

Functional Sound Design

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The context of my functional sound design is in a first-person shooter video game – Doom 2. In Doom 2 the player takes on the persona of a space marine who is fighting aliens and zombies using various types of weapons. In the simulation included, the context is one of the levels in the game. The five sounds I have designed are played multiple times. The sounds are: Low Health, Critical Health, Clip Low on Ammo, Clip Empty¹, Out of Ammo.

Low Health

The sound I design for a low health warning/alert is a heartbeat. The heartbeat plays continuously while the player is at or below 30% health. I chose a heartbeat for the following reasons:

- Players would naturally associate the sound of a heart with their health.
- The sound is low in volume, so it doesn't unintentionally shock the player.
- Although it's played continuously, it's unobtrusive due to the low volume, so it would be in the back of the player's mind.
- The low frequency of the sound prevents it from being annoying if the player takes long to regain their health.

Critical Health

A faster heartbeat is used for the critical health alert. It plays continuously at or below 10% health, and was chosen for the same reason given above. A continuous, fast-paced heartbeat is an obvious sign that one is under a lot of stress

Clip Low on Ammo

The low ammo warning is three short, high pitched tones. It plays when the player's ammo clip is at or below 20% of the clip's capacity. It plays continuously every 5 seconds to remind the player that they should reload their weapon. The reasons for this design were:

- The high pitched sound cuts through the other sound effects and music.
- It is only played every 5 seconds because it's not the most important thing to worry about.
- It is repeated because many players forget to reload their weapon.

¹ Although the reload related sounds would never play in the actual game Doom 2, the game still provides a useable simulation for the sounds I have designed.

Clip Empty

The sound alert for an empty clip is the same pitched tone as low ammo, but the tone is played at twice the frequency (not pitch) and is continuous. The reasons for this design are as follows:

- The high pitched sound cuts through the other sound effects and music.
- It is played continuously because reloading your weapon is a very important action to take.
- Players would quickly learn that this tone pitch is an ammo-related warning.

Out of Ammo

This alert uses the same pitched tone as the other ammo related alerts. This sound is played continuously and at twice the frequency as the Empty Clip alert.

Techniques used to generate the simulation

The simulation was generated by running the first level of Doom 2 and recording all the sounds. While playing the game I made sure to not pick up ammo clips from defeated monsters so that the alerts could be used. I also made sure to get hit by the enemies' attacks – for the low and critical health alerts. Once I had played through the situations where the sounds would play I stopped the recording. I then added the sound alerts to the relevant parts of the recording.