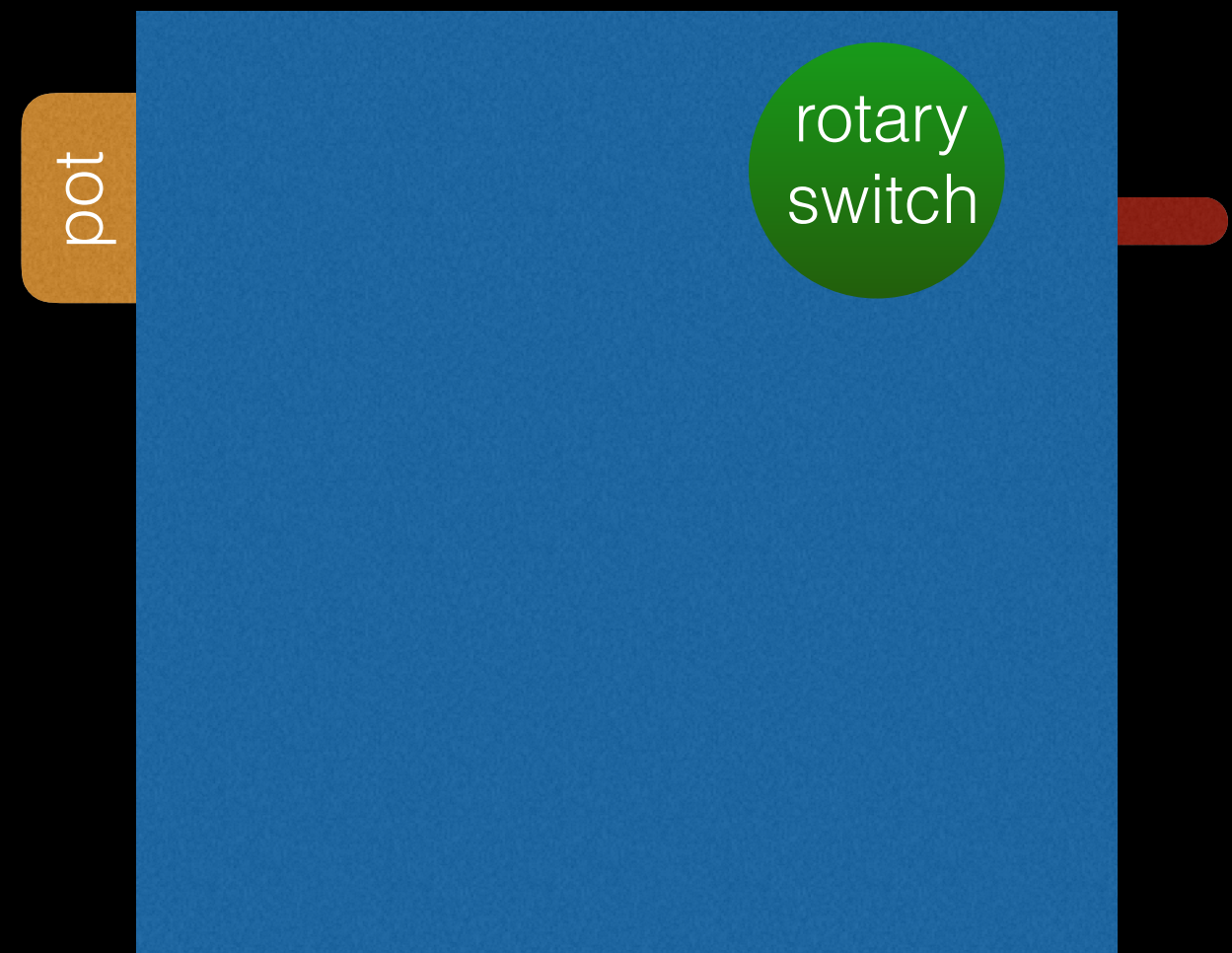


SNES Ultimate Co-Op

- **Potentiometer** controls timing for some Play Modes
- **Toggle Switch** determines the Play Mode category
 - center position = bypass, or normal play
 - up position = single player modes
 - down position = multiplayer modes
- **Rotary Switch** selects between six different play modes within the category determined by the toggle switch



Single Player Modes

1. **Both Control** - Control over the in game character is shared equally by both players at all times
2. **Teamwork** - The in game character receives only one message from each player at a time (forward from player one and jump from player two).
3. **Agree** - The in game character only performs an action if both players are pressing the corresponding button at the same time
4. **Alternate Time*** - Control over the in game character alternates between both players according to a time interval
5. **Alternate Presses*** - Control over the in game character alternates between the two players according to the number of button presses the controlling player makes
6. **Take Control*** - Control over the in game character is shared by the players unless a player presses both trigger buttons to lock out the other player temporally

* potentiometer controls time/presses

Multi Player Modes

1. **Pressed First** - Each of the buttons can only be pressed by one player at a time (if player 1 is pressing 'X' player 2 can't press 'X' until player 1 releases 'X')
2. **Limited Press*** - Each player is given 15 button presses for a period of time determined by the pot.
3. **XOR** - If both players press a button at the same time neither button press is sent to the in game characters
4. **Take Control*** - By pressing both trigger buttons either player is able to temporally hijack the opponents character for a short period of time
5. **Alternate Control*** - The in game character that each player controls changes at a time interval determined by the pot
6. **Both Control** - Both players have full control over both in game characters at all times

* potentiometer controls time/presses

What's in the Box?

- An **Arduino Mega** 'mimics' a SNES and reads the input from two SNES controllers
- **Two SNES controllers** with their casings and buttons removed have wires soldered to all of their button pads (with the other ends soldered to a custom shield resting on the Arduino)
- **8x LEDs** provide visual feedback as to the current operating mode and the timing state (if there is one for the current mode)