Neon Arcana

Core Game Mechanics and Vertical Slice

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# Introduction

Core mechanics of the game are briefly explained within this document for your feedback. Examples from many parts of the game are presented for a birds-eye overview of the big picture, in software development this is known as a vertical slice.

# Attribute List

* Strength
* Agility
* Perception
* Charisma
* Willpower
* Augmentation
* Magic

Body and Strength are rolled into Strength because neither had a lot of skills linked to them, this will make this attribute more useful (compared to Quickness).

Intelligence is renamed Perception because that’s what most rolls end up being anyway, and player intelligence is what it is at the table.

Essence is renamed Augmentation because it starts at 0 and goes up. Limits? On technological progress? As if.

# Skill List

Attributes and Skills are usually between 0 and 4 dice each, but can be higher. Higher numbers are better, because you get more dice to throw at your problems. In parentheses are the attributes most commonly used in tandem with the skill in question.

* Firearms (Agility)
* Close Combat (Strength)
* Computers (Perception)
* Conjuring (Charisma)
* Spellcasting (Willpower)
* Athletics (Strength, Agility)
* Negotiation (Charisma)
* Driving (Perception)
* Piloting (Perception)
* Intimidation (Charisma, Augmentation)
* Stealth (Agility, Perception)
* Medicine (Willpower, Perception)
* … and so on.

# Rolling Dice

Only roll dice when the outcome of an attempted action is time-sensitive, important and uncertain.

When you roll dice you assemble a dice pool of six-sided dice equal to an Attribute + Skill, such as Agility + Firearms. Compare the *highest* die you have to the ***target number* (TN)** as dictated by the rules or, in absence thereof for a particular case, by the game master.

|  |  |  |
| --- | --- | --- |
| Example  Difficulties | Target  Numbers | Minimum Dice Rolls |
| Effortless | 0 | N/A |
| Trivial | 2 | @ |
| Routine | 3 | # |
| Reasonable | 4 | $ |
| Complicated | 5 | % |
| Tough | 6 | ^ |
| Miserable | 7 | ^+! |
| Inconceivable | 8 | ^+!+! |

If you match the difficulty exactly, you succeed but with a complication, called a ***glitch***. Something goes slightly wrong and the game master will tell you how. If you beat the difficulty by 1 or more, the excess points become a measure of your performance.

If your performance is negative, you fail. Failure often wastes time or changes the situation, so trying again may not always be possible.

# Task Depth

Some tasks, like computing the square root of 87, take a few operations to accomplish even if you know how to do it (first, open the calculator on the phone, then type in 87, then tap the “√” button). What?

For such tasks the game master may call a ***task depth***: how many dice it takes to finish it, in addition to the target number. Task depth is called out as “three fours” or “two sixes”, where the first number is the depth and the second number is the difficulty TN.

If you haven’t rolled enough dice that beat the task depth, you knock one die of the depth off for the next attempt for each die that beats or matches the TN. It’s a matter of drudgery now.

Many people make careers out of low-difficulty high-depth tasks, so use these sparingly, if you want the game to not drain the remainder of your soul.

*Example: the task of vacuuming your house is five twos. It’s simple, but time consuming. You take your Willpower of 2 (you have no Housekeeping skill) and roll two dice, they come up as* @ *and* %*. That’s two down, 3 to go. Your performance on that* % *is 3, but you have a glitch from the* @*. The game master tells you that in the rush to get this done, the vacuum gobbled up something metal and jammed, so you’ll have to spend an action emptying it out. A trivial task like this wouldn’t even be the subject of a roll, but it’s important and time sensitive: your dog made a huge mess and you’re showing the house at 2. You better be going to Valhalla for this gallant act of self-sacrifice on the altar of grown-up responsibility.*

# Dice Stack

When multiple dice come up as the same number, for example, a $, $, and a $, they can be spent on the same task as a single action, saving you time. If you choose to use them together, as a *dice stack*, their performance is added together. In the above example, if the difficulty was 2, and you spent all three of them, you accumulated 2 + 2 + 2 = 6 performance. If the difficulty was 4, you got a glitch instead. You can’t create more than one glitch per action.

Dice Stacks can also help you act quickly in a combat situation (see [Seizing Initiative](#_Seizing_Initiative) on next page).

# Sixes Rule

When you roll a ^, you can roll an extra die. If that die rolls another ^, keep going recursively.

# Ones Rule Harder

|  |  |
| --- | --- |
| Probability Distribution Curves This section is a game designer aside, should probably not be in the final draft.  You can see below what sort of curves are created by this dice rolling mechanic. These curves a little too tight and steep, but there is a definite distribution curve, with as little as two dice.  <https://anydice.com/program/170ef>  Source code:   |  | | --- | | function: onestacking SEQ:s {  ONES: [count 1 in SEQ]  SIXES: [count 6 in SEQ]  EXTRAONES: [count 1 in SIXES \* d6]  if SIXES > 0 { result: 1@SEQ + ONES + EXTRAONES }  if #{SEQ} > 1 { result: 1@SEQ + ONES }  result: 1@SEQ  }  set "explode depth" to 10  output [onestacking 8d6] named "Neon Arcana Probabilities Curve with 8 dice" |   However, this does not take into account the profound effect exploding ^’s have on the gameplay (since they don’t directly increase the maximum target number attainable), or the dice and action economy inside a combat round, because the dice available to a player follow their own distribution curve. |

Dice that come up as ! are bullseyes and wildcards. You can stack them with any die to make both count as a single die with a higher value. You can stack multiple of them on top of a single die, to make it go higher than ^. You can also spend them for special maneuvers or called shots, such as performing a choke hold, a kick between the legs or a head shot, or to defend yourself against such maneuvers, cancelling a bullseye that your opponent spent.

# Situational Difficulties

Sometimes the environment makes your task easier or harder: you’re looking for a needle in a haystack with a metal detector, or you’re bandaging a teammate under pouring rain. In such circumstances, the game master may adjust your target number up or down, the default difficulty in the game is 4. If it drops below 2, you succeed automatically (for the sake of measuring performance, it becomes 0). Difficulty can exceed 6 with no upper limit.

The game master should not nickel and dime you for a variety of circumstances, but look at your situation holistically when picking your target number.

# Multitasking

When you’re doing two unrelated things at the same time, such as running and shooting, roll the higher of the two dice pools. The task you are less proficient in (the one that would allow you to use fewer dice) has a penalty: you’re not allowed to spend X of your highest dice on it, where X is the difference between the two dice pools.

*Example: you’re texting on your phone (Charisma: 3, Negotiation: 2, for a total of 5) while driving (Perception: 1, Driving: 1, for a total of 2). This allows you to roll five dice to do both. They come up as* !*,* !*,* #*,* % *and* %*. You can use any of these dice for texting, but only the two lowest dice for driving. That poor old man did not see it coming, and neither did you.*

# Paying Attention

The dice you did not use for your actions are a valuable resource for multitasking, such as noticing important clues, spotting an ambush or defending yourself against an attacker. Put them in front of you in a row without re-rolling them, and then spend them as needed. Collectively they are known as the *attention row*.

When you spend a die to do something or to react to something, move it up out of your row, so that you know it’s spent, but you keep track of how many you’ve had originally and what their values were.

# Plan B

If you have to do something unexpected, you can use the dice from your attention row, as long as you observe the multitasking penalty for the dice pool difference.

*For example, you were planning on shooting a suspect, but your partner was faster and now there’s a corpse and no valid target. You could “double tap” the body on the way down or you could rush to administer first aid to a wounded bystander, and if your dice pool for agility and firearms is 5, while willpower and medicine pool is 3, you can’t use your two highest dice for that.*

On some occasions, the attention row might be shorter (including spent dice) than the dice pool for the unexpected action. After declaring the change of plans, you get to immediately roll the difference and add it to the attention row.

# Seizing Initiative

Average distance for an urban gun fight is 7 meters and the median result is a double homicide.

In a violent situation a lot of things happen in quick succession. We measure time in a fight in ***combat rounds***, which are about 3 seconds each.

At the beginning of the first round, everyone declares their intent, clockwise around the table, starting with the game master, who declares what the (visible) NPCs are doing. After the circle is complete, everyone has one chance to change their minds. In case of PvP, break glass and have a frank discussion about the implied social contract, but you may also need to declare intent in secret by passing notes back and forth. Because that’s not obvious at all.

Then everyone rolls their dice pools for their chosen action.

Initiative order goes from the character with the highest die or die stack to the lowest. These dice are not spent, only referenced.

Dice stacks have a bonus: the dice value is multiplied by the number of dice. So having three dice that come up %, %, and % gives you initiative of 15.

Highest initiative character takes their turn first, then the second highest, and so on. If two or more characters are still tied for initiative, roll a separate die for each to break the tie.

The established initiative order continues until the fight is over.

# On Your Turn

When your turn comes up, you can either keep the dice you have (the spent dice remain spent), or pick them all up and reroll them, regaining all of them. If what you want to do changes, the dice pool size may change as well (see [Plan B](#_Plan_B)).

You can then take ***one action*** of any difficulty, which usually requires a die or a dice stack to be spent. All dice a single action consumes must form a valid dice stack.

Additionally, you can take one or two “free” ***effortless***, ***routine or trivial actions*** (difficulty 3 or lower), such as walking, running, driving, vacuuming, texting, ducking for cover, drawing a weapon, reloading or screaming at the top of your lungs. These free actions require no dice to be spent in most cases.

Finally, certain equipment, perks, augmentations, paranormal abilities or straight up magic can grant you **additional actions** in specific circumstances.

If you have an action to spend, but no dice left, the opportunity is wasted.

# Attacking and Defending

When you attack someone, you pick a die or a die stack, and they allocate a die to defend with. The performance on your roll turns into the ***damage*** they take. Performance of 0 or lower is a clean miss.

If the target has no dice to defend with, or is unconscious or restrained, the difficulty of the attack is based on the range to the target, but may vary *slightly* based on the situation.

|  |  |
| --- | --- |
| Range | Target Number |
| Close – melee range (<10m) | 0 |
| Near – whites of their eyes (<50m) | 2 |
| Far – can’t recognize faces (>50m) | 3 |
| Artillery – need a scope (>500m) | 4 |

The attacker has the opportunity to spend any number of ! to activate their weapon’s tags or perform special maneuvers, and the defender can spend the same number of ! to cancel these effects.

# Losing Defense Dice (Take Cover!)

If the defender takes any damage, the die they defend with is spent.

However, if the defender was in cover from the attack, the die instead loses a single pip (*for example, a* % *becomes a* $). The game master should tell you the hit boxes your cover has left, and it loses one for every pip lost in this way. Flimsy cover has 2-4 hit boxes, sturdy cover can have 12 or more.

Cover can be ignored with a called shot (by spending a !) or by moving into position to flank.

If you are using someone else (a teammate or a hostage) as cover and the attacker did not call their shot, the hostage also takes the damage. If the hostage is restrained, their defense TN is based on the range of the attack.

# Dead Man’s Trigger

Death is not always instant. If you die or get knocked out before your turn, you can still perform your intended action, unless one of three things happens:

* The attacker who knocked you out spent ! to aim for your head or put you in a grappling hold and you didn’t cancel it.
* The attacker who killed you spent ! to aim for your head or heart and you didn’t cancel it.
* You died instantly due to damage overflow.

# Hit Boxes

Humanoid creatures of vaguely human size have 6 + Strength + Willpower hit boxes, and a damage overflow box. When you take a point stun damage, you mark the next empty box in line, left to right, with a “/”. When you take a point of physical damage, mark the next box in line with an “X”. If all of your boxes are filled up, you lose consciousness, and the remainder of the damage taken goes into the overflow box as a number. Any damage that goes into the overflow box turns into physical damage, and you die outright when your overflow box contains as much damage as you have hit boxes.

*For example, you have 10 hit boxes, 3 physical and 3 stun, with 4 empty boxes. You receive another 8 boxes of stun damage. The first 4 knock you out (3 + 3 + 4 = 10) and the last 4 go into the overflow box. You’re six damage away from dying outright. But you still get to do your action on the way to the floor!*

You can heal 1 hit box of physical damage per day of rest, more with medical assistance. You heal 1 box of stun per hour of rest.

# Armor

Modern body armor absorbs and deflects small arms fire, but it doesn’t entirely protect from the shock of the impact. It converts physical damage into stun damage up to its own rating. Body armor can be bypassed by spending ! equal to the armor rating to aim for an unarmored part.

|  |  |
| --- | --- |
| Body Armor | Rating |
| Concealable under a hoodie or t-shirt | 1 |
| Concealable under a bulky, sweaty jacket | 2 |
| Obvious bomb squad armadillo with a helmet | 3 |

There is also tank armor, the sort armored vehicles and safe vaults use. When a target has tank armor, it is flat-out immune to all types of attack that don’t have “anti-tank” tag. It can be hypothetically bypassed by spending enough !. It doesn’t convert damage to stun. Even damage from anti-tank weapons gets reduced by the tank armor rating.

|  |  |
| --- | --- |
| Tank Armor | Rating |
| Power armor with backpack battery | 3 |
| VIP limo, armored cash transport | 4 |
| Riot control vehicle | 5 |
| Main battle tank | 6 |

# Gear Porn Examples

Since our damage depends heavily on the relative skill of the attacker and defender, our weapons differentiate themselves on ranges of engagement, special abilities described by tags and additional actions they can grant under specific circumstances.

## Example Tags

**Airburst X**: explodes in a radius of X meters.

***Anti-Tank***: capable of dealing damage to tank armor.

***Armor-Piercing***: ignores 1 point of body armor.

***Augmentation X***: this implant, prosthetic, mutation or genetic modification increases your Augmentation by X.

***Burst Fire***: this firing mode allows you to spend two more actions shooting the same target.

***Dangerous***: on a glitch, you deal 1d6 damage to an unintended target or targets (game master’s choice).

***Destructive***: damage to cover is tripled.

***Full-Auto***: this firing mode allows you to spend nine more actions shooting any targets.

***Loud***: this weapon makes a lot of noise and can deafen you when used indoors.

***Messy***: when you deal damage, spend a ! to amputate a limb of choice. Spend !! to decapitate.

***Reflex Boost X***: grants you X additional actions.

***Reliable***: spend a ! to cancel a glitch when using it.

***Revolver X***: this weapon has a cylinder with X rounds in it. Smartlink, if installed, allows you to choose which round to fire as an additional free action.

***Semi-Automatic***: this firing mode allows you to spend one more action shooting any target.

***Stopping Power***: spend a ! to knock the target off their feet or push them 1m away.

## Example Gear

**AK-47 Assault Rifle**: close/near/far, reliable, semi-automatic, burst fire, full-auto, loud.

**Desert Eagle**: close/near, stopping power, loud, semi-automatic.

***Gel rounds***: this ammunition grants stopping power tag, but the damage dealt is stun and is reduced by 1.

***Hardwired Reflexes X***: augmentation X, reflex boost X. When a person in close range is under attack, you can spend a die to give them an extra die of the same value.

***High-Framerate Vision***: augmentation 0.4, reflex boost 1. You can see bullets flying. When you would spend a die in your own defense, you instead lose two pips on that die.

**Lance**: close, stopping power, armor-piercing. Grants a bonus action to attack a target in range when you drive, ride or fly past them.

***Mono-Line Whip***: close, messy, dangerous, destructive.

***Silencer***: the weapon loses its loud tag, but the damage it deals is reduced by 1. Incompatible with burst fire, full-auto and revolver.

***Smartlink***: augmentation 0.5, when you hit with a smartlinked weapon, you deal 1 extra damage.

# 5/7 Rule

The average “pedestrian” has attributes of 2 and skills of 0 in everything except their area of expertise, which would be also 2, for a total of 4, so we write those numbers as a shorthand with a slash: Joe Average is a 2/4 plumber (pronounced “two out of four”). Experienced professionals can be much higher, for example a decorated navy officer might be 5/7 and an astronaut might be 6/9. The second number is the dice the NPC rolls for their specialty (a martial artist in close combat, a pilot guiding a recon drone), while the first number is the dice the NPC rolls for everything else.

We can use stray dice to track NPC’s incurred damage. Generally speaking, NPCs retreat or surrender once the damage exceeds the number of their specialty dice.

# Plot Armor (Optional Rule)

Players get 3 plot armor coins for each gaming session. They cannot be hoarded or increased by spending experience. You can’t hold more than 3 at a time. All you have to do to get yours refreshed is to show up to the next game.

A plot armor coin can be spent in two ways:

* Reroll some or all of your unspent dice.
* Move all your spent dice back into the attention row, making them available again.

A plot armor coin can be burned permanently, forever, to reduce damage you take from a single source to 0 by a freak accident or dumb luck. A burned plot armor coin no longer refreshes, ever.

Spent and burned plot armor coins can be used by NPCs, friendly or otherwise, in the same session. NPCs start each session with 0.