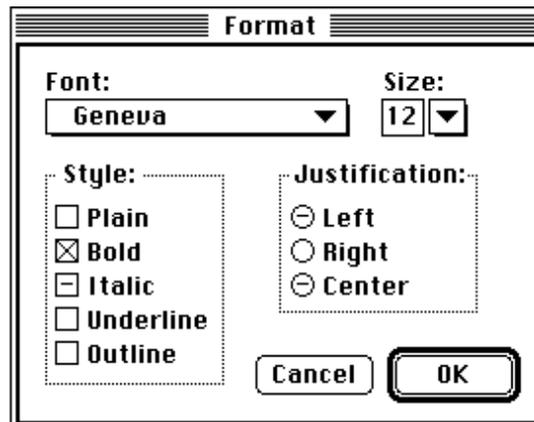
## Radio buttons and Check Boxes

The design for the mixed state of radio buttons and check boxes is derived from the menu design. The mixed state of a radio button or check box is displayed as a six pixel long dash through the middle of the control.



**Figure 3 - Enlarged view of mixed state for radio button and check box**

In the example shown in Figure 4, the user has made a selection that contains text formatted with different styles and justification. The dialog correctly shows the mixed radio button and check box settings. If the user selects a radio button, all mixed radio button settings in the group disappear. There is no way to return any button to the mixed state without canceling the dialog and starting again.



**Figure 4 - Example of dialog containing mixed control settings**

If the user clicks on a check box with a mixed setting, the check box becomes selected (checked). Thereafter, the check box cycles normally from checked to unchecked with each click. As with radio buttons, the only way to return a check box to the mixed state is to cancel the dialog and start again. This keeps the behavior of menus, radio buttons and check boxes consistent.

## Pop-up Menus

Pop-up menus present a problem for displaying mixed settings. The act of clicking on a pop-up menu to see the choices and releasing the mouse button triggers a selection, which alters any mixed state settings. It is best to avoid a situation that requires a mixed state pop-up menu if possible.

Pop-ups should follow the basic rules of pull down menus. If there is a mixed selection of objects or text, there should be dashes next to the appropriate menu items. A closed pop-up menu should indicate a mixed selection by using an appropriate menu item name, such as "Mixed Fonts". When the menu is open, this item is displayed at the top of the menu, separated from the rest of the items by a gray line. If the user

clicks on the menu to see the choices, simply releasing the mouse button again does not change the selection. If the user makes a selection, however, the mixed selection item is no longer available.

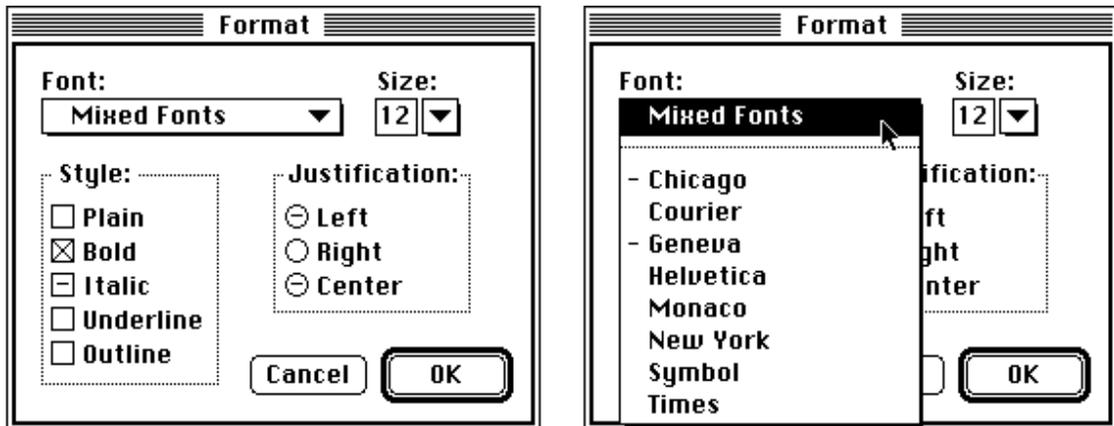


Figure 5 - Mixed state pop-up menu

The same design can be used for editable pop-up menus. The edit field should be left blank and the accepted contents of the editable portion of the pop-up do not change (i.e. the user can not enter the words “Mixed Sizes”).

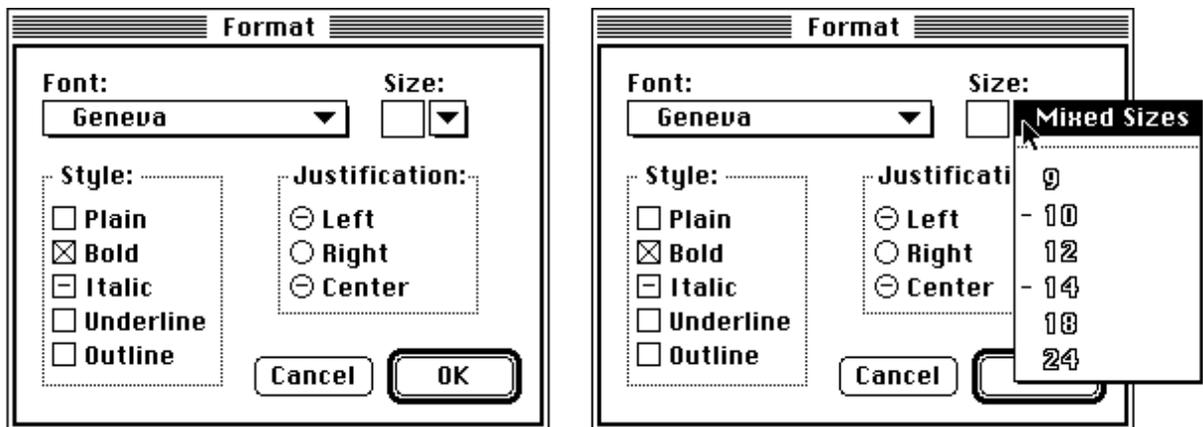


Figure 6 - Mixed state editable pop-up menu