

# Test Plan

Project: Sonic Cascade Rhythm Rumble

Date: 29/05/2023

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## INTRODUCTION

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The purpose of this test document is to outline the testing approach, strategies, and test cases for Sonic Cascade Rhythm Rumble. It provides a comprehensive overview of the testing process, including the objectives, scope, environment, and deliverables. This document serves as a reference for Mr. Requena and all other parties that might have an interest in this product.

## TEST OBJECTIVES

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The primary objectives of the testing phase are as follows:

- Validate the functionality and features of SCRR to ensure they meet the specified requirements.
- Identify and report any defects or issues encountered during testing.
- Verify the system's performance, reliability, and enjoyability.
- Test factors such as speed and mood in the music creation algorithm.
- Validate the usability and user-friendliness of the system.

## TEST SCOPE

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The scope of the testing phase includes:

- Functional testing to verify that all system features and functionalities operate as intended. Including but not limited to the LED strips, the LCD screen, the buttons, and the knobs.
- Checking potential speed and performance issues related to the low computing power of the Arduino board used.
- Testing of creation algorithm to see if music is created as intended.
- Usability testing to evaluate the system's ease of use and user-friendliness.

## TEST APPROACH

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The testing approach for SCRR will encompass the following activities:

- Test planning and preparation, including the creation of test cases, test data, and test environments.
- Test execution and defect reporting, involving the systematic execution of test cases and capturing any encountered defects.
- Test result analysis and reporting, evaluating the overall test outcomes and generating comprehensive reports.

## TEST ENVIRONMENT

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The test environment for SCRR includes:

- Hardware: Sonic Cascade Rhythm Rumble
- Software: Our own software specifically designed for SCRR
- Outside component: Novation Launchkey Keystation 25 mk2 piano

## TEST CASES

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A list of test cases will be documented, covering various aspects of SCRR. Each test case will include:

- Test case ID: in the form of a numerical value of 3 digits starting from 001 and increasing by one
- Test case description: Describing the specific case in less than 201 characters.
- Pre-conditions: Conditions required before the test is started
- Test steps: Specific steps of testing
- Expected results: What we expect
- Actual results: What actually happened
- Pass/Fail status: Were the Expected results the same as the Actual ones

## TEST DELIVERABLES

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The test deliverables for SCRR will include:

- Test plan document
- Test case document

## TEST RISKS AND MITIGATION

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The potential risks and challenges during the testing phase are identified, along with mitigation strategies to minimize their impact. Risks may include resource constraints, time limitations, potentially hazardous functioning, and other factors. These are not enumerated here as they are not required.

## TEST RESULTS

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The test results will be recorded. Pass/Fail metrics will be calculated.

## CONCLUSIONS

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This test document provides an overview of the testing process for SCRR. It outlines the objectives, scope, approach, and test cases to be executed.