



# Bezel Tools for PC Manual

*For Windows® 7, 8, and 8.1 Operating Systems*

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## About

Bezel Tools is a PC application that enables users to program custom bezel patterns on their Apex Spectra Bill Validator. This application is designed to run on Windows 7 or later, supporting both 32 and 64 bit operating systems. The use of this tool is not required to operate the Spectra and is provided as an extra feature to grant you creative reign over your device.

By default, all Spectra's come pre-programmed with exciting patterns that will get you up and running. Read on if you're interested in customizing these patterns to your needs.

## Quickstart

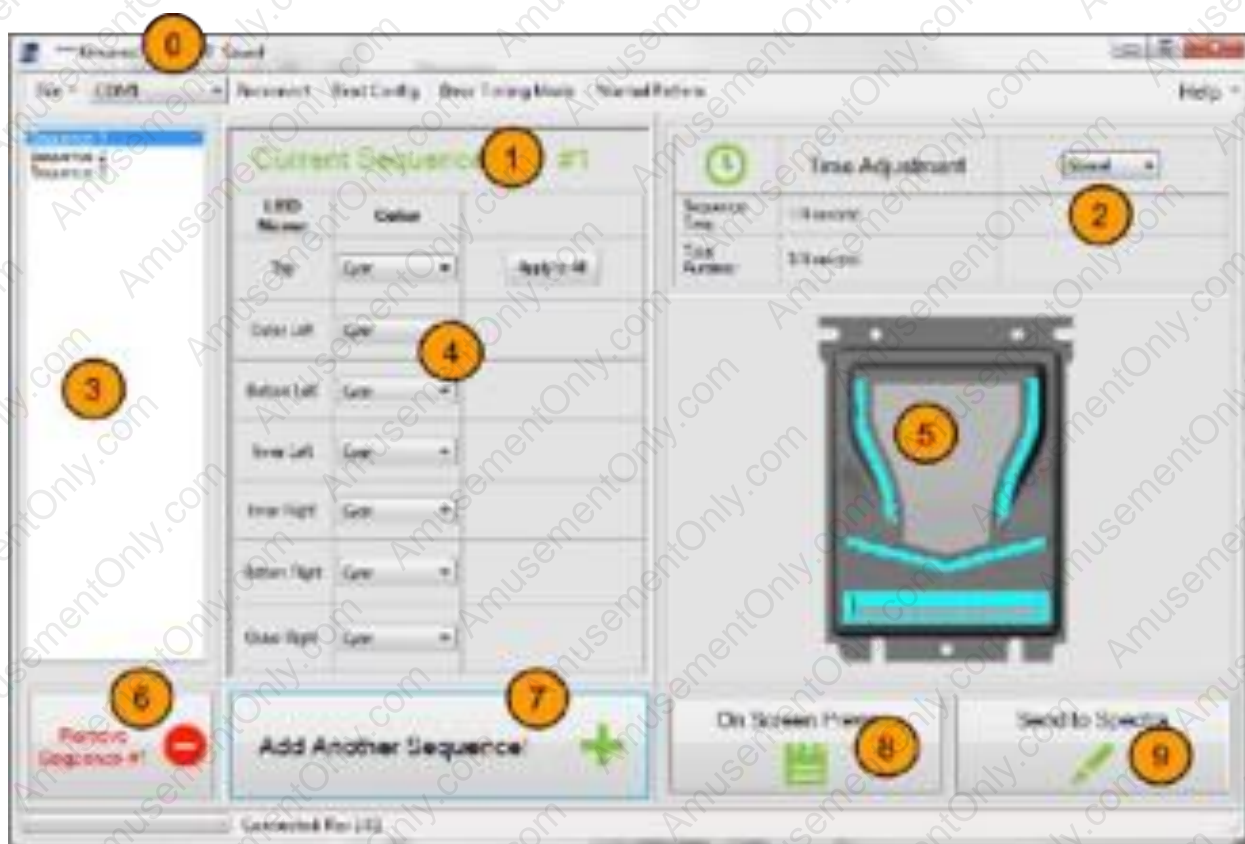
To dive in immediately, here is a list of what you will need:

1. Windows Operating System
  - a. 7, 8, 8.1
2. Flash Download Cable
  - a. <http://shop.pyramidacceptors.com/usb-flash-download-cable-for-pc-05aa0026/>
3. Bezel Tools
  - a. [Download](#)
4. An Apex Spectra Bill Validator
  - a. Contact [sales@pyramidacceptors.com](mailto:sales@pyramidacceptors.com) for more information

Download and install Bezel Tools, connect the PC and Spectra via the flash update cable, and you're ready to go!



## Navigating Bezel Tools



0. Control Bar
  - a. Contains the Save/Load options, Reconnect, Read Config, and Help dialogues.
  - b. Anything referenced as a dialogue is found here.
1. Sequence control box
  - a. Adjust the color(s) for each sequence in your pattern
2. Timing
  - a. Adjust the time each led is on or off
3. List of sequences in pattern
4. LED color selection
  - a. Select colors using combo box
5. Preview image
6. Remove sequence from pattern
7. Add a new sequence to the pattern
8. Run an on-screen preview of your pattern
9. Program (send) pattern to Spectra

## Connecting

Bezel Tools attempts to autodetect your Apex Spectra Bill Validator. If you are using our [Flash Update Cable](#), this process should be quick and reliable. If you are experiencing difficulty automatically detecting the device, please see the [troubleshooting section](#).

At this point, you are ready to load a pre built PTF file or create your first Spectra Bezel Pattern.

## Loading a Sample Pattern

The quickest way to get started is to use Bezel Tools to load one of our sample pattern files. Click Help->Load Sample Pattern

Once loaded, you can click through the list of sequences to see how the pattern was configured. You may also click the Preview button to run a real-time simulation within Bezel Tools. When you are ready, you may click the Program button to send the pattern to your Spectra.

## Creating Your First Pattern

### Terminology

It is important to understand the naming convention used to identify each LED on the Apex Spectra Bezel. Bezel Tools provides a Show Map feature that will highlight and name each LED on the Spectra image for your convenience. This option can be found under the Help menu. A more detailed map is shown below as Diagram 1.

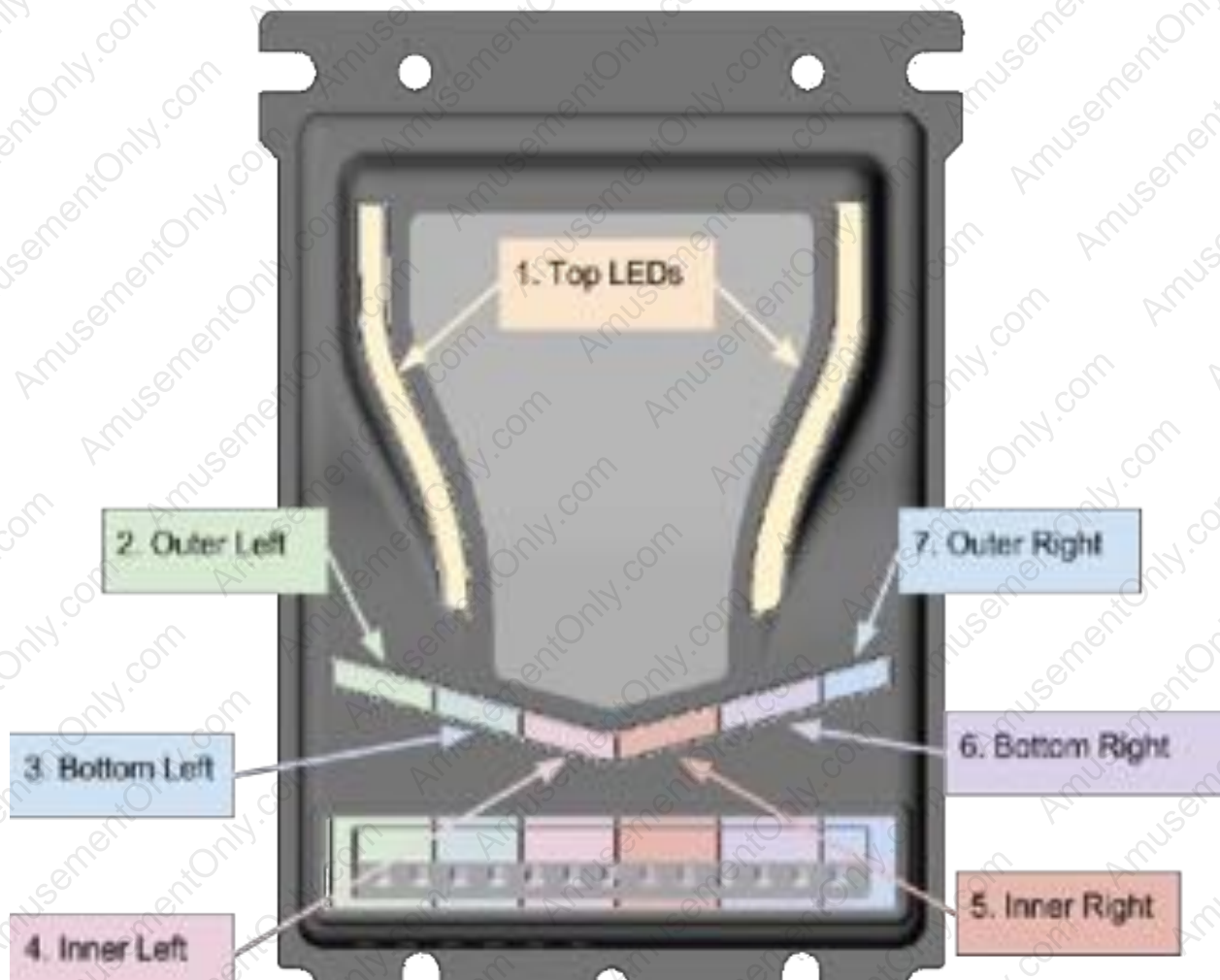


Diagram 1. LED Layout

## Colors

At any point, a LED can be any of the following colors:

- Off
- Blue
- Red
- Green
- Cyan
- Violet
- Yellow
- White

More colors may be added in future releases of Bezel Tools.

## Pattern Types

Unique patterns can be applied to both the normal running operation and the startup animation. These are selected by toggling the pattern type radio buttons. Please note, the startup animation is limited to 15 sequences and the normal pattern is limited to 31 sequences.

## Sequences

A pattern is composed of one or more sequences. A sequence is a period of time during which each LED will either be illuminated a specified color or turned off. Timing is controlled per sequence using the *Run For* settings box on the user interface. A pattern's total run time is the sum of timing for each sequence and this is shown in the bottom right of the Bezel Tools window.

To better understand the concept of sequences, see Diagram 2 below.

An Entire Pattern

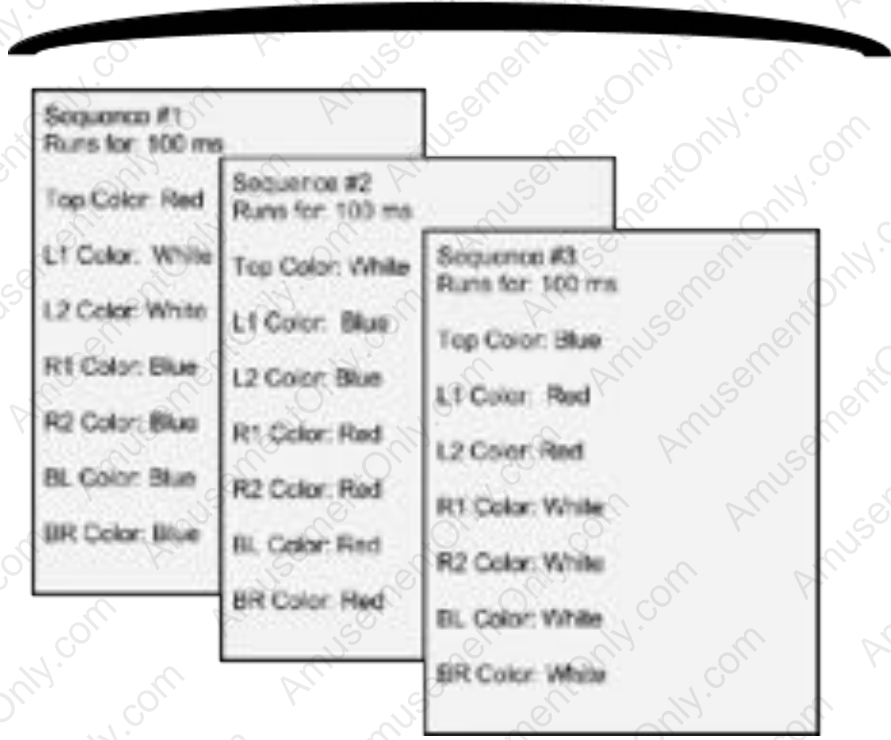


Diagram 2. Pattern Concept

## Creating a New Sequence

When the application is launched, a single sequence is loaded with all LEDs off and a timing of 1 second. Modify this sequence until you are satisfied, then click the Add Sequence button. This will copy the currently selected sequence and place it at the end of your sequence list.

This is useful for creating neat effects where each subsequent sequence is slightly different than the last sequence.

Once you have a few sequences defined, you can drag and drop the sequences to reorder them if you so desire. This is done by single-clicking on, dragging, and releasing a sequence to the order you would like to have it occur.

This comes in handy for example, if you miss a step in the pattern that you are trying to create.

## Saving Patterns

Patterns can be saved as PTF files for later use or sharing. To save a file, use the *File* -> *Save* dialog. A filename will be randomly generated for you but you are free to rename as you desire. The first word in the filename indicates the type of pattern it is, either NORMAL or STARTUP.

A PTF file is a simple XML file and can be read by any text editor. Custom editing is not recommended, please use Bezel Tools to manage these files.

## Loading Patterns

Saved patterns can be loaded in two ways. The easiest way is to double-click the PTF file which will launch Bezel Tools and load the pattern. The other method is to use the *File* -> *Load Pattern* dialog.

## Sharing Patterns

We love when our customers get innovative and make great looking designs. If you would like to share your pattern or browse other customer submitted patterns, please see our Pattern Portal:

[Link to Pattern Portal]

## Programming Patterns

Once you are satisfied with your pattern, you may click the Program button. This will send your current pattern to the Spectra. The process can take up to 5 seconds. Please do not disconnect the power or the serial cable until instructed to do so by Bezel Tools.

## Previewing Patterns

At any point in time, you can use the preview feature by pressing the Preview button. This will play back a simulation of your pattern in real time. While in Preview Mode, you are not able to add or remove sequences. Sending to Spectra is also disabled. You must exit Preview Mode by clicking the Stop button before proceeding.

While previewing, you may also apply a time modifier to quickly experiment with other sequences timing. For example, if you select the 1.5 modifier, each sequence will run for 1.5 times the configured duration. If you're happy with the time modification, click apply to automatically apply the modified value to each sequence in the pattern.

## Reading Configuration

The configuration of an Apex Spectra can be read using the Read Config button. This will read and display the current pattern from the attached device. Once read, the configuration can be saved, altered, or reloaded at your will.

Two types of patterns can be read from a Spectra, the NORMAL and STARTUP patterns. Toggle the Pattern Type radio button to the pattern you would like to read before clicking read config.

## Getting a Clean Slate

Did you make a mess? Do you want to start over? Use the *File -> Clear Form* dialogue to remove all sequences from Bezel Tools and allow you a fresh start. Restarting the application will also clear the sequences. The Spectra will not be affected by either of these operations.

## Troubleshooting

**Problem:** Cannot connect to Apex Spectra Acceptor. The Program button appears greyed out and reports “Not Connected” in the status bar.

1. Cycle power on the acceptor, close and relaunch Bezel Tools
2. Check that you are using the PTI [Flash Update Cable](#) and that your USB port is functional.
3. Ensure that you are using a Pyramid Apex Spectra Bill Validator
4. Use [Acceptor Tools to connect to the acceptor](#). This will report which port you are connected on. Take note of any errors reported by Acceptor Tools. If no errors are reported, close Acceptor Tools, launch Bezel tools, and select the port that Acceptor Tools identified. Click Reconnect.
5. Ensure that your flash cable’s drivers are installed. See this section of our FAQ <http://pyramidacceptors.com/acceptor-tools-instructions/#ftdi>
6. Contact [support@pyramidacceptors.com](mailto:support@pyramidacceptors.com)

**Problem:** Cannot create a new sequence

**Solution:**

1. If programming a NORMAL type pattern, the limit is 31 sequences.  
If programming a STARTUP type pattern, the limit is 15 sequences.
2. You cannot add more sequences while in Preview Mode. Exit Preview Mode by clicking the Stop button. If the Stop button is not visible, you are not in preview mode.
3. You cannot add a sequence if you are not connected to a Spectra. If the user interface appears greyed out or the bottom right of the screen says “Not Connected”, you are not connected to a Spectra.

**Problem:** The patterns running too quickly

**Solution:**

1. Try changing the timing option to Slow, Slower, Even Slower, or Slowest
2. Try Advanced Timing Mode

**Problem: The patterns running too slowly**

**Solution:**

1. Try changing the timing option to Fast, Faster, Even Faster, or Faster
2. Try Advanced Timing Mode

**Problem: The Spectra is not programming the pattern correctly**

**Solution:**

1. This can happen from time to time. Try cycling power on the Spectra and then re-applying your pattern.
2. Close and reopen the application
3. Send the PTF file to [support@pyramidacceptors.com](mailto:support@pyramidacceptors.com) for analysis.

**Problem: I'm not sure which LED is which**

**Solution:**

1. Click Show Map under the Help menu (CTRL+M) to show a detailed map that names and numbers each LED. Click Hide map (CTRL+H) to hide the map.

## FAQ

Question: Does Bezel Tools support other validators?

Answer:

No. Pyramid's Apex Spectra is the only validator that will function with this utility.

Question: How long will the pattern run?

Answer:

The pattern will repeat as long as the validator is powered, the host has enabled the validator, and the validator is not in an error state. Each cycle of the pattern will run for the amount of time shown in the bottom right of Bezel Tools. This is calculated as the sum of time applied to each sequence in the pattern.