CANNON COMPANION

REDUX V1.21

FIREARM DESIGN AND CUSTOMIZATION

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FIREARM DESIGN AND CUSTOMIZATION

This section provides rules for designing and customizing firearms and ammunition *Shadowrun. Firearm Design* and *Design Options* cover the design of new guns. *Firearm Customization* provides rules for modifying and upgrading existing firearms, which is the most common method for a shadowrunner to personalize his weapon.

GUNSMITHING TOOLS

Gunsmithing tools are divided into four classes, the normal kits, shops and facilities (priced as vehicle tools, p. 288, SR3) and the Maintenance Kit. Maintenance Kits are 20 nuyen and are only useful for a specific weapon, kits are purchased based on the frame type of the firearm, and shops and facilities are not frame-specific.

MAINTENANCE KITS

Maintenance kits provide the base tools and equipment needed to service a weapon. This includes cleaning materials and any special tools needed to field strip the weapon for maintenance. These kits are usually provided free with the weapon at purchase, and many store the kits in access spaces in the weapon itself (typically in the stock). They can also be purchased separately.

Any modification task that requires a Kit can be performed by a maintenance kit of the correct type, but the target number for the task is increased by +2.

TASK BONUS

In some cases superior resources may grant a bonus to the work rate. For purposes of gunsmithing this usually applies for having superior tools. If the gunsmith possesses tools one level better then what are required (for example, a shop where only an kit was necessary) receives a task bonus of +1. If there are facilities two levels greater then that required (for example, the gunsmith has access to a facility) then the task bonus is +2.

A +1 task bonus means the task period is divided by 2. A +2 task bonus means the task period is divided by 3, and so on.

FIREARM DESIGN

Although as a general rule the equipment needed to actually set up a production line is beyond the capabilities of the average shadowrunner group, it is not outside the realm of possibility. A sufficiently motivated and wealthy individual could buy the necessary manufacturing material, tools, raw materials, design equipment, and testing equipment to design a weapon from scratch. In most cases acquiring a special weapon will require contacts with a corporation or calling in a favor. In many cases just acquiring the design may become an adventure in itself - especially if other competing corporations take an interest in acquiring the characters new toys.

In game terms this requires at least a facility for gun production. Gunsmithing shops can perform much of the preliminary design work for a weapon design, but actual production and testing can only be performed with access to a full facility. Kits never sufficient to build or design firearms from scratch, but they are usually capable of performing simple modifications to existing weapons.

THE DESIGN PROCESS

Firearm design consists of four discreet stages, starting with determining the basic frame for the weapon. After this, additional options and improvements are added to the base design, adding more and more Design Points to the weapons Design Point Value. After this, an appropriate Mark-Up Factor is determined and the final price of the weapon is determined.

The design process involves the following steps:

1. Select a Frame
2. Add Design Options
3. Add Modifications
4. Determine Final Cost

1. SELECT A FRAME

The first step in designing a firearm is to choose one of the base frames listed. This will determine not only the base statistics and possible design options, but also which skill is used to fire the weapon. Each frame consists of the following:

Reliability: The weapons base Reliability. See p. xx for additional information on firearm reliability.

Barrel: The weapons base barrel length, ranging from Extremely Short (ES) to Extremely Long (EL).

Power: The base Power level of the weapon.

Damage Level: The base Damage Level of the weapon, ranging from L (Light) to D (Deadly).

Mode: The firing mode(s) that the weapon can utilize (p. 114 - 115, *SR3*), ranging from SS (single shot) to FA (full-auto).

Concealablilty: The base Concealability rating of the firearm.

Weight: The gun's empty base weight, before additions, modifications or ammo.

Ammo Cap: The firearm's base ammunition capacity, given as the number of rounds that can be loaded at one time. For cylinder, break-open and magazine weapons it represents their base internal ammunition supply. For clip or belt fed weapons it represents the amount of ammunition that is factored into the base Concealability when loaded.

Ammo Load: How the ammunition is loaded into the weapon, using the codes given on p. 280, *SR3.*

Mounts: The available space to mount various modifications on the firearm, both internal and external. The possible mount positions are barrel, top, underbarrel, grip, and stock. Each mounting location may hold either 3 Small options, 1 Large and 2 Small options, or a single Exclusive option.

FCU: Firearm Construction Units are abstract units that determine how much internal space the firearm offers to accommodate design options and modifications.

DPV: The base Design Point Value of the frame.

Hold-Out Pistol
Reliability: Reliable (1)
Barrel: ES
Power: 4
Damage Level: L
Mode: SS
Concealability: 8
Weight: .25
Ammo Cap: 4
Ammo Load: (c)
Mounts: None
FCU: 1
DPV: 25

Light Pistol
Reliability: Reliable (1)
Barrel: VS
Power: 6
Damage Level: L
Mode: SA
Concealability: 6
Weight: .75
Ammo Cap: 12
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip
FCU: 1.5
DPV: 90

Machine Pistol
Reliability: Unreliable (2)
Barrel: VS
Power: 6
Damage Level: L
Mode: SA/BF
Concealability: 6
Weight: 2
Ammo Cap: 30
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip
FCU: 1
DPV: 180

Heavy Pistol
Reliability: Reliable (1)
Barrel: VS
Power: 9
Damage Level: M
Mode: SA
Concealability: 5
Weight: 1.5
Ammo Cap: 10
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip
FCU: 2
DPV: 120

Submachine Gun
Reliability: Reliable (1)
Barrel: SH
Power: 6
Damage Level: M
Mode: SA/BF
Concealability: 4
Weight: 2
Ammo Cap: 20
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 1.5
DPV: 100

Shotgun
Reliability: Very Reliable (*1)
Barrel: SH
Power: 8
Damage Level: S
Mode: SA
Concealability: 3
Weight: 4.5
Ammo Cap: 5
Ammo Load: (m)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 2.5
DPV: 130

Taser
Reliability: Reliable (1)
Barrel: ES
Power: 10
Damage Level: S (Stun)
Mode: SA
Concealability: 5
Weight: 2.5
Ammo Cap: 5
Ammo Load: (m)
Mounts: Top
FCU: 1
DPV: 200

Sport Rifle
Reliability: Reliable (1)
Barrel: LN
Power: 7
Damage Level: S
Mode: SA
Concealability: 2
Weight: 4.5
Ammo Cap: 5
Ammo Load: (m)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 2.5
DPV: 125

Assault Rifle
Reliability: Reliable (1)
Barrel: LN
Power: 8
Damage Level: M
Mode: SA/BF/FA
Concealability: 3
Weight: 3
Ammo Cap: 30
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 3
DPV: 225

Sniper Rifle
Reliability: Very Reliable (*1)
Barrel: VL
Power: 14
Damage Level: S
Mode: SA
Concealability: -
Weight: 3
Ammo Cap: 6
Ammo Load: (m)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 2.5
DPV: 800

Light Machine Gun
Reliability: Reliable (1)
Barrel: LN
Power: 7
Damage Level: S
Mode: BF/FA
Concealability: -
Weight: 6
Ammo Cap: 40
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 4
DPV: 425

Medium Machine Gun
Reliability: Reliable (1)
Barrel: LN
Power: 9
Damage Level: S
Mode: FA
Concealability: 2
Weight: 8
Ammo Cap: 30
Ammo Load: (c)
Mounts: Barrel, Top, Under
FCU: 4
DPV: 700

Heavy Machine Gun
Reliability: Reliable (1)
Barrel: VL
Power: 10
Damage Level: S
Mode: FA
Concealability: -
Weight: 9
Ammo Cap: 30
Ammo Load: (c)
Mounts: Barrel, Top, Under
FCU: 4
DPV: 1000

Assault Cannon
Reliability: Unreliable (2)
Barrel: LN
Power: 18
Damage Level: D
Mode: SS
Concealability: -
Weight: 22
Ammo Cap: 20
Ammo Load: (c)
Mounts: Barrel, Top, Under, Grip, Stock
FCU: 4
DPV: 1400

2. ADD DESIGN OPTIONS
Design options are available only during the weapon's design. Unless otherwise noted, each option may be taken only once. Each frame has different limitations in regard to which options it can take, as described under Available Options By Frame. Each Design Option includes the following information:

DP: The Design Points added to the weapon's DPV by the option.

FCU: The FCU taken up or added by the option.

Weight: The weight added to or subtracted from the gun by the option. This is usually based on a percentage of the frames base weight. The percentages are totaled and then calculated based on the frames base weight to determine Total Weight. Final Weight is the weight of the weapon with all options, this is usually only necessary for the metahuman design option.

For example, two options each add 5% of base weight, another subtracts 2%. The final modifier to the weapons base weight is +8%

Concealablilty: The modification to the Concealability rating of the firearm, up or down, by the option.

AVAILABLE OPTIONS BY FRAME
Hold-Out Pistol: Ammo Loading (break action and cylinder only), Cased Only, Firing Mode (SA only), Flechette Only, Fragile Construction, Improved Ammo Capacity, Improved Concealability, Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Melee Hardening, Multiple Barrels (up to 3 additional), Polyresin Construction (up to 3 levels), Reduced Power, Reliable, Steel Construction, Unreliable, Weight Increase

Light Pistol: Ammo Loading (no belt), Barrel Extension/Reduction (up to 1 level of extension only), Cased Only, Firing Mode (SS, BF or SA/BF only), Flechette Only, Fragile Construction, Helix Clip, Improved Ammo Capacity, Improved Concealability, Improved FCU (up to 2 levels), Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Melee Hardening, Metahuman Design, Multiple Barrels (up to 1 additional), Polyresin Construction (up to 3 levels), Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 1 level), Weight Increase

Machine Pistol: Barrel Extension/Reduction (up to 1 level), Cased Only, Firing Mode (FA or BF/FA only), Flechette Only, Fragile Construction, Heavy/Light Barrel, Helix Clip, Improved Concealability, Improved FCU (up to 4 levels), Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Integral Recoil Compensation (up to 1 level), Melee Hardening, Metahuman Design,Poyresin Construction (up to 2 levels), Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 1 level), Weight Increase

Heavy Pistol: Ammo Loading (break action, internal magazine and cylinder only), Barrel Extension/Reduction (up to 1 level), Cased Only, Firing Mode (SS, BF or SA/BF only), Flechette Only, Fragile Construction, Gyrojet Only, Heavy/Light Barrel, Helix Clip, Improved Ammo Capacity, Improved Concealability, Improved FCU (up to 4 levels), Increased Damage Level (up to 2 levels), Increased Power (up to 1 level), Integral Recoil Compensation (up to 1 level), Melee Hardening, Metahuman Design, Polyresin Construction (up to 3 levels), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 3 levels), Weight Increase

Submachine Gun: Barrel Extension/Reduction (up to 1 level), Bullpup Configuration, Firing Mode (BF, FA, BF/FA or SA/BF/FA only), Fragile Construction, Heavy Barrel/Light Barrel, Helix Clip, High Velocity Capability, Improved Concealability, Improved FCU (up to 5 levels), Increased Power (up to 1 level), Integral Recoil Compensation (up to 2 levels), Melee Hardening, Metahuman Design, Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Polyresin Construction (up to 1 level), Unreliable, Weight Decrease (up to 4 levels), Weight Increase

Shotgun: Ammo Loading (break action, clip, cylinder, or belt only), Barrel Extension/Reduction (up to 2 levels reduction or 1 level of extension), Bullpup Configuration, Firing Mode (SS, BF, SA/BF, or SA/BF/FA only), Fragile Construction, Heavy/Light Barrel, Improved Ammo Capacity, Improved Concealability (up to 1 level), Improved FCU (up to 6 levels), Increased Power (up to 2 levels), Integral Recoil Compensation (up to 2 levels), Melee Hardening, Metahuman Design, Multiple Barrels (up to 4 additional), Polyresin Construction (up to 1 level), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 3 levels), Weight Increase

Taser: Ammo Loading (break action or clip only), Firing Mode (SS only), Fragile Construction, Improved Concealability, Increased Power (up to 2 levels), Melee Hardening, Metahuman Design, Multiple Barrels (up to 1 additional), Polyresin Construction (up to 2 levels), Reduced Damage Level, Reduced Power, Reliable, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 1 level), Weight Increase, Wireless

Sport Rifle: Ammo Loading (break action or clip only), Barrel Extension/Reduction (up to 1 level), Bullpup Configuration, Cased Only, Easy Breakdown, Firing Mode (SS, or SA/BF only), Fragile Construction, Heavy/Light Barrel, Improved Ammo Capacity, Improved Concealability (up to 1 level), Improved FCU (up to 6 levels), Increased Damage Level (up to 1 level), Increased Power (up to 2 levels), Integral Recoil Compensation (up to 1 level), Melee Hardening, Metahuman Design, Multiple Barrels (up to 1 additional), Polyresin Construction (up to 1 level), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 3 levels), Weight Increase

Assault Rifle: Ammo Loading (belt only), Barrel Extension/Reduction (up to 1 level), Bullpup Configuration, Cased Only, Easy Breakdown, Electric Ignition, Fragile Construction, Heavy/Light Barrel, High-Velocity Capable, Improved Concealability, Improved FCU (up to 6 levels), Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Integral Recoil Compensation (up to 2 levels), Melee Hardening, Metahuman Design, Multiple Ammunition Feeds, Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Polyresin Construction (up to 1 level), Unreliable, Weight Decrease (up to 4 levels), Weight Increase

Sniper Rifle: Ammo Loading (clip only), Barrel Extension/Reduction (up to 2 levels of reduction), Bullpup Configuration, Cased Only, Easy Breakdown, Electric Ignition, Firing Mode (SS only), Fragile Construction, Heavy/Light Barrel, Improved Ammo Capacity, Improved Concealability (up to 1 level), Improved FCU (up to 6 levels), Increased Damage Level (up to 1 level), Increased Power (up to 2 levels), Integral Recoil Compensation (up to 1 level), Metahuman Design, Polyresin Construction (up to 3 levels), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 3 levels), Weight Increase

Light Machine Gun: Ammo Loading (belt only), Barrel Extension/Reduction (up to 1 level), Bullpup Configuration, Cased Only, Electric Ignition, Firing Mode (SA, BF, FA, SA/BF or SA/BF/FA only), Fragile Construction, Heavy/Light Barrel, High-Velocity Capability, Improved FCU (up to 7 levels), Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Integral Recoil Compensation (up to 2 levels), Metahuman Design, Multiple Ammunition Feeds, Multiple Barrels (up to 4 additional), Polyresin Construction (up to 1 level), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 6 levels), Weight Increase

Medium Machine Gun: Ammo loading (belt only), Barrel Extension/Reduction (up to 1 level), Cased Only, Electric Ignition, Firing Mode (SA, BF, FA, SA/BF or SA/BF/FA only), Fragile Construction, Heavy/Light Barrel (heavy only), High-Velocity Capability, Improved FCU (up to 8 levels), Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Integral Recoil Compensation (up to 2 levels), Metahuman Design, Multiple Ammunition Feeds, Multiple Barrels (up to 6 additional), Polyresin Construction (up to 1 level), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 8 levels), Weight Increase

Heavy Machine Gun: Ammo Loading (belt only), Electric Ignition, Fragile Construction, Heavy/Light Barrel (heavy only), Improved FCU (up to 8 levels), Increased Damage Level (up to 1 level), Increased Power (up to 1 level), Integral Recoil Compensation (up to 2 levels), Metahuman Design, Multiple Barrels (up to 6 additional), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 8 levels), Weight Increase

Assault Cannon: Ammo Loading (break action or belt only), Barrel Extension/Reduction (up to 2 levels), Electric Ignition, Firing Mode (SA, BF, FA, SA/BF or SA/BF/FA only), Fragile Construction, Heavy/Light Barrel (heavy only), Improved FCU (up to 4 levels), Increased Power (up to 2 levels), Integral Recoil Compensation (up to 1 level), Metahuman Design, Multiple Barrels (up to 6 additional), Reduced Damage Level, Reduced Power, Reliable, Steel Construction, Unavailable Mounting Space, Unreliable, Weight Decrease (up to 6 levels), Weight Increase

DESIGN OPTIONS

Ammo Loading

The method of loading ammunition in the gun can be altered. This replaces the original method so the points for that load are returned, except in the case of belt loading, which is in addition to the base ammo load.

Changing to break action reduces your ammo capacity to 1; changing to cylinder, clip or magazine reduces ammo capacity to 4. These reductions can be offset (see Improved Ammo Capacity).

DP: Belt +10, Break Action -5, Clip +10. Cylinder +8, Internal Magazine +5
FCU: None
Weight: None
Concealability: Break Action +1, Clip -1, Cylinder -1

Barrel Extension/Reduction

The length of a weapons barrel not only has an impact on its damage (since shorter barrels mean the round will not gain full speed) but also its range (since with less stabilization and speed the round will be less accurate and have less energy).

There are seven barrel lengths, and each frame is assumed to come standard with one of them, with the effects already factored into its statistics. The barrel lengths are: Extremely Short (ES), Very Short (VS), Short (SH), Medium (MD), Long (LN), Very Long (VL), and Extremely Long (EL).

Reducing the length of the barrel decreases the maximum range of the weapon by 10% by every level of reduction. Every two levels of reduction reduces the range category of the weapon by one full level. Each level of reduction also reduces the Power of the weapon by .5 (round up).

Extending the barrel has the opposite effect. Each level increases the maximum range of the weapon by 10%, with every two levels of extension increasing the range band by one level. Increase the Power of the weapon by .5 (rounded down) for every level of extension.

The maximum level available is listed on the Available Design Options by Frame table. If the barrel extension is removable apply a +20% markup to the DP cost of the barrel.

DP: Extension +15/level, Reduction +8/level
FCU: Extension -.2/level (r)
Weight: Extension +5%/level of base weight; Reduction -5%/level of base weight
Concealability: Extension -1, Reduction +1

Bullpup Configuration
Most weapon frames can be designed with the trigger placed further forward, in front of the clip/magazine. This makes the weapon more compact and concealable, and also provides 1 point of recoil compensation. This option is not compatible with Improved Concealability (p. 76) and counts as a Large option in the stock.

DP: +25
FCU: -.5
Weight: None
Concealability: +1

Cased Only
This modification means the weapon is designed to fire cased rounds. It cannot fire caseless rounds. Shotguns are already assumed to use cased rounds while all other frames are assumed to be caseless by default.

Decrease the weapons Ammo Capacity by 20% to represent the increased ammunition sizes and weights.

DP: -5
FCU: None
Weight: None
Concealability: None

Easy Breakdown
Some firearms, especially sniper rifles, are designed to be broken down and rebuilt quickly. Guns with this option can be disassembled or re-assembled in 3 Complex Actions, and can fit into a large briefcase when disassembled.

This option reduces the Reliability of the weapon by 1 level.

DP: +40
FCU: -1
Weight: None
Concealability: None

Electric Ignition
Instead of relying on standard gas or recoil blowback to cycle new rounds the weapon can use an electric ignition system. This is usually referred to as a "chain gun" action. It improves reliability but requires power to operate.

The power requirement is determined by .05 x Max. RPP. The result is the PF that the weapon consumes for every Combat Turn of firing. Max RPP is the maximum amount of rounds per Combat Phase that the weapon can fire. Even if the weapon uses less then this amount the electric ignition uses the same amount of power. This requirement is cumulative with any other power requirements for the weapon (such as a mechanical or electrical gatling).

An electric ignition system will increase the weapons Reliability rating by one level. Cylinder, break-action, and magazine-fed weapons may not use electric ignition. Special ammo is required, this electrically-primed ammunition costs the same but has an availability code of +2/+0. It cannot be used in conventional weapons nor may electric ignition firearms utilized standard ammunition.

DP: +50
FCU: -1
Weight: None
Concealability: None

Firing Mode
A different trigger grouping will change the basic rate of fire listed in the firearm template, effectively changing the modes in which the firearm can be used. The options are as follows: SS, SA, BF, FA, SA/BF, BF/FA and SA/BF/FA.

If the weapon frame was not originally capable of BF or FA and is given BF then the weapon suffers a +1 recoil modifier. If it was given FA then it will suffer +2 recoil modifier. If it is given both BF and FA then the penalty is still only 2 points. In both cases the Reliability of the weapon will drop one level.

Each mode is purchased individually, even when combined with other modes. If a combination is purchased that includes the previous mode, the previous mode does not need to be purchased. If the previous mode is dropped, the points for it are returned. Break action weapons are limited to SS and SA firing modes.

For example, a submachine gun (base SA/BF) that is switched to BF/FA must pay the cost for FA, but the points for SA mode are returned.

DP: BF +100, FA +120, SA +5, SS -5
FCU: BF -1, FA -1, all others 0
Weight: BF +10% of base weight, FA +10% of base weight, all others 0
Concealability: None

Flechette Only
This design option turns the weapon into a slivergun. Rather than firing bullets, it fires only flechette ammunition.

DP: +10
FCU: +.5
Weight: None
Concealability: None

Fragile Construction
This design option makes the weapon more prone to misalignment and damage if treated roughly. Every time the weapon is treated roughly or used as a weapon in melee combat make an immediate Breakdown Check, with a target number of 3. This only applies for rough handling.

Fragile construction may be combined with Unreliable.

DP: +10
FCU: +.5
Weight: None
Concealability: None

Gyrojet Only
This modifies the weapons frame to fire gyrojets. Gyrojets may not take Reduced or Increased Damage Level or Power. However, they are affected by Barrel Reduction/Extension since it affects the stability and speed of the gyrojet projectiles. Gyrojets may not have the Hi-Velocity Capability option. They may possess multiple barrels but not Electric Ignition (they are already assumed to use a similar system). Gyrojet weapons may not use the belt-fed ammo feed.

Gyrojets use gyrojet rounds (p. 39, CC). Gyrojet rounds with different Power Levels or Damage Levels are NOT interchangeable.

DP: +50
FCU: -1
Weight: None
Concealability: None

Heavy/Light Barrel
Heavy barrels are designed to take extensive shock and heat, necessary for weapons with high rates of fire. Light barrels are not designed to handle excessive mishandling or gas pressure and thus reduce the weapons maximum level of Increased Damage Level or Increased Power by 1. In addition, reduce the weapons Reliability level by 1 any time it uses BF or FA fire.

DP: Heavy +25; Light -10
FCU: None
Weight: Heavy +10% of base weight; Light -5% off base weight
Concealability: None

Helix Clips
Weapons that are clip fed may be designed to utilize helical magazines. Helix magazines are long tubular magazines with the rounds held in spirals. Only weapons with Light and Moderate Damage Levels may utilize these clips for size and feed reliability reasons. Users of helical clips should carefully note the weight of these clips.

This modification doubles the weapons base Ammo Capacity. Helix clips may hold a maximum of 3x the weapons new base ammo capacity. The weapon must be designed to allow for a certain clip size (based on multiples of the new base ammo capacity). While it may use a lesser size helix clip, it cannot use a larger one.

Helix clips take either the Top or Under mounting space on weapons. If the ammo capacity of the clips is equal to the base value of the weapon (x1) then it is considered a Small option. If it is 2x then it is considered a Large option, and if it can hold 3x then it is considered an Exclusive option.

Because of their unique location and weight helix clips provide one point of recoil reduction if they are Large or Exclusive options.

DP: 1x 10, 2x 20, 3x 40
FCU: -.25
Weight: +10% of base weight
Concealability: 1x None, 2x -1, 3x -3

High-Velocity Capability
High-velocity weapons are designed for maximum rate of fire, and sacrifice weapon reliability in order to place as many rounds as possible in the air in the shortest amount of time. Typically this option is combined with multiple barrels to create true minigun style weapons.

High-Velocity capable weapons cannot accept Barrel mounts. This option must be taken together with Heavy Barrel. If combined with Multiple Barrels, the HV-capable weapon (usually referred to as Electric Gatlings) has an actual maximum autofire rate of up to 6 x Number of Barrels.

The length of the weapons bursts are equal to the maximum autofire rating /3. These bursts suffer recoil for each bullet like standard bursts. For example, and HV machinegun with a burst length of 6 rounds would incur a Recoil Modifier of +6 for the first burst, and a second burst in the same Combat Phase would suffer +12.

Electric Gatlings figure their power requirements as for mechanical gatlings.

All HV-capable firearms have their Reliability reduced 2 levels. The weapon must have at least a BF/FA firing mode in order to take this option.

DP: +100
FCU: -1.5
Weight: +50% of base weight
Concealability: None

Improved Ammo Capacity (Cylinder or Internal Magazine)
A gunsmith can increase the ammo capacity of a firearm. Firearms with internal magazines have an ammo maximum of 10 rounds. Cylinder loaders (or revolvers) may only hold a certain number of shots depending on their frame. Hold-Outs may hold a maximum of 6 rounds, Light Pistols and Shotguns may hold up to 12, and Heavy Pistols may hold up to 8.

DP: +2/round added
FCU: -.25 per 4 rounds (round down)
Weight: +.05 per round
Concealability: -1 per 4 rounds (round down)

Improved Concealability
By making the gun smaller and more compact, the gunsmith can improve the Concealability rating. The maximum level is 2.

DP: +20/level
FCU: -.25/level
Weight: None
Concealability: +1/level

Improved FCU
Careful use of the available internal space can often allow more improvements to a firearm. The maximum level is 8.

DP: +25/level
FCU: +.5/level
Weight: None
Concealability: -1 for every 2 full levels

Increased Damage Level
By using a higher bore size the amount of trauma the weapon can do to a target is increased. This increases the Damage Level of the weapon by 1 level for each level purchased. Each level of Increased Damage Level also doubles the recoil for each round. For each increase past the first add an additional multiplier. For example, two levels of Increased Damage Level increase each rounds recoil by (x2 +x1) x3.

The maximum level available is listed on the Available Design Options by Frame table. Each level of Increased Damage Level also imposes a +1 recoil modifier.

The weapon may have more levels of Increased Damage Level then its frame could normally handle if it possesses a Heavy Barrel, but each level past the limit adds a cumulative level of Overstress. In addition, if the weapon is Overstressed then all uncompensated recoil is doubled.

For example, a Hold-Out can normally have one level of Increased Damage Level (bringing it to Moderate). If the weapon was further given an additional two levels of Increased Damage Level (bringing it to Deadly) the weapon would have (1+2) 3 levels of Overstress.

Increased Damage Level on a shotgun represents the use of CAW style metal-cased shells. If the shotgun with this modification attempts to use normal shotgun ammunition drop Reliability by 1 level. If the weapon attempts to fire burst or full-automatic then reduce the Reliability by 2 levels! Normal shotguns may not use CAW ammunition. There is no price or Availability modifier for CAW ammunition.

Taser darts may be powered by (or fitted with) more powerful capacitors. If so, the Damage Level is increased by one, but the Power is decreased by two points. There is no recoil penalty for increasing the Damage Level of a taser. For Wireless tasers (see below) the price of taser darts those weapons use are increased by x2 with an Availability of +2/+0. For tasers that fire darts trailing a wire (default), the DP cost as specified below.

DP: +100/level
FCU: -.5/level
Weight: +5% of base weight/level
Concealability: None

Increased Power
Some firearms can be designed to create a higher muzzle velocity and a more efficient use of propellant force. This increases the Power of the gun by 1 for each level purchased.

The maximum level available is listed on the Available Design Options by Frame table.

For tasers, this option consists of a more powerful capacitor.

DP: +80/level
FCU: -.25/level
Weight: +5% of base weight/level
Concealability: None

Integral Recoil Compensation
The weapon is designed to decrease recoil. It provides 1 point of recoil compensation per level. The maximum level available is 1 for pistols and tasers, 2 for larger weapons. High-velocity weapons (p. 76) have their maximum level increased by 1.

DP: +70/level
FCU: -.5/level
Weight: +10% base weight/level
Concealability: None

Melee Hardening
The firearm is built especially sturdy and hard, receiving +1 Power when used in melee combat.

DP: +15
FCU: -.5
Weight: +20% of base weight
Concealability: None

Metahuman Design
Some guns are designed especially for the small hands of dwarf metatypes or the larger hands of troll metatypes. This makes the firearm more comfortable to use for the dwarf or troll, but more difficult for other metahumans. Members of any other metahuman race attempting to use a dwarf- or troll-modified gun suffer a +2 modifier when using the weapon. A dwarf attempting to use a troll-modified weapon suffers a +4 modifier, and vice versa.

Weapons have their base ammo capacity increased by 20% for Troll Modified weapons and reduced by 15% for Dwarf-Modified weapons.

DP: +25% of frames base DPV
FCU: None
Weight: Dwarf Modified -5% to total weight; Troll Modified +20% to final weight
Concealability: Dwarf Modified +1 if used by non-dwarves; Troll Modified -2 if used by non-Trolls

Multiple Ammunition Feeds
A weapon with both a clip and belt-fed ammunition options may not normally use both at the same time. With the multiple ammunition feed option it is possible to use both, switching between them with a selector switch. A firearm may only use one feed at a time, and it takes a Simple Action to choose between them, or a Free Action if the weapon is smartlinked.

DP: +35
FCU: -.5
Weight: +5% of base weight
Concealability: None

Multiple Barrels
Some weapons may have multiple barrels in order to increase their rate of fire. Each barrel must have the same fire mode and barrel modifications as the primary barrel (although at half cost).

SS weapons may elect to fire one or more of their barrels at once, in which case you use the burst-fire rules (p. 115, SR3). Note that only two barrels fired means you use the rules for short bursts. Weapons fired in SA get no appreciable bonus from multiple barrels.

Multiple barreled conventional FA-capable weapons are usually referred to as "mechanical gatlings". Mechanical gatlings have an actual maximum autofire rate of up to 3 x Number of Barrels per Combat Phase.

Mechanical gatlings require power to operate (spinning the barrels). The power requirement is determined by .05 x Max. RPP. The result is the PF that the weapon consumes for every Combat Turn of firing. Max RPP is the maximum amount of rounds per Combat Phase that the weapon can fire. Even if the weapon uses less then this amount the gatling uses the same amount of power. This requirement is cumulative with any other power requirements for the weapon (such as an electrical ignition).

Cylinder and magazine fed weapons may not have multiple barrels. Break action weapons have their ammo capacity increased by +1 per extra barrel. Multi-barrel weapons may not use Barrel accessories. Modifications to the extra barrels (such as heavy or light barrels) affect weight as normal.

DP: +25% weapons base DPV per extra barrel
FCU: -.25/extra barrel
Weight: +20% base weapon weight per extra barrel
Concealability: -1/extra barrel

Polyresin Construction
By making the gun mostly or entirely out of nonmetallic parts, the gunsmith can reduce the risk of detection by magnetic systems. Increase the Concealability rating of firearms with polyresin components by +2 per level when attempting to avoid detection by MAD systems (see *Weapon Detection,* p. 237, SR3).

The maximum level available is 3. At level 3, the gun composed almost entirely of polyresin.

DP: +20/level
FCU: -.25/level
Weight: -5% of base weight/level
Concealability: +2/level vs. MAD systems

Reduced Damage Level
By modifying the weapon to fire smaller caliber ammunition its ammo capacity can be increased at the expense of less damage. Each level of Reduced Damage Level lowers the weapons base Damage Level by one full level. In addition, the weapons Ammo Capacity is increased by 1/2 its base Ammo Cap for each level taken.

No weapon may have its Damage Level reduced below Light. Each level of reduction gives the weapon 1 point of recoil compensation.

DP: -50/level
FCU: +.25/level
Weight: None
Concealability: None

Reduced Power
For various reasons the weapon may have its Power reduced. For every three levels of Reduced Power the weapon gets 1 point of recoil compensation. No weapon may have its Power reduced to below 2.

DP: -30/level
FCU: None
Weight: None
Concealability: None

Reliable
The weapon is much more reliable then most in its category. Each level of Reliability increases the weapons Reliability Rating by one level. .

DP: +80/level
FCU: None
Weight: None
Concealability: None

Steel Construction
Although most Shadowrun firearms are constructed out of high-strength alloys, steel is still popular with cheaper firearms. Decrease the Concealability rating of firearms with steel components by -1 per level when attempting to avoid detection by MAD systems (see *Weapon Detection,* p. 237, SR3).

All frame types may possess steel construction up to level 3. At level 3, the weapons high-stress components (such as the receiver and barrel) are composed of steel and the extra weight provides 1 point of recoil reduction. May not be combined with polyresin construction.

DP: -5/level
FCU: None
Weight: +10% base weight/level
Concealability: None

Unavailable Mounting Space
Due to design or price considerations the weapon does not have a mounting option that others of its class may possess. For example, a heavy pistol with an Unavailable Barrel space would not be able to use gas vents.

Obviously a weapon may only select from those spaces it normally has available to begin with.

DP: -5/unavailable space.
FCU: None
Weight: None
Concealability: None

Unreliable
The weapon is cheaply made, is mechanically complex, or has some other combination of quirks that makes the weapon unreliable, or even dangerous. Each level of Unreliability decreases the weapons Reliability Rating by one level. May not be combined with Reliable.

DP: -15/level
FCU: None
Weight: None
Concealability: None

Weight Decrease
By using lighter composite materials for the frame, the overall weight of the firearm can be lowered significantly.

Every two levels of Weight Decrease give the weapon a recoil modifier of 1.

DP: +5/level
FCU: None
Weight: -5% of base weight/level
Concealability: None

Weight Increase
By using cheaper, but heavier, construction materials for the frame the overall weight of the weapon is increased. No weapon may increase its weight in this manner to over twice its normal base weight.

May not be combined with Weight Decrease. Every two levels of Weight Increase provide 1 point of recoil compensation.

DP: +5/level
FCU: None
Weight: +15% of base weight/level
Concealability: None

Wireless (Tasers)
This modification allows a taser to fire darts which do not trail a wire. This means that instead of being powered by a capacitor in the taser itself, they are powered by a capacitor in the dart. The smaller size of this capacitor reduces the taser's power by two.

However, the tasers range is increased to the Hold-Out range bracket.

DP: +30
FCU: -.5
Weight: +10%
Concealability: None

3. ADD MODIFICATIONS
Except for Full-Auto Mode, Remove Safety, and Sawed-Off Shotgun Barrel, the modifications listed may be incorporated during weapon design.

If a modification is included in the design, no Installation Test is necessary. Simply add the Design Point cost to the DPV, subtract the required FCU, and modify the weight, Concealability and other elements as directed.

4. DETERMINE FINAL COST
For final cost the weapons DPV total is multiplied by the Mark-Up Factor, and then multiplied again by 10 to get the final cost in nuyen.

WEAPON MARK-UP FACTORS TABLE	
Production Type	**Mark-Up Factor**
Unique, Prototype	5
Limited Run (<50 units)	3
Short Run (<500 units)	2
Long Run (<1000 units)	1
Mass Production (>1000 units)	.5

FIREARM CUSTOMIZATION

Most customization not only requires appropriate parts, but a competent gunsmith. Unlike weapon design, which assumes a certain level of available resources and economy of scale, customization is usually done privately and may require access to materials or technologies not available even to some gun designers.

If the necessary parts or equipment is acquired then either the character or his gunsmith may attempt to install the modifications by making an Installation test with the appropriate Build/Repair skill as noted with the individual option. Divide the base time by the number of successes scored in the Installation Test.

WORKING TIME AND COST
Consult p. 79 - 80 for additional rules on working time and costs.

SPACE RESTRICTIONS
Modifications that are to be built into the weapon consume internal space, as represented by the FCU requirements for each option. This follows the same rules as for the other aspects of the weapons design.

MAKING MODIFICATIONS
Modifications may be made in any order (with some common sense exceptions). Removing an option typically requires a test with the same parameters as that used to install it, but with twice the Base Time.

DESCRIPTIONS
After their name and a brief description the following information is listed:

Skill: This is the Skill required to perform the modification.

Installation TN/Base Time: This is the target number and base time required for installation of the modification. Divide the base time by the number of successes scored to determine the actual time required for the installation.

Mount: This lists the possible mounting locations for the option and how large it is.

Tools: The required tools to install the modification.

Weight: The options weight (in kilograms). This amount is added to the weapons total weight.

FCU: This shows the amount of Firearm Construction Units (FCU) that are required to install the modification or option. If the FCU requirement is followed by an (r), then the option only requires the amount if permanently built into the gun.

DP: If a modification is included in the design, no installation test is necessary. Simply add the Design Point cost to the DPV. If the modification is made after the gun is purchased or if the gun is a stock gun (an Ares Predator, for example) multiply the Design Point cost of the modification by 8 to determine its nuyen cost. If the modification is made after the gun is purchased or if the weapon is a stock gun (an Ares Predator, for example) then the parts must be procured normally.

COSMETIC MODIFICATIONS

These modifications affect only the gun's appearance, not its performance.

As a general rule, many of these modifications improve the weapons "Charisma," and may be used as a Complimentary Skill when trying to impress other gun-nuts.

Anodized Finish

This is a matte-black coating bonded to the metal portions of the frame. Anodized parts are resistant to corrosion and scratching. Generally not useful on weapons with more then 1 level of polyresin construction.

May not be combined with any other finish or plating.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/24 hours
Mount: None
Tools: Shop
Weight: None
FCU: None
DP: +10

Chrome Plating

Chrome plated weapons are very resistant to corrosion but are quite noticeable. All Stealth attempts with an chrome-plated weapon at the ready are at +3 to all target numbers. Many people may also remember the distinctive look of a shiny, chrome-plated weapon.

Chrome plating may not be combined with any other finish or plating.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/24 hours
Mount: None
Tools: Shop
Weight: None
FCU: None
DP: +20/level

Custom Finish

All weapons are assumed to come in either parkerized (matte black), blued, or nickel plated for no additional cost. However, gold/silver/chrome plating, ivory handles and other cosmetic embellishments are possible for those runners who like their gun to look its best. This modification is not compatible with the Polyresin Construction option (p. 75, CC).

Some examples of custom finishes include primary colors (red, orange, etc), bowling ball (two or more colors in swirling combinations), iridescent (glow in the dark!), or simple patterns (usually some form of camouflage). "Loud" finishes such as iridescent may give target number penalties for Stealth attempts due to their obvious nature or glare. This is at gamemaster discretion, the tackier the weapon the worse the penalty.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/24 hours
Mount: None
Tools: Shop
Weight: None
FCU: None
DP: +20

Embossing/Engraving

Most etching involves scrollwork, patterns, names, or even nature scenes etched onto the frame. Depending on the quality and style of the work it can look classy or just tacky. Most simple embossing is done with machines, using a laser. Unique or custom designs are typically done by hand by artists. In many cases the results are identical, but it is always considered classier to have the artwork done by an artist.

Note that depending on the complexity of the design the target number may increase.

Skill: Art (Etching)
Installation TN/Base Time: 4/4 hours/sq inch
Mount: None
Tools: Kit
Weight: None
FCU: None
DP: Machine Etched +5/sq inch; Artist +50 or more/sq inch

Gold Plating
The weapon has a vapor-deposited 24-karat gold coating. May not be combined with Custom or Printless Finish. The weapon can not be camouflaged and is usually so noticeable that the user is at +3 target number for all Stealth attempts if the weapon is not hidden under a coat or similar. He will also be vividly remembered by anyone who sees him use the weapon.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/8 hours
Mount: None
Tools: Shop
Weight: +.5 for Rifles and Assault Rifles, +1 for Light and Medium Machine Guns, +2 for Heavy Machineguns and Assault Cannons.
FCU: None
DP: +20 for Hold-Outs and Light Pistols, +50 for Machine Pistols and SMGs, +100 for Carbines, Rifles, Assault Rifles and Shotguns, +150 for Light and Medium Machine Guns, +250 for Heavy Machine Guns and Assault Cannons

Printless Finish
By using a custom teflon coating on the weapons frame and grip it can resist picking up fingerprints. A weapon with a printless finish adds +4 to the target numbers of any attempt to "lift" prints from the weapon. This option is usually seen as a "criminal" modification and is illegal in many nations (although it has remained semi-legal in the CAS and UCAS). At the very least being discovered with a printless weapon will get you harassed by Lone Star...or worse. Spotting a printless finish requires close inspection and an Awareness (6) Test. Otherwise it appears as a standard parkerized finish.

Printless finish may not be combined with custom finish and only comes in the standard parkerized colors.

Installation TN/Base Time: 9/72 hours
Mount: None
Tools: Shop
Weight: None
FCU: None
DP: +50

INTERNAL ACCESSORY MODIFICATIONS

These modifications are structural and radically alter parts of the firearm.

Active Defense
A gunsmith may equip a weapon with a so-called "active defense" system in order to deter unauthorized use. This is usually tied to another detection system to interrogate the user of the weapon - usually either through a biometric safety (p. 32, CC), smartlock, or a smartgun link. If the user is unauthorized then the security system will activate.

There are several systems available, and a fiendish gamemaster is free to develop new kinds.

Chemical: Either contained in the Stock or Grip, this system releases a single doze of an air-vectored chemical into the surrounding area. Typical area of effect is only 1 meter, centered on the weapon. Some particularly nasty variations spray the user directly in the face when they attempt to aim in. Costs for the chemical are figured separately.

Explosive: This is an actual explosive charge that detonates on activation. Treat it as a grenade of the appropriate type exploding at range 0. Obviously the weapon will not survive the explosion. Any of the grenade types listed in SR3 (p. 282-283) and CC (p. 40-41) maybe used. The price for the explosive is figured separately.

Spike: These are spring or piston driven spikes that spring from the grip at activation. The spikes cause 6M damage. Note that shooting gloves and the like provide no protection. But armored gauntlets such as that found on military-grade armor reduce the Power by half.

Taser: Upon activation the weapon drives a spring or piston loaded spike from the grip. Treat this in the same manner as for the Spike option, above. This attack does 6S Stun. However, if the spike does any damage then it is assumed to draw blood, and the increased conductivity of the blood doubles the Power of the attack. Replacement batteries are 5 nuyen each.

All of these options are one-use only. All of the options may be reset if the weapon is recovered (requiring a (Weapon) B/R (4) Test) accept for the explosive version (assuming it used an explosive).

Skill: (Weapon) B/R
Installation TN/Base Time: 6/48 hours
Mount: Grip (the explosive and chemical option may go in the stock). Considered Large options.
Tools: Shop
Weight: .5
FCU: -.75
DP: Chemical +250; Explosive +100; Spike +150; Taser +250

Dikoted Firing Mechanism
A thin diamond coating on the moving surfaces of a weapon make them very smooth and flat, and immune to corrosion and damage. As long as the weapon is cleaned regularly and well lubricated the gun will not jam due to a mechanical fault. Increase the Reliability of the weapon by 1 level.

Skill: (Weapon) B/R
Installation TN/Base Time: 7/1 week
Mount: None
Tools: Facility
Weight: None
FCU: None
DP: +(1/2 frame's base DPV)

Full-Auto
This is an illegal modification that makes an existing machine pistol, submachine gun, sport rifle, or assault rifle full-auto capable. If the weapon already had burst-fire capability it is lost permanently (and no points are refunded).

The stress of full-auto fire on a frame not originally designed for it reduces its Reliability by 1 level and adds 1 to its recoil modifier. The severity of the Legality of a full-auto modified weapon is typically 3 or less.

Skill: (Weapon) B/R
Installation TN/Base Time: 9/72 hours
Mount: None
Tools: Kit
Weight: None
FCU: -.5
DP: +70

Gas Vent
Gas venting involves manipulating a portion of the weapons's barrel gases in order to counteract barrel climb, recoil, and uneven barrel pressure. This includes techniques such as installing a muzzle brake, porting the barrel, or smart gas venting systems.

Each level of gas venting provides 1 point of recoil reduction. However, each level increases the visual and auditory signature of weapon when it fires. This penalty is doubled against low-light because of the bright halo

If installed at design time none of the gas venting systems take the Barrel mounting location (it's built into the weapon itself) or reduce Concealability. Retrofitting a weapon with an internal gas vent (otherwise the gas vent is assumed to be an external attachments at the end of the barrel) will cost triple the DP shown here.

Skill: (Weapon) B/R
Installation TN/Base Time: 5/72 hours
Mount: Barrel
Tools: Shop
Weight: Gas Vent II .5, Gas Vent III .75, Gas Vent IV .75
FCU: Gas Vent II -.5, Gas Vent III -.75, Gas Vent IV -1
DP: Gas Vent II +45, Gas Vent III +70, Gas Vent IV **+**100

High-Density Bolt
A high-density bolt replaces the weapons standard bolt with a heavier version, so that it absorbs more of the recoil. This counts as one point of recoil reduction but reduces the maximum number of rounds per Combat Phase that can be fired on FA by 5.

Skill: (Weapon) B/R
Installation TN/Base Time: 6/48hours
Mount: None
Tools: Shop
Weight: +5% of base weight
FCU: None
DP: +15

Lightweight Bolt
This modification reduces the weight of the bolt. Increasing rate of fire at the expense of recoil and control.

Weapons with a lightweight bolt suffer a +1 recoil modifier. However, weapons firing on FA get an addition +5 to their rate of fire per Combat Phase. Weapons with lightweight bolts can also feed low-power and subsonic rounds without the usual Reliability decrease.

Skill: (Weapon) B/R
Installation TN/Base Time: 6/48hours
Mount: None
Tools: Shop
Weight: -5% of base weight
FCU: None
DP: +10

Selective Trigger
A selective trigger removes the need for a fire selector on a selective fire weapon. Instead of a switch or toggle to change the weapons fire mode, the trigger itself is set to work as the fire select. A single trigger pull that is then released fires a single shot, pulling the trigger all the way back and letting go fires a burst, and holding it back puts the weapon into fully-automatic fire (depending on the available fire modes for the weapon).

The system allows the user to select his fire mode at will, without even expending a Free Action. However, it is difficult to become used to and an user without at least Level 3 in the appropriate weapons skill will have a difficult time controlling the weapons rate of fire. The gamemaster may have the character make a Fumble (4) Test whenever they wish to only fire single rounds or a burst, a failure means they fire 1D6 or more rounds instead.

Skill: (Weapon) B/R
Installation TN/Base Time: 6/72 hours
Mount: None
Tools: Shop
Weight: None
FCU: -.25
DP: +30 per fire mode

Set Triggers
A double set trigger helps with marksmanship by reducing the slight muzzle movement from pulling a trigger. It is called a set trigger because the trigger is "set" and fired, not just pulled. There are actually a few different kinds of set triggers.

Single Set: Has one trigger only, and is usually set by pushing it forward, then fired by pulling it back.

Double Set: Has two triggers, one for setting the mechanism, one for firing the trigger.

Double Set, Single Phase: Has a setting trigger and a firing trigger, but the gun can only be fired by setting the trigger, it won't fire in the unset condition.

Double Set, Double Phase: Has two triggers, one for setting the mechanism, one for firing it, but the gun can be fired without setting the trigger first.

For game purposes the effects are identical, but as a general rule assume SR set triggers are double set, double phase. Set triggers reduce the target number for aimed shots and Long and Extreme range by 1. Only SS and SA weapons may be equipped with set triggers.

Skill: (Weapon) B/R
Installation TN/Base Time: 6/48 hours
Mount: None
Tools: Shop
Weight: None
FCU: -.25
DP: +25

Smartgun System (Internal)
A smartgun system consists of several pieces of electronics that combine to improve the user's accuracy when firing. There are two versions available, the original smartlink and the improved smartlink-2 (p. 31, M&M).

The smartgun electronics are usually placed in the grip or stock of the weapon. If there are no grip or stock locations available then the weapon may not have an internal smartlink.

Skill: Electronics B/R, (Weapon) B/R
Installation TN/Base Time: 5/24 hours
Mount: Grip or Stock. Considered a Large option.
Tools: Shop
Weight: Standard .5, Smartlink-2 .25
FCU: -.5
DP: Standard Smartlink +(frame's base DPV), Smartlink-2 +(1.5 x frame's base DPV)

Smartlock
This system uses a code key sequence keyed to a specific smartgun processor. If it is not hooked the proper smartgun processor the weapon will refuse to fire. In addition it can also trigger an Active Defense system.

The system requires an internal smartlink in the weapon.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/24 hours
Mount: None
Tools: Shop
Weight: .1
FCU: None
DP: +100

Voice Activation
A voice activation system is an option available to systems with an smartlink system (internal or external). It consists of a small microphone mounted on the weapon (typically built into the ammo counter) and an simple audio processor connected to the smartlink hardware.

The system operates by activating the weapons firing process when it "hears" a phrase or codeword that it is programmed to remember. This codeword must be spoken at a level of a normal conversation at the distance where the gun is located - the gamemaster is the final arbiter of how sensitive the voice activation system is.

The exact effects of the system are up to the gamemaster, although it should be noted that in most cases this system is useful only as a diversion or as a gimmick. If the weapon is dropped the gamemaster may determine if the weapon is pointing at the enemy by rolling a 1D6. On a 6 the weapon is pointing at an enemy and if commanded to fire may potentially hit (apply the effects for Blind Fire).

Skill: Electronics B/R, (Weapon) B/R
Installation TN/Base Time: 6/48 hours
Mount: None
Tools: Shop
Weight: .1
FCU: -.25
DP: +50

PHYSICAL MODIFICATIONS

Most of these modifications attach to the outside of the firearm.

Biometric Safety

The biometric safety is more fully described on p. 32, CC. The system scans the palmprint and heat pattern of anyone touching the grip and will only unlock the safety if an approved user is using the weapon.

This option must be combined with an internal smartlink in order to function.

Skill: (Weapon) B/R
Installation TN/Base Time: 6/24 hours
Mount: Grip. Considered a Large option.
Tools: Shop
Weight: .1
FCU: -.25
DP: +225

Bipod

Bipods are folding legs that are attached to the underside of the barrel. When they are extended they help brace the weapon and reduce recoil. When the weapon is used with the legs of the bipod resting on a surface that can provide traction (typically the ground), it provides 2 points of recoil compensation.

It requires a Simple Action to unfold a bipod. Bipods may only be attached to Sport Rifle and above sized frames. Most bipods are detachable with clips or mounting pins, but they may also be built into the weapon.

Skill: (Weapon) B/R
Installation TN/Base Time: 3/2 hours
Mount: Under. It is considered a Large option.
Tools: Kit
Weight: .5
FCU: None
DP: +20

Extended Clip/Drums

An extended clip is a special large-capacity clip, usually seen on assault rifles since most countries consider them paramilitary gear (Legality 4-U). Most take the form of extremely long clips, box magazines, or drums.

A weapon may not use an extended clip with a capacity greater then 2x their frames base Ammo Capacity without reliability problems. Every additional multiplier past 2x decreases the weapons Reliability by 1 level as long as the clip is used. This is because of the increased chance of misfeeds and other ammo problems.

In addition, every multiplier of the weapons base Ammo Capacity (or fraction thereof) reduces the weapons Concealability by 1. For example, an assault rifle with a 40 round extended clip has a -1 Concealability modifier since this exceeds its base Ammo Capacity.

The tests below assume the gunsmith is manufacturing his own extended clips.

Skill: (Weapon) B/R
Installation TN/Base Time: (Rounds in Clip/10, rounded up)/8 hours
Mount: None
Tools: Shop
Weight: Clip Capacity/10, rounded down when empty
FCU: None
DP: +1/ammo capacity

Flash Suppressor/Hider
A flash suppressor consists of an expansion chamber at the end of the barrel that reduces the amount of visible light and flash produced by the weapon. Unless the viewer is directly in front of the weapon then apply +3 to all target numbers for visually locating a firing weapon except through low-light, where the suppressor actually reduces and observers target number by 1 (from the "light donut" as it is called).

Flash suppressors provide no bonus if the weapon also has any level of Gas Vent.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/6 hours
Mount: None
Tools: Kit
Weight: .25
FCU: None
DP: +15

Foregrip
This consists of a small grip mounted near the front of the weapon (p. 34, CC). It provides 1 point of recoil compensation if the weapon is used with both hands.

Foregrips may be used on machine pistols, submachine guns, shotguns, sport rifles, assault rifles, and light machine guns. Foregrips may not be used at the same time as a bipod or tripod. They may be mounted on, but provide no recoil reduction for, bullpup weapons.

Skill: (Weapon) B/R
Installation TN/Base Time: 3/24 hours
Mount: Under. Considered a Small option.
Tools: Kit
Weight: .25
FCU: None
DP: +25

Imaging Systems
These systems consist of passive augmentation to the firers normal vision. It includes everything from simple magnification to low light, infrared and ultraviolet sensors.

Various imaging system types may be combined into one unit by totaling their DP and FCU costs. It typically requires a Simple Action to change the sensor type of a multi-mode unit, or a Free Action if it is built into the weapon and connected to an internal smartlink.

Skill: B/R Electronics
Installation TN/Base Time: 4/2 hours
Mount: Top. Considered a Large option.
Tools: Kit
Weight: .25 each or .25+ .05 for each additional if combined
FCU: -.25 each or -.25+ .05 for each additional if combined (r)

DP: Low-light +150, Magnification 1 +50, Magnification 2 +80, Magnification 3 +120, Thermographic +150, Ultraviolet +200

Laser Sight
A laser sight projects an aiming dot to show where the round will impact. It provides a -1 target number modifier. It also can cancel the penalties for firing from the hip (since you don't need to shoulder the weapon to aim) and can be used with a fast draw. It provides no additional bonus to a smartgun system.

Skill: Electronics B/R
Installation TN/Base Time: 3/2 hours
Mount: Top or Under. Counts as a Small option.
Tools: Kit
Weight: .25
FCU: -.25 (r)
DP: Low-power +50, High-power +150

Laser Designator
This is a high powered laser capable of sending coded laser pulses that weapons with the appropriate guidance equipment can home in on (p. 35, CC).

The laser designator may be used as a high-power laser sight at a cost of +75 DP.

Skill: Electronics B/R
Installation TN/Base Time: 4/2 hours
Mount: Top or under
Tools: Kit
Weight: .5
FCU: -.25 (r)
DP: +300

Light System
This is typically either a visible-spectrum flashlight or some other active emission system (such as IR or UV). The various types may be combined into one unit by totaling their DP and FCU costs. It typically requires a Simple Action to change the emission type of a multi-mode unit, or a Free Action if it is built into the weapon and connected to an internal smartlink.

Light sources that are not built-in typically require just a few seconds to clip on. In some cases they can even be taped or otherwise jury-rigged to the weapon.

Skill: B/R Electronics, (Weapon) B/R
Installation TN/Base Time: 4/2 hours
Mount: Top or Under. Considered a Small option.
Tools: Kit
Weight: .25 each or .25+ .05 for each additional if combined
FCU: -.25 each or -.25+ .05 for each additional if combined (r)
DP: Flashlight +5, Low-light +25, Infrared +45, UV +65

Mounting Rails
These are a series of rails fixed onto the weapon, allowing the sights and other combat accessories to be simply clipped on and off without having to keep recalibrating them. The size of the option that the rail can mount must be determined at purchase. Options may not be connected to an incorrectly sized mount.

Any type of accessory can be fitted using this system, but they need a special adapter (increase cost of accessory by +10DP). The accessory can then be attached or detached with a Complex Action.

Skill: (Weapon) B/R
Installation TN/Base Time: 3/2 hours
Mount: Top, Under
Tools: Kit
Weight: None

FCU: None
DP: Small +15, Large +20, Exclusive +50

Personalized Grip
The weapons grip is specially designed to match the firing style and grip of the user. Every personalized grip is unique, and in some cases, a weapons owner can be identified by his personalized grips.

Personalized grips provide a -1 recoil modifier for the user they are designed for. Other users have a +1 recoil modifier.

This option is not available during design. It may not be combined with any other type of grip.
Skill: (Weapon) B/R
Installation TN/Base Time: 5/48 hours
Mount: None
Tools: Kit
Weight: None
FCU: None
DP: +25

Range Finder
A range finder measures the range to a target and feeds it to the user either through a smartgun link or displays it on an imaging system.

A high-powered laser site may be modified to function as a range finder for an additional +10 DP.
Skill: Electronics B/R
Installation TN/Base Time: 3/2 hours
Mount: Top or under
Tools: Kit
Weight: .1
FCU: -.25 (r)
DP: +15

Reflex Sights
Reflex sights are specially design to allow for rapid target acquisition and aiming purely by reflex. They can all be used on fast draws. None of these sights may be used in conjunction with laser sights, they all provide -1 modifier when used correctly (not firing from the hip). They also reduce the fast draw penalty to -1 when used. Obviously only one style of sight may be used at a time.

Guttersnipe Fast Acquisition Combat Sight: A plastic gutter with bright yellow sides, the guttersnipe draws the point of vision along its length. When the weapon is straight the yellow sides appear of equal size and length. Practice allows the user to instinctively put the weapon on target. A disadvantage is that the weapon must be seen, so bonus is lost in dim light or darker

A beta light model with glowing guttering is available, which allows you to see the rails even in total darkness (but it doesn't do much if you can't see your target)

Trilux: This uses three beta light sources, two in the rear sight, one in the foresight. When level, the target appears to have a line of three lights across them. The system works even in complete darkness and will glow for several years

Ring Sight: This uses a length of plastic tubing aligned with the barrel. When the target is in your sights, they are visible through the tube when the gun is at arms length. A simple system, but as the tube tapers slightly, the two circles formed by the tubes beginning and end aid the eye in centering the weapon.

Holosight: This uses a Hologram on a sheet of glass or plastic set in a 'window' about 5cm across on top of the weapon. A low power light illuminates the hologram from behind, so that light shines through the hologram to your eye. This produces the illusion of a glowing targeting sight floating in the window, which is only visible from the firer's point of view.

Skill: (Weapon) B/R
Installation TN/Base Time: 3/2 hours
Mount: Top. Counts as an Large option.
Tools: Kit
Weight: .25
FCU: None
DP: +40

Remove Safety
This dangerous modification removes the weapons safety. It trades the ability to fire instantly at any time with the possibility of firing due to shock.

Weapons without a safety only suffer a -2 for fast draws and the weapon may be fired at an opponent quickly in a surprise situation where the weapon was not necessarily readied. However, if the weapon takes a hard shock a Quality (3) Test should be made. If there is a single success then the weapon goes off. In the case of burst or full-auto weapons additional successes mean more rounds are fired.

The gamemaster is the final arbiter of the effects and when these checks should be made.
Skill: (Weapon) B/R
Installation TN/Base Time: 5/18 hours
Mount: None
Tools: Kit
Weight: None
FCU: None
DP: +30

Remove Stock
Weapons with this option have their stocks removed. They lose all Stock mounting locations and suffer a +1 recoil modifier. This option may not be combined with Bullpup and only weapons that start with a Stock location can use this modification.
Skill: (Weapon) B/R
Installation TN/Base Time: 4/6 hours
Mount: None
Tools: Kit
Weight: None
FCU: None
DP: 0

Remove Trigger
This modification removes the physical trigger group. A weapon without a trigger may only fire if equipped with an internal smartlink.
Skill: Electronics B/R
Installation TN/Base Time: 5/24 hours
Mount: None
Tools: Shop
Weight: None
FCU: -.5
DP: +20

Sawed-Off Shotgun Barrel
Sawing off a shotguns barrel has essentially the same effect as a Barrel Reduction (see p. xx). However, since this modification is not a part of the design it reduces the maximum choke of the weapon by 4 for every level of impromptu Barrel Reduction. In addition, the weapon suffers a +1 recoil modifier for every level that is chopped off.

Sawing off a shotguns barrel prevents the use of any Barrel options and automatically removes the shotguns Under mount.

Skill: Shotguns B/R
Installation TN/Base Time: 3/2 hours
Mount: None
Tools: Kit
Weight: As per Barrel reduction
FCU: None
DP: 0

Shock/Hip Pads
Special shock absorbing gelpads or cushions may be mounted on any weapon with a Stock location. These pads provide 1 point of recoil compensation if the weapon is not being fired from the hip.

Multiple shock or hip pads may not be "stacked" for additional bonuses.

Skill: (Weapon) B/R
Installation TN/Base Time: 3/2 hours
Mount: Stock. Counts as a Small option.
Tools: Kit
Weight: Shock .25; Hip .5
FCU: None
DP: +40

Silencer
This is a long cylinder that uses a series of expansion chambers and bullet wipes to reduce the sound of a weapon being fired as well as the flash. It automatically counts as a flash suppressor.

A silencer will reduce the sound of a Light Damage Level weapon to that of a slammed book, while that from a Moderate or Serious weapon will range from loud to barely tolerable. In any case the sound will carry less, and the muffled signature will be harder to recognize.

A silencer increases the target number for noticing or tracking a weapons firing location by +4 for Light damage level weapons, +2 for Moderate and Serious Level weapons, and +1 for Deadly rated weapons. Silencers can never be used with assault cannons or by weapons firing in BF or FA (doing so will permanently damage the silencer - making it useless).

A silencer may only be used with a particular class of weapon. A silencer designed for Light Pistols will not work on a Hold-Out or Heavy Pistol (unless it is Disposable).

Home Made: A home-made silencer is constructed of commonly available parts. They do not last long and significantly reduce bullet energy but are quite cheap. A home-made silencer can be constructed with an (Weapon) B/R (3) Test. The silencer will last for a number of rounds equal to 5 x Number of Successes scored. The weapons range category is reduced by one full level while using a homemade silencer. Home-made silencers also give a -3 Concealability modifier. The parts can be purchased from about anywhere for 15 nuyen.

Cheap: Cheap silencers use a series of "wipes", plates that have a hole big enough for the bullet to pass through in the center. As they are used, the holes wear larger and more gas gets out, until all they do is catch the flash. Cheap silencers will last for 1D6 x 10 rounds before becoming useless, functioning only as a flash suppressor. Cheap silencers are half the cost of a normal silencer.

Disposable: These silencers use plastic and glass fiber tubes with plastic film baffles inside them. When first used the bullet punches the holes in the baffles to the right size. They are only good for about 10 shots before becoming useless. A disposable silencer may be used with any size weapon. They cost 100 nuyen.

Standard: Standard silencers do not degrade as they use baffles and vortex chambers to reduce the sound, rather than bullet wipes. They can be used indefinitely without any loss of silencing capability.

Skill: Special
Installation TN/Base Time: 4/2 hours

Mount: Barrel. Counts as an Exclusive option.
Tools: Kit
Weight: .2
FCU: Standard -.25 (r)
DP: Standard +100

Smartgun System (External)
An external smartgun system provides targeting data that the firer can use to place his shots more accurately. Because it is an attachment to the weapon and not built in they cannot perform the following options that internal smartlinks are capable of: Change Smartgun Fire Mode or Eject Smartgun Clip,

An external smartgun system may be combined with an top-mounted imaging system, but with no weight or FCU savings for doing so.

Skill: Electronics B/R
Installation TN/Base Time: 4/2 hours
Mount: Top or Under. Counts as a Large option.
Tools: Kit
Weight: Standard 1, Smartlink-2 .75
FCU: -.25 (r)
DP: Standard Smartlink +60, Smartlink-2 +80

Sound Suppressor
A sound suppressor works in the same manner as for normal silencers, but may also be used by weapons with burst-fire and full-auto.

Use the same rules as for silencers, but note that there are no home-made suppressors. Disposable silencers may be used as a suppressor but will still only last for 10 rounds. Cheap suppressors are available at half normal cost.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/2 hours
Mount: Barrel. Counts as an Exclusive option.
Tools: Kit
Weight: .5
FCU: Normal -.25 (r)
DP: Normal +75

Stocks
Adding a rigid or folding/collapsible stock can often help with recoil. Both types provide 1 point of recoil compensation for pistols and submachine guns when not fired from the hip.

Rigid and unfolded collapsible stocks have a -1 Concealability modifier. Rigid stocks provide a normal Stock mounting location while collapsible stocks only allow one Small option to be attached.

It requires a Simple Action to unfold a collapsible stock. Stocks may not be combined with bullpups.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/36 hours
Mount: None
Tools: Kit
Weight: .5
FCU: None
DP: +20

Tripod
A tripod usually consists of a weapon cradle and three legs that help steady the weapon and reduce recoil. It is quite large however, and only machineguns and assault cannons may utilize them. As a general rule a tripod may only be used with one class of weapon (a light machinegun tripod will be useless with a medium machinegun).

A tripod cannot be concealed and requires two consecutive Complex Actions to set up, with an additional Complex Action being required if the weapon was not already connected. It then takes a Simple Action to get into a proper firing position (which requires being in a sitting position). However, the tripod does provide 6 points of recoil compensation.

When using a tripod no Under mounted attachments may be used. They don't have to be removed in most cases, but cannot be properly utilized. This includes external smartgun links and imaging devices.

The tripod modification is actually performed on the tripod itself to match it to a particular weapon. Using a tripod for another weapon in the same class, but that it has not been fitted for, reduces the tripods recoil compensation to 3 points.

Skill: (Weapon) B/R
Installation TN/Base Time: 3/2 hours
Mount: Under. Prevents use of any other Under mounts. Does not take any space itself.
Tools: Kit
Weight: 8
FCU: None
DP: +120

Ultrasound Sight
When combined with ultrasound goggles or another appropriate display these sites reduce all targeting modifiers from visibility, lighting, or invisibility by half (rounded up).

May not be combined with an Imaging System or Light System.

Skill: Electronics B/R
Installation TN/Base Time: 4/2 hours
Mount: Top or Under
Tools: Kit
Weight: .25
FCU: -.25 (r)
DP: +180

Underbarrel Weapon
An underbarrel weapon is a secondary weapon, typically mounted under the barrel that has its own firing mechanism and trigger. These systems are somewhat bulky however, and the weapon has its Concealability reduced by -3. In addition, the weapon may not be used for fast draws.

Flamethrower: This consists of a flamethrower nozzle and connection points for the fuel lines (p. 30).

Grapple Gun: This is an grapple launcher mounted underneath the weapon. Note that the connection to the weapon is much weaker then the line itself, and the undermounted launcher will rip off the gun if subjected to more then 100 kilograms.

Antioch Grenade Launcher: This is an advanced system that fires mini-grenades from an internal magazine (p. 279, SR3). It can be removed with a successful (Weapon) B/R (5) Test.

Break Action Grenade Launcher: This system is mechanically simpler then the Antioch, and has only a -2 Concealability modifier. It can only fire one mini-grenade at a time and has an ammo capacity of 1. Its stats are otherwise the same as the Antioch.

Shotgun: A shotgun may be attached underneath the weapon. This may be any suitably modified shotgun. To be undermounted the shotgun must have no greater then a LN barrel, must not have a stock, and can not have a Concealability less then 3. It must still have a separate trigger unless designed into the weapon along with an internal smartlink, in which case the option for Remove Trigger may be used. Underbarrel shotguns may never have belt-fed ammo feeds. The underbarrel shotgun reduces the host weapons Concealability by 1 point for every point of Concealability below 7.

This modification allows the gunsmith to attach an under-barrel bayonet (p. 32), grenade launcher (p. 279, SR3), grapple gun (p. 33) or flamethrower nozzle (p. 30) to the underside of any weapon rifle-sized or larger.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/24 hours
Mount: Under. Counts as a Large option.
Tools: Kit
Weight: Grapple Gun 2, Grenade Launcher 2, Flamethrower 1, Shotgun varies
FCU: -.25 (r)
DP: Grapple Gun +100, Grenade Launcher +360, Flamethrower +240, Shotgun original DP

Underbarrel Weight
An underbarrel weight utilizes a heavy object placed under the barrel to reduce recoil. It provides 1 point of recoil compensation.

By attaching an underbarrel weight (p**.** 34) to the barrel, this modification reduces 1 point of recoil. Multiple weights may not be combined for additional effect.

Skill: (Weapon) B/R
Installation TN/Base Time: 4/2 hours
Mount: Underbarrel. Counts as a Small option.
Tools: Kit
Weight: 1
FCU: -.25 (r)
DP: +12

OPTIONAL RULES

WEAPON RELIABILITY (DRAFT!)

Standard weapons have a reliability of 1. That means that there is only a problem if the dice rolls are ALL 1s.

If the reliability is 2 that means there is a problem if all the dice come up all 1's OR 2's. If 3 then if all the dice are between 1-3 and so on.

If the weapon is Very Reliable 1* then not only do all the dice have to come up 1s but you roll another D6 and it has to come up a 1.

If there is a malfunction the weapon CANNOT be fired before either fixing the problem or performing Immediate Action.

Low Skill
If the user of the weapon has an skill of less then 4 in the appropriate weapon then decrease the reliability rating by 1 level.

Environment
For situations where the weapon could be fouled, or otherwise have its operations impaired, reduce Reliability by 1 level. This includes firing a weapon you just crawled through the mud with, etc.

Maintenance
If the weapon has not been properly maintained (the player has not been cleaning it, you picked it up out of a rice paddy, it fell from a moving vehicle) then reduce the weapons Reliability by 1 or 2 levels until it is properly maintained or repaired.

IMMEDIATE ACTION
Immediate Action is a quick and dirty attempt to solve the most common problems of a malfunctioning weapon.

An Immediate Action is a Simple Action. Make an appropriate success test using either the skill for the weapon being used -2 or the appropriate B/R skill. The Target Number for this test is twice the weapons base Reliability. The target number is 4. If the number of success equals TWICE the weapons base Reliability then the weapon is immediately ready for action. Cylinder weapons roll against a TN of 3 because of their mechanically simple operation.

You may only perform immediate action ONCE per malfunction.

REMEDIAL ACTION
If Immediate Action fails then the user must before Remedial Action. Remedial Action requires a test using either the appropriate weapon skill -2 or the relevant B/R skill against a TN equal to 4x the base Reliability with a base time of 30 Combat Turns.

The base time assumes nearby combat conditions and stress (hiding behind a dumpster trying to pry an bent jammed case out of the receiver). In a less stressful environment halve the base time.

SUBSONIC AMMO (DRAFT!)

Subsonic ammo is designed to not break the sonic barrier. Hence it does not produce the distinctive "CRACK!" of normal rounds. Subsonic ammo provides the same bonuses as if the weapon was using a Silencer.

Subsonic ammunition reduces the range of the weapon by 50% and reduces the Power of the weapon by 2. Unless the weapon has a Lightweight Bolt (p. xx) it decreases the Reliability of the weapon by 1 level while it is being used.

Subsonic ammo does not provide cumulative bonuses with suppressors or silencers. If subsonic ammunition is used with a silencer then reduce the power by an additional 2 points.

Ammo (per 10)	Conceal	Damage	Weight	Avail.	Cost	St. Index	Legal.
Subsonic Ammo	8	See rules	1	8/10 days	100Y	2	Legal