**Test Results Template-- ECE 458 Spring 2020**

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| Test Name | MuteBot system Setup | | Test Number | 1 | | | |
| Requirement(s) Tested | | 5 | Verification Method | I | A | D | T |
| Test Setup  -Include HW or SW Versions  -Attach Diagrams as appropriate | | 1. Raspberry Pi 3B+    1. OS: Raspbian v10 2. Connections to Pi:    1. USB Sound Card into USB port    2. HDMI cable into HDMI port    3. Micro USB into Micro USB port    4. Ethernet cable into Ethernet port    5. Keyboard & Mouse into USB ports    6. 3.5mm cable into Microphone (Pink) port of USB soundcard    7. IR Remote shield connected to pins 1 to 26 3. Connections to TV:    1. Micro USB cable into USB port    2. 3.5mm cable into 3.5mm headphone port    3. Power cable into power port    4. Antenna into Coaxial port 4. Other Connections:    1. Connect HDMI cable to secondary Monitor    2. Connect TV Power cable to power outlet 5. Other Materials:    1. Westinghouse TV remote 6. TV Settings:    1. Powered On    2. TV Input set to Raspberry Pi 3B (HDMI) | | | | | |

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| Test Step | Action (Attach test data, diagrams, etc. as appropriate) | Expected Result | Observed Result | Pass  Fail |
| 1. | **Plug** the **Westinghouse TV Power cord** into an outlet. | The Westinghouse TV has Power |  | Pass |
| 2. | Using the **Westinghouse TV** remote **press the Red Power Button** | The Westinghouse TV powers up (Blue Light indicates Westinghouse TV is on) | Blue light has turned on and the Westinghouse logo appears on the TV display | Pass |
| 3. | **Plug the HDMI cable** into both the **Raspberry Pi** along with the **Westinghouse TV** | Display between the two systems are connected (After Power is applied) |  |  |
| 4. | **Plug** a **keyboard** and a **computer mouse** into the **bottom two USB ports** on the **Raspberry Pi** | Mouse and Keyboard will now work on the Raspberry Pi (After power is applied) |  |  |
| 5. | **Plug in** the **USB soundcard** into the top right USB slot | USB soundcard now inputs into the Raspberry pi |  |  |
| 6. | Plug one end of **3.5 mm jack** into the **Westinghouse TV** and plug the other end into the **pink port on the USB sound port** | The Raspberry Pi can get sound in from the Westinghouse TV (After Power is applied) |  |  |
| 7. | Attach the **IR shield** to the **Raspberry Pi** so that the **IR shield board hovers over the Raspberry Pi**, Plug in the IR shield at the **farthest pin down towards ‘J8’** on the Raspberry Pi | The IR shield can now interact with the Raspberry Pi |  |  |
| 8. | **Plug** in one end of **a micro USB cable** into an **outlet** and **plug** the other end of the **micro USB cable** into the **micro USB port on the Raspberry Pi** | Starts up the Raspberry Pi and shows the Raspberry Pi desktop |  |  |
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| Comments  The MuteBot system was able to boot without any errors and Westinghouse TV displayed the Raspberry Pi desktop. The IR shield was working properly when connected to its proper pins on the Raspberry Pi. The keyboard and mouse are working as intended and can navigate through the Raspberry Pi Desktop and can launch programs. The USB soundcard is working as intended and the TV’s audio is sent to the Raspberry Pi with the 3.5 mm jack. |

Date March 3, 2020 Test Engineer Steve Ferreira Witness Thomas Morrissey