



## LipSync Gaming Command List

Command	Success Response	Failure Response	Description
<b>SETTINGS</b>	SUCCESS,0:SETTINGS	FAIL,{N}: Command	Enter Settings mode
<b>EXIT</b>	SUCCESS,0:EXIT	FAIL,{N}: Command	Exit Settings mode
<b>MN,0:0</b>	SUCCESS,0:MN,0:2	FAIL,{N}:Command	Get Model number (2=Gaming)
<b>VN,0:0</b>	SUCCESS,0:VN,0:V{N.NN}	FAIL,{N}:Command	Get version number (V{N.NN})
<b>SS,0:0</b>	SUCCESS,0:SS,0:{Cursor Speed Level}	FAIL,{N}:Command	Get the mouse cursor speed value (Level)
<b>SS,1:{Cursor Speed Level:0-10}</b>	SUCCESS,0:SS,1:{Cursor Speed Level}	FAIL,{N}:Command	Set the mouse cursor speed value (Level)
	MANUAL,0:SS,1:{Cursor Speed Level}		Set the mouse cursor speed value (Level)
<b>PT,0:0</b>	SUCCESS,0:PT,0:{Threshold 5% to 50%}:{Nominal Pressure V*100}	FAIL,{N}:Command	Get puff pressure threshold (threshold 5% to 50%) (Nominal Pressure)
<b>PT,1:{threshold 10% to 50%}</b>	SUCCESS,0:PT,1:{Threshold 5% to 50%}:{Nominal Pressure V*100}	FAIL,{N}:Command	Set puff pressure threshold (threshold 5% to 50%) (Nominal Pressure)
<b>ST,0:0</b>	SUCCESS,0:PT,0:{Threshold 5% to 50%}:{Nominal Pressure V*100}	FAIL,{N}:Command	Get sip pressure threshold (threshold 5% to 50%) (Nominal Pressure)
<b>ST,1:{threshold 5% to 50%}</b>	SUCCESS,0:PT,1:{Threshold 5% to 50%}:{Nominal Pressure V*100}	FAIL,{N}:Command	Set sip pressure threshold (threshold 5% to 50%) (Nominal Pressure)
<b>PV,0:0</b>	SUCCESS,0:PV,0:{Nominal Pressure}	FAIL,{N}:Command	Get pressure value (Nominal Pressure)
<b>RA,0:0</b>	SUCCESS,0:RA,0:{Rotation Angle}	FAIL,{N}:Command	Get rotation angle (deg)
<b>RA,1:{Angle: 0-359}</b>	SUCCESS,0:RA,1:{Rotation Angle}	FAIL,{N}:Command	Set rotation angle (0,90,180,270 deg)
<b>DM,0:0</b>	SUCCESS,0:DM,0:{Debug Mode}	FAIL,{N}:Command	Get debug mode value ( 0=debug mode disabled,1=debug mode enabled)
<b>DM,1:0</b>	SUCCESS,0:DM,1:0	FAIL,{N}:Command	Set debug mode value to 0 (Disabled)
<b>DM,1:1</b>	SUCCESS,0:DM,1:1	FAIL,{N}:Command	Set debug mode value to 1 (Enabled)
	LOG,1:{0,0,0,xHighNeutral,xLowNeutral,yHighNeutral,yLowNeutral}		Log initialization values once if debug mode is enabled
	LOG,2:{0,0,0,xHighMax,xLowMax,yHighMax,yLowMax}		Log calibration values once if debug mode is enabled
	LOG,3:{x,y,action,xHigh,xLow,yHigh,yLow}		Log cursor and FSR values if debug mode is enabled until debug mode is disabled
<b>IN,0:0</b>	SUCCESS,0:IN,0:{xHighNeutral,xLowNeutral,yHighNeutral,yLowNeutral}	FAIL,{N}:Command	Get joystick initialization values (xHighNeutral,xLowNeutral,yHighNeutral,yLowNeutral)
<b>IN,1:1</b>	SUCCESS,0:IN,1:{xHighNeutral,xLowNeutral,yHighNeutral,yLowNeutral}	FAIL,{N}:Command	Perform joystick initialization using command



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			(xHighNeutral,xLowNeutral,yHighNeutral,yLowNeutral)
	MANUAL,0:IN,1:{xHighNeutral,xLowNeutral,yHighNeutral,yLowNeutral}		Perform joystick initialization using push button or sip/puff (xHighNeutral, xLowNeutral,yHighNeutral,yLowNeutral)
JV,0:0	SUCCESS,0:JV,0:{xHigh,xLow,yHigh,yLow}	FAIL,{N}:Command	Get joystick FSR values: {xHigh,xLow,yHigh,yLow}
CA,0:0	SUCCESS,0:CA,0:{xHighMax,xLowMax,yHighMax,yLowMax}	FAIL,{N}:Command	Get joystick calibration values (xHighMax,xLowMax,yHighMax,yLowMax)
CA,1:1	SUCCESS,0:CA,1:0	FAIL,{N}:Command	Perform joystick calibration using command
	SUCCESS,0:CA,1:1	FAIL,{N}:Command	Perform joystick calibration using command (Step 1)
	SUCCESS,0:CA,1:2	FAIL,{N}:Command	Perform joystick calibration using command (Step 2)
	SUCCESS,0:CA,1:3	FAIL,{N}:Command	Perform joystick calibration using command (Step 3)
	SUCCESS,0:CA,1:4	FAIL,{N}:Command	Perform joystick calibration using command (Step 4)
	SUCCESS,0:CA,1:5:{xHighMax,xLowMax,yHighMax,yLowMax}	FAIL,{N}:Command	Perform joystick calibration using command (Step 5) (xHighMax,xLowMax,yHighMax,yLowMax)
	MANUAL,0:CA,1:0		Perform joystick calibration using push button
	MANUAL,0:CA,1:1		Perform joystick calibration using push button (Step 1)
	MANUAL,0:CA,1:2		Perform joystick calibration using push button (Step 2)
	MANUAL,0:CA,1:3		Perform joystick calibration using push button (Step 3)
	MANUAL,0:CA,1:4		Perform joystick calibration using push button (Step 4)
	MANUAL,0:CA,1:5:{xHighMax,xLowMax,yHighMax,yLowMax}		Perform joystick calibration using push button (Step 5) (xHighMax,xLowMax,yHighMax,yLowMax)
CT,0:0	SUCCESS,0:CT,0:{changeTolerance}	FAIL,{N}:Command	Get drift change tolerance value
CT,1:{Change Tolerance: 0-30}	SUCCESS,0:CT,1:{changeTolerance}	FAIL,{N}:Command	Set drift change tolerance value
MP,0:0	SUCCESS,0:MP,0:{NNNNNN}	FAIL,{N}:Command	Get Button mapping ( Example: SUCCESS,0:MP,0:123465)
MP,1:{NNNNNN}	SUCCESS,0:MP,1:{NNNNNN}	FAIL,{N}:Command	Set Button mapping ( Example: MP,1:123465)
DZ,0:0	SUCCESS,0:DZ,0:{Deadzone Value}	FAIL,{N}:Command	Get the deadzone value
DZ,1:{Deadzone :30-99}	SUCCESS,0:DZ,1:{ Deadzone Value}	FAIL,{N}:Command	Set the deadzone value ( Example: SUCCESS,0:DZ,1:30)



# Makers Making Change

A Neil Squire Program

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<b>BM,0:0</b>	SUCCESS,0:BM,0:{Button Mode Value}	FAIL,{N}:Command	Get the button mode value (1 = Digital Mode , 2 = Analog Mode)
<b>BM,1:{Button Mode Value:1-2}</b>	SUCCESS,0:BM,1:{Button Mode Value}	FAIL,{N}:Command	Set the button mode value (1 = Digital Mode , 2 = Analog Mode)
<b>FR,1:{Reset Type: 0-1}</b>	SUCCESS,0:FR,1:{Reset Type: 0-1}	FAIL,{N}:Command	Perform factory reset (0 = Hard Reset , 1 = Soft Reset)

## API Format

End-Point      Parameters  
Command  
**MP,1:123461**

## Response Code

Response Status	Response Code	Description
<b>SUCCESS</b>	<b>0</b>	The command has successfully performed.
<b>FAIL</b>	<b>0</b>	The serial API mode is not enabled. Please enter the serial API mode.
<b>FAIL</b>	<b>1</b>	The requested command does not exist. Returns the response code and the requested parameter.
<b>FAIL</b>	<b>2</b>	The requested command exists, but the entered parameter is in incorrect format. Returns the response code and the requested parameter.
<b>FAIL</b>	<b>3</b>	The requested command exists, but the entered parameter is out of range. Returns the response code and the current value stored in the EEPROM.

## Input Actions

Input Action	Description
<b>Short Puff</b>	< 3 seconds
<b>Short Sip</b>	< 3 seconds
<b>Long Puff</b>	3-5 seconds
<b>Long Sip</b>	3-5 seconds
<b>Very Long Puff</b>	> 5 seconds



Very Long Sip	> 5 seconds
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## Output Digital Actions Options

Action Number	Output Action	Description
0	(No action)	No action
1	Button 1 Click	Presses and immediately releases Button 1.
2	Button 2 Click	Presses and immediately releases Button 2.
3	Button 3 Click	Presses and immediately releases Button 3.
4	Button 4 Click	Presses and immediately releases Button 4.
5	Button 5 Click	Presses and immediately releases Button 5.
6	Button 6 Click	Presses and immediately releases Button 6.
7	Center Reset	Initiates center reset routine to set joystick center position.
8	Calibration	Initiates joystick calibration routine to set joystick limits and reset joystick center.

## Output Analog Actions Options

Action Number	Output Action	Description
0	(No action)	No action
1	Button 1 Press	Presses Button 1.
2	Button 2 Press	Presses Button 2.
3	Button 3 Press	Presses Button 3.
4	Button 4 Press	Presses Button 4.
5	Button 5 Press	Presses Button 5.
6	Button 6 Press	Presses Button 6.
7	Center Reset	Initiates center reset routine to set joystick center position.
8	Calibration	Initiates joystick calibration routine to set joystick limits and reset joystick center.

## Digital Action Mapping

Input Action	LipSync Gaming Action
Short Puff	1 : Button 1 Press and Release
Short Sip	2 : Button 2 Press and Release
Long Puff	3 : Button 3 Press and Release
Long Sip	4 : Button 4 Press and Release
Very Long Puff	5 : Button 5 Press and Release
Very Long Sip	6 : Button 6 Press and Release



## Analog Action Mapping

Input Action	LipSync Gaming Action
<b>Puff</b>	1 : Button 1 Press
<b>Sip</b>	2 : Button 2 Press

## Example

INPUT	RESPONSE	ACTION
<b>SETTINGS</b>	SUCCESS,0:SETTINGS	LipSync Ready for API Command
<b>VN,0:0</b>	SUCCESS,0:VN,0:30	LipSync return firmware version 3.0

INPUT	RESPONSE	ACTION
<b>SETTINGS</b>	SUCCESS,0:SETTINGS	LipSync Ready for API Command
<b>PT,0:0</b>	SUCCESS,0:PT,0:10	LipSync return current puff pressure threshold of 10%
<b>PT,1:20</b>	FAIL,0:PT,1:20	(Attempt to set puff pressure threshold failed – need to resend SETTINGS for each command)
<b>SETTINGS</b>	SUCCESS,0:SETTINGS	LipSync Ready for API Command
<b>PT,1:20</b>	SUCCESS,0:PT,1:20:266	LipSync set new puff pressure threshold of 20% and returned current nominal pressure of