Managing Multiple Windows
by harmonv -- June 2007

This article and demo programs will help you handle multiple windows flawlessly.
There are only a few things to remember, but they are important.

(1) Don't try to open a window that is already open.
(2) Don't try to close a window that is already closed.
(3) As your program is quitting, close all open windows.

We are going to show two methods. The first one uses a dedicated variable to
remember the condition of each window. Think of it as a flag. When the flag is up,
the window is open, and when it is down the window is closed. This method is
good when dealing with a limited number of windows.

```
' Managing Multiple Windows
' using dedicated variables
  nomainwin
  win1Open = 0 ' windows closed
  win2Open = 0

' Let's open our first window
  UpperLeftX = 100
  UpperLeftY = 50
  Open "Window One" For graphics As #win1
  #win1, "trapclose [exitprogram]"
  win1Open = 1

' Let's open our second window
  UpperLeftX = 450
  Open "Window Two" For graphics As #win2
  #win2, "trapclose [exitprogram]"
  win2Open = 1

  #win2, "place 30 60 ; down"
  #win2, "\Click Red Close button to exit."
  #win2, "flush"

  Wait

[exitprogram]
  If win1Open=1 Then Close #win1
  If win2Open=1 Then Close #win2
END
```

The second method we will look at is very similar to the previous one but uses an array rather than separate variables. This is better for keeping track of a larger number of windows.

```
' Managing Multiple Windows
' using a array

' Avoid using REDIM on this array because it
' resets all array elements to 0.
  Dim winOpen(10) ' our array of flags

  nomainwin

' Let's open our first window
  UpperLeftX = 100
  UpperLeftY = 50
  Open "Window One" For graphics As #win1
  #win1, "trapclose [exitprogram]"
  winOpen(1) = 1

' Let's open our second window
  UpperLeftX = 450
  Open "Window Two" For graphics As #win2
  #win2, "trapclose [exitprogram]"
  winOpen(2) = 1

  #win2, "place 30 60 ; down"
  #win2, "\Click Red Close button to exit."
  #win2, "flush"

  Wait

[exitprogram]
  If winOpen(1)=1 Then Close #win1
  If winOpen(2)=1 Then Close #win2
END
```

Events can be handled by subs as well as by [branchlabels]. In this final example, we have a window that contains a button. This button branches to the Sub sendTo rather than a branch label [sendTo]. When the button is clicked we open a window that has us choose where our program's output is to be sent or stored. If the window is already open we bring it to the top with an API call. (Thanks Alyce)

```
' Managing Multiple Windows
' a window demo with a button.

 nomainwin
' win2 handle is used in Subs, so needs to be global.
  Global reporTo$, win2

' Avoid using REDIM on this array because it
' resets all array elements to 0.
  Dim winOpen(10) ' our array of flags

' Let's open our first window
  UpperLeftX = 100
  UpperLeftY = 50
  Button #win1.btn, "Send Report To", sendTo, UL, 100, 250, 120, 25
  Open "Main Window" For window As #win1
  #win1, "trapclose [exitprogram]"
  winOpen(1) = 1

  Wait


[exitprogram]
  If winOpen(1)=1 Then Close #win1
  If winOpen(2)=1 Then Close #win2
END


' If window 2 closed, open it else bring it to front.
Sub sendTo handle$
 If winOpen(2)=0 Then
    UpperLeftX = 450
    UpperLeftY = 100
    wide = 70 : high = 25
    Groupbox #win2.gb, "Select:", 20, 20, 100, 130
    Radiobutton #win2.rb1, "File", set, nil, 30, 40, wide, high
    Radiobutton #win2.rb2, "Printer", set, nil, 30, 70, wide, high
    Radiobutton #win2.rb3, "Screen", set, nil, 30,100, wide, high
    statictext #win2.st, " ", 20, 160, 250, 25
    Open "Send Report to:" For window As #win2
    #win2, "trapclose win2close"
    winOpen(2) = 1
    #win2, "font Arial 10"
  Else
```

```
    hWindow = hwnd(#win2)
    CallDLL #user32, "BringWindowToTop",_
    hWindow as uLong, _
    result As long
  End if
End Sub

' Reset win2 radiobutton Sub
Sub nil handle$
    Wait
End Sub

' Win2 radiobutton handler Sub
Sub set btnfrom$
    If btnfrom$="#win2.rb1" Then reporTo$="File"
    If btnfrom$="#win2.rb2" Then reporTo$="Printer"
    If btnfrom$="#win2.rb3" Then reporTo$="Screen"
    #win2.st, "Report will be sent to "; reporTo$
End Sub

' close win2 Sub
Sub win2close handle$
    If winOpen(2)=1 Then
        Close #win2
        winOpen(2) = 0
    End If
End Sub
```

Also, Carl has shared his own method of managing multiple windows.
It's called multiwin.bas and comes with LB.