

# Appendix:

# Hacking

1st Edition

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Special Thanks to Jeff Sheppard and the entire extended Sins of a Nation organization.

## The Hacker

Hacking in *The Emergent* offers a unique gameplay style where strings of words, called Variables, can be assembled in order to create and use custom abilities. Since virtually all people in Anagos have some baseline cybernetics—a cortical stack, at minimum—hackers can execute Functions to directly affect other people, as well as electronic equipment, digital databases, and virtually anything found on the network via a Terminal. Most hackers need to prepare Functions ahead of time by crafting Scripts if they want to use them independently of a network terminal, however some unique Emergent individuals have the power to interface with the network innately, allowing them to assemble and execute Functions on the fly. Hacking, and Technomancy in particular, offer the most versatility of any skillset in the game.

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## Hacking 101

### The Syntax of a String

A string of code is composed of a number of Variables, arranged in a sentence-like Function in the following order:

*Initiate [Delivery] [Duration], [Effect (Target)]*

Some Effect Variables have default deliveries or durations, meaning that you may not need to include them in your Function. Some examples of simple combat Functions include:

*Initiate Discharge, [5 Damage]*

5 Damage by Packet

*Initiate Contact, [Repair (Blood)]*

Restore 5 Blood by Touch

*Initiate Contact Install, [Setup (Buffer (Weapon))]*

Bestow Weapon Shield by Touch

*Initiate Batch Median, [Cloak]*

Area Short Cloak

*Initiate Local Synchronize, [Disengage]*

By Gesture Sustained Disengage

### Executing a Function

In order to execute a Function, you must state aloud the string, followed immediately by the effect. Any attack that successfully hits you interrupts the string, as does activating another ability or effect (such as a shield or resist). If you make a mistake while stating the Function, this also effectively interrupts the Function. Interruption does not consume the attributes needed to execute the Function, as these attributes are not spent until the effect is declared. You may move while stating the Function, however at the conclusion of the Function you must stop and deliver the effect.

### Complex Functions

A single Function can be expanded to include multiple effective Functions as a package; this is called a Complex Function. All Delivery and Duration variables used in the Function must match, but this also means that the cost for each delivery and duration, if any, is halved (rounded up). Complex Functions should be calculated as follows; take delivery and duration cost, multiply by the number of effects in the Function, then divide by two, rounding up. Finally, add the cost of each effect as normal.

Note that you may not include any two identical instances of an effect when making a Complex Function; for instance, you could not include two instances of the 5 Damage effect because it would be identical, but could include both Shatter Weapon and Shatter Armor, because while the Shatter effect is used twice, the use is not identical.

## **Programming**

Most Hackers execute their trade in the field via Programming, a type of crafting. Hackers master Variables by researching Programming Components to obtain their Methods, and they can use any Variable they have learned in order to craft Scripts. Scripts are pre-designed Functions that can be executed away from a Terminal, most notably in combat, and may or may not have an attribute cost depending on the methods used. A Hacker must understand the above rules for creating a Function, but they additionally rely on the Programming rules found in [Appendix: Crafting](#) in order to tier and price the crafted Script.

## **Technomancy**

Technomancers are unique Emergent who find that their powers allow them to innately interact with digital technology. While most Hackers are limited in what they can do outside of a Terminal, Technomancers can compose and execute Functions simply with their minds on nearby cybernetics and electronics. They can still use Programming to create Scripts and Software Chips, and they still need a Terminal for more complex Longform Hacking, but their abilities transcend conventional means, making them extraordinarily versatile.

While Technomancers can still learn to use Variables in crafting via Programming Components, in order to use a Variable innately, a Technomancer must master that variable using CP. Conversely, any Variable known to a Technomancer in this fashion can be used in crafting. In lieu of typical abilities, the Technomancer header is primarily comprised of individual Variables that can be purchased, with progression tier requirements similar to conventional abilities.

## Variables

### Deliveries

By Stream –	Effect: Not compatible with effects; used only to deliver 1 Network damage by packet, touch, or strike. The hacker need only issue the <i>Initialize Stream</i> Function, and may then deliver 1 damage without reinitiating until the next time they move.  ABILITY COST: – ACTIVATION COST: 0
By Touch <i>Contact</i>	Effect: Allows the hacker to apply the effect by physical contact.  ABILITY COST: – ACTIVATION COST: 0
By Strike <i>Impact</i>	Effect: Allows the hacker to apply the effect by successful melee weapon strike.  ABILITY COST: – ACTIVATION COST: 0
By Packet <i>Discharge</i>	Effect: Allows the hacker to throw the effect via packet.  ABILITY COST: – ACTIVATION COST: 0
By Barrage <i>Sequence</i>	Effect: Allows the hacker to throw the effect via packet 3 times. One pitching step may be taken between each throw.  ABILITY COST: 6CP (Tier 3F) ACTIVATION COST: 3FP
By Gesture <i>Local</i>	Effect: Allows the hacker to apply the effect “By Gesture” to one target within 6 feet.  ABILITY COST: 2CP (Tier 1F) ACTIVATION COST: 1FP
By Area <i>Batch</i>	Effect: Allows the hacker to apply the effect “By Area” to all friendly or hostile targets (you choose) within 6 Feet.  ABILITY COST: 6CP (Tier 3F) ACTIVATION COST: 3FP

By Voice <i>Remote</i>	<p>Effect: Allows the caster to apply the effect “By Voice” to one target who can hear them, including via long-distance communication methods.</p> <p>ABILITY COST: 8CP (Tier 4F) ACTIVATION COST: 4FP</p>
By Tag <i>Tag</i>	<p>Effect: Allows the hacker to tag the subject with <i>Inflct Tagged</i> and execute a Function targeting that subject remotely and/or at another time. The <i>Tagged</i> condition is consumed upon use, and a target may only have one <i>Tagged</i> condition on them at a time; however, unlike other conditions, <i>Tagged</i> is not removed by the application of a different condition.</p> <p>ABILITY COST: 2CP (Tier 1) ACTIVATION COST: 0</p>

### Durations

Instant —	<p>Effect: Function effect has no duration; is either momentary or permanent, depending on the effect used.</p> <p>The Duration INSTANT is only compatible with: 5 Damage, 20 Damage, Death, Maim, Rend, Shatter</p> <p>ABILITY COST: — ACTIVATION COST: 0</p>
10 Seconds <i>Minimum</i>	<p>Effect: Function effect lasts 10 seconds.</p> <p>ABILITY COST: — ACTIVATION COST: 1SP with Slam, 0 otherwise</p>
1 Minute <i>Median</i>	<p>Effect: Function effect lasts 1 minute.</p> <p>ABILITY COST: 4CP (Tier 2S) ACTIVATION COST: 2SP</p>
5 Minutes <i>Maximum</i>	<p>Effect: Function effect lasts 5 minutes.</p> <p>ABILITY COST: 8CP (Tier 4S) ACTIVATION COST: 4SP</p>
Until Used <i>Install</i>	<p>Effect: Function effect lasts until the target triggers the effect or Resets.</p> <p>ABILITY COST: — ACTIVATION COST: 0</p>

Sustained Sync	<p>Effect: Function effect lasts as long as the hacker maintains focus on the subject (roleplayed by maintaining a gesture toward them), takes no other action and is not interrupted for up to 5 minutes.</p> <p>ABILITY COST: 6CP (Tier 3S) ACTIVATION COST: 3SP</p>
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## Effects

*Note: Non-targeting effects are mercifully intuitive—their Variable is the same as their Effect name.*

5 Damage	<p>Negative Effect: Subject takes 5 Damage.</p> <p>Compatible Durations: Instant ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP</p>
Bind	<p>Negative Effect: Subject cannot use specified limb or limbs for the effect duration.</p> <p>Compatible Durations: 10s, 1 Minute, 5 Minutes, Sustained ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP (one Limb), 2SP (pair), 4SP (all)</p>
Crushing	<p>Negative Effect: A Crushing effect is considered to be a hit even if it strikes a weapon or shield, and is not negated by the Weapon Shield effect.</p> <p>Compatible Durations: Instant ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP</p>
Slam	<p>Negative Effect: Subject falls to the ground. They must remain on ground for the duration or until hit.</p> <p>Compatible Durations: All ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP</p>
Charm	<p>Negative Effect: Subject becomes friendly to hacker, at minimum acting as the hacker's bodyguard to the best of their ability.</p> <p>Compatible Durations: 10s, 1 Minute, 5 Minutes, Sustained ABILITY COST: 2CP (Tier 1F) ACTIVATION COST: 1FP (-1 FP if combined with Sustained)</p>

Cloak	<p>Positive Effect: Subject crosses their arms over their chest; they cannot be seen, and may call “No effect” to any call that isn’t an area of effect call or an effect that ends cloak, such as “Reveal Cloak”.</p> <p>Compatible Durations: 10s, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 2CP (Tier 1F)  ACTIVATION COST: 1FP</p>
Disengage	<p>Negative Effect: Subject cannot make hostile actions against hacker, cannot advance on hacker, and must give the hacker way if they advance.</p> <p>Compatible Durations: 10s, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 2CP (Tier 1F)  ACTIVATION COST: 1FP</p>
Piercing	<p>Negative Effect: Damage modified by Piercing ignores armor and goes directly to blood.</p> <p>Compatible Durations: Instant  ABILITY COST: 2CP (Tier 1F)  ACTIVATION COST: 1FP</p>
Rage	<p>Negative Effect: For the duration, subject attacks closest person to them, even if they are allies.</p> <p>Compatible Durations: 10 seconds, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 2CP (Tier 1F)  ACTIVATION COST: 1FP (-1 FP if combined with Sustained)</p>
Rend	<p>Negative Effect: Subject begins bleeding out. Does not render subject unconscious.</p> <p>Compatible Durations: Instant  ABILITY COST: 2CP (Tier 1F)  ACTIVATION COST: 1FP</p>
Choke	<p>Negative Effect: For duration, subject can take no actions other than falling to their knees and role-playing choking.</p> <p>Compatible Durations: 10s, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 4CP (Tier 2S)  ACTIVATION COST: 2SP</p>

Maim	<p>Negative Effect: Subject applies the Maimed condition to specified limb or limbs, rendering them unusable until that condition is removed.</p> <p>Compatible Durations: Instant  ABILITY COST: 4CP (Tier 2S)  ACTIVATION COST: 2SP (one limb), 4SP (pair), 6SP (all)</p>
Drain	<p>Negative Effect: If a Drain attack damages a subject (1 BP), the hacker restores 5 Blood and 5 Armor to themselves.</p> <p>Compatible Durations: Instant  ABILITY COST: 4CP (Tier 2SP)  ACTIVATION COST: 2SP</p>
Silence	<p>Negative Effect: Subject cannot speak or use abilities requiring a spoken phrase (Hacking, Blessed, Authority) for the duration.</p> <p>Compatible Durations: 10 seconds, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 4CP (Tier 2F)  ACTIVATION COST: 2FP</p>
Stun	<p>Negative Effect: Subject can take no actions for duration or until hit, and should roleplay being staggered or frozen.</p> <p>Compatible Durations: 10 seconds, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 4CP (Tier 2F)  ACTIVATION COST: 2FP</p>
20 Damage	<p>Negative Effect: Subject takes 20 Damage.</p> <p>Compatible Durations: Instant  ABILITY COST: 6CP (Tier 3S)  ACTIVATION COST: 3SP</p>
Blink	<p>Positive or Negative Effect: Underhand throw a purple glowstick; once it lands, subject must move immediately, quickly, and safely out of game to the glowstick's location.</p> <p>Similar to the Gate symbol, but on a much smaller scale, Blink (<i>Astrada</i>) immediately pulls the affected subject to a specific point within a short distance. The process occurs near-instantly.</p> <p>Compatible Durations: Instant  ABILITY COST: 6CP (Tier 3S)  ACTIVATION COST: 3SP</p>



Dominate	<p>Negative Effect: Subject must perform any order given to them by the hacker.</p> <p>Compatible Durations: 10s, 1 Minute, 5 Minutes, Sustained  Sympathy: Cosmological  ABILITY COST: 6CP (Tier 3F)  ACTIVATION COST: 3FP (-3 FP if combined with Sustained)</p>
Subdue	<p>Negative Effect: Subject is knocked unconscious for the duration; subject is not reduced to 0 Blood and does not start bleeding out when rendered unconscious by Subdue.</p> <p>Compatible Durations: 10 seconds, 1 Minute, 5 Minutes, Sustained  ABILITY COST: 6CP (Tier 3F)  ACTIVATION COST: 3FP</p>
Death	<p>Negative Effect: Subject dies.</p> <p>Compatible Durations: Instant  ABILITY COST: 8CP (Tier 4) <b>Requires In-Game Training</b>  ACTIVATION COST: 3BP Reduction</p>

### Targeted Effects

Commune <i>Decode</i>	<p>Positive Effect: Subject becomes able to speak your language for the duration. In the case of an object with the Electronic Trait, it allows the hacker to obtain the associated code.</p> <p>Compatible Durations: Instant  Target: Trait  ABILITY COST: 2CP (Tier 1)  ACTIVATION COST: 0+Target</p>
Restore <i>Repair</i>	<p>Positive Effect: Returns specified type and number of attribute points to subject, but cannot bring subject over maximum.</p> <p>Compatible Durations: Instant  Target: Armor (5 points per), Blood (5 points per), Focus, Stamina  ABILITY COST: 2CP (Tier 1)  ACTIVATION COST: 1(S or F)+Target</p>

Reveal <i>Locate</i>	<p>Negative Effect: Call Perceive on the target, allowing the caster to see it/them in game.</p> <p>Compatible Durations: Instant  Target: Item, Magic, Message  ABILITY COST: 2CP (Tier 1)  ACTIVATION COST: 0+Target</p>
Shield <i>Buffer</i>	<p>Positive Effect: Subject may negate one attack of specified type. Shield against Weapon does not negate a Crushing attack.</p> <p>Compatible Durations: Until Used  Target: Weapon, any Carrier, any Negative Effect(Except Crushing)  ABILITY COST: 2CP  ACTIVATION COST: 1SP+Target</p>
Cleanse <i>Purge</i>	<p>Positive Effect: Removes specified negative effect from subject.</p> <p>Compatible Durations: Instant  Target: any Negative Effect  ABILITY COST: 4CP (Tier 2)  ACTIVATION COST: 0+Target</p>
Bane <i>Isolate</i>	<p>Negative Effect: Triggers secondary effect or effects for subject if targeting conditions are met.</p> <p>Compatible Durations: Instant  Target: Trait  ABILITY COST: 4CP (Tier 2)  ACTIVATION COST: 2SP+Target(SP) or 2FP+Target(FP)</p>
Bestow <i>Setup</i>	<p>Positive Effect: Provides the subject with additional attribute points of specified type, which may bring subject over maximum for those values, or allows one use of a specific effect. Active Bestows are lost upon Resetting.</p> <p>Compatible Durations: Until Used  Target: Blood, Focus, Stamina, Effect (for target to use)  ABILITY COST: 4CP (Tier 2)  ACTIVATION COST: 1SP+Target(SP) Upkeep or 1FP+Target(FP) Upkeep</p>
Strip <i>Cancel</i>	<p>Negative Effect: Removes specified positive effect from the subject.</p> <p>Compatible Durations: Instant  ABILITY COST: 4CP (Tier 2F)  ACTIVATION COST: 2FP+Target</p>

<p>Fatigue <i>Exhaust</i></p>	<p>Negative Effect: Subject cannot use specified attribute for duration.</p> <p>Compatible Durations: 10 seconds, 1 Minute, 5 Minutes, Sustained Target: All, Blood, Focus, Stamina ABILITY COST: 4CP (Tier 2F) ACTIVATION COST: 1FP+Target</p>
<p>Animate <i>Automate</i></p>	<p>Negative Effect: Subject is under hacker's control if the targeting conditions are met, until the duration expires or the targeting condition is removed.</p> <p>Compatible Durations: 10 seconds, 1 Minute, 5 Minutes, Sustained Target: Death, Sleep ABILITY COST: 4CP (Tier 2F) ACTIVATION COST: 2FP+Target (3BP no Reduction for Death)</p>
<p>Shatter <i>Delete</i></p>	<p>Negative Effect: Targeted item gains the broken condition until that condition is removed.</p> <p>Compatible Durations: Instant Target: Armor, Item, Shield, Weapon, Trait (Electronic) ABILITY COST: 4CP (Tier 2F) ACTIVATION COST: 1FP+Target</p>
<p>Reflect <i>Return</i></p>	<p>Positive Effect: Turns targeted effect or elemental attack into a "By Gesture" attack issued by the subject.</p> <p>Compatible Durations: Until Used Target: Weapon, any Carrier, any Negative Effect ABILITY COST: 6CP (Tier 3S) ACTIVATION COST: 3SP+Target</p>
<p>Transport <i>Send</i></p>	<p>Positive Effect: Delivers a digital entity via the network. Primarily used for sending files, like messages.</p> <p>Compatible Durations: Instant Target: File ABILITY COST: 2CP ACTIVATION COST: 0+Target</p>

## Targets

Trait	<p>There are many possible Traits, each with their own name and matching Variable. Most require research to utilize. All Hackers start with access to the Electronic Trait, which can be used to target electronic locks and other small devices.</p> <p>ABILITY COST: –/2CP (Tier 1) ACTIVATION COST: 1SP or 1FP</p>
Armor	<p>ABILITY COST: 2CP (Tier 1) ACTIVATION COST: 1SP or 1FP</p>
Blood	<p>ABILITY COST: 2CP (Tier 1) ACTIVATION COST: 1SP or 1FP</p>
Shield	<p>ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP</p>
Stamina	<p>ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP</p>
Weapon	<p>ABILITY COST: 2CP (Tier 1S) ACTIVATION COST: 1SP</p>
Focus	<p>ABILITY COST: 2CP (Tier 1F) ACTIVATION COST: 1FP</p>
File	<p>ABILITY COST: 2CP (Tier 1F) ACTIVATION COST: 1FP</p>
Item	<p>Applies only if no other Target symbol can apply to the subject.</p> <p>ABILITY COST: 4CP (Tier 2F) ACTIVATION COST: 2SP or 2FP</p>
All	<p>Usable only if all applicable effects are attuned.</p> <p>ABILITY COST: 6CP (Tier 3F) ACTIVATION COST: 3SP or 3FP</p>

# Longform Hacking

When a hacker gains access to a terminal, they can potentially access and manipulate any systems that terminal connects to. Engaging in the network in this way is called longform hacking, and where combat hacking is short to the point, longform hacking is more like a complex conversation with the systems at play.

When you access a terminal, you may take actions against the server that your terminal is connected to; usually that of an organization. An Ecosystem and the subsystems within it might have any number of linked defensive and offensive systems, which have the following traits:

- Preventive (such as a Firewall)
- Detective (such as an Alert)
- Responsive (such as a Countermeasure)
- Recovery (the Ecosystem itself generally contains repair protocols)

Once inside an ecosystem, a hacker will typically be attempting to interface with a Database, or an Asset within a Database. Most actions a hacker can take have one of three traits, which a hacker may choose to specialize in; doing so slightly discounts actions made from that trait family:

- Obtain
- Alter
- Disable

Because of these specializations, it is common for hackers to work together on larger-scale longform hacks, each covering their own specialized roles. One hacker always serves as a Host, and if that hacker is booted from the terminal, the hack ends in failure. Each time a hacker botches a string, or each time an offensive system is triggered, the Host receives a strike, and each terminal has a number of strikes permitted before locking down. If a hacker botches a string (by stating the variables incorrectly), they can always choose to Validate, spending one point of the attribute used by the botched effect to re-attempt the string without triggering a strike.

Variables used in combat hacking take on additional functions and gain certain traits when used in a longform hack:

Action	Trait	Specific Use
5 Damage	—	—
Bind	Disable	Stall a responsive system
Crushing	--	Stall a defensive system
Slam	Disable	Gain access to an ecosystem
Charm	Obtain	Gain access to an ecosystem
Cloak	Alter	Gain access to an ecosystem

Disengage	--	Exit a system that you have targeted
Piercing	--	Bypass a defensive system
Rage	Alter	Remove account access from an ecosystem
Rend	Disable	Stall a recovery system
Commune	Obtain	Read data from a target database or asset
Restore	Alter	Repair corrupted data
Reveal	Obtain	Search for a target database within an ecosystem or an asset within a database
Shield	Alter	Install a firewall
Transport	Obtain	Extract data from a target asset
Choke	Disable	Disable a defensive system
Maim	Disable	Disconnect a system from the system it is linked to
Drain	Obtain	Extract a large amount of data from a target database
Silence	Disable	Disable a detective system
Stun	Disable	Disable a responsive system
20 Damage	—	—
Cleanse	Alter	Remove corrupted data from a target database or asset
Bane	Disable	Encode or decode data
Bestow	Alter	Add data to a target database
Strip	Alter	Remove undesired data from a target database or asset
Fatigue	Disable	Stall a system
Blink	Obtain	Move data from one database or asset to another
Dominate	Obtain	Gain admin control of a system
Subdue	Disable	Disable a system
Animate	Alter	Reprogram a system to function as you choose
Shatter	Disable	Corrupt a system
Reflect	Alter	Redirect a reactive system to target another system
Death	Disable	Corrupt a server

Systems	Trait	Specific Use
Armor	Defensive, Recovery	Target Ecosystem
Blood	--	Target Database
Shield	Defensive, Preventive	Target Firewall
Stamina	Defensive	Target Defensive Systems

Weapon	Offensive, Reactive	Target Countermeasure
Focus	Offensive	Target Offensive Systems
Message	Offensive, Detective	Target Alert
Item	--	Target Asset
All	--	Target all systems you have already targeted

## Diving

Sometimes, a hacker needs to enter the network itself through a process called diving. Using a terminal, the user's consciousness is downloaded into the network, and their physical body is digitized, allowing them to move around within the digital space more-or-less as in real space. From here, many things can be accomplished that even longform hacking would struggle to facilitate, including backdoor entry of databases and other sections of the network that can't be directly accessed from a connected terminal. It is also how hackers are able to enter the cybersphere, though they do so at their peril.

To initiate a dive, you will need the help of a fixer to hook you up with a public terminal (a dive will almost always be a mod). Were you to attempt a dive from a terminal connected to a private server, you would need to either operate fully within that ecosystem or work to escape it to reach the network at large. Because of universal adoption of cortical stacks, pretty much anyone can tag along on a dive, though a hacker will always need to initiate the sequence. Once inside, hackers are in their element, and can initiate longform hacking at any time. Well-prepared hackers can also craft scripts that only function within the network, but do so much more efficiently. From the inside, the network often appears in metaphor, and to the untrained eye, nothing is what it seems.