

40 Mechanician (Ver 2.1)

Mechanicians are a blend of engineer and builder who possess both design knowledge and crafting ability so that they may plan and personally manufacture devices. Even without modern power sources and techniques, Mechanicians can still build quite sophisticated devices using systems such as springs, hydraulics and wind-based motor systems to drive well greased moving parts. Mechanicians may also be called on to devise locks and traps to foil the efforts of thieves. They often practice a particular trade and are called Locksmiths, Shipwrights, Architects, etc. A skilled mechanician may master several such professions. Mechanicians often build overly large and complex devices that are frequently non-functional and occasionally dangerous. Their profession is usually considered more of an art than a science.

40.1 Restrictions

A Character must be literate in at least one language at Rank 6 or above to acquire the mechanician skill.

MD affects a mechanician's Experience costs. A mechanician pays 10% extra EP if their MD is less than 15 and pays 10% less if their MD is more than 22.

A mechanician must pay money for the upkeep of a studio or workshop, tools, work-in-progress and possibly guild fees.

The more complex, dangerous and experimental a mechanician's project is, the more likely that it is to be temperamental, expensive to upkeep and prone to breakdowns.

40.2 Benefits

Drafting A mechanician may draft and use plans accurately. A mechanician may draw freehand sketches and may draft, read and use plans and diagrams, provided that they relate to an ability with which the mechanician is familiar and that the mechanician is literate in the language used.

Supervision Many projects will require the assistance of artisans and labourers, as well as other mechanicians. Mechanicians gain the ability to supervise subordinates who are practising either the mechanician skill or an artisan skill necessary to the mechanician's project.

Artisan discount Many of the mechanician abilities give the character a grounding in an Artisan skill. A character may rank artisan skills that are listed under abilities they have learned, at half of the normal experience cost and time (round up), up to the same Rank as mechanician. Artisan skills are shown in the mechanician ability listings as [craft].

Combinations A mechanician may combine known abilities. A mechanician may combine any or all of their areas of expertise in the design and execution of a project. A mechanician may also combine their skills with other crafters to produce items. The GM must decide, based on the abilities possessed by the mechanician and other assistants, whether or not they may design and build a certain project.

Example A mechanician who knew bridge building, stoneworking, earthworks and hydro engineering, could design and build an aqueduct that spanned a gorge. A mechanician who knew chronometrical engineering, fine materials and spell containment, might design and build a "magical trap" that has a time delay in the trigger mechanism. A mechanician, an armourer and a weaponsmith could combine abilities to build a suit of plate armour with retractable blades at various locations. A mechanician wishes to build a mill using a waterwheel for power. The GM determines that they will need the architecture, complex mechanics, stoneworking and woodworking abilities. A mechanician who knew boat building and animal and textile products, could design and build a sail powered coracle made of leather, but not a wooden dinghy.

40.3 Abilities

All mechanicians have certain rudimentary abilities. At Rank 0 a mechanician gains an in-depth knowledge of basic mechanics (including levers, wedges,

simple gears and pulleys, balances and use of ropes) and basic foundations (including simple earthworks, digging and shoring pits, piled stone walls and brick-making and laying). [Brickmaker /layer].

After Rank 0 a mechanician acquires one new ability per Rank. Additional abilities may be gained after achieving Rank 10, by the expenditure of 1500 Experience Points and 4 weeks of training.

Some mechanician abilities give abstract comprehension of the theory, design and construction techniques involved in crafting different projects. Others offer an understanding of materials along with a basic practical knowledge and ability in crafting those substances. Each ability lists the particular crafts or substances with which knowledge is gained. Special abilities are fully explained in later sections of this skill.

Mechanician knowledge is of a more practical and less esoteric nature than that gained through equivalent philosopher fields and may be complemented by the acquisition of philosophic knowledge.

The abilities available are:

Animal and textile products including material such as horn, furs and leather, natural fibres and other non-wooden plant products, heavy cloth and ropes. Does not include venoms and alchemical extracts. [Rope / Netmaker], [Sail / Tentmaker], [Leatherworker], [Tanner / Hideworker / Furrier].

Architecture unfortified buildings of any size.

Bridges includes suspension, span, swing, hump-back and floating bridges.

Carriages wagons, carriages and coaches. [Cartwright / Wheelwright].

Chronometers clocks, time-pieces and other timing devices.

Complex locks special ability. (See below). [Locksmith].

Complex mechanics including stresses, valves, pumps, power transmission (complex gears, compound pulleys, pistons, hydraulics, etc.) and power generation (springs, wind, water, etc.).

Earthworks complex earthworks, foundations and landscaping. Civil engineering (including road, ramp and town square building, as well as town planning). Earthworks will be required to build most large structures. [Lumberjack].

Fine materials fine and delicate materials, wire-pulling and small component manufacture. [Gold/Silversmith].

Fortifications defensive military works. Includes a basic knowledge of siege warfare.

Glassworking glass mixing, blowing, window construction and staining. [Glass-blower].

Hydro-mechanics devices (pumps, pistons, valves, waterscrews, etc.), canals, seals, drainage, irrigation, sewage systems and plumbing.

Metalworking the forging and casting of base metals. [Blacksmith], [Caster / Pewterer / Tinsmith].

Mines mine design & construction, pneumatic devices (air pumps, fans, ventilators, etc.), knowledge of air shafts, ventilation and basic geology. [Miner].

Optics optical devices (telescopes, magnifying glasses, spectacles, mirrors, etc.), knowledge of light, optics, and lens making, grinding and finishing.

Prosthetics articulated artificial limbs.

Traps special ability. (See 40.5).

Ships new designs for boats and ships. [Shipwright].

Siege engines Offensive military machines. Includes a basic knowledge of siege warfare.

Spell containment special ability. (See 40.6).

Stoneworking quarrying, cutting, finishing and fitting. [Mason].

Woodworking carpentry, joints and wood-joining. Also making basic wooden constructions. [Carpenter / Cabinetmaker].

Experimental engineering This ability may be learnt any number of times with different experimental areas. It may first be learnt when acquiring Rank 8. Experimental engineering areas may include: aeronautics, steam, geo-thermal, gases, explosions, perpetual motion, vacuum, sub-marine and advanced versions of any other mechanician ability they already possess.

40.4 Complex Locks

Rank A Complex Lock is considered to have a Rank, which is the Effective Rank that the mechanician used in the construction of the lock. The Rank of a lock may be less than or equal to the Rank of the mechanician constructing it.

Time & cost The time to construct a Complex Lock is: (11 + Lock Rank - mechanician Rank) hours.

The cost is (25 × Lock Rank [minimum 10]) sp.

A mechanician may always open one of their own Locks in: (12 - mechanician Rank) minutes.

40.5 Trap Construction

Rank A trap is considered to have a Rank, which is the Effective Rank that the mechanician used in the construction of the trap. The Rank of a trap may be less than or equal to the Rank of the mechanician constructing it.

Time & cost The time and cost to create a trap will vary greatly, depending on the complexity, size and nature of the trap.

The most commonly encountered type of mechanician trap is the precision trap. This is the type of small needle or blade trap that may be set into or adjacent to locks or other precision devices.

A lock or similar device may have up to Rank / 3 (round up) traps on or adjacent to it.

The time to build each trap is: (11 + Trap Rank - mechanician Rank) hours.

The cost is: (125 × Trap Rank) sp, minimum of 50, plus the cost of poisons, alchemical materials.

A triggered trap may be reset by any Mechanician whose Rank is at least half that of the trap. This will take: (11 - mechanician Rank) hours. A trap may need refuelling.

A mechanician may disable or re-enable one of their own traps in (12 - mechanician Rank) minutes.

Triggering The precise actions that will trigger a trap must be specified at the time that the trap is constructed. Traps on a lock or other precision device are automatically triggered if the device is operated in the pre-specified manner and the traps have not been removed or disabled.

Damage A trap may be built that causes physical damage or explosively discharges its contents in a cone up to: (Trap Rank + 1) feet wide and (10 + Trap Rank) long, or activates the mechanical trigger of a "spell container".

A precision trap that causes physical damage may cause up to: [D10 + Trap Rank] Damage Points. It may also be poisoned, coated with acid, etc., so as to cause additional damage.

40.6 Spell Containment

A mechanician may use this ability to create a spell container, or magical trap, with a mechanical trigger.

Construction The mechanician with the "spell containment" and "fine materials" abilities can build a mechanical device into which a spell can be stored. The device is usually referred to as a magical trap, or a spell container. The device is made out of silver, truesilver or starsilver. Often the device is built inside or incorporating other materials with which the mechanician is familiar.

Spell Storage A single charge of a suitable spell may be stored in the trap or container by an Adept successfully casting a spell into the device after performing Ritual Spell Preparation. A double or triple effect stores an enhanced spell as specified by the Adept. A failure has no effect. A backfire affects the Adept as normal, and also results in the device being damaged so that 20% more time and materials are required before another try at storing a spell may be attempted. The spell to be stored must include a Storage type of "Magical Trap".

Triggering The precise actions that will trigger the device must be specified at the time that the device is constructed. When these actions are performed the spell is released. The spell stored must either affect only the entity or object that triggered the release of the spell, or affect an area in relation to the device. All variable spell effects, such as direction and volume affected, must be defined at the time of storage. Once the spell has been triggered the device is useless, although metal equal to 10% of the cost may be recovered. If the spell is dissipated, then 20% of the cost may be recovered.

Time to construct $25 - (2 \times \text{mechanician Rank})$ hours.

Time to store spell $(\text{Spell Rank} - \text{mechanician Rank})$ hours, (minimum 1, and maximum 10).

Cost $(\text{Spell Rank (minimum 1)} \times \text{Spell EM}) + 100$ sp.

Minimum Weight $(16 - \text{mechanician Rank})$ ounces.