



1. Introduction

Inserting custom data into the Ambient Devices platform is easy and fun! You've already completed the first step by changing to this channel.

To insert custom data, visit the page:

http://www.myambient.com:8080/java/my_devices/submitdata.jsp, followed by the appropriate query string. The query string is the portion of the URL following the question mark (?). This part of the URL is not interpreted by the web server as a page address, but as special instructions to the selected page. Query strings are a list of keyword/value pairs, separated by and ampersand (&). For instance, the address: "http://www.bigcompany.com?product=shoes&ship=overnight", the query string is the portion after the '?'. It consists of two values, "product" which equals "shoes", and "ship", which equals "overnight".

The query string determines how the device will respond to the data. There are four components to a well form query string for device data

keyword	required / optional	description
devID	required	Device Identification. This is the serial number printed on the bottom of the device. Be sure to include dashes.
color	required	Primary device color. The colors range from 0 (red) to deep magenta (35). 36 is white. Refer to the color guide below.
anim	optional (defaults to "none")	The type of animation. Valid selections are the numbers 0 - 9 according to the table below.
comment	optional (defaults to no comment)	A short description of the data being inserted -- e.g. "37 new customers" or "3700 widgets on order".






































NOTE: the "comment" string must be properly encoded for a URL. Generally this means substituting the '+' symbol for spaces, but most non-alphanumeric characters need to be encoded with their ASCII hex value -- e.g. an exclamation point (!) gets encoded as %21. Please see <http://java.sun.com/j2se/1.4.1/docs/api/> for more details.

For example, the string "hello there pal!", is encoded as "hello+there+pal%21".

The comment will also accept some HTML formatting. For example, the string "This is bold text" is encoded as ""this+is+%3Cb%3Ebold%3C%2Fb%3E+text" and is displayed as "this is **bold** text".

2. Colors

Below are all the colors available to the device. Note that your screen may not exactly match the colors of your device.

0	1	2	3	4	5
					
6	7	8	9	10	11
					
12	13	14	15	16	17
					
18	19	20	21	22	23
					
24	25	26	27	28	29
					
30	31	32	33	34	35
					
36					
					

Design Hint: When mapping linear data to color, it is tempting to take full advantage of all colors. But color 35 is virtually indistinguishable from color 0 -- the colors wrap around in a circle. So if linear data is mapped to the colors 0 - 35, it can be visually hard to tell if a red device is red because the data is closer to 0, or if the device is red because the data is closer to 35. For visual clarity, it's best to leave at least a gap of five or six colors. For example, stocks range from red to green, and our tests have shown this is more than sufficient to express market performance.

3. Animations

There are nine preset animations. If no animation is specified, it defaults to none. Note the slower animations are very slow and barely perceptible, so it may appear at first like there is no animation. This is intentional to allow the device to transition from steady to pulsing without a discontinuous leap in animation rate. If you want the animation to be noticeable, use one of the faster anims.

"crescendo" and "heartbeat" are special-effect animations for extreme situations where it is permissible for the device to attract attention. In general, we like the device to quietly blend into its surroundings and not cause visual distractions.

Index	Animation
0	none
1	very slow
2	slow
3	medium slow
4	medium

5	medium fast
6	fast
7	very fast
8	crescendo
9	heartbeat

3. XML Response

The "submitdata.jsp" page responds with an XML stream containing feedback about the submission. The XML nodes should be mostly self-explanatory, but a few points can be made:

* The "submittedAt" value is a timestamp of when the data was submitted. All times are East Coast time.

* The "maxNextUpdate" is the maximum time until the next wireless update. The update may arrive sooner than this time, but we guarantee data will be sent out before "maxNextUpdate". Note there is up to two or three minutes of latency between submission of the data to our wireless providers, and the actual transmission of that data to user devices. This latency is unpredictable and varies according to time of day, and geographical location.

* The "response" node is the overall status of the submission. "OK" for the "type" attribute means the data was successfully inserted into our database. "warning" also means the data was successfully inserted, but there were issues or ambiguities which you would be wise to heed. "error" means the data was not accepted.

attribute	type	message body
0	OK	Data inserted OK
1	error	'color' term not defined. Must be number between 0 - 36.
2	error	error parsing 'color' term. Must be number between 0 - 36.
3	error	'color' value out of range. . Must be number between 0 - 36.
4	warning	'anim' term not defined. Must be number between 0 - 9. Assuming 'none'.
5	error	error parsing 'anim' term. Must be number between 0 - 9.
6	error	'anim' value out of range. . Must be number between 0 - 9.
7	error	The term 'devID' was not specified.
8	error	The specified devID is not a premium account.
9	warning	The specified devID is not set to the developer channel.
10	error	The specified devID is not in the Ambient database.
11	warning	The comment contains invalid characters. Ignoring comment.
12	error	Unspecified error
13	error	You are not authorized to submit data to this account (not yet implemented)

14	error	You must submit data to this account on a secure channel (not yet implemented)
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Note: Parsing of the XML stream can be done with home-brewed code that simply looks for the success message, or with publicly available XML parsers, such as the one available for Java at <http://www.java.sun.com>. For many applications it isn't essential the response code be parsed. We have made efforts for the XML stream to be human readable.

4. Examples:

Note these examples are specific to your ambient device with serial number = RBD-123-ABC. To send a message to another device, substitute that ambient serial number

Steady green:

http://myambient.com:8080/java/my_devices/submitdata.jsp?devID=RBD-123-ABC&anim=0&color=12&comment=this+is+steady+green

Medium Fast blue:

http://myambient.com:8080/java/my_devices/submitdata.jsp?devID=RBD-123-ABC&anim=5&color=24&comment=this+is+medium+fast+blue

Very slow white with formatted comment:

http://myambient.com:8080/java/my_devices/submitdata.jsp?devID=RBD-123-ABC&anim=1&color=36&comment=this+comment+contains+bold+text

Note how spaces are represented by the '+' symbol. For more info, please see: <http://java.sun.com/j2se/1.4.1/docs/api/>

5. Interactive Generator:

Use the form below to set your device to any color and animation pattern available in our platform.

color:

anim:

devID:

comment