Using volumedamage to hurt the player :: [Pantera](mailto:dj_pantera@hotmail.com)  
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By using some plain old algebra I've tried to get some more insight on the 'volumedamage'-thing and how to set up the right values for it (don't laugh, it's raining outside and I'd nothing better to do).

Understanding how this volumedamage number works can help us use it as a 'replacement' for the non-functioning trigger\_hurt. Just a little info, nothing new or terribly exciting, but just a reminder of a fast and easy way to make something hurt the player without using a seperate script file. I believe this has been a topic before, but I still see few people actually use this easy method to inflict pain upon a player (I know some people use their own barbwire/hurt-script, but this is just another way of doing the same sort of thing).

You might have noticed the use of a thread called 'waterdeath' in some original map's scripts, to cause instant death when a player touches the water. This original thread goes as follows:

|  |
| --- |
| waterdeath: $ocean1 volumedamage 1000 end |

As with so many things, you can set this to whatever you want; let's say you want your fire to cause pain to the player, but not kill him immediately and give him a fair chance to get out. Everybody understands that the value must be less than the given 1000, but what's a good value for the purpose you have in mind? Well...erm, let's say just a 100? I found that even with just a 100 the player is gonna be dead in just 2 seconds. Howcome? It seems like this volumedamage is hitting the player about 3 to 4 times per second.

Before I start talking numbers and get all 'interesting', here's how to set up the trigger in MohRadiant, nothing new, just a trigger.

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Setting up the trigger  
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(1) make a trigger\_multiple around the fire (or whatever) you want to cause the pain.

(2) with this trigger selected press 'N' to set its properties

|  |  |
| --- | --- |
| key: | targetname |
| value: | gimme\_a\_name |
|  |  |
| key: | setthread |
| value: | whatever\_you\_want |
|  |  |
| key: | wait (sets the amount of seconds between triggerings) |
| value: | the number of seconds you want |

(3) next, add the following to the script of your map, after 'level waittill spawn :

|  |
| --- |
| whatever\_u\_want: $gimme\_a\_name volumedamage 100 //(example) end |

(4) and you're done.

Now for the meaning of the damage number and the use of the wait-key:

As you can see you can slow down the hurting by adding a 'wait' key to your trigger in Mohradiant. It says default is '2', but in this case you still have to set a value to make it work. By default, and without this 'wait' key the 'volumedamage' takes your health away very fast and without pause, like every ~1/4 second. Therefore, if the trigger is not to kill the player instantly and you wanna give him a fair chance to escape, I really recommend you to set a 'wait' key of at least 1 second.

Also, there is a 'delay'-key available. When delay is set, then: -> the player activates the trigger but it waits some time before firing. I can't really think of a reason why to add this delay when hurting a player, other than to use it when a player is in cold water (fell through the ice..) and the freezing sets in. Right, but enough about the delay-key.

Note : While testing with a value of a 100 and using a wait-key of 1 second, I lost 13 healthpoints per hit (or triggering) and died in ~8 seconds. In the statistics it said: hits taken = 8. Then, without the wait-key, I still took the same amount of 8 hits but was killed in only ~2 seconds, about 4 times as fast.

If you don't like algebra, just skip this part and read the last part, this just explains how I got the numbers.

The above means, that 'volumedamage 100' stands for 13 healthpoints (the health you lose is 13% of your volumedamage) per hit, about 4 times per second. And, if 4 hits would take place in 1 second, I would lose 4 \* 13 = ~52 healthpoints per second (this makes sense as I was killed in about two seconds; still this is just guessing, the whole thing goes too fast).

Figure it out: you set volumedamage to 100 and lose about 52 healthpoints per second. Remember, this would be the case when you don't set a wait-key for the trigger. However, when you do set a wait-key, that same volumedamage of 100 will only take away 13 healthpoints every time you touch your trigger (everytime your wait-key expires).

Note : Unfortunately I can't tell the effect 'per second' for sure as I don't know exactly how many triggerings take place in 1 second. All this time I was talking about what happens when you use a volumedamage of 100. To find out what volumedamage 1 (= 1% of 100) does to your health per second, just take 1% of 13 = 0.13 healthpoints per hit.

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How to define the values you want  
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(Give your trigger a wait-key to see the hits)  
  
*volumedamage = (amount of healthpoints per hit) / 0.13*  
  
Example: you want to take 10 healthpoints per hit;  
volumedamage = 10 / 0.13 => (~) 77  
  
reversed:  
  
*amount of healthpoints per hit = volumedamage \* 0.13*  
  
Example: say volumedamage is set to 50;  
Healthpoints per hit = 50 \* 0.13 => 6.5  
  
In the original waterdeath thread they used 1000.  
Healthpoints per hit = 1000 \* 0.13 => 130

This, combined with the fact that multiple hits take place in 1 second would explain an instant death. But keep in mind that without a wait-key even a value of 100 is very lethal, as with 100 you'd lose 13 points per hit. With full health the player should be able to take (100/13 = 7.7 =>) 8 hits. With about 3 to 4 hits per second, the player dies in a second or two.

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Barbed Wire  
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Tip : If you wanna use this volumedamage for making barbwire hurt the player, but don't wanna use a wait-key, set 'volumedamage' to a value < 10.

Personally, for barbwire I'd go for a wait-key (say 1 second), and a value of 15, which comes down to 2 healthpoints per hit every second (the time of my wait-key) and is enough to warn the player when he's touching the barbwire without making it annoying or really life-threatening.

I don't know if anyone finds this information useful, but if you're still looking for an easy way to hurt the player give this a try. All you need to do to make the player lose the amount of health you want is set up your trigger(s) and see what your volumedamage should be, using the first 'formula'.

Need any help : Ask in the [Forum](http://www.mohaaaa.co.uk/mohaa/forum/index.php)