

The Monitor Function

The 'mntr' resource must contain a function that responds to the various events that can occur while the Options dialog box is on the screen. The declaration for a monitor function named MyMntr is as follows:

```
pascal long MyMntr (  short      message,
                     short      item,
                     short      numItems,
                     long       monitorValue,
                     DialogPtr  mDialog,
                     EventRecord *theEvent,
                     short      screenNum,
                     ScrnRsrcHandle *screens,
                     Boolean     *scrnChanged
                     );
```

Parameter descriptions

message	A message number, from the list defined in the following section, that your monitor function can use to determine what action to take.
item	The dialog-item-list number of the item that the user clicked. To calculate the dialog-item-list number in your ' <u>DITL</u> ' resource, subtract the number passed in the numItems parameter from the number in the item parameter. When the message parameter equals <i>StartupMsg</i> , the item parameter indicates whether the user is a superuser—that is, whether the user can be assumed to be very knowledgeable. If the user is a superuser, the item parameter is 1; if not, it is 0.
numItems	The dialog-item-list number of the last standard item in the Options dialog box. You number the items in your ' <u>DITL</u> ' resource starting with 1; the Monitors control panel adds the value of the numItems parameter to each number in the ' <u>DITL</u> ' resource and uses the result for the dialog-item-list number.
monitorValue	The result returned by your monitor function the last time it was called. Because control panel routines cannot have global variables, you might want to use the function result to return a handle to the storage of your local data. This handle is then available in the monitorValue parameter the next time the monitor function is called. The monitorValue parameter is 0 the first time the Monitors control panel calls your monitor function (that is, when the message parameter equals <i>startupMsg</i>). If your monitor function returns a

function result in the range 1 through 255, the Monitors control panel interprets this result as an error and closes your Options dialog box. Therefore, your monitor function cannot receive a value in this range in the monitorValue parameter.

mDialog	The dialog pointer for the Options dialog box.
theEvent	The <u>event record</u> for an event that caused a hitMsg, nulMsg, or keyEvtMsg message.
screenNum	The number of the screen device (that is, the monitor) that the user has selected. The Monitors control panel numbers monitors consecutively, in the same order as the slots in which the cards are installed, starting with 1.
screens	A handle to the ' <u>scrn</u> ' resource. The ' <u>scrn</u> ' resource is described in the description of the <u>Graphics Devices Manager</u> .
scrnChanged	<p>A <u>Boolean</u> value that you can use to indicate whether you have modified the '<u>scrn</u>' resource. Set this parameter to <u>TRUE</u> if you have modified the '<u>scrn</u>' resource. When the scrnChanged parameter is <u>TRUE</u>, the Monitors control panel checks the '<u>scrn</u>' resource to make sure that the values in it are still valid; if there is a problem, the Monitors control panel tries to correct it.</p> <p>This parameter makes it easier to implement a control that changes the apparent area displayed on the screen. For example, your monitor might be able to display either two pages of a document or a magnified view of a single page. If the user changes the area displayed on one screen in a system with multiple screens, the displays on adjacent screens could overlap or show gaps. When you change the '<u>scrn</u>' resource to implement this change, the coordinates of the global rectangles for adjacent screens are no longer contiguous. In this case, if you have set the scrnChanged parameter to <u>TRUE</u>, the Monitors control panel shifts the virtual locations of the screens to eliminate the gaps or overlaps.</p>

Your monitor function can return either an error code or a value that you want to have available the next time the Monitors extension is called. Each time the extension is called, the monitorValue parameter contains the value that your monitor function returned the last time it was called.

If an error occurs, your monitor function should display an error dialog box and then return a value between 1 and 255. If your code returns a value in this

range, the Monitors control panel closes the Options dialog box immediately and no more calls are made to your code. If your code returns an error in response to the initMsg or startupMsg message, the Monitors control panel does not display the Options dialog box. You can display an alert box describing the error before returning control to the Monitors control panel.