OCUTECH® Sight Enhancement Technology

Reading music with bioptic telescopes

Reading music is perhaps one of the most challenging activities for the visually impaired. Seeing the notes and their position requires very fine detail vision which usually requires higher magnification, while being able to track fluently across the bars requires a wide field of view. In addition, the working distance to read the music needs to be far enough away (mid-range) to allow room for the hands and the instrument.

The only optical devices that can provide a high level of magnification at mid-range are telescopes set for near—they can either be focusable or fixed focus for the desired working distance. As telescopes get stronger in power their fields of view become narrower. Fortunately the field of view of telescopes is like a cone—the further away you are from the material the more you can see at once. Galilean telescope can provide an ample field of view up to approximately 2x power, while Keplerian telescopes provide wider fields of view when powers above 3x are required.

1. Maintain the furthest distance possible from the music stand that will enable you to read the music through the telescope—it can be further than arm's reach as you can lean in to turn the page when necessary.
2. Make certain the music is well illuminated.
3. Position the telescope in front of your preferred seeing eye.
4. Focus the telescope for the working distance determined in step #1.
5. Determine whether the telescope provides enough magnification for you to read the music fluently.
6. If you can read it well, try moving further away (while refocusing) to gain a wider field of view.
7. If you cannot read it well, try adding more light and/or moving in closer (while refocusing)

Some other hints:

1. A binocular device may be able to provide a wider field of view, however you need to determine the most promising working distance first so that the binocular telescopes can be aligned for that distance.
2. Determine whether the music will be at eye-level (piano) or lower down. This will help determine the proper positioning of the telescope in the frame.
3. If you will be with a group and/or a conductor, you'll likely prefer a bioptic design so you can alter your visual attention between the conductor, fellow players and the music.
4. No matter how wide the field of view can be achieved, it will only cover a few bars of music. With practice you will learn to move your head and eyes together to track along the page.