

```
1: ()
2: Prgm
3: @(GUI only) NiMH battery cycle tracker
4: @ v1.3.1
5:
6: Local lastcycl,currttime,oldfold,dispplot,sel,t,s,str,k,
   keepdata:false→dispplot:false→keepdata
7:
8: setFold(main)→oldfold
9: Try
10:   NewFold mem
11: Else
12:   ClrErr
13: EndTry
14: setFold(#oldfold)
15:
16: If not isVar(mem\batt) Then
17:   {}→mem\batt
18: EndIf
19:
20: PopUp {"Record new cycle...", "Plot all cycles", "Recover graph"}, sel
21: Try
22:   If sel=1 Then :EndIf
23: Else
24:   ClrErr
25:   0→sel
26: EndTry
27:
28: If sel=1 Then
29:   Goto chkbatt
30: ElseIf sel=2 Then
31:   true→dispplot
32:   Goto plotbatt
33: ElseIf sel=3 Then
34:   Try
35:     PlotsOff 9
36:     RclGDB φφφbak
37:     DispHome
38:     DelVar φφφbak,mem\xplot,mem\yplot
39:   Else
40:     ClrErr
41:     misc\statline("msg:▪ Failed to recover graph state")
42:     Goto quit
43:   EndTry
44:
45:   misc\statline("msg:✓ Recovered original graph state")
46:   Goto quit
47: ElseIf sel=0 Then
48:   Goto quit
49: EndIf
50:
51:
52: Lbl chkbatt
53: Try
54:   mem\batt[dim(mem\batt)]→lastcycl
55: Else
56:   ClrErr
57:   "N/A"→lastcycl
58: EndTry
59: getDtStr(1)&" @ "&getTmStr(12)→currttime
60:
```

```
61: If isVar(misc\batteryb) Then
62:   misc\batteryb()
63: Else
64:   undef→battst
65: EndIf
66:
67: Dialog
68:   Title "Record New Cycle"
69:   Text "Current battery level: "&string(battst)
70:   Text "# of cycles so far: "&string(dim(mem\batt))
71:   Text "Last cycle at: "&lastcycl
72:   Text ""
73:   Text "Current date/time: "&currttime
74:   Text "Record new cycle?"
75: EndDlog
76: If ok=1 Then
77:   misc\statline("msg:Recording new cycle...")
78:   Unarchiv mem\batt
79:   currttime→mem\batt[dim(mem\batt)+1]
80:   Archive mem\batt
81:
82:   0→sel
83:   Dialog
84:     Title "Cycle Visualization"
85:     DropDown "Plot all cycles?", {"Yes", "No"}, sel
86:   EndDlog
87:   Try
88:     If sel=1 Then
89:       true→dispplot
90:     EndIf
91:   Else
92:     ClrErr
93:     false→dispplot
94:   EndTry
95: Else
96:   Goto quit
97: EndIf
98:
99:
100: Lbl plotbatt
101: If dispplot Then
102:   {}→mem\xplot
103:   dim(mem\batt)→s
104:   For t,1,s
105:     misc\statline("msg:Extracting cycle data... ("&string(t)&"/"&string(s)&")")
106:     mem\batt[t]→str
107:     misc\idbd(expr("20"&mid(mem\batt[1],7,2)&mid(mem\batt[1],1,
108: 2)&mid(mem\batt[1],4,2)),expr("20"&mid(str,7,2)&mid(str,1,2)&mid(str,4,
109: 2)))→mem\xplot[t]
110:   EndFor
111:   seq(t,t,1,dim(mem\batt))→mem\yplot
112:
113:   StoGDB φφφbak
114:   FnOff
115:   setMode("Graph","FUNCTION")
116:   setGraph("Grid","Off")
117:   ^5→xmin
118:   ^3→ymin
119:   mem\xplot[dim(mem\xplot)]+5→xmax
120:   mem\yplot[dim(mem\yplot)]+3→ymax
121:   NewPlot 9,2,mem\xplot,mem\yplot,,,4
```

```
120: DispG
121: misc\statline("pause")
122: misc\statline("msg:Total cycle count: "&string(dim(mem\yplot)))
123: While true
124:   getKey()→k
125:   If k=258 Then @[STO▶]
126:     true→keepdata
127:     Exit
128:   ElseIf k≠0 Then
129:     Exit
130:   EndIf
131: EndWhile
132:
133: If keepdata Then
134:   misc\statline("msg:♦ Saved data to mem\xplot,mem\yplot")
135: Else
136:   PlotsOff 9
137:   RclGDB φφφbak
138:   DispHome
139:   DelVar φφφbak,mem\xplot,mem\yplot
140: EndIf
141: Else
142:   misc\statline("msg:✓ Cycle recorded. New cycle count:
"&string(dim(mem\batt)))
143: EndIf
144: Lbl quit
145: DelVar battst
146: EndPrgm
```