

```
1 #include <stdlib.h>
2 #include <stdio.h>
3
4 #include "thinkgear.h"
5
6 /**
7  * Prompts and waits for the user to press ENTER.
8  */
9 void
10 wait() {
11     printf( "\n" );
12     printf( "Press the ENTER key...\n" );
13     fflush( stdout );
14     getc( stdin );
15 }
16
17 /**
18  * Program which prints ThinkGear EEG_POWER values to stdout.
19  */
20 int
21 main( void ) {
22
23     char *comPortName = NULL;
24     int    dllVersion = 0;
25     int    connectionId = 0;
26     int    packetsRead = 0;
27     int    errCode = 0;
28
29     /* Print driver version number */
30     dllVersion = TG_GetDriverVersion();
31     printf( "ThinkGear DLL version: %d\n", dllVersion );
32
33     /* Get a connection ID handle to ThinkGear */
34     connectionId = TG_GetNewConnectionId();
35     if( connectionId < 0 ) {
36         fprintf( stderr, "ERROR: TG_GetNewConnectionId() returned %d.\n",
37                 connectionId );
38         wait();
39         exit( EXIT_FAILURE );
40     }
41
42     /* Set/open stream (raw bytes) log file for connection */
43     errCode = TG_SetStreamLog( connectionId, "streamLog.txt" );
44     if( errCode < 0 ) {
45         fprintf( stderr, "ERROR: TG_SetStreamLog() returned %d.\n", errCode );
46         wait();
47         exit( EXIT_FAILURE );
48     }
49
50     /* Set/open data (ThinkGear values) log file for connection */
51     errCode = TG_SetDataLog( connectionId, "dataLog.txt" );
52     if( errCode < 0 ) {
53         fprintf( stderr, "ERROR: TG_SetDataLog() returned %d.\n", errCode );
54         wait();
55         exit( EXIT_FAILURE );
56     }
57
58     /* Attempt to connect the connection ID handle to serial port "COM5" */
59     comPortName = "\\.\COM6";
60     errCode = TG_Connect( connectionId,
61                           comPortName,
62                           TG_BAUD_9600,
63                           TG_STREAM_PACKETS );
64     if( errCode < 0 ) {
65         fprintf( stderr, "ERROR: TG_Connect() returned %d.\n", errCode );
66         wait();
67         exit( EXIT_FAILURE );
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68     }
69
70     /* Read 10 ThinkGear Packets from the connection, 1 Packet at a time */
71     packetsRead = 0;
72     while( packetsRead < 10 ) {
73
74         /* Attempt to read a Packet of data from the connection */
75         errCode = TG_ReadPackets( connectionId, -1 );
76
77         /* If TG_ReadPackets() was able to read a complete Packet of data... */
78         if( errCode == 1 ) {
79             packetsRead++;
80
81             /* If attention value has been updated by TG_ReadPackets()... */
82             //if( TG_GetValueStatus(connectionId, TG_DATA_ATTENTION) != 0 ) {
83             //    /* Get and print out the updated attention value */
84             //    fprintf( stdout, "New attention value: %d\n",
85             //            TG_GetValue(connectionId, TG_DATA_ATTENTION) );
86
87             //    fflush( stdout );
88
89             //} /* end "If attention value has been updated..." */
90             /*if( TG_GetValueStatus(connectionId, TG_DATA_ATTENTION) != 0 ) {
91                 fprintf( stdout, "New TG_DATA_BATTERY value: %f\n",
92                         TG_GetValue(connectionId, TG_DATA_BATTERY) );
93                 fflush( stdout );
94             }
95
96             if( TG_GetValueStatus(connectionId, TG_DATA_POOR_SIGNAL) != 0 ) {
97                 fprintf( stdout, "New TG_DATA_POOR_SIGNAL value: %f\n",
98                         TG_GetValue(connectionId, TG_DATA_POOR_SIGNAL) );
99                 fflush( stdout );
100             }*/
101
102             if( TG_GetValueStatus(connectionId, TG_DATA_ATTENTION) != 0 ) {
103                 fprintf( stdout, "New attention value: %f\n",
104                         TG_GetValue(connectionId, TG_DATA_ATTENTION) );
105                 fflush( stdout );
106             }
107
108             if( TG_GetValueStatus(connectionId, TG_DATA_MEDITATION) != 0 ) {
109                 fprintf( stdout, "New TG_DATA_MEDITATION value: %f\n",
110                         TG_GetValue(connectionId, TG_DATA_MEDITATION) );
111                 fflush( stdout );
112             }
113
114             if( TG_GetValueStatus(connectionId, TG_DATA_RAW) != 0 ) {
115                 fprintf( stdout, "New TG_DATA_RAW value: %f\n",
116                         TG_GetValue(connectionId, TG_DATA_RAW) );
117                 fflush( stdout );
118             }
119
120             if( TG_GetValueStatus(connectionId, TG_DATA_DELTA) != 0 ) {
121                 fprintf( stdout, "New TG_DATA_DELTA value: %f\n",
122                         TG_GetValue(connectionId, TG_DATA_DELTA) );
123                 fflush( stdout );
124             }
125
126             if( TG_GetValueStatus(connectionId, TG_DATA_THETA) != 0 ) {
127                 fprintf( stdout, "New TG_DATA_THETA value: %f\n",
128                         TG_GetValue(connectionId, TG_DATA_THETA) );
129                 fflush( stdout );
130             }
131
132             if( TG_GetValueStatus(connectionId, TG_DATA_ALPHA1) != 0 ) {
133                 fprintf( stdout, "New TG_DATA_ALPHA1 value: %f\n",
134                         TG_GetValue(connectionId, TG_DATA_ALPHA1) );
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135         fflush( stdout );
136     }
137
138     if( TG_GetValueStatus(connectionId, TG_DATA_ALPHA2) != 0 ) {
139         fprintf( stdout, "New TG_DATA_ALPHA2 value: %f\n",
140                 TG_GetValue(connectionId, TG_DATA_ALPHA2) );
141         fflush( stdout );
142     }
143
144     if( TG_GetValueStatus(connectionId, TG_DATA_BETA1) != 0 ) {
145         fprintf( stdout, "New TG_DATA_BETA1 value: %f\n",
146                 TG_GetValue(connectionId, TG_DATA_BETA1) );
147         fflush( stdout );
148     }
149
150     if( TG_GetValueStatus(connectionId, TG_DATA_BETA2) != 0 ) {
151         fprintf( stdout, "New TG_DATA_BETA2 value: %f\n",
152                 TG_GetValue(connectionId, TG_DATA_BETA2) );
153         fflush( stdout );
154     }
155
156     if( TG_GetValueStatus(connectionId, TG_DATA_GAMMA1) != 0 ) {
157         fprintf( stdout, "New TG_DATA_GAMMA1 value: %f\n",
158                 TG_GetValue(connectionId, TG_DATA_ALPHA2) );
159         fflush( stdout );
160     }
161
162     if( TG_GetValueStatus(connectionId, TG_DATA_GAMMA2) != 0 ) {
163         fprintf( stdout, "New TG_DATA_GAMMA2 value: %f\n",
164                 TG_GetValue(connectionId, TG_DATA_GAMMA2) );
165         fflush( stdout );
166     }
167
168
169     } /* end "If a Packet of data was read..." */
170
171 } /* end "Read 10 Packets of data from connection..." */
172
173 /* Clean up */
174 TG_FreeConnection( connectionId );
175
176 /* End program */
177 wait();
178 return( EXIT_SUCCESS );
179 }
```