If you now select the light and move it somewhere else, then run cue 1 you will see that it returns to the position ‘piano’ and colour ‘red’. If it turns out that the piano has moved, you would have to refocus the light to the new position and then store that position in the ‘piano’ group, with the cues that use that group then automatically being corrected. If you have a real light attached to your console you can try this for yourself - run cue 1 then move the light. You can then type:
[1][UPDATE][GROUP][2][@ATT][position][*]
(if you can’t remember the number corresponding to a particular group, holding down [SHIFT] and pressing [GROUP-DISPLAY] will set the console to ‘Preset Display’ mode, where group numbers and names are shown; repeat that command and you’ll get ‘Control’ display showing group names and the values stored in the group. Press again to return to the normal display).

Alternatively, and more usually, you can use the ‘magic update’ facility introduced with software version 2.5 by just typing:
[UPDATE][GROUP][*][*]

This finds any lights that were set to reference groups, sees that they have been moved to a new setting and automatically stores that setting into the correct reference group. If you need to limit its behaviour you can - for example, if you moved lots of lights but only want to update the values for channel 1 you can type:
[1][UPDATE][GROUP][*][*]

or if you’ve changed the position and colour of lots of lights but only want to store the new positions you can type:
[UPDATE][GROUP][@ATT][position][*][*]
or any combination thereof.

Unlike some consoles, the 300- and 500-series consoles do not place any limitations on which groups store which types of attributes - position, colour and so on, allowing you to arrange things according to taste. The only rule is that only whole-numbered groups 1 to 750 can act as reference groups. Within that you might choose to use groups 1-100 for colour, 101-200 for beam (gobos, beam edge focus and so on) and 201-300 for position. Point groups can make handy spacers between different sets of reference groups.

Using reference groups also makes it very easy to recall stored information later on. For example, if you’d stored a colour red as group 1 you could later set a light to that colour by typing:
[1][@][GROUP][1][*]

However, you could also do this without having to remember the group number by typing:
[1][@][GROUP][TEXT] red [*]

or even just
[1][@][TEXT] red [*]

Chances are, you wouldn’t even have had to type all of the word ‘red’ - as you start to type a group name the console finds group names that match what you’ve typed so far and displays them at the bottom of the command line; when you see the name of the group you’re after you can just press [*] to select it. If you name your colours using Lee and Rosco numbers - either because you’re using those colours in scrollers or you’ve made matching colours in colour-mixing lights - you won’t even have to reach for the keyboard to select a colour - just type
[1][@][TEXT][03][*]

And for groups that you need to recall frequently - for example, gobos and colour, you can make macros to select those groups ([@][GROUP][number][*]); use macros 101 and up and set your submaster bump buttons to ‘Mac’ and your reference groups are just a button-push away.

Once you become familiar with reference groups, they suddenly offer all sorts of possibilities. They’re invaluable for blind-plotting shows in advance - if you know you want the light to be in red in cue 1, make a group called ‘red’ by just storing any old values in it and use it in cue 1 all in preview. When you actually get to the theatre mix a red with your light and store it into the correct group; all of the cues will suddenly look right.

They’re also useful for more than just attributes. Writing a complex chase for many lights in preview but not sure what the actual levels need to be? Why not have the intensities in the chase go from a reference group called ‘bright’ to one called ‘dim’, then set the actual levels later?

Best of all - work you put in to creating reference groups on one show becomes time saved on the next show that uses the same type of lights. Take you first show, delete the cues but keep the reference groups - particularly those for colour and beam information - and you have useful building