SIZE, RANGE, SPEED, AND DISTANCE

Size= Range=	0	1	2	3	4	5	6	7	8	9
Size			Eye	Head	Crouch	Person	Vehicle	ACS	BCS	
Range	Contact	Vshort	Short	Medium	Long	Vlong	Distant	VDistant	Orbit	Far Orbit
Distance		5 m	50 m	150 m	500 m	1000 m	5000 m	50 km	500 km	5000 km
Speed	Still	Walk	Run		Tracked	Wheeled	ACV			

Understanding Sizes. Most people are Size=5. A half-hidden person is Size=4, as is a Small sophont. Just a head or a limb is Size=3. A very small control sensor, or an eye, is Size=2. Most vehicles are Size=6. ACS Adventure Class Starships (2000 tons or less) starships are Size=7. BCS Battle Class Starships are Size=8.

Size minus Range gives apparent size. A Size-5 Person at Range=5 looks about the same size as a Size-6 Vehicle at Range=6. If Size minus Range is less than zero, the object to too far away to see (or attack).
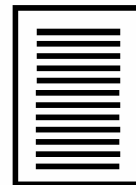
Understanding Speeds. Humans (and most sophonts) Walk at Speed=1 and Run at Speed=2. The full array of Speeds is shown on the Vehicles Speed Chart

Conflicts between individuals, groups, or military units is resolved using the Traveller Combat System.

Combat is the resolution of violent conflict based on the weapons used, the tactics, decisions, and choices of the participants, and some measure of chance. Combat is based on coarse variable scales which give a feeling of authenticity without slavish adherence to exact formulas. Distance is a coarse set of approximate ranges. Time is a coarse measure of passing time. Size is an approximation of the relative size of objects and targets.

Finally, the **Traveller Combat System (TCS)** assumes that many shots and many attacks are taking place, but many bullets go wild and many attacks come to nothing. The system also assumes that there are lulls in the action which characters wait or think or catch their breath. The TCS accomplishes all of these realistic constraints without burdening the players with arbitrary or constraining rules.

THE ELEMENTS OF A FIGHT
A fight includes the following elements:

The Situation
A situation is an encounter. One or both sides have goals and the situation dictates that violence will be used to resolve the conflict.

The encounter is defined by:

The Participants. Participants are characters. One side is the player-characters operated by the players. The opposition consists of non-player characters controlled by the referee. The participants are defined along with the weapons, armor, and protection they are using or have available.

The Terrain. The location and its important characteristics are the terrain. Terrain can provide concealment to hide fighters from the enemy, and cover to protect them from enemy attacks. Terrain also serves to constrain or channel movement by either side.

Initial Range. The distance between the two sides determines which weapons can be used and when.

The Battle
The characters attack, defend, move, and otherwise act to resolve the encounter in a series of Rounds.

In a Round, every participant has the opportunity to move and to use a weapon (or to do some other activity like use a communicator or operate an important device). When every participant has had an opportunity to act, the current Round ends and the next Round begins.

The Aftermath
Once the fight is over, participants resolve the consequences of their actions: gathering the dead, helping the wounded, occupying the territory they have won, or fleeing the enemy to a place of safety.

SCALE
Fighting is based on variable distance in Range Bands, variable time in Rounds, and approximate Size for Objects.

Distance Scale
Physical location for Fighting is tracked using Scaled Range Bands. Each Band is numbered and corresponds to a specific physical distance and to a benchmark object.

For example, Range Band 3 (Range=3) represents a distance of approximately 150 meters. Its benchmark is a book (a typical human can see a Size -3 (book-sized) object at 150 meters, but probably not at the next Range Band).

Weapon maximum ranges are expressed in Range Bands.

Time Scale
Combat takes place in Rounds. Some seem like seconds; some seem like hours. Some pass without anything happening; others are flurries of activity.

At the end of combat, count the number of Rounds that have passed and equate them generally to minutes (thus, a fight taking ten Rounds probably took about ten minutes).

GUNMAKER, ARMORMAKER, AND VEHICLEMAKER
The Maker Series allows referees and players to design and produce weapons, armor, and vehicles for use in the Traveller Combat System.

GunMaker produces a variety of weapons from low tech blades to high-tech plasma guns, and provides their range, cost, combat effects, and other details.

ArmorMaker produces a variety of armors and protections from simple bullet-proof vests to powered armor, and provides their cost, protective abilities, and other details.

VehicleMaker produces a variety of ground and air vehicles and provides their cost, performance, and combat effects.

In addition, an armory full of pre-generated weapons is provided.

NON-COMBAT EVENTS
The Damage rules of the TCS can be implemented in non-combat situations; they detail the effects of storms, blizzards, falls, collisions, and other mishaps.

How Attacks Work

AN OVERVIEW

The central mechanism for Fighting is the **Fighting Action:** an Attacker shoots a weapon at a Target and resolves the Fighting Action to determine if the shot Hits. If it misses, the process ends; if it succeeds, the Attacker determines if it penetrates armor, and then determines damage.

The Fighting Action takes into account:
  The shooter's Characteristic and Skill.
  The target's speed and evasion status.
  The target's size based on range.
  Any target Mods, and
    If shooting with AutoFire, a range penalty, or
    If shooting with SnapFire, a greater range penalty.

Unskilled

If the character is unskilled (or using default Fighting=0) use 3D rather than 2D.
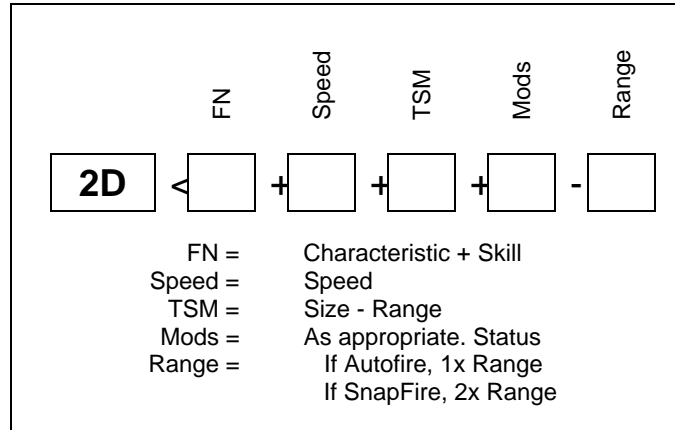
Failure On 12

Any Attack (whether 2D, 3D) fails on a roll of 12.

First Attacker

The first one to attack receives Mod +1 in any Attack against him in the Round. If the First Attacker succeeds, that Target cannot fire in the current Round.

THE FIGHTING ACTION

$$2D < [FN] + [Speed] + [TSM] + [Mods] - [Range]$$

FN = Characteristic + Skill
Speed = Speed
TSM = Size - Range
Mods = As appropriate. Status
Range = If Autofire, 1x Range
       If SnapFire, 2x Range

Hand To Hand:

Mod= Attacker Str minus Defender Str.
  Must be Range=0.

Duelling (Guns, Blades)

Mod= Attacker Dex minus Defender Dex.
  Range= 1 or 2.

Aiming

A Weapon may target any Object or part of an Object whose Size is equal or greater than Range.

ATTACK TYPES

	Speed must be	
Aimed Fire	0	Single Shots
AutoFire	1 or less	Full Automatic
SnapFire	any	Quick Unaimed Fire

Special rules apply to Vehicles.

STATUS

Stealthy	Evading	Normal	Unaware	Obvious
- 2	**- 1**	**0**	**+1**	**+2**
Sneaking	Zig-Zag Crouched	Fighting		Surprised

SPEED

	Still	Walk	Run
For People	**0**	**+1**	**+2**
For Vehicles		**(use Speed)**	

Vehicle Speed above 2 is Negative (the vehicle is harder to hit). But, a Vehicle moving directly Toward or Away From the Attacker (then Mod = 0).

TARGET SIZE MOD

$$TSM= \ Size - Range$$

A Size-5 Object at Range=5 has TSM=0.
If TSM is less than 0, the Target cannot be attacked.
If Vehicle is behind something, or a person is prone, Reduce Size by 1.

FIGHTING NUMBER

$$FN= \quad Characteristic + Skill$$

WEAPONS SKILLS AND CHARACTERISTICS

Based on Weapon Used:	Skill	Characteristic
Portable	BattleDress	+ Dexterity
Fixed, Tank Mount	Artillery	+ Intelligence
Gun, Gatling	Artillery	+ Intelligence
Cannon, Autocannon	Artillery	+ Intelligence
Launcher	Launcher	+ Dexterity
Laser, Fusion, Plasma	Beams	+ Dexterity
Acid, Fire, Gas, or Stench	Sprays	+ C2
Shock, EMP, Rad, Flash	Exotics	+ C2
Freeze, Mag, Sonic, Grav	Exotics	+ C2
Psi Amp	Exotics	+ Psi
Edged Weapons	Blades	+ Strength
Hand-to-Hand	Unarmed	+ Strength
Designator	Fwd Observer	+ Dexterity
Fires Bullets *	Slug Thrower	+ Dexterity
*and not otherwise assigned.		
Hand Thrown Explosives	Athlete	+ Strength
Or	Explosives	+ Strength

How Armor Works

AN OVERVIEW

When an attack hits a target, the Attacker determines if it penetrates armor, and then if it inflicts Injury to Beings and Damage to Objects. If there is no Armor or Protection, determine Injury or Damage and apply it.

AGAINST ARMOR

1D per Weapon Effect= Injury
If Injury exceed Armor Value:
Reduce Armor Value	-1
Reduce RadProof	-1
Reduce SoundProof	-1
Reduce Insulated	-1
Reduce Sealed	-1

Apply Injury Exceeding Armor to Target

For example, Bullet-2 inflicts 2D against Armor-6.
Roll 2D, subtract Armor-6, and apply the excess to Target.

AGAINST PROTECTIONS

1D per Weapon Effect= Damage
If Damage exceed Protection Value:

Apply Damage Exceeding Protection to Target

For example, Stench-2 inflicts 2D against Sealed-8.
Roll 2D, subtract Sealed-8, and apply excess to Target.

HIT EFFECTS ON ARMOR

Code	Effect	Must Penetrate	Or Must Overwhelm	Armor	EMCage	Flashproof	Radproof	Soundproof	PsiShield	Insulated	Sealed	Type	Injures Beings	Damages Objects
A	Corrode	Armor		■								Hit	Yes	Yes
B	Bullet	Armor		■								Hit	Yes	Yes
C	Slash	Armor		■								Cut	Yes	Yes
D	Blast/Blow	Armor		■								Hit	Yes	Yes
E	EMP		EMCage		■							Fry	Awareness	Electronics
F	Frag	Armor		■								Hit	Yes	Yes
G	Gas		Sealed								■	Suff	Yes	No
H	Hot		Insulation							■		Heat	Yes	Yes
I	Infection		Sealed								■	Hit	Yes	No
J	Psi		PsiShield						■			Stun	Yes	No
K	Burn	Armor		■								Hit	Yes	Yes
L	Elec		Insulation							■		Hit	Yes	Yes
M	Magnetic		( )									Stun	Yes	Magnetics
N	Bang		SoundProof					■				Deaf	Hearing	No
O	Stench		Sealed								■	Stun	Yes	No
P	Pain	Armor	Sealed	■							■	Stun	Yes	No
Q	Cold		Insulation							■		Freeze	Yes	No
R	Rad		RadProof				■					Hit	Yes	Yes
S	Sound		SoundProof					■				Stun	Yes	No
T	Poison		Sealed								■	Hit	Yes	No
U	Flash		Flashproof			■						Blind	Vision	No
V	Vacc		Sealed								■	Suff	Yes	No
W	Wound	Armor		■								Hitt	Yes	No
X	Pen	Armor		■								Hit	Yes	Yes
Y	Grav		( )									Hit	Yes	Yes
Z	Tranq		Sealed								■	Stun	Yes	No

■ **=** Attack is stopped by this Armor or Protection. Otherwise, the Armor or Protection is ignored.
Must Penetrate. The act of penetrating destroys Armor. The armor value is permanently reduced.
Must Overwhelm. The act of overwhelming bypasses a protection. The protection value is unchanged.

For example, an EMP Projector hits with EMP-3. The Target has Cage=5. A successful attack rolls 3D (=10) for Fry against the Target. Cage stops 5 of the 10; the Target receives Fry=5 against its Electronics; a person with Awareness receives Ablind-5. An ordinary human would be unaffected.

How Injury and Damage Work

AN OVERVIEW

Injury or Damage in excess of those stopped by Armor or Protection is applied to the Target.

For **Non-Player** Characters and Equipment, make a simple assessment of Out-Of-Action if Injury or Damage is 10+.

For **Player** Characters and Equipment, assess detailed Injury and Damage as necessary.

Non-Player Character Injury = **10+**	**= Out-Of-Action**	(ignore Injury 9 or less)
Non-Player Object Damage = **10+**	**= Out-Of-Action**	(ignore Damage 9 or less)

CHARACTER HIT LOCATION

	Location	2D
If Injury is Hits or Cuts,	Head	2
Consult Hit Location Table	Head	3
	Left Arm	4
For other Injury,	Right Arm	5
go directly to Injury Table	Torso	6
	Torso	7
	Torso	8
	Left Leg	9
	Right Leg	10
Automatic Severity= 1	Graze	11
Automatic Severity= 1	Graze	12

OBJECT HIT LOCATION

Location		
Comms	If Damage is Hits	
Cargo	Consult Hit Location Table	
Sensors		
Protections	For other Damage.	
Life Support	Go directly to Damage Table	
Locomotion		
Power Source		
Body Panels		
Weaponry		
Navigation		
Computer		

INJURY   (to Characters)

Effect	Injury	Inflicts
Flash	Blind	Blind for Rounds = Injury
Slash	Cut	Total Cuts / 3 = Wound Severity
Bang	Deaf	Deaf for Rounds= Injury
Cold	Freeze	Unconscious if Check C3 fail*
EMP	Fry	Ablind for Rounds = Injury
Hot	Heat	Unconscious if Check C3 fails*
Pen	Hit	
Bullet	Hit	
Wound	Hit	
Corrode	Hit	
Blast/Blow	Hit	
Frag	Hit	Total Hits / 2 = Severity
Burn	Hit	
Rad	Hit	
Elec	Hit	
Infection	Hit	
Poison	Hit	
Grav	Hit	
Pain	Stun	
Psi	Stun	
Stench	Stun	Unconscious for
Tranq	Stun	Rounds = Injury.
Magnetic	Stun	
Sound	Stun	
Gas	Suff	Unconscious if Check C3 fails*
Vacc	Suff	

*Mod -1 per Round of this Injury.

DAMAGE   (to Vehicles and Equipment)

Effect	Damage	Inflicts
Slash	Cut	Total Cuts / 3 = Severity
EMP	Fry	Inoperable for Rounds = Fry.
Rad	Fry	
Hot	Heat	Inoperable for Rounds = Heat.
Pen	Hits	
Bullet	Hits	
Corrode	Hits	
Blast/Blow	Hits	
Frag	Hits	Total Hits / 2 = Severity
Burn	Hits	
Elec	Hits	
Grav	Hits	
Magnetic	Hits	
Bang		
Flash		
Gas		
Infection		
Pain		No Effect
Poison		
Psi		
Sound		
Tranq		
Vacuum		

Round Fractions Down.

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How Movement Works

AN OVERVIEW
   Characters and Vehicles can change Range Bands in the course of combat.
   They can change from one Band to an adjacent Range Band during the Movement Phase of a Combat Round, subject to limitations.

CHARACTER MOVEMENT   **RANGE BANDS**   **VEHICLE MOVEMENT**

Range	
0 Contact	
1 Vshort 5 m	Coin
2 Short 50 m	Cards
3 Medium 150 m	Book
4 Long 500 m	Suitcase
5 Vlong 1000 m	Person
6 Distant 5000 m	Truck
Horizon	

Bands 0-1-2
   A Character (minimum Speed=1) can move one Band per Round between Bands 0 - 1 - 2.

Bands 3-4-5
   A Character (minimum Speed=2) can spend Rounds equal to the destination Band and then move one Band between Bands 3 - 4 - 5 in the Movement Phase of that final counted Round.

Bands 6
   A Character at Range Band 6 or greater cannot change Range during a battle.

Bands 0-1-2
   Vehicles cannot move closer than Range Band 3 unless directly approaching the Attacker. They may move one Band per Round between Bands 0 - 1 - 2.

Bands 3-4-5-6
   A vehicle at Speed=2 can spend Rounds equal to the destination Band and then move one Band between Bands 3 - 4 - 5 in the Movement Phase of that final counted Round.

   A Vehicle at Speed=3 or greater can move one Range Band per Round.

FLYERS
   A Flyer may maintain Range unchanged (the equivalent of Hover or Circling).

RANGE, SPEED, AND DISTANCE

Speed= Range=	0	1	2	3	4	5	6	7	8	9
Range	Contact	Vshort	Short	Medium	Long	Vlong	Distant	VDistant	Orbit	Far Orbit
Distance		5 m	50 m	150 m	500 m	1000 m	5000 m	50 km	500 km	5000 km
Speed	Still	Walk	Run		Tracked	Wheeled	ACV			

   Understanding Speeds. Humans (and most sophonts) Walk at Speed=1 and Run at Speed=2. The full array of Speeds is shown on the Vehicles Speed Chart.

The Combat Round

AN OVERVIEW

Combat is resolved in Combat Rounds. Each Round moves through five Phases of activity. This sequence repeats with each new Combat Round.

Combat Round = about 1 Minute

Combat takes place in Rounds. Some seem like seconds; some seem like hours. Some pass without anything happening; others are flurries of activity.

At the end of combat, count the number of Rounds and equate them generally to minutes (a ten Round fight probably took about ten minutes).

S T A M P

Situation - Target - Attack - Move - Penetrate

THE FIVE COMBAT ROUND PHASES

1	**S**	**SITUATION**	The Attacker notes current Situation. Situation affects how he may attack. He notes his Weapon and may change Weapon at this Step.	
2	**T**	**TARGET**	The Attacker identifies a Target (one he can see or sense) and determines its Range, Size, and Target Mod.	Picking Targets reflects cooperation between the participants. Targeting can be changed at the very last minute.
3	**A**	**ATTACK**	The Attacker uses (fires, shoots, launches) his weapon and rolls to see if it hit. Make a note if the attack hit.	Most Attackers shoot at only one target; Suppression allows attacking multiple targets.
4	**M**	**MOVE**	The attacker may Move or perform any important action. He can change his status. He can move even if he has been Hit.	Movement can include Important Actions.
5	**P**	**PENETRATE**	The effects of any Hits are determined: if the attack penetrated armor or protection, any damage, wounding, or injury is noted.	All final activity in the Round occurs here.

Who Goes First?

STAMP governs the actions of each participant in combat. Each of the Phases is completed by everyone involved before play proceeds to the next Phase. It helps for the Referee (or someone in charge) to call out "End Of <Phase Name> Phase!" when every one is done.

Controlling Who Goes When. Within each Phase, everyone participates (targets, attacks, moves) more-or-less at the same time. Nevertheless, it helps for participants to play in some sequence. Someone must volunteer to go first; if no one volunteers, the Referee says, "Everyone hesitates. Next Phase."

First Attacker

The first participant to make an attack in the Attack step is subject to the First Attack Mod +1; every attack against the First Attacker is slightly easier. If the attack by the First Attacker succeeds, that Target cannot fire in the current Attack step.

Suppression

A Machinegun may be allocated to Suppression. The attacker specifies Suppression. It attacks every enemy who makes an attack during the Round, but may not initiate an attack.

The Nuances of Combat

AN OVERVIEW

There are many exceptions and special situations in Combat.

Surprise

The side which begins Combat starts with Status=0.

Other potential participants have Status=+2. They shift to Status= 0 in the Round after being attacked.

Aiming

A Weapon can target any object with Size equal or greater than Range.

Gun Targets

Cannon, AutoCannon, and Gatling (but not Guns) cannot attack TSM less than 2.

First Attacker

The first participant to make an attack in the Attack step is subject to the First Attack Mod +1; every attack against the First Attacker is slightly easier. If the attack by the First Attacker succeeds, that Target cannot fire in the current Attack step.

KO Knockout

The traditional hit-on-the-back-of-the-head attack renders the target unconscious.

The Target must be Status= +1 or greater and head unarmored. The attack uses a hand (or manipulator) and delivers a Blow effect at Contact range. The automatic result is Unconscious for 2D Rounds.

QK Quick Kill

An overwhelming attack kills the target.

The Target must be Stats= +1 or greater and unarmored. The attack uses a weapon at Contact whose total possible hits equals or exceeds the target's Physical Characteristics C1+C2+C3. The automatic result is death.

Suppression

A Machinegun may be allocated to Suppression. The attacker specifies Suppression. It attacks every enemy who makes an attack during the Round, but may not initiate an attack.

Projectors

A Projector attacks all enemy targets in the specified Range Band. For a Projector, TSM= 0 and Status=0.

Reloading

Ammunition for weapons is counted in Loads. Specific ammunition counting is not required and Reloading is automatic if Speed= 1 or less.

Most weapons require reloading after three Rounds of firing.

Launchers Load= one Shot.
Multi-Launcher Load = three Shots.
MachineGuns. Notice that MachineGuns automatically reload if Still or Walking.

Energy Projectors do not require reloading within the context of a battle.
Spray Projectors Load= 3 Shots.

Remotes

A Remote weapon is emplaced at a location and slaved to an operator's Designator. When the Designator is fired, the Remote automatically aims at the location marked by the Designator.

Triggered Operation. Designator fires at the Target. If it hits, then in the next Round, the user may Trigger the Remote weapon, which fires at the designated target.

Automatic Operation. Designator fires at the Target; the Remote automatically fires at the same time.

A Designator must Hit, but need not Penetrate. If the Designator misses, then the Remote misses.

FN. The FN for a Remote depends on its installation.

FN = Char + Skill
Char = Weapon Quality (if not known, = 2D-2).
Skill = Installation.

To Install A Remote Weapon
2D < Dexterity + (Fighting or Ordnance)
Installation = Assets minus Die Roll.

Anti-Designators

An Anti-Designator weapon (if On) senses the operation of a Designator, automatically targets the Designator, and alerts the Operator. Firing the Anti-Designator completes the attack.

Slaves

A Slave Weapon is a weapon installed in a Slave Vehicle. Slaved weapons fire automatically at a target hit by a Designator.

Vehicle Speed

Speed above 2 is a Negative Mod (makes the vehicle harder to hit) except, if the vehicle is travelling directly Toward or Away from the Attacker (then Mod = 0).

COLLISIONS

A collision inflicts Damage equal to:

$$D= Tons * Speed^2$$

Tons= Volume Tons of the **other** vehicle.

Speed. If the crash is head-on, use the sum of the two speeds. If the two vehicles are at angles to each other, use the greater speed. If the two vehicles are travelling in the same direction, use the difference between the two speeds.

Useful Tonnage Calculation. To convert Sophont Size (Human= 100) to tons (displacement Tons = 13.5 cubic meters), divide by 20,000.

INDIRECT FIRE

Some weapons can attack targets which are not directly in their line of sight. This Indirect Fire involves Artillery (high arcing shots which descend on the target), Ortillery (shots dropped from orbit on a target), or Bombing (shots dropped from flyers on a target). In most cases, Indirect Fire is controlled by a Forward Observer.

BATTLEFIELD EFFECTS

Some effects on the battlefield are not the deliberate result of enemy attacks: they just happen: Mines, random artillery attacks, random bombing. The Battlefield Effects Charts show the effects of casual (or deliberate) weapons on the battlefield, including Weapons of Mass Destruction.

ENVIRONMENTAL EFFECTS

The effects imposed by weapons can also be imposed by the environment. The Environment Effects Charts show common environmental situations and how they can inflict damage on characters and equipment.

Fighting

The capabilities of weapons are reflected in their controls. These charts determine the controls to be expected on weapons.

3

VEHICLE HIT LOCATIONS

Comms	2
Cargo	3
Sensors	4
Protections	5
Life Support	6
Locomotion	7
Power Source	8
Body Panels	9
Weaponry	10
Navigation	11
Computer	12

Use this table for vehicles.

SOPHONT HIT LOCATIONS

A	Head	2
A	Head	3
C	LG-2	4
D	LG-1	5
B	Torso	6
B	Torso	7
B	Torso	8
E	LG-3	9
F	LG-4	10
G	Tail	11
G	Tail	12

Use this table for non-humans; it may need to be adapted.

HUMAN HIT LOCATIONS

A	Head	2
A	Head	3
C	L Arm	4
D	R Arm	5
B	Torso	6
B	Torso	7
B	Torso	8
E	L Leg	9
F	R Leg	10
G	Graze	11
G	Graze	12

Use this table for humans.

BIOLOGICAL HIT LOCATIONS

Brain	2
Senses	3
Circulation	4
Skeleton	5
Respiration	6
Skin	7
Digestion	8
Elimination	9
Muscle	10
Skin	11
Skin	12

Use this table for Infections.
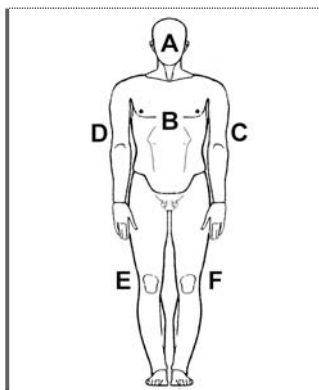
The Battle Damage charts show useful alternatives to these tables based on object size and function.

WEAPONS SKILLS AND CHARACTERISTICS

Based on Weapon Used:	Skill	Characteristic
Portable	BattleDress	+ Dexterity
Fixed, Tank Mount	Artillery	+ Intelligence
Gun, Gatling	Artillery	+ Intelligence
Cannon, Autocannon	Artillery	+ Intelligence
Launcher	Launcher	+ Dexterity
Laser, Fusion, Plasma	Beams	+ Dexterity
Acid, Fire, Gas, or Stench	Sprays	+ C2
Shock, EMP, Rad, Flash	Exotics	+ C2
Freeze, Mag, Sonic, Grav	Exotics	+ C2
Psi Amp	Exotics	+ Psi
Edged Weapons	Blades	+ Strength
Hand-to-Hand	Unarmed	+ Strength
Designator	Fwd Observer	+ Dexterity
Fires Bullets *	Slug Thrower	+ Dexterity

*and not otherwise assigned.

Bay Weapon	Bay Weapons	+ Intelligence
Turret	Turrets	+ C2
Ortillery	Ortillery	+ C5
Spines	Spines	+ C5

Hand Thrown Explosives	Athlete	+ Str
Or	Explosives	+ Str

(5)

Battle Damage disables vehicles and equipment. Depending in its severity, it may be able to be repaired.

L1 DAMAGE LOCATION -1

------------------ Organic --------------

2D	Vehicle	Ship	Hvy Weapons	Armor	Anatomical	Biological
2	Comms	Bridge	Controls	Controls	Head	Brain
3	Cargo	Hold	Mount	Interior	Head	Senses
4	Sensors	Sensors	Sights	Visor	Limb-Group-1	Circulation
5	Protections	Protections	Shields	Protections	Limb Group-2	Skeleton
6	Life Support	Life Support	Stocks	Life Support	Torso	Respiration
7	Locomotion	Drives	Barrel	Legs	Torso	Skin
8	Power Source	Power Plant	Power	Power	Torso	Digestion
9	Body Panels	Hull	Frame	Torso	Limb Group-3	Elimination
10	Weaponry	Weaponry	Ammunition	Manipulators	Limb Group-4	Muscle
11	Navigation	Astrogation	Mechanism	Navigation	Graze	Skin
12	Computer	Computer	Computer	Computer	Graze	Skin

L2 DAMAGE LOCATION -2

1D	Device	Tool	Weapon
1	Case	Case	Frame
2	Power	Power	Ammunition
3	Input	Adjuster	Sights
4	Output	Toolhead	Barrel
5	Controls	Grip	Grip
6	Processor	Safety	Mechanism

S SEVERITY

1D	How Severe?
1	Easy 1D
2	Average 2D
3	Difficult 3D
4	Formidable 4D
5	Staggering 5D
6	Hopeless 6D

Anatomical locations are injuries;
biological locations are illnesses or infections.

Immediate Action (Damage Control)
For any malfunction, identify the appropriate skill and

Check Skill (2D)

Success converts Severity to Easy 1D and the device remains operable (but a result of 12 is automatic failure).

THE MALFUNCTION
The Referee determines the details of the malfunction. Some information is dictated by the situation; the remainder is generated from the charts. The three details of a malfunction are Location, Severity, and Diagnosis.

Location. Roll 2D on the Location Table appropriate to the device or person.
Severity. Roll 1D on the Severity Table. The result is the difficulty of the repair task.
Diagnosis. Roll 1D again on the Severity Table for the separate difficulty of the diagnosis task.

At the end of the process, the Referee knows where the problem is, the difficulty of its repair task, and the difficulty of its diagnosis task. For example,
Sensors, Difficult Repair, Easy Diagnosis,
Navigation, Easy Repair, Staggering Diagnosis.

Until the Diagnosis is successful, the repair task cannot be attempted.

WHAT WENT WRONG?
Characters determine the details of the malfunction using the diagnosis process.

Fault Diagnosis
The characters first diagnose the problem (which may not be obvious). Difficulty = Diagnosis Severity.

To diagnose why this object doesn't work.
Difficulty (nD) < Int
Uncertain (Difficulty minus 3).
Anyone may try to diagnose a fault.

Difficulty (nD) < Int + Skill + Diagnostic Tools
Uncertain (Difficulty minus 1).

Apply Mod +1 for each successive diagnosis attempt.

LET'S FIX IT
Using the diagnosis, the appropriate components are replaced or repaired.

To replace a malfunctioning component
Severity (nD) < Int + Skill +1
Item must be available as a spare.

To repair a malfunctioning component
Severity (nD) < Int + Skill
Uncertain (1D)

An ineffective or incorrect repair increases the Severity of the malfunction +1.

PICKING A SKILL
Various characters can volunteer that a particular skill applies to the diagnosis and repair. Obviously wrong skills can be dismissed (the character says: "I don't understand this thing."). Proper or appropriate skills are used (with negative Mods as appropriate.

USEFUL SKILLS
Biologics
Craftsman
Electronics
Fluidics
Gravitics
Magnetics
Mechanic
Photonics
Polymers
Programmer

Medical

	Behind-The-Screen Damage	
	A procedure for generating consequences for dangerous situations not otherwise covered by existing rules.	**BTSD**

Referees occasionally encounter dangerous situations not otherwise covered by the general body of rules. They must, in such circumstances, create the results quickly and reasonably. BTSD allows a referee to roll dice using a single procedure to produce rational results with a minimum of preparation.

BTSD is rolled secretly (Behind The [Referee's] Screen) when rules do not otherwise cover the situation, or when time is short. It produces results that can be quickly and easily interpreted and imposed.

Assumptions. BTSD assumes that a situation has come out negatively, and that the character faces potential consequences in the form of injury or wounding, or that an object or piece of equipment faces some level of damage.

Using Bad Flux: Bad Flux is a variant of Flux which produces only negative results (average - 2, ranges from - 1 to - 5). Roll 2D and subtract the larger result from the smaller result.

With Negative Focus. BTSD concentrates on negative consequences; once consideration moves to BTSD, the best that can occur is a "no-result."

MODS TO BTSD

BTSD is eligible for various Mods. The spirit of BTSD allows only minimal Mods.

FOR EXAMPLE

Eneri and Aia are racing across a solidified lava plain just after the adjacent volcano begins an unexpected eruption. Hot ash is falling all around, and it is impossible for them to complete their dash to the safety of their ATV without some consequences. There isn't time for the Referee to make up falling ash rules, and he doesn't want to be arbitrary in imposing damage. He decides that each of the two is subject to one possible injury. He turns to BTSD and selects two dice.

Eneri is wearing ordinary clothing and receives no Mods. The Referee rolls 2 and 1. Subtract the larger from the smaller for a result of -1. Eneri suffers a slight wound.

Aia is wearing Mesh (= heavily clothed) and receives Mod +1. The Referee rolls 4 and 1. Subtract the larger from the smaller for a result of -3; Mod +1 gives a final result of -2. Aia receives a Light wound.

The ATV. The Referee decides the ATV is also subject to possible damage. The Referee rolls 6 and 6. Subtract the larger from the smaller for a result of 0. The ATV suffers a Scratch of no particular consequence (the characters can probably buff that out later).

BTSD Behind-The-Screen-Damage

Roll	Wound	Damage	N	N%
-7	Complete	Total	0	0%
- 6	Disastrous	Near Total	0	0%
- 5	Very Heavy	Very Heavy	2	6%
-4	Heavy	Heavy	4	11%
-3	Common	Common	6	17%
-2	Light	Light	8	22%
-1	Slight	Surface	10	27%
0	Scratch	Scratch	6	17%
+1			0	0%
+2			0	0%
+3			0	0%
+4			0	0%
+5			0	0%
+6			0	0%

Wounding applies to characters. **Damage** applies to equipment.

BTSD Mods

Mod	Protections	Actions
-7		
- 6		
- 5		
-4		
-3		
-2		
-1		
0	Typical	Typical
+1	Heavily Clothed	Dodging
+2	Armored	
+3	Heavily Armored	
+4		
+5		
+6		

Protections apply to clothing or equipment; Actions apply to movement or position.

	Vehicle Name
☀️ **....**	
	Model LongName (Bulk - Motive - Mission - Type -User - <u>TL</u>)

Vx: VEHICLE EXTENSION

	Tons	Speed	Load	Stage	Environ	Endurance	QREBS	Options
Vx:	Tons=	Speed=	Load=					

The basic information required to <u>use</u> a vehicle.

Wx: WEAPON EXTENSION

	Range	Cost	Mass	QREBS		Effect1	Effect2	Effect3
Wx:	R=	Cr	kg					

The basic information required to <u>use</u> a weapon mounted on a vehicle.

HIT LOCATIONS

Comms	**2**
Cargo	**3**
Sensors	**4**
Protections	**5**
Life Support	**6**
Body Panel	**7**
Power Source	**8**
Locomotion	**9**
Weaponry	**10**
Navigation	**11**
Computer	**12**

Paste any **Traveller** vehicle image here.   Include a human figure for scale.

ARMOR / PROTECTION

Armor	
Cage	
FlashProof	
RadProof	
SoundProof	
PsiShield	
Insulated	
Sealed	

COMMENTS

Q	R	E	B	S	Period	Age

☀️   **Vehicle HitForm**   ☀️