

Multiple LED-Wiz ActiveX Control Command Reference

Advance Release v.89



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Multiple LED-Wiz Control
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Installation:

Copy the OCX file to your hard-drive and follow the directions provided by your development platform / OS for using ActiveX controls.

Demo Program:

Included in the “Demo” folder is a simple Visual Basic 6 application that will demonstrate how to use the control to:

- Identify the quantity and ID numbers of LED-Wiz™ devices connected.
- Select the LED-Wiz Device you wish to control
- Send Commands to the LED-Wiz command parser.

Control Usage:

Simply place the control anywhere on the main form of your application. This will expose an “LED-Wiz” Object, which will allow you to control as many as 16 LED-Wiz devices directly from your own programs..



Properties:

- **Command**

This property is a *write-only* String which is set to a command intended for the LED-Wiz command parser.

The format is <three letter command>:<parameter>,<parameter>,<...>

Example: LED_Wiz.Command = “RGB:1,13,22,40”

Refer to the *LED-Wiz™ Command Parser Reference* for commands recognized by the parser.

- **Detected**

This property is a 16 character, *read-only* string that represents the quantity and device numbers of LED-Wiz devices present on the system. A “1” in the leftmost, or first, position of the string indicates the presence of an LED-Wiz with a device number of “1”. A “1” at the second position from the left indicates the presence of an LED-Wiz with a device number of “2”, and so on. A “0” indicates no LED-Wiz is present at that location.

Example: MyString = LED_Wiz.Detected

- **DeviceNumber**

This is an Integer value between 1 and 16 inclusive. It represents the device number of the LED-Wiz you wish to control. Writing to a non-existent LED-Wiz will generate an error.

Example: LED_Wiz.DeviceNumber = 2

LED-Wiz™ Command Parser Reference

Output States:

Command: SBA

Parameters: x,x,x,x,y



Description: Sets the state of all outputs plus Global Pulse Speed.

The x values are 8-bit representations of on/off states for banks 1-4. Value y is the Global Pulse Speed setting (1 through 7).

Example:

SBA:255,255,255,255,2

Sets the state of all outputs to *on*, and sets the Global Pulse Speed to 2

SBA:0,0,0,0,1

Sets the state of all outputs to *off*, and sets the Global Pulse Speed to 1

Command: SB x

Parameters: y

Description: Sets the states of a Bank of 8 outputs.

Bank 1 addresses the first 8 outputs, Bank 2, the second 8 and so on.

X = Bank 1 through 4, y = 0 to 255 (8-bit addressing)

Example:

SB1:255

Sets the state of outputs #1 through #8 to *on*.

SB4:129

Sets the state of outputs #26 through #31 to *off*, and outputs #25 and #32 to *on*.

LED-Wiz™ Command Parser Reference

Output States:(continued)

Command: Sxx

Parameters: y

Description: Sets the State of a Single Output

The *x* value is an output number from 01 to 32 inclusive. Value *y* is the state of the output, 1=*on* and 0=*off*.

Example:

S01:1

Sets the state of the #1 Output to *on*.

S32:0

Sets the state of the #32 Output to *off*.

Command: RDS

Parameters: *rl,rh*

Description: Sets random on/off states to a range of outputs.

The *rl* value is the lower output number in the range and the *rh* value is the high end of the range.

Example:

RDS:12,24

Sets the state of outputs numbered 12 through 24 to on or off conditions randomly.

LED-Wiz™ Command Parser Reference

Output Profile Settings:

Command: PBA

Parameters: x, x, x, x, \dots, x



Description: Profile Settings for All Outputs.

Each of the 32 x parameters coincide with the outputs numbered 1-32. A value of 0 to 48 inclusive, sets the brightness or intensity of each LED using Pulse Width Modulation (PWM). A value of 129-132 indicates an automated pulse mode as follows:

129 = Ramp Up / Ramp Down

130 = On / Off

131 = On / Ramp Down

132 = Ramp Up / On

The speed is controlled by the *Global Pulse Speed* parameter.

Example:

PBA:48,48,48,129,48,48,48,48,48,48,48,48,48,20,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48,48

Output 4 set to a "sawtooth" pulse, output 14 is set to an intensity of 20 and the rest of the outputs are set to full brightness settings.

NOTE: Profile Settings commands should not be used as *on/off* controls. They are for setting up the behavior profile for each output. Use the more efficient "state" commands for switching inputs on and off. Profile commands should only be used when the behavior profile of an output needs to be changed.

LED-Wiz™ Command Parser Reference

Output Profile Settings:(continued)

Command: PBx

Parameters: y,y,y,y,y,y,y,y

Description: Sets the behavior profiles for a bank of 8 outputs. Bank 1 addresses the first 8 outputs, Bank 2, the second 8 and so on. x = Bank 1 through 4, y = 0 through 48 or 129 through 132 (as in previous command)

Example:

PB1:16,16,16,16,48,48,48,48

Sets outputs #1 through #4 to intensity level 16 and sets outputs #5 through #8 to intensity level 48 (full intensity.)

SB4:129,129,129,129,10,10,20,20

Sets outputs #25 through #28 to pulse, outputs #29 and #30 to intensity level 10 and outputs #31 and #32 to intensity level 20.

Command: Pxx

Parameters: y

Description: Sets the behavior profile of an individual output. xx = Output 01 through 32, y = 0 through 48 or 129 through 132 (as in previous commands)

Example:

P01:27

Sets the #1 output to brightness level 27

P32:130

Sets the #32 output to blink.

LED-Wiz™ Command Parser Reference

Output Profile Settings:(continued)

Command: RDI

Parameters: *rl,rh,y*

Description: Sets random intensity / brightness to a range of outputs and optionally affects the states of the outputs in that range.

The *rl* value is the lower output number in the range and the *rh* is high end of the range. The *y* value is the “Affect State” parameter. When *y=0* the current state of outputs is unaffected. When *y=1*, the three corresponding inputs are set to *on*.

Example:

RDI:5,20,1

Sets the intensity of outputs numbered 5 through 20 to values from 0 to 48 randomly and turns on the associated outputs.

LED-Wiz™ Command Parser Reference

Special Commands:

Command: RGB

Parameters: x,r,g,b

Description: Sets the Intensity (Red, Green and Blue) values of an RGB LED and then turns on the three corresponding outputs.

To properly use this command, the LED must be connected with the Red leg at output x and the Green and Blue at outputs $x+1$ and $x+2$ respectively.

The x value is the first, or Red, output. The r,g and b values are intensity levels from 0 to 48 inclusive.

Example:

RGB:4,48,30,0

Produces a “warm yellow” color on an RGB LED connected starting at output #4.

Command: RDC

Parameters: x,y

Description: Sets an RGB LED to a random color when connected as explained in the RGB command and optionally activates the outputs.

The x value is the first, or Red, output. The y value is the “Affect State” parameter. When $y=0$ the current state of outputs is unaffected. When $y=1$, the three corresponding inputs are set to *on*.

Example:

RDC:4,1

Produces a random color on an RGB LED connected starting at output #4.

LED-Wiz™ Command Parser Reference

Special Commands:(continued)

Command: GPS

Parameters: *x*

Description: Sets the *Global Pulse Speed* for the automated pulse modes of the LED-Wiz hardware. This parameter affects all outputs with automated pulse modes active.

The *x* value can be a number from 1 to 7, with 1 being the fastest pulse speed and 7 being the slowest.

Example:

GPS:1

Will cause any outputs with their behavior profile set to use a hardware pulse mode to pulse at the maximum possible speed.