| BUTTONS | TEENSY 4.1 PIN # (Inputs) | NOTES |
|---|---|---|
| Puppet 1 Left Foot: *Button Lead* | 0 | The Teensy (button) inputs are utilizing a pullup-resistor setup.<br><br>Utilize Teensy's ground for the other side of each buttons' terminal.<br><br>View the circuit diagram for reference. |
| Puppet 1 Right Foot: *Button Lead* | 1 | |
| Puppet 1 Left Arm: *Button Lead* | 2 | |
| Puppet 1 Right Arm: *Button Lead* | 3 | |
| | | |
| Puppet 2 Left Foot: Button Lead | 4 | |
| Puppet 2 Right Foot: *Button Lead* | 5 | |
| Puppet 2 Left Arm: *Button Lead* | 9 | |
| Puppet 2 Right Arm: *Button Lead* | 14 | |
| | | |
| **BUTTON LIGHTS** | **TEENSY 4.1 PIN # (Outputs)** | **NOTES** |
| Puppet 1 Left Foot: *Relay Input* | 16 | Each Teensy button light output is connected to its respective relay input.<br><br>As Teensy operates with a 3.3v logic level, the relays are rated at 3v for operation.<br><br>View the circuit diagram for reference. |
| Puppet 1 Right Foot: *Relay Input* | 17 | |
| Puppet 1 Left Arm: *Relay Input* | 22 | |
| Puppet 1 Right Arm: *Relay Input* | 24 | |
| | | |
| Puppet 2 Left Foot: *Relay Input* | 25 | |
| Puppet 2 Right Foot: *Relay Input* | 26 | |
| Puppet 2 Left Arm: *Relay Input* | 27 | |
| Puppet 2 Right Arm: *Relay Input* | 28 | |
| | | |
| **SOLENOIDS** | **TEENSY 4.1 PIN # (Outputs)** | **NOTES** |
| Puppet 1 Left Foot: *Relay Input* | 29 | Each Teensy solenoid output is connected to its respective |

| | | |
|---|---|---|
| Puppet 1 Right Foot: *Relay Input* | 30 | relay input.<br><br>As Teensy operates with a 3.3v logic level, the relays are rated at 3v for operation.<br><br>View the circuit diagram for reference. |
| Puppet 1 Left Arm: *Relay Input* | 31 | |
| Puppet 1 Right Arm: *Relay Input* | 32 | |
| | | |
| Puppet 2 Left Foot: *Relay Input* | 33 | |
| Puppet 2 Right Foot: *Relay Input* | 34 | |
| Puppet 2 Left Arm: *Relay Input* | 35 | |
| Puppet 2 Right Arm: *Relay Input* | 36 | |
| | | |
| **SPOTLIGHTS** | **TEENSY 4.1 PIN # (Outputs)** | **NOTES** |
| Puppet 1 Spotlight: *Relay Input* | 41 | As Teensy operates with a 3.3v logic level, the relays are rated at 3v for operation.<br><br>View the circuit diagram for reference. |
| | | |

| SEMNOX FUNCTION | SEMNOX PIN # | RELAY SETUP | TEENSY 4.1 PIN # | NOTES |
|---|---|---|---|---|
| *Player Count Pulse (Listed as COM) | J3: 2 (Brown wire) | 5v Relay Semnox->DC+ Teensy->COM | 3.3v | The reader, when swiped, activates the Semnox interface's relay. Thereafter, the ground is bridged to the Teensy unit (for gamestart)<br><br>*The 5v Relay setup is "Hacky," as I received too much noise from the Semnox Unit. See the Diagram for further information. |
| *Player Count Pulse (Listed as NO) | J3: 4 (Orange wire) | 5v Relay Semnox->in Teensy->NO | 37 | |
| Ticket Activation | J1: 1 (White wire) | 3.3v Relay Semnox -> NO Teensy -> COM | 38 | |
| **Ticket Count Pulse | J1: 6 (Blue wire) | N/A | 39 | |

| | | | | |
|---|---|---|---|---|
| | | | | **Semnox must be set to 5v logic. Additionally, a 12v->5v must be utilized for the 5v->3v conversion. See the circuit diagram for signal flow |