

Appendix:

Crafting

1st Edition

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The Crafter

Items in ***Sins of a Nation: The Emergent*** allow players to expand their abilities beyond those they've purchased with CP. These special pieces of equipment grant access to new abilities, either as an alternative to spending CP or by investing in in-game currency. While some players may prefer to buy, steal, or loot their gear, others take a more hands-on approach—designing and crafting their own tools. This is where **Chemistry, Engineering, and Infiltration** come into play.

The ability to create items can be unlocked by purchasing the **Concoction, Tinkering, and Programming** skills within the **Specialty headers** of Chemistry, Engineering, and Infiltration respectively. These skills grant access to:

- Learning **crafting methods**
- Designing **recipes**
- Producing **items** during time blocks or live gameplay

Each step of this process is detailed in the following guide.

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Learning Methods

To craft an item, a **Crafter** must first design a **Recipe**, which determines the item's function. A Recipe is made up of three key factors:

- **Effect** (What the item does)
- **Delivery** (How the effect is applied)
- **Duration** (How long the effect lasts)

In crafting terminology, each of these elements are called a **Method**, which must be learned before it can be used in a Recipe.

Examples of Methods: "Short Duration," "Maim," and "By Gesture" are all crafting Methods.

Before a Crafter can use a Method in a Recipe, they must first **learn it**. This can happen in the following ways:

1. Learning Through Abilities

Whenever a Crafter acquires a new **game ability**, they automatically learn all Methods associated with that ability's in-game call.

Example:

- A Crafter who learns the **Stop Talking** ability ("By Gesture, Silence") automatically gains access to:
 - **By Gesture** (Delivery Method)
 - **Silence**(Effect Method)

2. Experimenting with Crafting Components

Crafters can **experiment with in-game materials** to discover new Methods. Experimental Methods typically include **unique effects and carriers**.

Example:

- A Crafter testing a **spool of wire** might discover the **"Bind by Lightning"** Method.
- This experimental result **cannot be broken down** into separate effect and delivery Methods—it must be used as discovered.

3. Unlocking Complete Recipes Through Production Skills

Crafters automatically learn a **set of complete Recipes** based on their Production skills. These Recipes are **predefined and cannot be modified** or combined with other Methods.

Example:

- A Crafter with the **Production skill** under the **Chemistry** specialty knows all starter alchemy Recipes, including their associated Methods.

Methods Known by All Crafters

All Crafters have access to a set of fundamental Methods that form the foundation of item creation.

These include:

- **Standard Duration** (10 seconds or instantaneous).
- **Consumable Durability** (Item expires after one use).
- **Durable Durability** (Item lasts until the end of a reset).
- **High Yield Durability** (Item has multiple uses before expiring).
- **Permanent Durability** (Item does not expire unless specifically destroyed).

Designing Recipes

Once a Crafter has learned **Methods**, they can begin **designing Recipes** for the items they wish to create.

- Creating a **Recipe costs no resources** and does not consume a **timeblock**—Crafters can start designing potential items at any time.
- A **valid Recipe** must contain the following **four factors**:

Recipe Formula

A Recipe consists of:

➡ **Delivery + Effect(s) + Duration + Durability**

Each of these **Methods** has an associated **Tier**, and the **total Crafting Tier** of an item is determined by **adding up all Method Tiers** that contribute to it. The **Crafting Tier** also determines the **cost to produce the item**.

The maximum **crafting tier** a player can achieve is determined by their **Specialty header** and increases as they progress through the **Chemistry** or **Engineering** skill tiers. However, skill purchases alone can only take a player so far. Advancing to **higher-tier crafting** requires **in-game research, knowledge acquired through hacking, or similar actions** to unlock advanced techniques.

The **Crafting Tier** of a recipe is calculated as the **sum of all Method Tiers** that contribute to an item's final design.

Header Tier	Max Chemistry Crafting Tier	Max Engineer Crafting Tier	Max Programmer Crafting Tier
1	4	4	4
2	6	8	8
3	8	12	12
4	10	16	16

Crafting Tier Example

Example: Crafting a Sword with a "Bind" Effect

*A Crafter wants to make a **melee weapon that can disarm opponents**.*

- **By Melee** (Delivery Method, Tier 0)
- **Bind** (Effect Method, Tier 1)
- **Permanent Durability** (Durability Method, Tier 4)

- **Standard Duration** (*Duration Method, Tier 0*)

Total Crafting Tier = 5

*This item would be **Tier 5** in cost and difficulty.*

Item Activation & Costs

- Items with **Consumable** or **High Yield Durability** do **not** require an activation cost.
- Items with **Durable** or **Permanent Durability** **must be activated** using **Focus, Stamina, or a split of both**.
- The activation cost is calculated based on the **total attribute cost of all Methods used in the Recipe**.
- If an activation cost is split, divide the cost **evenly between Focus and Stamina**, rounding up if necessary.

Crafting Multiple Effects in One Item

When crafting a **single item with multiple effects** that are **not used in the same in-game call**, each effect must be crafted as a **separate recipe**. The total cost is calculated by **adding up the crafting costs of each recipe**.

Example: A Permanent Sword with Multiple Effects

A Crafter wants to make a **sword that can perform both Crushing Slam and Drain** separately.

- **Recipe 1:** (*By Melee + Crushing Slam + Permanent Durability + Standard Duration*) = **Tier 6**
- **Recipe 2:** (*By Melee + Drain + Permanent Durability + Standard Duration*) = **Tier 6**

Total Crafting Cost = Equivalent to crafting two separate Tier 6 items

Carriers

Carriers add **properties** to an effect (e.g., Fire, Divine, Toxin).

- A Carrier can be combined with **Standard, Short, or Long Duration** Methods.
- This always counts as a **Tier 1 Effect** and **does not increase the Crafting Tier cost** of the Duration Method.
- Carriers can **only** be combined with the following **Delivery Methods**:
 - **By Packet**
 - **By Melee**
 - **By Shot**

Example:

- *“Swing ‘Fire’ for five minutes” is a **Tier 1 Effect**.*

Timeblock Crafting Limitations

- A Crafter can produce as many items during a timeblock as they have resources to cover the total crafting cost.
- The cost of production (in in-game currency) is determined by the Crafting Tier of the item.

Cost by Crafting Tier

Total Crafting Tier	Crafting Cost	Total Crafting Tier	Crafting Cost	Total Crafting Tier	Crafting Cost	Total Crafting Tier	Crafting Cost
0	2	5	130	10	505	15	1130
1	10	6	185	11	610	16	1285
2	25	7	250	12	725	17	1450
3	50	8	325	13	850	18	1625
4	85	9	410	14	985	19	1810

Component Conversion

When crafting items, a crafter may convert components of the correct crafting category (chemical, engineering, and programming) to contribute to paying for the item crafted. The full cost of an item can be covered by this conversion should the crafter have enough components on hand.

- A Common (Tier 1) component may be used to pay 10 credits each towards the final cost.
- An Uncommon (Tier 2) component may be used to cover 25 credits each towards the final cost.
- A Rare (Tier 3) component may be used to cover 50 credits each towards the final cost.

Method Specifications

Delivery Methods

Delivery Methods have an attribute or power point cost equal to their tier. The Method Tier contributes to the Crafting Tier of an item. Not all crafter headers can use each delivery method.

Method Name	Tier	Description	Restricted to
By Touch	0	Allows item effects to take place by physical contact. Things like potions and armor kits are generally By Touch.	None
By Melee	0	Allows the item effects to be delivered by a melee weapon swing.	Engineer
By Shot	0	Allows the item effects to be delivered by a foam dart blaster shot.	Engineer
By Armor	0	Allows the item effects to be delivered to the character wearing the armor.	Engineer
By Shield	0	Allows the item effects to be delivered to the character using the shield.	Engineer
By Packet	0	Allows the item effects to be delivered by a packet.	Chemist
By Gesture	1	Allows the item effects to be delivered through the Gesture call.	Chemist
By Blast	2	Allows the item effects to be delivered by a grenade phys-rep and adds the Blast call.	Chemist
By Area	3	Allows the item effects to be delivered through the By Area Call.	None
By Voice	5	Allows the item effects to be delivered through the By Voice call.	None

Duration Methods

Methods have an attribute or power point cost equal to their tier. Duration Method Tiers contribute to the Crafting Tier of an item. Not all crafter headers can use each delivery method.

Method Name	Tier	Description	Restricted to
Standard	0	The item effects either happen instantly, or last for 10 seconds, as is normal for the effect in question.	None
Until Used	0	The item effect lasts until it is used or the character resets.	None
Short	2	The item effects last 1 minute.	None
Sustained	3	The item effects lasts as long as the user is focusing.	Engineer
Long	4	The item effects last 5 minutes.	None

Durability Methods

Durability Methods do not increase the attribute cost to activate of an item. Consumable and High Yield items do not have an activation cost. Durable and Permanent items do. Durability Methods increase the Crafting Tier of an item.

Method Name	Tier	Description	Restricted to
Consumable	0	Item expires once it is used. Consumable items do not have an activation cost.	None
Durable	2	Item expires at the end of the reset during which it is activated.	None
High Yield	X	Item can be used X times before expiring. High Yield items do not have an activation cost.	None
Permanent	4	Item does not expire.	None

Effect Methods

Each **Method** has an **attribute or power point cost** equal to its **tier**.

- **Effect Method Tiers** contribute to the **total Crafting Tier** of an item.
- Methods marked with an **asterisk (*)** have **special rules**, which are detailed in the descriptions below.

Tier	Effects
0	Any Elemental Carrier*, Toxin Carrier*, Divine Carrier*, Weapon, Bolt, Remove*, Resist*, Shield*
1	5 Damage, Bind*, Charm, Cloak, Commune*, Crushing, Detect*, Disengage, Inflict*, Lethal, Modify*, Parry, Piercing, Rage, Rend, Restore*, Slam, Stealth
2	Animate, Bane*, Bestow*, Choke, Double, Drain, Fatigue*, Maim*, Shatter, Silence, Stun
3	20 Damage, Absorb, Blink, Dodge, Dominate, Refract*, Sleep
4	Death*

Bane

- Bane must specify a **Target Creature Type** (e.g., Construct, Undead).
- A Crafter **must first learn** a specific Bane type in-game before crafting with it.
- If a Crafter learns an ability that grants them **Construct Bane**, they can craft using **Construct Bane**, but not any other Bane Effect until learned separately.

Bestow

Bestow has **two distinct uses**:

1. Bestowing an Effect

- Bestow can be **paired with another Effect Method** (e.g., **Bestow Drain**).
- The **Crafting Tier increases** by the Tier of Bestow (**Tier 2**), but the Effect Tier and attribute cost **do not** increase.

Example:

- A **Permanent item** that performs **Bestow Drain by Touch** has:
 - **Crafting Tier** = 8 (2 from Drain, 2 from Bestow, 4 from Permanent)
 - **Effect Tier** = 2 (from Drain)
 - **Activation Cost** = 2 attribute points

2. Bestowing an Attribute

- Bestow can be **paired with an attribute: Armor, Blood, Focus, Power, or Stamina**.
- The **Effect Tier** equals the **number of points Bestowed**.
- The **Crafting Tier** is **twice** the number of points Bestowed.
- **Activation Cost** = 1 + number of points Bestowed.

Example:

- A **Permanent item** that performs **Bestow 2 Stamina by Touch** has:
 - **Crafting Tier** = 8 (4 from Bestow 2 Stamina, 0 from By Touch, 4 from Permanent)
 - **Effect Tier** = 2 (from Bestow 2 Stamina)
 - **Activation Cost** = 3 attribute points

Bind

- **No predefined limb requirement**; can be crafted generally.
- If crafted for **Bind Arms** or **Bind Legs**, it **increases to Tier 2**.
- If crafted for **Bind All**, it **increases to Tier 4**.

Commune & Perceive

- Must specify a **Target Creature Type** or **Condition** (e.g. Spirit).
- No cost increase for targeting a specific entity.
- The target must be **learned as a method** before use in crafting.

Example:

- A Crafter who knows **Commune Spirit** can craft a **Commune Spirit** item but **cannot craft Commune Undead** unless learned separately.

Death

- Instead of a **normal attribute cost**, activating **Death** requires a **3 Blood Reduction**.

Example:

- **Area Death** (Tier 4 Effect) costs **3 Blood Reduction + 3 attributes** to activate.

Detect

- Must specify a **Target Creature Type** (e.g., Construct) or a **Condition** (e.g., Cloaked).
- A Crafter **must learn each Detect type separately** in-game.

Example:

- A Crafter with **Detect Construct** can craft a **Detect Construct** item, but **not Detect Undead** unless learned separately.

Fatigue

- Must specify an **Attribute** (Blood, Stamina, Focus, or Power).
- This **does not** increase its cost.
- **Fatigue All** is **Tier 4**.

Example:

- A Crafter who knows **Fatigue Focus** can craft a **Focus Fatigue** item but **not Stamina Fatigue** unless learned separately.

Inflict

- Adds a **Trait** to the target for a **Standard Duration**.
- Can be increased to **one minute** (*Short Duration*) or **five minutes** (*Long Duration*).
- Traits include **rac**es, **cultures**, and **special traits** (e.g., *Marked, Advantage*).
- Effect **cost is zero** unless specified otherwise.

Maim

- **No predefined limb requirement**.
- If crafted for **Maim Arms** or **Maim Legs**, it increases to **Tier 4**.
- If crafted for **Maim All**, it increases to **Tier 5**.

Remove

- **Remove** must be paired with an **Effect Method** it removes.

Example:

- A **Permanent item** that performs **Remove Maim by Touch** has:
 - **Crafting Tier** = 6 (2 from Maim, 0 from Remove, 4 from Permanent)
 - **Effect Tier** = 2 (from Maim)
 - **Activation Cost** = 2 attribute points (*Stamina or Focus*)

Resist

- Must be paired with an **Effect Method** it negates.
- **Does not** increase the Effect Tier or attribute cost.

Example:

- **Resist Fire** is a **Tier 1 Effect**.
- **Resist Maim** in a **Permanent item** has:
 - **Crafting Tier** = 6 (2 from Maim, 0 from Resist, 4 from Permanent)
 - **Effect Tier** = 2 (from Maim)
 - **Activation Cost** = 2 attribute points

*If **Bestow** is added to **Resist**, it **must** also be included in the recipe.*

Restore

- Must specify an **Attribute** (**Blood, Stamina, Focus, Armor, or Power**).
- **Restore Blood or Armor** = 5 points restored (Tier 1).
- **Restore Stamina, Focus, or Power** = 1 point restored (Tier 1).

- Can be increased **up to 10 points** (each additional point = +1 Tier).

Example:

- **Restore 2 Stamina** is a **Tier 2 Effect**.
- **Restore 5 Blood** is a **Tier 1 Effect**.

Reflect

- Must be paired with an **Effect Method** it negates.
- **Crafting Tier** increases by **3** when added.
- **Activation Cost** = **3 attribute points** on top of the Effect's cost.
- In-game call: **"Modify to Bestow to self"** → Defender may then call **By Gesture [Effect]**.

Example:

- A **Permanent item** that performs **Reflect Maim** has:
 - **Crafting Tier** = 9 (3 from Reflect, 2 from Maim, 4 from Permanent)
 - **Effect Tier** = 2 (from Maim)
 - **Activation Cost** = 5 attribute points

Shield

- **Shield must be paired** with an **Effect Method** it negates.
- It can negate standard **elemental or physical effects**, including:
 - **Weapon**
 - **Bolt**
 - **Fire**
 - **Subdue**
 - Other applicable effects

Shield with Carriers

- If **Shield** is combined with a **Carrier** (e.g., **Fire Shield**, **Divine Shield**, **Toxin Shield**), it is treated as a **Tier 1 Effect**.
- **Weapon Shield** and **Bolt Shield** are also **Tier 1 Effects**.

Example:

- A **Permanent item** that performs **Weapon Shield** has:
 - **Crafting Tier** = 5 (1 from Weapon Shield, 4 from Permanent)
 - **Effect Tier** = 1 (from Weapon Shield)
 - **Activation Cost** = 1 attribute point

Shield + Bestow

- When **Bestow** is added to a **Shield method**, it is included **at no additional cost**.

Examples:

Consumable Item – Bestow Weapon Shield

- ***Crafting Tier = 1*** (1 from Weapon Shield)
- ***Effect Tier = 1*** (from Weapon Shield)
- ***Activation Cost = None*** (Consumables do not require attribute activation)

Permanent Item – Bestow Weapon Shield

- ***Crafting Tier = 5*** (1 from Weapon Shield, 4 from Permanent)
- ***Effect Tier = 1*** (from Weapon Shield)
- ***Activation Cost = 1 attribute point***

Efficiencies

Efficiencies are **optional crafting Methods** that allow a Crafter to **reduce the Crafting Tier cost** of an item by cutting corners, making the item harder to use, or adding risk.

- A Recipe does not have to include an Efficiency Method.
- A Recipe may include multiple Efficiencies, but the total reduction cannot exceed 3 Tiers.
- An item's Crafting Tier cannot be reduced below (*Effect Tier - 1*), with a minimum of 1.

The following table provides a quick reference for **Efficiency Methods**, their **restrictions**, and how they are learned.

Efficiency Name	Tier Reduction	Restrictions	How to Learn
Addictive*	***	Chemist only & By Touch only	Gain access to an Addiction Method
Hazardous*	***	None	Gain access to a Hazardous Effect Method
Training Required	-1	Consumable or High Yield only	Known by all Crafters
Difficult to Use	-1	Durable or Permanent only	Known by all Crafters
Delicate	-2	Permanent only	Gain access to the Shatter Method
Preparation Required*	***	Cannot be used with Bestow	Known by all Crafters
Monomaniacal Crafting*	***	Requires Tier 2+ in any Core Header	-
Digital	-2	Programmer only	Known by all Programmers

(Three asterisks (**)) indicate a variable reduction explained below.*)

Addictive

This item is **habit-forming**—the **degree of addiction** determines the **Crafting Tier reduction**. In the modern world of high end pharmaceuticals and designer drugs players do not need to assign a specific substance, though they may, but do need to outline the **Class** and **Tier** of the addictive substance.

- **Only Chemists** can use this Efficiency.
- The item **must be Consumable or High Yield**.
- The item **must** have **By Touch Delivery** and use only the following Effect Methods:
 - **Bestow** (*Blood, Stamina, Focus*)
 - **Remove** (*Any*)
 - **Resist** (*Any*)
 - **Restore** (*Blood, Stamina, Focus*)
 - **Shield** (*Any*)

Addiction Tier Reductions:

- **-1 Tier** for **Tier 1 substances**.
- **-2 Tiers** for **Tier 2 substances**.

Example:

A Crafter makes a **Bestow Focus by Touch** tonic using the **Amphetamines (Tier 2 Stimulant)** category.

- The Crafting Tier receives a **-2 Tier reduction**.

Delicate

- If an item with **Delicate** is **Shattered**, it is **completely ruined** and **cannot be repaired**.
- **Only available for Permanent items**.

Difficult to Use

- This item **costs 1 more attribute point** to activate than normal.
- If the attribute cost is **split** between two attributes, **both increase by 1**.

Example:

- A **Permanent weapon** that usually costs **2 Focus** to activate now costs **3 Focus** instead.

Digital

This Efficiency allows a programmer to make a purely digital device, **only usable in the digital realms of the cybersphere or when dived into a network**.

- The item produced using this efficiency has no use or effect in the material world.
- Digital items may be crafted like a Software Chip allowing the programmer designing the item greater flexibility.

Hazardous

This Efficiency **adds dangerous side effects** to an item to **reduce its Crafting Tier cost**.

- Available for the following **Effect Methods**:

- 5 Damage, 20 Damage, Bind, Choke, Crushing, Death, Disarm, Fatigue, Piercing, Rage, Rend, Shatter, Silence, Slam, Stun, Subdue.
- Disarm and Shatter can only be applied to Durable, High Yield, and Permanent items, and always apply to the item itself.
 - If both Stamina & Focus are used, Fatigue must apply to both.

Monomaniacal Crafting

This Efficiency allows a Crafter to **focus all their effort** on crafting a **single item during a timeblock, doubling the usual tier limit** for that craft.

Crafting Tier Reduction Based on Header Tier:

- Tier 2 → -1 Tier reduction
- Tier 3 → -2 Tier reduction
- Tier 4 → -3 Tier reduction

Example:

A **Tier 3 Crafter** uses **Monomaniacal Crafting** for a **Tier 8** item.

- This allows them to craft it at **Tier 6 instead**.

Preparation Required

Before this item can be used, the **user must roleplay a preparation action** (e.g., **applying bandages, coating a weapon in oil, cranking a mechanical device**).

Preparation Time & Tier Reduction:

- 30 seconds of roleplay → -1 Tier reduction
- 1 minute of roleplay → -2 Tier reduction

Example:

- A Crafter makes a **Healing Salve** that normally takes a **3-count to activate**.
- They add **Preparation Required (1-minute roleplay)** for a **-2 Tier reduction**.

Training Required

This item **requires special training** to use.

- If the user lacks the required training, they must pay an activation cost.
- Users with the correct training can activate it at no cost.

Two Types of Training:

Training Type	Can Be Applied To	Who Can Use It
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Demolitions	Area, Blast, Packet, Line of Voice delivery items	Only Chemists
Coding	Scripts	Only Programmers

Example:

- A Crafter creates an **Area-based explosive** using **Demolitions Training Required**.
- **Only Chemists can use it freely.**
- If an untrained character attempts to use it, they **must pay an attribute cost** to activate it.

Modifiers for Additional Tier Reduction:

- **Increase Duration to Short** → -2 Tier reduction
- **Increase Duration to Long** → -4 Tier reduction
- **Change Delivery from Touch to Area or Allies** → -3 Tier reduction

How to Calculate Reduction:

1. Add up the **total Effect Tiers**.
2. Add any **modifiers**.
3. Divide by **2**, rounding **up**.

Example:

A Crafter creates a **Hazardous firearm** with:

- **5 Damage (Tier 1)**
- **Rend (Tier 1)**
- **Area to Allies Delivery (Tier 3 modifier)**

Total Reduction:

$(1 + 1 + 3) / 2 = 2.5 \rightarrow$ rounds up to **3 Tier reduction**.

Additional Rules

- **Hazards take effect after the normal effects of the item.**
- **Fatigue must target the same attribute the item costs to activate.**

Live Crafting

During events, any Crafter with **Production** can craft items **live** at the **Crafting Station**.

- The **Crafting Station** will be located in the **mess hall**, equipped with everything needed for live item production.
- Live crafting follows the **same recipe rules** as timeblock crafting.

Printing Crafting Tags

Live-crafted items must have proper **printed tags** to be valid. The process includes:

1. **Select a recipe** from the approved Rec Time Ledger.
2. **Add the necessary items** from your inventory.
3. **Print tag**, a digital copy will be sent to Staff

Hex Codes

- Each Crafter has a **unique Hex Code** (a custom symbol tied to their character).
- Crafters **must request their Hex Code from staff before their first event**.
- Every **crafted tag must have the Crafter's Hex Code** applied to be valid.
- Tags **without a Hex Code are inert** and cannot be used or sold.

*If a tag is accidentally printed without a Hex Code, it **does not consume resources** and should be discarded.*

Using Crafted Items

Durable & Permanent Items

- Activated when the cost is paid.
- Must be worn, activated, or used appropriately.
- If an item is **Shattered**, it regains functionality at reset.

Consumable Ammunition & Munitions

- Bullets, grenades, and munitions can be used at will.
- A **special bullet** is considered used **whenever the player declares the call**.

Permanent Item Phys-Rep Requirements

When crafting a **Permanent item**, the Crafter must specify a **required phys-rep** (physical representation) for the item.

*For example, if a Crafter creates a **Reveal Cloak (By Gesture)**, they might specify that it requires **Goggles** as the phys-rep.*

Phys-Rep Rules:

- The specified item **must be distinct** from common clothing.
- Items that **players are already guaranteed to wear** (e.g., "shirt" or "shoes") **are not valid** as phys-rep requirements.
- The phys-rep **must be worn or held** to use the crafted item's effects.

Expiration Rules for Consumables & Components

Components, Consumable and High-Yield items expire **one year after being crafted or collected**.

To track expiration, crafting tags will be printed on **color-coded paper** based on the event in which they were created:

Event Number	Tag Color
Event 1	Green
Event 2	Yellow
Event 3	Orange
Event 4	Blue

Once an item reaches its expiration date:

- **Most items** are simply **removed from the player's inventory**.
- The **specific side effects** depend on the consumable's original effect and may require in-game testing to determine.

Special Rules

Each of the three core crafting disciplines has their own quirks, specialties, and variations that you'll need to learn about in order to get the most out of your crafting experience.

Engineering-Specific Crafting Rules

Engineers specialize in **creating weapons, armor, and gadgets as well as Tech Items and Power Casings**.

Engineer Recipes Automatically Known

All Engineers start with knowledge of the following **Tier 0 Effect Recipes**:

- **Restore 1 Armor by Touch** – A basic armor repair function.
- **Crushing by Shot** - Enhances a firearms attack.
- **Piercing by Shot** - Enhances a firearms attack.

These Tier 0 Recipes are unique and cannot be broken down into individual Methods.

Engineer Methods Automatically Known

Engineers have the ability to craft **weapons and armor**. They automatically gain access to the following **Delivery Methods**:

- **By Shot** – Enables the crafting of **firearms and ammunition**.
- **By Melee** – Allows the creation of **melee weapons and melee enhancements**.
- **By Shield** – Used to produce **shields and shield enhancements**.
- **By Armor** – Allows for the crafting of **armor and armor enhancements**.

*Engineers **cannot** use the By Packet or By Blast Delivery Methods in their crafting.*

Tech Items and Casings

For more information, see section [Powered Tech & Rigs](#).

Chemistry-Specific Crafting Rules

Chemists specialize in **crafting chemical-based consumables and Power Cores**.

Chemistry Recipes Automatically Known

All Chemists begin with knowledge of the following **Tier 0 Effect Recipes**:

- **Restore 1 Blood by Touch** – A basic healing effect.
- **1 Damage (By Toxin) by Packet** – A toxin-based attack delivered via a packet.
- **Bestow By Toxin to Weapon Strike** – Enhances a weapon strike with toxin properties.
- **Restore 1 Power by Touch** – Restores energy to Powered Tech..

These Tier 0 Recipes are unique and cannot be broken down into individual Methods.

Chemistry Methods Automatically Known

Chemists automatically gain access to:

- **By Packet** (*Delivery Method*) – Allows effects to be applied at range via thrown packets.
- **Restrictions:** Chemistry Recipes **cannot** use the **Sustained Duration** Method.

Advanced Chemistry: Addiction Methods

Chemists can unlock **Addiction Methods** through research and experimentation.

- To do so, they must **study the composition** of an addictive substance over **three doses between events**.
- Research may involve **biological or chemical analysis**.

Once unlocked, the Chemist gains the ability to craft addiction-based substances.

Addiction Crafting Rules

A Chemist with **Addiction Category access** can craft substances in bulk:

- **Tier 0 Craft:** Produces **2 doses** of a **Tier 1 substance**. Examples of this level would be substances such as Nicotine or Caffeine (Stimulant), Alcohol (Depressant), Cannabis (Hallucinogen), Nitrous Oxide (Anesthetic), or Naproxen (Analgesic).
- **Tier 1 Craft:** Produces **4 doses** of a **Tier 2 Substance**. Examples of this level would be substances such as Barbiturates (Depressant), Cocaine (Stimulant), Psilocybin (Hallucinogen), Morphine (Anesthetic or Analgesic).
- Players do not need to assign a specific substance, though they may, but do need to outline the **Class** and **Tier** of the addictive substance.
- **Addiction-Based Items** always have **Consumable Duration** and **By Touch Delivery**.

Chemistry Crafting Limitations

- **Chemists cannot craft weapons or armor.**
- Chemists **cannot use the Permanent Durability Method** in combination with the following:
 - **By Melee**
 - **By Shot**
 - **By Armor**
 - **By Shield**
- However, they **can** create **temporary modifications** to weapons (e.g., bullets or blade coatings) using these Methods.

Chemistry Carriers

Whenever a Chemist crafts an item, they must include two carriers:

1. **Toxin Carrier** – Represents the chemical nature of the item.
2. **Elemental Carrier** – Chemists choose 1 carrier for free at character creation from the following list: Psi, Fire, Water, Lightning, Nature. A chemist may opt instead to use a carrier associated with their major power.

Power Cores

For more information, see section [Powered Tech & Rigs](#).

Programmer-Specific Crafting Rules

Programmers specialize in creating **pre-designed hacking Scripts and Software Chips** to run **Powered Tech**.

Programing Recipes Automatically Known

All Programmers begin with knowledge of the following **Tier 0 Effect Recipes**:

- **1 Damage By Network by Packet** – A Network-based attack delivered via a packet.
- **Bestow By Network to Weapon Strike** – Enhances a weapon strike with Network disrupting properties.

These Tier 0 Recipes are unique and cannot be broken down into individual Methods.

Programmers specialize in crafting **scripts and Software Chips**. Unlike Engineers and Chemists, **Programmers typically do not craft standalone items**.

Programmers can produce the following:

- **Software Chips**
- **Scripts**
- **Automated Items**

Scripts

Programmers have access to a **special type of crafting** called **Scripts**, which are **prepared Technomancy functions**.

Important: Scripts do not follow normal crafting rules. To fully understand Scripts, refer to [Appendix: Hacking](#).

How Scripts Works

1. **Determine Known Technomancy Variables**
 - A Programmer has access to all Variables that replicate Methods they know.
 - If they are also a Technomancer, they may use all Variables they have purchased.
 - Example:
 - A Programmer with the **5 Damage Effect Method** has access to the **5 Damage Technomancy Variable** when designing Script Recipes.
2. **Designing a Script Recipe**
 - Spells are designed using the available Symbols.
 - The **Effect Tier** of a Script is the sum of all Effect Symbols in the Function.

- **Duration and Delivery Variables** raise the **Crafting Tier**, just like Methods.
- 3. **Choosing Durability**
 - If the Script is Consumable, it does not need an activation cost.
 - If the Script is **Durable or Permanent**, activating the Script costs exactly what activating the Function would cost.
- 4. **Adding the Technomancy String**
 - The string must be written on the Script phys-rep.
 - The string must be spoken aloud in-game before the Script can be used, exactly like a Function.

Automated Items

Programmers can make special tech that is capable of executing internal functions independently of the wielder, called Automated Items. An Automated Item must be Durable or Permanent in durability, and all the attribute costs of the Script are added together and converted to a Power Point cost, but otherwise it functions as a Script, including the Hacking Function. An Automated Item must be powered by a power core (it is treated as Power Rig compatible).

Programmer Carriers

All scripts use the carrier Network.

Software Chips

For more information, see section [Powered Tech & Rigs](#).

Powered Tech & Rigs

Powered Tech are items that utilize a more complex system of hardware, software, and power supply to function. These items use **Power Points** instead of standard attributes, allowing characters to **activate powerful effects without consuming their normal ability points**.

Using Powered Tech

- Any character can use **Powered Tech**, but they must have a **Power Rig**.
- A **Power Rig** consists of:
 - **Tech Item** (e.g., weapon, armor, device)
 - **Software Chip** (determines effects)
 - **Casing** (power hub)
 - **Power Core** (stores Power Points)

Power Rig **Formula**:

- ◆ **Power Rig = Tech Item + Software Chip + Casing + Power Core**

Powered Tech Functionality

- A character can only have one power core active at a time.
- **Most power cores burn out** when a character resets.
- If a power core is **not used between resets**, it **does not burn out**.
- The **Casing connects to Tech Items**, with a **maximum limit based on the item's tier**.
- A **Software Chip determines the activation cost**, which is paid in **Power Points from the Power Core**.

Powered Tech Crafting by Header

Each type of crafting is responsible for creating the different pieces necessary for a full rig of powered tech to work.

Engineers

- **Crafts: Casings and Tech Items**
- **Types of Tech Items:**
 - **Weapons** (*Melee or Ranged*)
 - **Guards** (*Armor or Shields*)
 - **Devices** (*Tools, goggles, wearable tech, etc.*)

Allowed Deliveries for Tech Items:

Item Type	Permitted Deliveries
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Weapon By Melee, By Shot, By Gesture, By Area

Guard By Armor, By Shield, By Touch

Device By Touch, By Packet, By Gesture, By Blast, By Area, By Voice

Tech Item Crafting Tier Table:

Chip Slots	Required Engineer Tier	Crafting Tier
1	1	5
2	2	6
3	3	7
4	4	8
5	4	9

When crafting a Tech Item normal crafting rules apply allowing the item to also be crafted with innate abilities before Software Chips are loaded into the item. The crafting tiers for such an item are added to the crafting tier derived from the number of Chip Slots the final item would have.

Example: Crafting a Sword with a "Bind" Effect and 2 Chip Slot

A Crafter wants to make a **melee weapon that can bind opponents**.

- **By Melee** (Delivery Method, Tier 0)
- **Bind** (Effect Method, Tier 1)
- **Permanent Durability** (Durability Method, Tier 4)
- **Standard Duration** (Duration Method, Tier 0)

Crafting Tier = 5

In the final step of designing the item the crafting tier of creating an item with 2 Chip Slot is added.

- **2 Chip Slot** (Requires Engineer Tier 2)

Crafting Tier = 6

By adding these two costs we end up with a final Crafting Tier of 11.

Final Crafting Tier: 5 (Normal Crafting) + 6 (Tech Item Crafting) = 11

Casing Crafting

- A **Basic Casing** has **no Durability, Duration, Effect, or Delivery Method**.
- The **Crafting Tier** starts at **2**, allowing connection to **one Tech Item**.

- Every 2 additional Tiers add one more item slot.

Casing Crafting Tier Table:

Item Slots	Required Engineer Tier	Crafting Tier
1	1	2
2	2	4
3	3	6
4	4	8
5	4	10

Chemists

- **Crafts: Power Cores**
- **Function: Power Cores** fuel **Power Rigs** with **Power Points**.
- **Expiration: Power Cores burn out at reset** unless otherwise modified.

Power Core Crafting Tier Table:

Power Core Type	Power Points	Uses	Required Chemist Tier	Crafting Tier
Basic Power Core	5	1	1	1
High-Output Power Core	10	1	2	2
Basic Power Core +X Uses	5	1+X	1+X	1+X
High-Output Power Core +X Uses	10	2+X	2+X	2+X

Programmers

- **Crafts: Software Chips** (determine the item's effect)
- **Delivery:** A Programmer selects which Tech Item can **slot the Software Chip**.
- **Software Chips must have Durable or Permanent Durability.**
- **Restore Stamina/Focus effects are prohibited** for Software Chips.

Designing Software Chip Recipes is relatively simple; it is mostly a normal crafting Recipe, with the Programmer deciding on Effects, Delivery, and Duration Methods as normal, with the exception of Restore Stamina/Focus effects being prohibited. Unlike Scripts, Software Chips do not apply the Network

carrier to their effects, as the chip merely relays instructions to a physical device. To determine the Delivery, the crafter decides what type of Tech Compatible Item can slot the Chip; the Delivery raises the Crafting Tier as normal. Note that this allows Programmers to use some Deliveries not normally available to them. Software Chips must have a Durability Method of either Durable or Permanent. Finally, total up the attribute cost for activating the item, and convert the cost to a Power Point cost. The Tier of the Programming Chip is determined as if one were crafting a normal item.