New Technical Notes
Macintosh

®
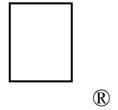
Developer Support

'CDEF' Parameters and Bugs
Toolbox

Revised by: David Shayer	October 1989
Written by: Mark Bennett	August 1988

This Technical Note describes known bugs in the Control Manager which affect control definition functions (`'CDEF'` resources).

Changes since August 1988: Updated to reflect known bugs in the `posCntl` and `thumbCntl` messages and the Control Manager `_TrackControl` call.

The Control Manager chapter of *Inside Macintosh*, Volume I-309, describes how to write a control definition function (`'CDEF'` resource). This Note assumes a basic understanding of this chapter, specifically of the various messages which are sent in the `message` parameter.

drawCntl (0) and autoTrack (8)
When a `'CDEF'` is called with either the message `drawCntl` or `autoTrack`, it is possible for the high word of the `param` parameter to contain undefined data which could result in the failure of routines that rely upon all 32 bits of `param` being defined. `'CDEF'` resources should only consider the low word of the `param` parameter when dealing with the `drawCntl` and `autoTrack` messages.

posCntl (5) and thumbCntl (6)
According to *Inside Macintosh*, the Control Manager calls a `'CDEF'` with the `posCntl` message and the `thumbCntl` message if an application does custom dragging of an indicator (a thumb), but not if it does default dragging. This is not true. The Control Manager calls a `'CDEF'` with the `posCntl` message if an application does default dragging, which is exactly the opposite of the way it is documented. The `'CDEF'` receives the `thumbCntl` message regardless of which type of dragging an application does, however, the results are used only for default dragging (they are ignored for custom dragging).

_TrackControl
When a user clicks on your control, you normally call `_TrackControl`, which is supposed to return zero if the user does not change the control's setting or the part code if the user does change the setting. For `'CDEF'` resources that implement custom dragging, `_TrackControl` returns zero whether or not the user changes the control's setting. To work around this problem, you must use another method to find out if the user has changed

the control's setting, such as comparing the control's value before and after the call to `_TrackControl`.

Further Reference:

- *Inside Macintosh,* Volume I-309, The Control Manager