

[4.2] Use *DispG* to force update to Δx and Δy

Δx and Δy are system variables that represent the distance between the centers of two pixels in the graph view window. These variables are calculated from the system variables $xmin$, $xmax$, $ymin$, and $ymax$. However the values for Δx and Δy are not automatically updated when $xmin$, etc., are changed. This is usually not a problem unless you use Δx and Δy in calculations in a program. You can force Δx and Δy to be updated by executing the *DispG* instruction. This effect is shown by this test program:

```
test()
Prgm

clrIO

0→xmin:50→xmax
0→ymin:50→ymax

disp "1. Δx="&string(Δx)
disp "   Δy="&string(Δy)

dispG

disp "2. Δx="&string(Δx)
disp "   Δy="&string(Δy)

10→xmin:200→xmax
10→ymin:200→ymax

disp "3. Δx="&string(Δx)
disp "   Δy="&string(Δy)

dispG

disp "4. Δx="&string(Δx)
disp "   Δy="&string(Δy)

EndPrgm
```

This program displays Δx and Δy , both with and without the *DispG* instruction. For the case labeled 1, the values shown are whatever they happened to be before *test()* was run; the assignment of 0 and 50 to the min & max variables has no effect. For the case labelled 2, the correct values are shown because *DispG* was executed. The min & max values are changed between cases 2 and 3, but the displayed values don't change, because *DispG* isn't used. The final display case 4 shows that Δx and Δy are finally updated, since *DispG* is again used.

So, if you want to use Δx and Δy in calculations in your program, execute *DispG* before you use them, but *after* values are assigned to $xmin$, $xmax$, $ymin$ and $ymax$.