

Firmware 1.8 list of HTTP GET commands

This page documents the complete list of OpenSprinkler firmware 1.8 HTTP GET commands.

1. Change controller values (password required) [Keyword /cv]:

Command: `/cv?pw=xxx{&rsn=x}{&rbt=x}{&en=x}{&mm=x}{&rd=x}`

Note: { } means the parameter is optional: if the parameter is not present, the corresponding value will not be changed. The actual command should not contain the brackets.

Parameters:

- **pw:** password
- **rsn:** reset all stations (binary value)
- **rbt:** reboot controller (binary value)
- **en:** operation enable (binary value), when disabled, all stations will remain closed until the controller operation is enabled again.
- **mm:** manual mode (binary value)
- **rd:** rain delay time in hours (a value of 0 turns off rain delay)

Examples:

<http://x.x.x.x/cv?pw=opendoor&rbt=1> (reboot controller)

<http://x.x.x.x/cv?pw=opendoor&mm=1> (switch controller to manual mode)

<http://x.x.x.x/cv?pw=opendoor&rd=24> (set 24 hours rain delay time)

2. Set station bits [Keyword /sn1=]:

Command: `/sn1=x`

Note: setting station bits only works when the controller is in manual mode (mm=1), in order to avoid interfering with the normal program mode.

Parameters:

- **sn*:** * is the positive station index (starts from 1). For example, sn1 is the first station, sn2 is the second station and so on. The parameter value is a binary value.

Examples:

<http://x.x.x.x/sn1=1> (turn on the first station)

3. Get station bits [Keyword /sn1]:

Command: `/sn1`

Note: this will return an html webpage that contains a binary value or string that reflects the station status.

Parameters:

- **sn*:** * is the positive station index (starts from 1). sn0 refers to all stations.

Examples:

<http://x.x.x.x/sn1> (returns the binary status of the first station)

<http://x.x.x.x/sn0> (returns the binary status of every station in a string)

4. Change station names and master operation bits (password required)

[Keyword /cs]:

Command: `/cs?pw=xxx{&s0=xxx}{&s1=xxx}{&s2=xxx}.....{&m0=xxx}{&m1=xxx}`

Note: { } means the parameter is optional: if the parameter is not present, the corresponding stations name will not be changed. The actual command should not contain the brackets.

Parameters:

- **pw:** password
- **s?:** ? is station index (starts from 0, up to N-1 where N is the total number of stations). s0 is the first station, s1 is the second stations, and so on. Parameter value is a string up to 12 characters.
- **m?:** ? is the board index (starts from 0, up to M-1 where M is the total number of boards). m0 is the master controller, m1 is the first extension board, and so on. Parameter value is an integer that stores the master operation bit of each station on that board. For example, a value of 255 means all eight stations will activate the master value; and a value of 127 means the first four stations will activate the master value while the other four stations do not.

Examples:

<http://x.x.x.x/cs?pw=opendoor&s0=front%20lawn&s1=back%lawn> (sets first two stations names)

<http://x.x.x.x/cs?pw=opendoor&m0=255> (sets the master operation bits for the master/first controller board).

<http://x.x.x.x/cs?pw=opendoor&s7=garage&m0=254> (sets stations name of s7 and the master operation bits for the master/first controller board)

5. /cr: Change run-once program (password required) [Keyword /cr]:

Command: `/cr?pw=xxx&t=[xx,xx,xx,xx....]`

Note: if the command is successful, the controller will start executing the run-once program immediately. The normal program mode will be temporarily interrupted until the run-once program is completed.

Parameters:

- **pw:** password
- **t:** an integer array (surrounded by []) that stores the run-time (in seconds) of each station. Note that the array size must be equal to the total number of stations. If a station is not scheduled to run, use value of 0.

Examples:

[http://x.x.x.x/cr?pw=opendoor&t=\[60,0,60,0,60,0,60,0\]](http://x.x.x.x/cr?pw=opendoor&t=[60,0,60,0,60,0,60,0]) (start a run-once program that turns on stations 1, 3, 5 and 7 for 1 minute each)

6. Change (add/modify) programs (password required) [Keyword /cp]:

Command: `/cp?pw=xxx&pid=x&v=[x,x,x,x,x,x,x]`

Parameters:

- **pw:** password
- **pid:** program index (starting from 0). For example, 0 means the first program, and so on. Must be less than the total number of programs. A value of -1 will add a new program.
- **v:** program values, consisting of 7 integers:
 - *en:* program enable bit (binary value, e.g. 0 means the program is disabled)
 - *days0:* days selection first byte (see explanation below)
 - *days1:* days selection second byte (see explanation below)
 - *starttime:* program start time (in minutes relative to 00:00. e.g. 360 means 6am)
 - *endtime:* program end time (in minutes relative to 00:00)
 - *duration:* duration of each station (in seconds)
 - *interval:* program interval time (in minutes. e.g. 240 means every 4 hours)

Days selection bytes:

days0 and *days1* in the program values are formatted as follows:

- if (*days0*.bit7 == 0 || *days1* == 0 || *days1* == 1): this is a standard weekly program:
 - *days0*.bits[0..6] store the binary selection bit from Monday to Sunday (bit 0 corresponds to Monday)
 - if (*days1* == 1): even day restriction
 - if (*days1* == 2): odd day restriction
- if (*days0*.bit7 == 1 && *days1* > 1): this is an interval program:
 - *days1* stores the interval (>1. e.g. 2 means every 2 days, 3 means every 3 days and so on)
 - *days0*.bits[0..6] store the starting day (e.g. 0 means the program starts today, 1 means the program starts tomorrow, and so on)
- **Examples:**
 - *days0* = 127, *days1* = 0: weekly schedule on every day
 - *days0* = 255, *days1* = 1: weekly schedule on every day, with odd day restriction
 - *days0* = 128, *days1* = 5: interval schedule, every 5 days, starting from today
 - *days0* = 129, *days1* = 4: interval schedule, every 4 days, starting from tomorrow

7. Delete a program (password required) [Keyword /dp]:

Command: `/dp?pw=xxx&pid=x`

Parameters:

- **pw:** password
- **pid:** program index (starting from 0). For example, 0 means the first program, and so on. Must be less than the total number of programs. A value of -1 will delete all programs.

Example:

<http://x.x.x.x/pw=opendoor&pid=2> delete the third program
<http://x.x.x.x/pw=opendoor&pid=-1> delete all programs

8. Change options (password required) [Keyword /co]:

Command: `/co?pw=xxx{&o*=xx}{&loc=xxx}{&npw=xxx}{&cpw=xxx}`

Note: { } means the parameter is optional: if the parameter is not present, the corresponding option value will not be changed. The actual command should not contain the brackets.

Also be careful with the option values marked below as **boolean**: these options are set (to 1) as long as the option name exists in the parameter list, and cleared (to 0) if the name doesn't exist.

Warning: this command is currently quite messy and requires knowing the option index.

Parameters:

- **pw:** password
- **npw:** new password (if changing the password)
- **cpw:** confirm new password (if changing the password)
- **loc:** location (zip code or city name)
- **o1:** time zone: (floating point time zone value + 12) x 4. e.g. GMT-5:00 will be $(-5+12) * 4 = 28$, GMT+8:15 will be $(8 \frac{1}{4} + 12) * 4 = 81$
- **o12:** http port (lower byte)
- **o13:** http port (upper byte)
- **o15:** number of extension boards (up to 3)
- **o17:** station delay time (in seconds). must be between 0 and 240. e.g. 15 means a 15 seconds delay between two consecutive stations.
- **o18:** master station index (0 means no master station, 1 means station 1 is the master station, and so on)
- **o19:** master on delay time (in seconds). must be between 0 and 60. e.g. 5 means the master station will turn on 5 seconds after a station opens.
- **o20:** master off delay time (in seconds). must be between -60 and +60. e.g. -5 means the master station will turn off 5 seconds before a station closes.
- **o21:** use rain sensor (**boolean**). option is set if the name exists in the parameter list, regardless of the value; cleared if the name does not exist.
- **o22:** rain sensor type (**boolean**. 1 means normally open). option is set if the name exists in the parameter list, regardless of the value; cleared if the name does not exist.
- **o23:** water level in percentage (from 0 to 250). e.g. 150 means water time will increase to 150%.
- **o25:** ignore password (**boolean**. 1 means ignore password). option is set if the name exists in the parameter list, regardless of the value; cleared if the name does not exist.

Example:

<http://x.x.x.x/co?pw=opendoor&npw=1234&cpw=1234> (change password to 1234)

<http://x.x.x.x/co?pw=1234&loc=10001> (change location to zip 10001)

<http://x.x.x.x/co?pw=1234&o12=144&o13=31> (change http port to 8080: $31 * 256 + 144$)

<http://x.x.x.x/co?pw=1234&o21=on&o25=on> (rain sensor and ignore password options are set, rain sensor type is cleared, i.e. normally closed)