# **CTS Relay Scheduler Design Document**

**Date Requested:** 04/14/2021

**Requested By:** Component Tinning Services - Ryan

**Approved By:** Ryan & Mike

**Team:** Tyler

**Project Description:**

CTS would like to introduce the ability for customers to setup custom schedules for a 4-way USB Relay device. They would like a custom and standalone desktop application that would allow for scheduling of each individual relay and to automatically turn the relays on and off at the appropriate times.

The schedules for each relay need to be customizable and apply to each relay independently. Some additional features they would like to see would include having the application automatically locate the relay device since there will always only be one on a machine, the ability to force separate relays on and off, the relay names should be editable, and it should remember its last state on a system reboot.

**Requirements**

* On software load, the device address for the USB device is located automatically
* Each relay has a configurable schedule for each day of the week and at all hours
* Relays automatically turn on and off based on the schedule
* Users can force a relay on and it will ignore the schedule
* An indicator is present on the main form to reflect current relay status for each relay
* Relay names can be edited by users
* Last relay states are remembered when computer reboots

Some additional desired features would include:

* Configuration import/export

**Design & Implementation**

**Validation & Testing**