

Mapped Hit Location Plug-in

By Mark Chase

[For Total Fuzion® and Instant Fuzion®](#)

Special Thanks to **Otto Blix** of **STUDiO187** for providing images

Introduction

The "Mapped Hit Location" plug-in is a different approach to the "random roll" hit charts traditionally used in role-playing games (such as Fuzion). The attempt is to provide a more visual system that better reflects real-world combat. This system is partially derived from Babylon Project RPG by Chameleon Eclectic, though somewhat modified and adapted for Fuzion. It is fully compatible with Total Fuzion, Instant Fuzion, [Quick Damage Classes](#), and, of course, [Atomik WAR](#).

Pros (the good)

- Hits are not completely random. Though they still have a small random element, all hits are logically placed and grouped in a contiguous manner.
- Gives a visual and graphic feel to combat. Instead of rolling "Leg hit, Thigh hit, Arm hit", your rolls on the Target Map will show the bullets staggering across the body like in a movie or video game.
- Resolves confusion with partially hidden targets, or adversaries standing behind hostages. With a Target Map, a terrorist behind cover (or holding a hostage) can be fairly portrayed, and hitting him (or hitting the obstruction) is seamlessly handled by this system.
- Adds greater realism. Soldiers and police are trained to target the center of the body (the Base Target Point for most Target Maps), thus increasing the probability of hitting a vital location. Such silly hits as "Head hit, then left foot hit" will virtually never occur.
- There are less to-hit penalties to worry about, since this system automatically handles a number of situations, such as cover, defensive positions, and target shape and size.

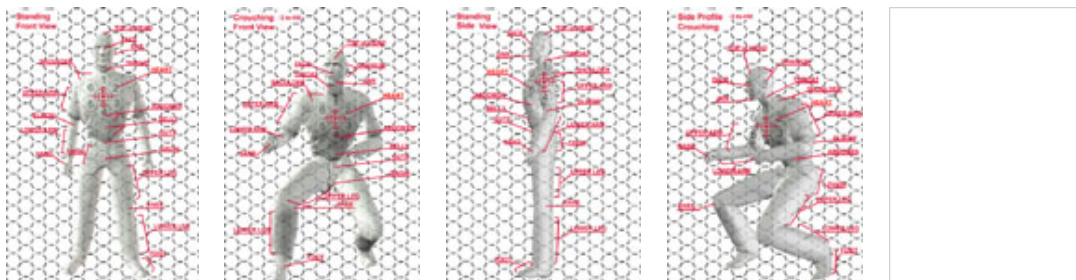
Cons (the not quite as good)

- Requires numerous Target Maps. Though the default ones cover most situations, the GM may be required to draw new Target Maps for different positions, animals, monsters, or vehicles, as needed.
- "Vitals" (to Head, Vitals, etc.) are much easier to hit, as the chest is the Base Target Point, and "less damaging" locations, such as arms and feet, will happen far less.
- It is possible for a valid "hit" to actually miss or strike an obstruction. It is also possible for a "miss" (or a successful dodge) to still hit, though usually its only a glancing hit or on an extremity.

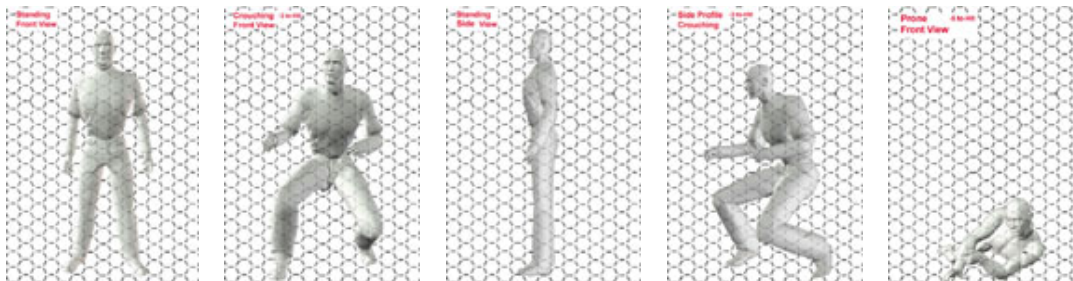
The Target Map

The first chart shows the default Target Map for an upright humanoid target (which should be the case 90% of the time), face on. As can be seen, the center of the target is the Base Target Point, where unaimed shots generally go, but this Base Target Point may be different depending on the situation (more on this later). With the first chart, because it is face on, the left hand side of the chart is the target's right, and the right hand side is the target's left. This should be reversed when shooting a person in the back (so you may use the same chart for both of these situations).

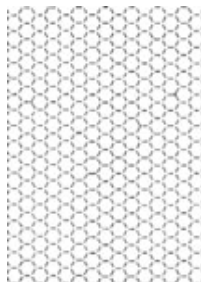
These Target Maps shows details with annotations and the Base Target Point. Please click the image to open a larger version.



These Target Maps are the same as above, but the Target Maps are without annotations or BTP. You may use these as templates or alter as you wish. Click the image to open a larger version.



Below is a Blank Hex Map which you may use to draw your own Target Maps.



Base Target Point

The Base Target Point is the default target location for an unaimed shot, usually the center of the chest (see the first Chart) for a standing, unobscured humanoid target. However, this Base Target Point (or BTP) can be anywhere on the target, depending on the situation (this must be determined by the GM). If the target is obscured (partially behind a wall or under light cover, etc.), but is still in roughly the same profile as in the chart, the BTP of "center chest" should be used. If your shot hits the obstruction, too bad, that was why he was standing behind cover! The attacker may also designate any other hex point on the Target Map as his aim point, offsetting the BTP at a certain penalty. Examples will follow shortly.

When shooting non-humanoid targets (a car, a dog, a six-legged Klakkath warrior, etc.), the GM need only sketch its silhouette on a scrap of hex-paper and assign the numbers similar to what is illustrated in the first Chart.

Aiming

Declaring that you are shooting at any other spot besides the BTP imposes a penalty to hit. For every hex away from the BTP you have a -1 penalty to hit. Thus, shooting the face is a -3 penalty. Shooting the hand is a -5 penalty. Though this is much different than the penalty listed in the core Fuzion rules, it is more realistic. Shooting a standing target in the foot or hand is a great deal more difficult than shooting the head, even though it is "not as fair" in game terms (who said guns were fair anyway?).

Aiming (taking time to aim) works as normal, for example, aiming for two actions gives you a +2 to hit. If you were aiming at the head, this balances out, and the head becomes the BTP at little or no penalty.

Hitting the Target

This is what Hex-Base Hit Locations are all about. Even a miss may still hit, though not often. Even if you succeed in "hitting" the target, you may not hit the designated BTP. The margin of success, not a random die roll, determines how accurate your hit was. The BTP (whether by default or chosen by the attacker) is the intended aim point. If the margin of success was at least 2, then the hit was dead on (i.e., in the BTP). A success of 1 is 1 hex off, a success of "0" (even AV/DV tie) is 2 hexes off, a failure by 1 is 3 hexes off, and a failure by 2 is 4 hexes off. Beyond that, it was a total miss. The later cases will usually miss the target, but may have a chance of hitting an outer extremity.

- If you succeeded by 2 or better, the BTP was hit dead on.
- If you succeeded by 1, the hit was 1 hex off on the Target Map.
- If the roll was a tie (AV/DV the same), the hit was 2 hexes off, and was a "glancing" hit.
- If you missed, but only failed by 1, the hit was 3 hexes off, and was a "glancing" hit.
- If you missed, but only failed by 2, the hit was 4 hexes off, and was a "glancing" hit.
- The GM may expand this further, at his discretion.

Once the margin of success or failure has been determined, roll 1D6 to determine the direction the shot went (see the first Chart). Then count the number of hexes you were off, and the resulting hex is where the shot hit. If the resulting hex is outside of the Target Map, then you missed (even if you technically succeeded). Furthermore, if the target was behind something (such as an over-turned table), and the resulting roll hits a location that is obscured, then that object (the table) will provide some defensive cover (in the form of hit points or armor).

For example, if your hit succeeded by 1, then we see by the numbers above that we were one hex off from the BTP on the Target Map. We roll 1D6 and get a result of 4. Looking at the Chart we see that this shows the round hit in "Direction 4" one hex below the BTP.

Note: Any hit which technically failed (i.e., hits which failed by a margin of 0 or higher) but still struck the target, is automatically considered "glancing" blow, and does half-damage.

For example, Jet jump kicks Chow, going for his BTP (the center chest) and succeeds by 1 (off by 1 hex). He rolls a 2, and by this it is determined that Chow was hit in the left shoulder.

Simi-Auto Shots

Successive shots from a simi-auto weapon (a handgun, for example), is not autofire. Instead, the weapon may simply be fired more than once in an Action, usually with a penalty (of -1 or -2, etc.). The roll to hit is made for each shot, as normal, dropping back down to the BTP, along with the penalty for the successive shot. If you wish to aim at a particular location, this may pose a greater penalty for each shot.

For example, Chow clicks off two shots from his Desert Eagle at Jet. He had aimed for Jet's stomach (-2 to hit), and succeeds by 0 (an AV/DV tie), which means he was 2 hexes off and the hit was a "glancing hit" doing half-damage. We roll and determine that this has the effect of hitting Jet in the right leg. On his second shot Chow suffers a -2 to hit from recoil, but does not continue to aim (so the BTP is again the chest). He makes the roll with a success of 2, hitting Jet square in the chest. Had Chow tried to maintain his aim on the stomach, he would have suffered at total of -4 to hit.

Autofire

Autofire is a bit different than simi-auto. Instead of rolling for each shot, you only roll once, then determine how many bullets hit. There are several methods of handling Autofire (determining penalty, using Autofire Ratio, etc.), which will not be discussed here. We will simply assume that the target was hit, and the total number of bullets have been determined by the Autofire Ratio.

When a target is hit by more than 1 bullet on autofire, each bullet after the first hits one hex away from the previous, *and the BTP shifts to the last location hit*. That is to say, if you successfully hit the target, and if it was determined that 6 rounds could hit, then the first round will hit either on the BTP or a hex or two off, depending on your margin of success (as determined by the rules in "Hitting the Target"). The 2nd round will be 1 hex off (roll 1D6 to determine direction), and that hex then becomes the BTP. The 3rd round will be 1 hex off the new BTP, and the BTP then shifts to that hex. The 4th shot will be 1 hex off the new BTP, shifting the BTP once more, and so forth. Any number of these rounds may still miss if their roll lands them on a "gap" spot on the Target Map.

Optional: This is optional, due to complexity. To better portray the advantages of more accurate weapons or greater skill, any hit which has a margin of success of 2 or better may have that number of bullets (Margin of Success minus 2) all hit the BTP, then each successive bullet after that strike in accordance to the rules above. For example, if the AV Total was 22 and the target's DV was 17, then the success total was 5. Thus, the first 3 bullets would hit the BTP, and the remaining rounds would each hit one hex off the previous hex, as above.

To-Hit Penalties

With the Mapped Hit Location Plug-in there are less to-hit penalties to worry about, since this system automatically handles a number of situations.

All penalties for Range, Environment, and Speed remain the same. There are *no* penalties for cover, positioning, target size, or shape. These factors are built into the very nature of how Target Maps work.

For example, there is no additional penalty to hit a target standing behind a brick wall with only his head visible. Your BTP is still his center chest, though it is obstructed. You may change your BTP to his head or neck and hope to hit (or a -3 or -4 penalty), but any shot may still strike the brick wall. If the target was standing behind some tree branches (and the GM had drawn these on the Target Map), then any rounds which hit a hex with a tree limb in it would have its damage greatly reduced (or it may not penetrate at all). Likewise, if the target was standing behind a hostage, and your shot hits a hex covering part of the hostage's body, then the hostage was hit.

If the target was crouching or lying prone on the ground, you must shift your BTP to this new position. This penalty is listed on the sample Target Maps to hit the default BTP shown. The GM should determine the penalty for the BTP on new positions or targets. Size does not matter, it will simply cover a smaller or greater number of hexes on the Target Map, thus increasing or decreasing the chances of a hit landing on the map.

Area Effect Damage

Simplified, all damage from an Area Effect explosion will be inflicted upon the Base Target Point.

However, to take advantage of the unique features offered by the Mapped Hit Location Plug-in, Area Effect can be treated in a much more realistic (though complex) fashion.

First, all damage from an Area Effect explosion should be divided into 5-point units. Thus, if the explosion did 18 points of damage, then there are 3 units of 5 and 1 of 3. The first 5-point unit of damage will hit the default BTP. Next, 1D6 is rolled to determine the direction on the Target Map where the next unit will

land, and the next damage unit will be applied to this spot. All subsequent damage-units are then applied in a clockwise spiral from this point. If a damage unit hits a "gap" in the target map, then that damage unit missed. The BTP may also change, depending on the situation. For example, if the character stepped on a mine (or a grenade exploded at his feet) then that foot would be the BTP, and all damage would apply upward (rather than outward in an even circle).

Note: All damage is applied *at once* for purposes of penetrating armor. Thus, if 3 damage units of 5 points hit the chest then a total of 15 damage was inflicted. If the target had 12 Armor, then 3 points would have penetrated.

Shotgun Damage

Shotguns (when using shot, not slugs) acts much like Area Effect (above). You can use a simplified method and say that all damage is applied to the BTP (reducing damage for long ranges, as normal).

However, to take advantage of the unique features offered by the Hex-based Hit Locations Plug-in, Shotgun Damage can be treated in a much more realistic (though complex) fashion. But it does require some quick figuring on the part of the GM.

Put simply, all damage must be evenly distributed to all "hexes" in a certain Effect Zone (or as close to even as feasible). At point-blank (or in melee range) this "Effect Zone" is simply the target hex that was hit. At each successive "step out" on the Range chart, this zone expands one radius (the Atomik WAR range chart was used). Thus, at Near Range (on the Atomik WAR range chart), the total effect zone is two hex radii out, totaling 19 hexes. If 38 damage was rolled, then this damage must be equal distributed to all 19 hexes, in a circular pattern out from the center point (with the majority of "remainder" damage hitting the center point). Note that damage from shotguns *is not* reduced for range using this system. The fact that much of the damage will miss the target at long ranges balances out. If a damage unit hits a "gap" in the target map, then that damage unit missed.

For example, a shotgun does 8DC of damage, which is rolled to be 38 hits. At Near Range the total effect zone extends out two radii from the center point, totaling 19 hexes (the center hex, then 6 in the next level, then 12 in the next layer). This actually divides out evenly, with 2 damage points to each hex (how nice). However, if only 20 hits were inflicted, then 2 damage could be dealt to the BTP, and 1 to each of the 19 hexes.

Example 2: A shotgun blast (8DC) is rolled to inflict 32 hits of damage. At Medium Range the total effect zone extends out three radii from the center point, totaling 37 hexes (the center hex, then 6 in the next level, then 12 in the next layer, then 18 in the next). The center hex takes 2 hit, and the 6 surrounding hexes take 1 hit each (totaling 8 damage). In the next layer out, each hex takes 1 hit (brining our total to 20), and in the third layer out, 1 point is applied to every other until the total of 32 damage is reached (only 12 of the 18 outer hexes were affected). Much of the outer damage has probably missed the target, or had minimal effect by hitting a limb.

Note: All damage is applied at once for purposes of penetrating armor. Thus, if 5 damage units of 2 points hit the chest then a total of 10 damage was inflicted. If the target had 8 Armor, then 2 points would have penetrated.

"Shotgun Damage" can be used for Claymore Mines and other Focused Area Effect blasts.

Shotgun Range Table

Note, all ranges are as per Atomik WAR. Original Fuzion range is listed as well.

Range	Effect Radius	Hexes Effectd	(original)
Melee < 4m	0	1 Hex	Melee
Close < 10m	1	7 Hexes	Close
Near < 20m	2	19 Hexes	(none)
Medium < 40m	3	37 Hexes	Medium
Long (list range)	4	61 Hexes	Long

With Quick Damage Classes

Mapped Hit Location plug-in is fully compatible with my alternate damage plug-in, [Quick Damage Classes](#). Together, these two plug-ins create a complete alternative to the existing combat system for Fuzion, which is nearly diceless. Only 1D6 is required for determining the hit location, and no dice are used with Quick Damage Classes. For quick yet realistic combat, these two plug-ins can't be beat.

With Atomik WAR

Mapped Hit Location plug-in is fully compatible with [Atomik WAR](#). The only difficulty comes in rolling on the Traumatic damage table, since the hit locations are now greatly expanded from the original ten (each hex is actually a hit location). You may still use the table, but be weary of possible discrepancies.

For even more fun, all three plug-ins may be use -- this one, Atomik WAR, and Quick Damage Classes,

as a complete replacement for the Fuzion combat system. A future version of Atomik WAR may seamlessly incorporate both of these plug-ins.

Hit Location Details

With this method, it is much easier to hit any physical location on the human body, above and beyond those listed on the standard Fuzion hit table. Therefore, more details will be covered below. All locations are grouped by their traditional Fuzion Hit Locations for armor coverage and backward compatibility (thus anything under the "Chest" category is covered by Chest armor).

Head

It is important to note that most head armor only covers the top of the head, and the back of the head, leaving the rest (face, jaw, neck) fully exposed. Some helmets have light cover over the face area, either a plexiglass faceplate, heavy goggles, and so forth. These should be noted on the Target Map (if worn), along with their proper armor value.

Top Head - x2 Damage. This is the very top of the head, the brainpan if you would, which is very sensitive to high-velocity foreign objects. Usually covered by a helmet.

Face - x2 Damage. The region including the eyes, nose, and cheek. In order to target a particular facial feature (i.e., an eye) imposes an additional -4 on top on of penalty to move the Base Target Point to the facial region.

Cranium - x2 Damage. Generally, the back of the head, including where the skull meets the spine. Usually covered by a helmet.

Ear - 1/4 Damage. It hurts a lot to get hit in the ear, but its not fatal. Any damage is reduced to 1/4. The ear is often covered by a helmet.

Jaw - x1 Damage. Your lower jaw, which is rough living without when it gets ripped off by a .50 Browning round.

Throat - x1.5 Damage. The throat region is fairly self-explanatory. It contains many important arteries.

Chest

Wishbone - x1 Damage. Or upper sternum. This is the upper part of the chest, just below the neck. It is still technically part of the sternum.

Sternum - x1 Damage. This is the dead center of the chest, and by default, the Base Target Point.

Chest - x1 Damage. Most everything else in the chest area, basically whatever your rib cage covers.

Vitals

Heart - x1.5 Damage. Slightly to the left of the sternum is a particularly important organ, which, if hit, general results in death. This Vital location is covered by Chest armor.

Guts - x1.5 Damage. The guts are the belt line regions of the body, containing the intestines. It is vital due to the extreme bleeding (internal and external) which will occur when this area is ruptured. This Vital location is covered by Stomach armor.

Groin - x1.5 Damage. Though not vital as far as one's life is concerned, this area is considered Vital for damage purposes due to the extreme pain at being hit here (for both females as well as males). This Vital location is covered by Thigh area armor.

Shoulders

Collar - x1 Damage. The collarbone is considered part of the Shoulders for damage purposes.

Shoulders - x1 Damage. The place where your arm bone and collar bone come together. It also includes the shoulder blades on the back.

Stomach

Abdomen - x1.5 Damage. Just below the chest is the muscular area (muscular on some people) known as the abdomen. It contains the stomach, liver, and other organs which are not truly vital, but critical.

Belly - x1 Damage. Below the abs is the "belly" region, usually containing fatty tissues and other organs, such as the pancreas, kidneys, gall bladder, and so forth. It is not as critical to be hit in the belly, though just below (the guts) are very critical.

Arm

Upper Arm - 1/2 Damage. The upper arm.

Elbow - x1 Damage. The elbow joint is pretty sensitive, and in fact, if a large caliber bullet hits the elbow it can blow the limb completely off. For this reason, damage is x1, rather than at 1/2. It is also very sensitive, as there is a large nerve here known as the "funny bone".

Lower Arm - 1/2 Damage. The lower arm.

Hand

Hand - 1/2 Damage. The hand. Individual fingers may be targeted at an additional -3 penalty on top on of penalty to move the Base Target Point to the Hand.

Thigh

Thigh - x1 Damage. Also know as the Hips.

Leg

Upper Leg - 1/2 Damage. The upper leg. There is a very large artery in the upper leg, which can be

deadly if it is ruptured.

Knee - x1 Damage. The main joint of the leg. It is difficult for injuries to the knee to heal properly, and so if the knee takes significant damage, you will probably be crippled or lame for life. For this reason, damage is x1, rather than at 1/2. In fact, if a large caliber bullet hits the knee it may blow the limb completely off.

Lower Leg - 1/2 Damage. The lower leg.

Foot

Foot - 1/2 Damage. The foot. You may target individual toes at a -4 penalty on top on of penalty to move the Base Target Point to the foot (if you can see the toes), but that's rather silly.

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