

Reset. Set address to 0, or  
maximum depending on whether  
input forward is true or false

If not paused

### Ready state

- Wait for some inputs

Input:  
Pulse from frequency  
divider that pulses  
each period of the  
sampling frequency

### Fetch state

- Set outputs to flash memory  
to fetch data current address  
register
- Wait for flash to be ready

Input: When  
memory is done  
and ready

### Set state

- Set the output to the  
audio to whatever you  
fetch

Input:  
forward =  
true

### Increment

- Add 1 to the current  
address register

Always

### Ready paused

- wait to be unpaused

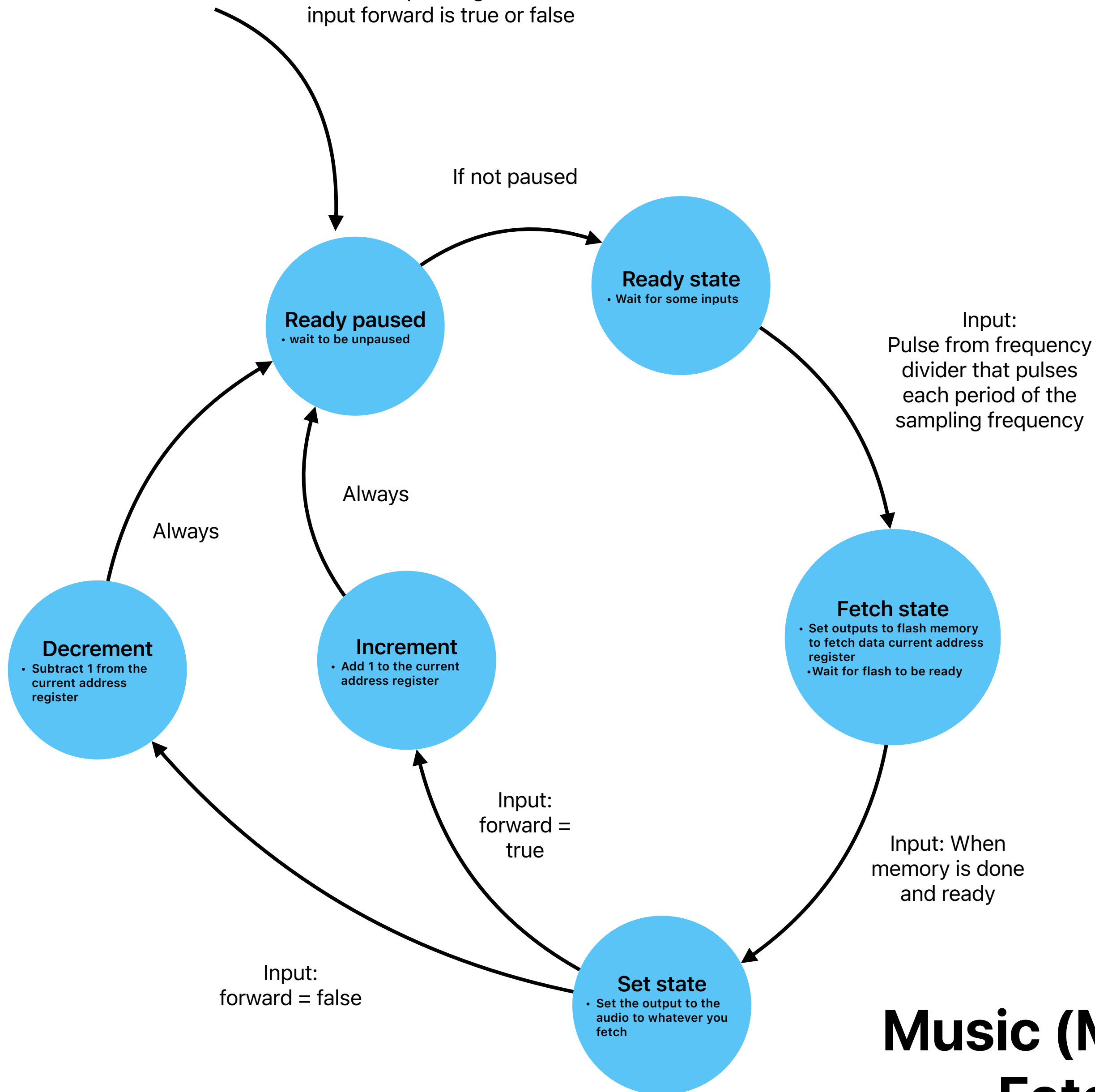
Always

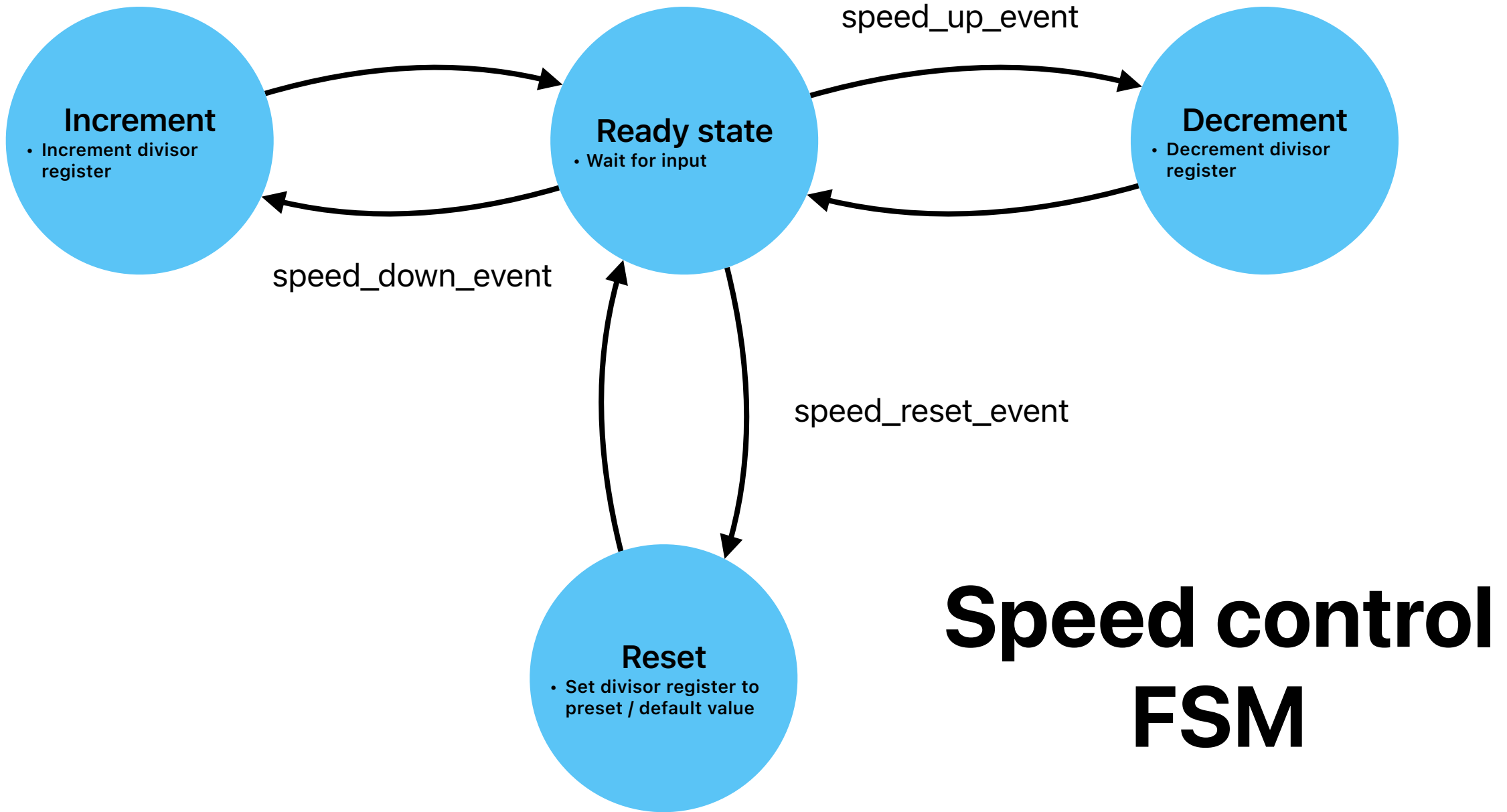
### Decrement

- Subtract 1 from the  
current address  
register

Input:  
forward = false

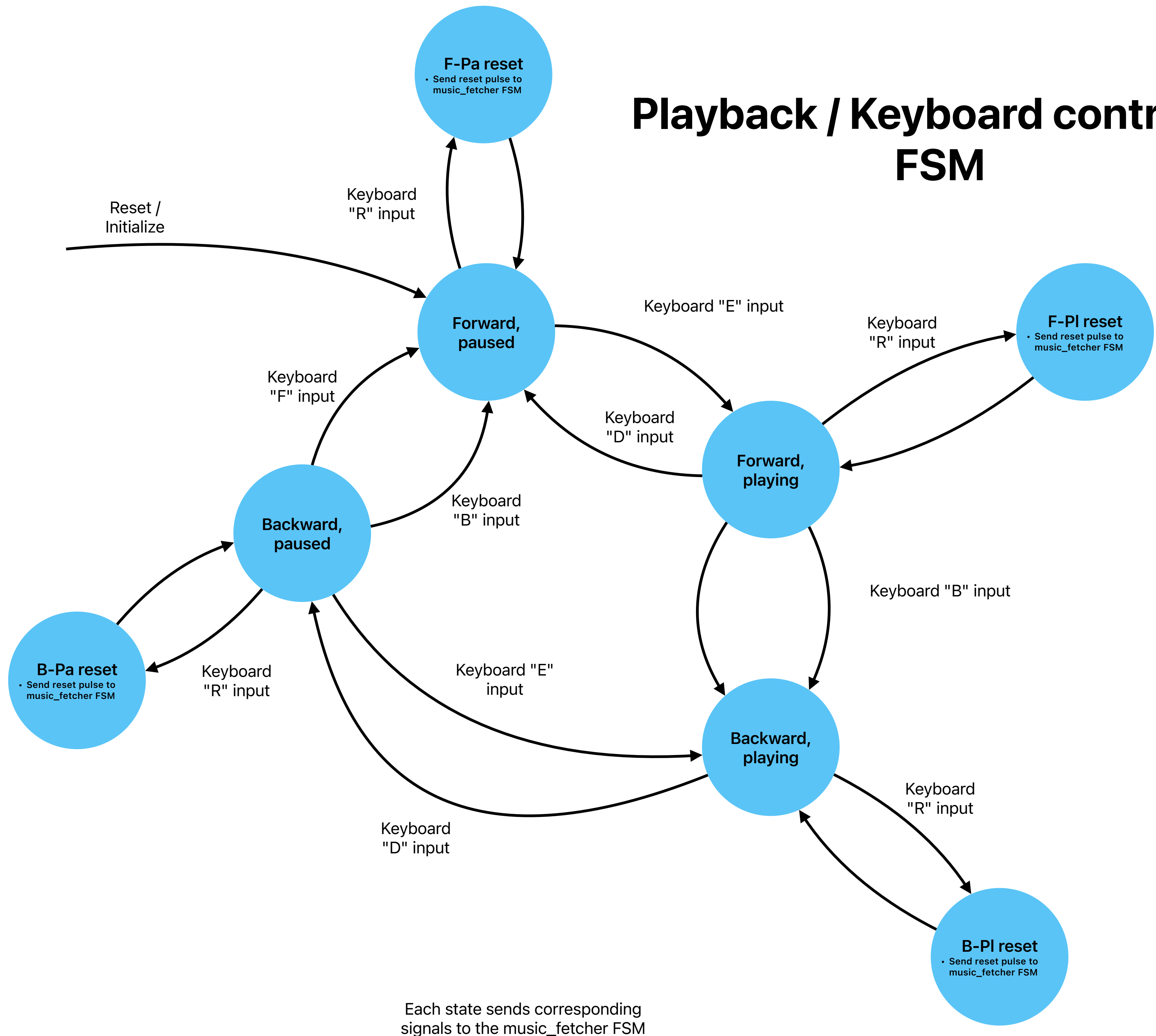
# Music (Memory) Fetcher FSM





# Speed control FSM

# Playback / Keyboard controller FSM



Each state sends corresponding signals to the music\_fetcher FSM