

# GoGo Board Socket Server Protocol

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## General Guidelines

- Make sure to use the GoGo Monitor software version 3.5.0 or better.
- The sockets commands are text-based. You can experiment with the commands by connecting to the server via a terminal emulator (PuTTY is a good free package). Make sure the connection type is RAW. That is, all the socket data being sent or received should be seen directly by the user.
- The default port for socket server is 9873 and 9874 for the sensor streaming service.
- The commands sent to the socket server will have the same effect on the GoGo Monitor as when directly manipulating the UI. For example, selected motor ports will have their check boxes checked.
- White spaces and new line characters before and after the commands are ignored.
- Commands are NOT case sensitive.
- The GoGo board must be connected to the GoGo monitor otherwise the commands will return an error.

## The Commands

All commands are delimited by a semicolon (“;”). Multiple commands can be sent as long as they are properly delimited. A delimiter is optional for the last command sent.

```
beep;ledon
```

The above will tell the GoGo Board to beep and then turn on the user LED.

The response is always in the following format

```
command=status;
```

command is the command being executed. Status is typically “ok” unless the command is unrecognized or returns a value. The response always ends with a semicolon. Here are some examples:

```
beep;  
beep=ok;
```

```
foo  
foo=GoGo Monitor Error: Unrecognized command;
```

```
sensor1  
sensor1=1023;
```

```
beep;ledon  
beep=ok;ledon=ok;
```

```
beep;  
beep=GoGo Monitor Error: GoGo board not connected;
```

The following table describes the available commands and their responses

close	<p>Ends the socket connection with the GoGo server.</p> <p>Response close=ok;</p>
setcom <i>number</i>	<p>Sets the serial port number</p> <p>Response setcom <i>number</i>=ok;</p>
Connect	<p>Connects the GoGo monitor to the GoGo Board</p> <p>Response Connect=ok;</p>
Disconnect	<p>Disconnects the GoGo monitor from the GoGo Board</p> <p>Response Disconnect=ok;</p>
Talktoport <i>abcd</i>	<p>Selects motor port(s) to work with. For example:</p> <p>talktoport ab</p> <p>Will make the motor ports A and B selected. You will see the checkboxes selected on the GoGo Monitor software.</p> <p>Response Talktoport <i>abcd</i>=ok;</p>
Setpower <i>number</i>	<p>Sets the power level of the selected motor ports. Number must be between 0 and 7 otherwise an error message will be sent.</p> <p>Setpower 7</p> <p>Sets the power level of the selected motor ports to 7.</p> <p>Response Setpower <i>number</i>=ok; If number is invalid Setpower <i>number</i>= GoGo Monitor Error: power out of range;</p>
On, off, break, coast	<p>These four commands control the on-off state of the selected motors.</p> <ul style="list-style-type: none"> <li>• <b>On</b>=turns the motor(s) on</li> <li>• <b>Break</b>=turns off the motor(s) and applies a resistance preventing the motors to turn.</li> <li>• <b>Coast</b>=turns off the motors with our resistance</li> <li>• <b>Off</b>=turns off and applies a resistance for a short time then coasts.</li> </ul> <p>Response Command=ok;</p>
Thisway, thatway, rd	<p>These three commands determine which way the motor(s) will turn. RD stands for "reverse direction".</p> <p>Response Command=ok;</p>

Beep	Tells the GoGo Board to beep once
	Response Beep=ok;
Ledon, ledoff	Tells the GoGo Board to turn on and off the built-in user LED respectively.
	Response Command=ok;
Burston, burstoff	Turns on or off sensor readings. When on, the GoGo Board will continuously stream sensor data to the GoGo Monitor. Burst mode must be on for the sensor streaming server to work.
	Response Command=ok;
sensorN	Returns the sensor number N's value. Where N is between 1 and 8. For example:
	Sensor1 Sensor1=1023;
	Response sensor=Value;
	Value is -1 if burst mode is not turned on

## The Streaming Server

Once a connection is established with the streaming server, which is part of the GoGo Monitor software, the server will immediately start streaming the sensor data to the client. The format of a sensor value packet is as follows. The values are packed inside square brackets. Each value is delimited by a comma.

```
[sensor1,sensor2,sensor3,sensor4,sensor5,sensor6,sensor7,sensor8]
```

Each sensor value ranges between 0 and 1023. If the burst-mode on the GoGo Monitor is not turned on, the sensor values will be blank.

## **Change Log**

1.0.1– July 25, 2011

Added documentation for the sensor streaming server