

## TITLE: See Sharp – Low Vision Music Aid

GOAL: The See Sharp provides a convenient, functional, and user-friendly way to make written music readable to visually impaired individuals who have lost the ability to read normal sheet music, enabling them to continue a lifelong pursuit that benefits their overall wellbeing.



## ABSTRACT:

As people begin to age, the gradual or sudden loss of their vision may greatly hinder their abilities to engage in meaningful activities. For musicians, these activities may include performing in an orchestra, marching band, or a church choir. Cloudiness, loss of central vision, blurred vision, and floaters are just some of the side effects associated with the common visual impairments of the aging population. Impairments such as cataracts, macular degeneration, glaucoma, and retinopathies may make something as simple as reading a piece of sheet music almost impossible. As a result, many of these individuals become frustrated and stop participating in these activities. Since these impairments are usually incurable, and the current technology is not designed to overcome the limitations presented by these conditions, we have decided to make a device that is portable, affordable, and musically adjustable so this population is able to continue their engagement in music.

Musicians whose vision has declined over time often lose the ability to read music, which impacts their sense of social and personal independence. As a result of primary research with end users and subject matter experts, we have developed the See Sharp as a solution to this problem. The device has several hardware and software features that we identified as particularly important for our target end user. We have generated a 3D printed prototype to demonstrate the hardware, and we have completed a software prototype that works on a commercially available tablet PC.