

## COMBAT

### 1. MOVES

#### 1.1. BASIC MOVES

Attacking is the primary action in combat. Basic attacks for all characters are **punches** and **kicks**.

- Punches are faster but weaker, kicks are slower but deal more damage and knock enemies back slightly.
- Punches can be repeated infinitely; however, each consecutive punch after the second hits slower. This mechanic is referred to as the **repetition penalty**. Punching speed goes back to normal as soon as the player character performs another move.

#### 1.2. AERIAL MOVES

Player characters can hit targets mid-air.

- If a player character is hitting a target in the air, the falling speed of the attacking character and the target is reduced by 90%.

#### 1.3. SPECIAL MOVES

Each character has access to unique special moves that consume stamina.

- Not every special move is offensive.

#### 1.4. DODGE ROLL

Both player and various enemy characters can perform dodge rolls, executing a forward roll during which they are invulnerable to enemy attacks.

- Some characters can roll further than others.
- Dodge roll consumes stamina.

#### 1.5. AIR DODGE

Player characters can perform an air dodge by pressing the dodge roll button mid-air, gaining invulnerability frames against enemy attacks.

- Air dodge consumes stamina.

More details and values about character moves and stats can be found in the character sheets.
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### 2. ATTACK COMPONENTS

#### 2.1. HITBOX & HURTBOX

An attack is considered a hit when the hitbox of the attack collides with the hurtbox of the target.

- Hitbox is the area of an attack that can hurt an enemy. During a punching attack, the character's fist is the hitbox.
- Hurtbox is the damageable area of a character. It is the same shape as a character's body.
- The hurtbox of a character may consist of multiple boxes. Certain hurtboxes of some characters may be more vulnerable to damage than others.

### 3. MOVE EFFECTS

#### 3.1. HITLAG & HITSTUN

Attacks cause hitlag and hitstun.

**Hitlag** is a very short pause in the animation of both the attacking player and the target that is being hit.

- The purpose of hitlag is to make hitting enemies more satisfying, therefore it occurs only when a player character successfully hits an enemy and not the other way around.
- The duration of hitlag depends on the hitlag value of the attack. More powerful attacks cause longer hitlag.

**Hitstun** is the short period of time in which the target cannot perform any action and is vulnerable for follow-up attacks.

- Both PCs and enemy NPCs are affected by hitstun.
- The duration of hitstun depends on the hitstun value of the attack.

#### 3.2. STAGGER

Certain moves leave enemies with a unique standing stun animation. stagger stun

- Just like during hitstun, the staggered character cannot perform any action.
- Player characters can shake out of a stagger stun by providing 4 distinct directional inputs during the effect.

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### 3.3. KNOCKBACK

Some attacks push their targets in the direction they're being hit and cause a **knockback**. In other words, knockback is the measure of how far an attack sends its target.

- Final move in a combo causes a knockback to keep the enemy out of your reach and give them an opportunity to recover.
- Some attacks have a higher knockback value than others.

Some attacks cause a **knockup** and launch enemies up in the air.

Some attacks cause a **knockdown** and knock enemies down on the ground. Enemies are also knocked down at the end of a knockup, when they land on the ground.

- Providing input for the move kick allows the player characters to stomp enemies knocked down on the ground.

### 3. COMBAT ANIMATIONS

Animations for each attack consists of 3 phases: startup, active and recovery.

#### 4.1. STARTUP FRAMES / ANTICIPATION

Attack animation starts with **startup frames**. This phase occurs right after the player provides an input and before the attack hits.

- The animation during this phase telegraphs the upcoming attack. Longer startup is used for stronger attacks to set the expectations of the player accordingly.
- Characters are vulnerable during startup, thus making the execution of stronger attacks with a longer startup duration more difficult.

#### 4.2. ACTIVE FRAMES / HIT

**Active frames** are the attacking part of the animation when the hitbox of the attack is activated and can collide with a target's hurtbox.

- Longer active frame duration gives the players a bigger window to hit enemies.
- During this phase of animation, the character can still be vulnerable depending on the hitbox of the attack. During a straight punch, for example, a character can still be hit from behind.

### **4.3. RECOVERY FRAMES / COOLDOWN**

**Recovery frames** conclude an attack. The animation blends to the default stance at the end of this phase.

- Recovery of an attack can be cancelled early by initiating a follow-up attack or moving the player.
- Recovery is always longer than startup. Stronger attacks have longer recovery to enhance the feeling of power.
- Just like during startup, the character is vulnerable in the recovery phase.

Details and values about character animations can be found in the character sheets.
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## **5. PLAYER INPUT**

### **5.1. ATTACK CANCELLING**

Players can end an attack prematurely during recovery phase of the animation by performing another action such as triggering another attack or jumping.

### **5.2. INPUT BUFFERING**

Players can perform the input for the next attack during any phase of the animation. This input is stored in the buffer for 1 second and the relevant action is executed as soon as the previous action can be cancelled out of.