ThinkGear Connector User's Guide

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NeuroSky®
Brain-Computer Interface Technologies

The NeuroSky product families consist of hardware and software components for simple integration of this bio-sensor technology into consumer and industrial end-applications. All products are designed and manufactured to meet exacting consumer specifications for quality, pricing, and feature sets. NeuroSky sets itself apart by providing building-block component solutions that offer friendly synergies with related and complementary technological solutions.

Contents

Introduction

The ThinkGear Connector (TGC) is a program that runs in the background on your Windows or Mac OS X computer, allowing special games and applications to react to your thoughts and emotions as they're detected by the MindSet™ headset.

Installation

Windows

Simply unzip the `thinkgear_connector_-_pc-xxxxxx.zip` file. Drop the unzipped `ThinkGear Connector` directory into your `C:\Program Files` directory.

Mac

Unzip the `thinkgear_connector-os_x_intel-xxxxx.zip` file, and drop the `ThinkGear Connector` app into your `/Applications` directory.

Starting the Connector

> **Important:** Before starting up the server, make sure to pair your MindSet with your computer (refer to the documentation that came with your MindSet).

Once this has been done, double-click the `ThinkGear Connector` executable (in the `/Applications` directory on the Mac, and in `C:\Program Files\ThinkGear Connector` directory in Windows). If the MindSet is turned on and paired properly, the TGC will automatically connect to the headset, and will show the main application screen. If not, TGC will display a connection configuration window, similar to that shown below:
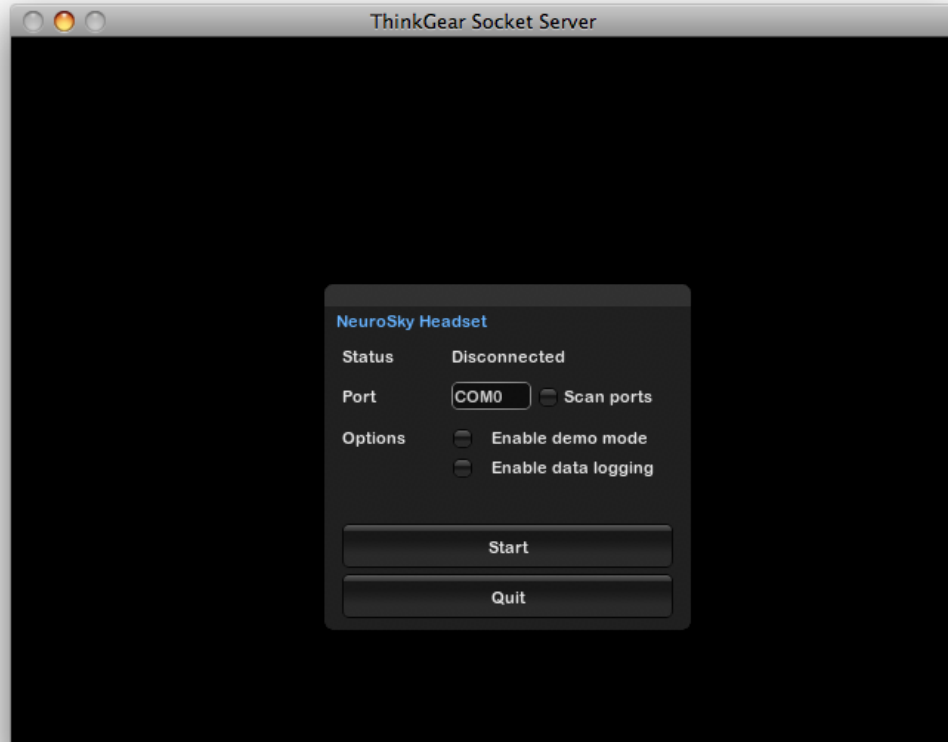
Figure 3.1: Connection configuration window

Simply input the desired COM port number, optionally specifying a port scan (in case the COM port is incorrect), and click the **Start** button to connect to the headset. Mac users should look at the Mac Serial Ports section below for instructions on retrieving the serial port name to paste into this field.

If no headset is available, the *Enable demo mode* option can be selected. This will cause the TGC to

generate canned output, and allows developers to try developing MindSet-capable applications even without having a MindSet (though of course the data won't be real, it's only good for development trial and testing).

The *Enable data logging* option causes all data received from the headset to be written to log files in the application directory.

Mac Serial Ports

Since the Mac doesn't use numbered serial ports, users must determine manually which port the MindSet connects to. Once you've completed the pairing procedure, load up the **System Preferences**, and click on the **Bluetooth** icon. Select the MindSet in the list of devices, then click on the gear icon underneath. Then, click on the `Edit Serial Ports…` menu option.

Figure 3.2: Edit Serial Ports…

Simply copy the text listed next to the *Path* label. This is the MindSet's serial port. Copy this back into the *Port* field of TGC.
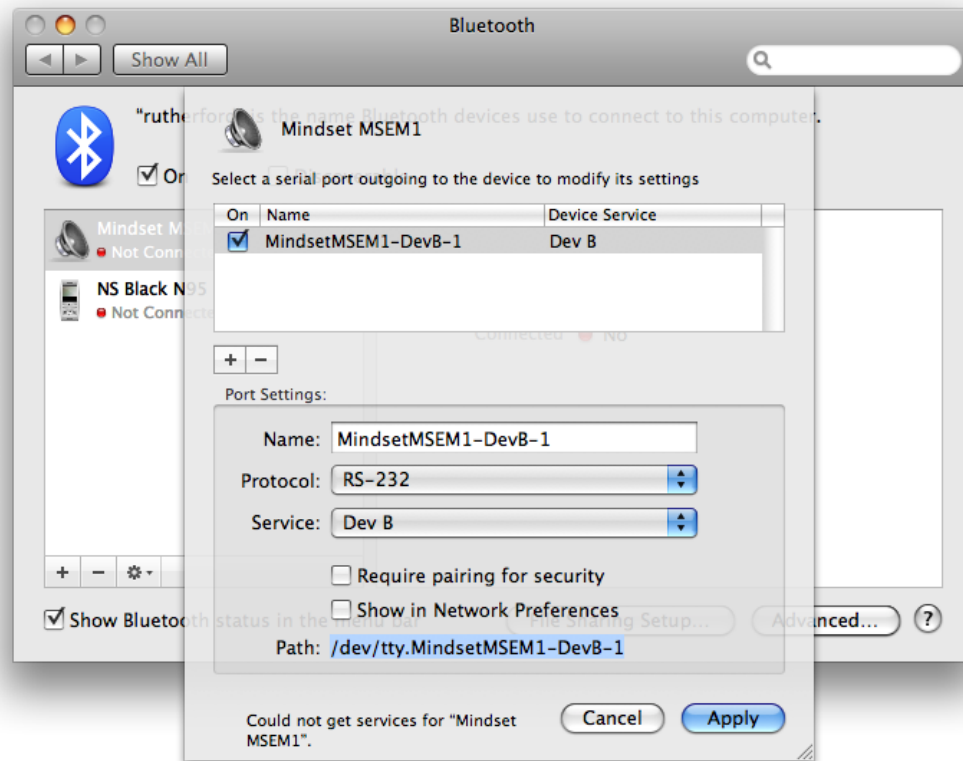
Figure 3.3: Retriving the port name

The TGC Window

Debug information about the server — such as server startup and client connection / disconnection events — are logged to the main application screen. The screenshot below shows the screen after a client application has connected to it.
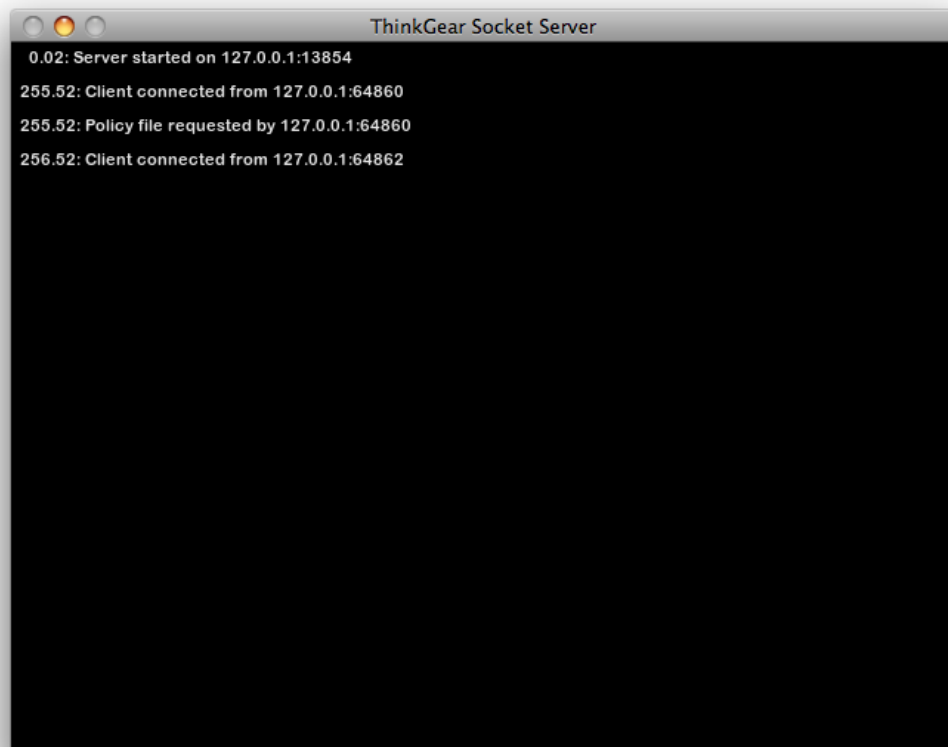

Figure 4.1: Main application screen