Team 21-010

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Schematic and Bill of Materials

Diagram, schematic

Description automatically generated

The screen is connected to the Pi via HDMI and USB ports. Shows five jacks (parts TRS) connected to the Pi. Each jack is used to connect to Seven Hills assistive technology buttons.

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| Item Name | Description | Quantity | Part Number | Manufacturer | Part Designator | Cost |
| Raspberry Pi 3A+ | Allows for the music playing functionality, along with Bluetooth, USB, HDMI, and SD card functionality​ | 1 | SC0130​ | Raspberry Pi Foundation | - | $25.00 |
| 7-inch LED screen | Screen to display interface for users to interact with | 1 | MDS-702​ | EVICIV | - | $89.99 |
| SD card module | Extra port to allow users to store songs​ | 1 | 8541641720 | Stemedu | - | $8.99 |
| MicroSD card 16gb | Used to store Raspberry Pi OS | 1 | 936 | SanDisk | - | $7.95 |
| MicroSD card 128gb | Used to store song files | 1 | B07HHD7C7T | SanDisk | - | $14.99 |
| Pi Juice | A hat for the Raspberry Pi that connects to a rechargeable battery | 1 | PIS-0212​ | PiJuice | - | $70.40 |
| Wall Adapter Power Supply | Micro-USB - 5.1V 2.5A | 1 | 1260 | Raspberry Pi Foundation | - | $8.95 |
| USB-C to Micro-USB adapter | Allows the Raspberry Pi to be charged via USB-C rather than Micro-USB​ | 1 | L6LUC134-CS-R​ | Amazon Basics | - | $6.86 |
| 3.5mm jacks | Allows connection of wired adaptive switches and to connect to wired headphones​ | 5 | - | Amazon Basics | TRS | $10.00 |
| Resistor | 150 Ω | 20 | - | - | R27, R37, R32, R38, R31, R43, R28, R45, R29, R46, R48, R49, R30, R42, R36, R44, R34, R41, R35, R40 | - |
| Bidirectional Capacitors | 100 nF | 10 | - | Stockroom | C24, C40, C36, C43, C39, C43, C38, C42, C37, C35 | - |
| Unidirectional Capacitors | 10 µF | 10 | - | Stockroom | C34, C32, C29, C41, C26, C28, C27, C33, C31, C30 | - |
| Breadboard | Board used to wire components | 1 | - | Stockroom | - | - |
|  |  |  |  |  | Total: | $243.13 |