

Junior Design Engineering Requirements

Local Display Requirement:

Customer Requirement:

Must have a display on the physical device that displays information about the state of the device and the time remaining on each channel's timer.

Engineering Requirement:

The system must display the following information: the on/off state of the display within 5 seconds of the state changing, the current draw of each channel within 0.1A accuracy, the time remaining on each timer within 5 seconds of accuracy to the actual time remaining, and the bluetooth pairing state of the device with within 15 seconds of the state changing.

Sound System Requirements:

Customer Requirement:

Must have a sound system that indicates to the user when the state of the device changes.

Engineering Requirement:

Nine out of ten people must be able to correctly identify how the state of the device has changed based on the sound the system makes when the state of the device changes. There will be sounds for bluetooth connection, bluetooth disconnection, a channel turning on, a channel turning off from user input, a channel turning off from timer expiration, and for a channel turning off from overdrawing current.