Using the Color Picker Package

Most applications only use the **Color Picker Package** to display the **Color Picker** dialog box. A few applications may need to use the color model and SmallFract conversion routines.

Presenting the Color Picker Dialog Box

Your application can present a user with the **Color Picker** dialog box by using the **GetColor** function.

When called by your application, **GetColor** displays the dialog box, including prompt text, which appears in the upper-left corner, and the starting color, which appears in the lower of the two rectangles below the prompt. The color that the user is selecting, displayed in the upper rectangle, ranges over the entire color space in response to the controls in the rest of the dialog box. Your application can supply the prompt text, the starting color, and the location of the upper-left corner of the dialog box, and it can specify whether the dialog box should appear on the main screen (the screen with the menu bar) or the screen with the greatest pixel depth.

The two groups of numeric fields (Hue, Saturation, Brightness; Red, Green, Blue) show the parameters of the color being picked in the two color models. The user can increase or decrease the values using the arrow controls or can enter values directly into any of the six fields.

The range for each of the component values is 0 to 65,535. Larger values are truncated to 65,535 after the user exits the field. The hue value for pure red is 0; pure green is 21,845; pure blue is 43,690. Hue values wrap around from 0 to 65,535, so the user can circumnavigate the wheel with arrow controls just as with the cursor. The user can select a single RGB value from the **Color QuickDraw** range of 248 color values.

On black-and-white hardware (or in less than 4-bit mode), the display appears in black and white; the **Color Picker** returns the RGB value selected, but it does not call any color routines in the course of responding to user actions.

On a device with a variable color look-up table (CLUT), the **Color Picker** temporarily borrows a CLUT entry to display the exact color in the rectangle that shows the color currently being picked. (If you let the **Color Manager** approximate the user's value when your application subsequently displays the chosen color, the result will probably differ somewhat from the one picked.) The **Color Picker** restores the color environment when it is done.

Using Conversion Facilities

In addition to the **GetColor** function that displays the **Color Picker** dialog box, the **Color Picker Package** provides six procedures for converting between an RGB color record and a CMY, HLS, or HSV color record, and it provides two functions that convert between SmallFract and fixed numbers. Most applications are likely to use only the **GetColor** function.

The **Color Picker Package** defines the CMY color, HSL color, and HSV color records with SmallFract values rather than integer values (as used in the RGB color record). A SmallFract value is the fractional part-that is, the low-order

word-of a fixed number.

The integer values in the RGB color record are actually used as unsigned short integer-sized values; by using SmallFract values, the **Color Picker Package** avoids sign extension problems in the conversion math.

The **Color Picker Package** provides two functions for converting between SmallFract and fixed numbers. Most applications do not need to use these facilities.