SMARTd20 Vehicle Combat Rules

by Don Sauber

Vehicle Combat Concepts

Action Economy

Vehicles and especially ships use a different action economy from people. Different things count as simple and complex actions due to the extra crew.

Mixed Scales Economy

If you have actions occurring at the Ship Scale, the Air Combat Scale, and the Personal Scale, you start with the largest scale, do a few rounds, then the next largest scale, and so on. This allows some tactics to occur in each scale.

Signatures and Profiles

The Defense rating for Ships and Vehicles is called a Signature. This is the number for vehicle attacks to hit using the sensors. This is also the number for sensors to detect a vehicle.

If you are within visual range you can use the Profile rating instead. This notes if the target number changes based on which facing you are looking at when you fire.

Sensors

Vehicles, during and after Modern Times, have sensors that tell the crew and systems what is around the vehicle.

Fire Control

Vehicles have a Fire Control that covers the bonus to hit with any of their weapons. This is a combination of the accuracy of the weapons plus the sensors of the vehicle.

Some ships have a second Fire Control for Point Defense.

Crew

When you have a larger crew, you can't go through what ever crewman does. This system generalizes those actions based on their overall effects.

Skill

As in personal combat, vehicle defense is partially based on the skill of the driver or pilot. This means that there are minimum skill ratings and skill penalties to operate that vehicle.

However, a lot of vehicles are limited in their ability to move quickly so there is a limit to their effective skill. Any vehicle with negative maneuver rating has a maximum skill rating as well.

Drivers and pilots can also make an Abort to Dodge action.

Attacks

Vehicle attacks are made based on an Operations roll instead of a Ranged roll.

Autopilot

This is a rating for the computer system that supports things like Autopilot, Sensors, Point Defense, and Vehicle Weapons. It replaces the skill rating for a vehicle's defense. The maximum still applies.

Complexity

This is a penalty to pilot or drive this vehicle due to the amount of skill to just get them operating.

Set Up

Step 1) Define the Scenario
Is this in space, in the ocean, or on land. What are the goals? What is the table size?

Step 2) Set the Terrain
You set the Terrain Type – Open, Hampered, or Restricted. Which side is in what kind of terrain? Do you have mixed terrain? Are there Obstacles?

Step 3) Set the Default Posture
What posture are each side starting at? Do they have any Intel on the other side in the area? Are they using Jamming or Stealth already? Do they have spotters or CAP? Is there Satellite Overview?

Step 4) Define out of map assets
Can the ships or vehicles call upon artillery or bombers? Any reinforcements?

3d vs 2d

The map is reflecting a 3d space but the map is 2d. Some ships may be higher or lower than other ships. If one is detached from the fleet enough to need notation then put a white die on it to mark altitude and a blue one to make depth. This works for naval as well as space engagements.

If they are trying to use an asteroid field or dockyard as cover, they will line up behind those obstacles. If they are going over or under the obstacle just place them over the obstacle for the map. They can move through the space of an obstacle and even end their movement on top of an obstacle.

Ships can also move through each other's spaces in the map since they are moving in 3d. They can't stack at the end of their move just so they don't become a confusing blob that would not really be one in 3d.

Dice Markers

Each larger ship should have a ship marker so show it's position and direction. These should be large enough to hold a few colored dice on top of them. These can be d6, d10, or d20 as needed.

White shows altitude
Blue shows depth
Red shows critical damage
Purple shows shield strength

Ship Sheet

The easiest way to do this is simply copy and paste the ship stats from the book onto their own page and use the rest for notes. Not all of the stats will apply for every type of combat but it is a waste of effort to try and copy it to a smaller format right before a session.

Action Economies

What is an Action Economy?

There are a limited number of things that you can do at a time. The game system that determines how many and what type of actions you can do in each character's turn is called an Action Economy. All games have this but different types generally handle it differently.

Time and Actions

You can divide a role playing game into a few different ways. These are important to know what a character can do and when.

Campaign – This is the over arc of the primary storyline that the GM is running. It can also refer to the setting and particular limits that the GM wants to use.

Session – This is the time when a group meets up. This is important because the milestone leveling system often is based on the number of sessions played.

Scene – This is a location and events in that location in an undetermined amount of time. It could be a battle or a tavern meetup or anything else. Some abilities last a scene. Banked Boosts last to the end of a scene so that players will use them in game. If there are a lot of banked boosts, the GM can announce that this is the last enemy of the scene to use their boosts!

Round – This is an abstract unit of time, usually only a few seconds for quick combats but can be minutes for ship based combat.

Turn – Each character gets a turn to do the things that they can given the action economy used, their circumstances, and their abilities.

Simple Actions – These are single actions that take a turn. They are thinking like firing a weapon, attacking with a melee weapon, etc.

Quick Actions – These are actions that don't take up a round. You can do these as your action or you can spend a Success to get a Quick Action. You can do this a number of times equal to your Dex bonus (positive).

Complex Actions – These are actions that occur slower or take a few steps. They can be started on one turn and actually occur on another turn. This is common for a lot of technical skills and some magical skills.

Extended Actions – These are actions that occur over a longer period of time and involve accumulating boosts to finish the action. See the skill rules for Extended Actions.

Initiative

Initiative determines who goes first in combat. Initiative in the SMART game engine is different from most other games. Most other game systems treat Initiative as a mostly random factor with a bonus thrown in. Initiative is more of a tactical factor in Nexus.

You can roll Tactics if you are in a situation where you would recognize a good spot for an ambush and so could someone else. You can also use Tactics in a battle to give you Initiative from having better tactics. However, most of the time, initiative in Nexus should be determined by the situation (ie the GM).

Think of it based on who has the advantage in that combat. Does one side have the high ground and the other has to fight their way up to meet them? Then the people on the high ground have initiative. Did one group surprise the other? Then the ambushers have initiative. If one side initiates combat then they have the initiative by definition. If one side uses flash bombs then they have initiative. If you have one group waiting or on alert for an attack then the alert group actually has initiative. In a chase the prey vehicle (the one being chased) always has initiative over the predator (the one chasing) because the predator has to always react to the prey's actions.

If a character with the tactics skill takes their round to evaluate the situation then you can allow them to go first (or if they are facing someone who also has the tactics skill then they can re-roll their initiative roll. If they organize others then he can cause them to also switch their initiative. That is what leadership can do.

If one side doesn't have a tactics skill and the other does then the one with tactics will usually have initiative. If there are too many competing reasons for different groups to have initiative then go ahead and have them roll. If someone doesn't have a Tactics skill then they are rolling a Default (-10) on that roll. You could have two gangs fighting and they are both rolling Default on their Tactics skill.

You can also have out of initiative actions. These are attacks that people don't see coming. The actual battle starts after this but this one attack starts things up. The most common version of this is a sniper attack. You could have an alert group that would normally have initiative over someone else be surprised by this. The attack occurs and then others react to it. This could lead to the sniper's friends attacking and they may gain the initiative because of surprise.

If you have a character that joins the combat then they will either be able to attack at the end of the combat initiative count or they can take a round to evaluate the situation and make their own initiative check.

Initiative State

Characters have one of three Initiative States. These states are determined by things like surprise, high ground, various circumstances, or if a character is in the middle of doing something that they can't look away from.

There are three states of Initiative:

Advantage – Extra simple action before the rest of the characters
Standard – Everyone gets a simple action or can start a complex action.
Disadvantage – Can't attack. Can only go Defensive or Hold

Advantage can include a special circumstance such as higher ground or certain abilities. Advantage gives you an additional simple action before each regular skirmish round. Characters with Advantage can also hold action based on the action of another character.

Characters with Disadvantage can't make an attack. They can take a move action or a free action. They could also make a skill roll in a non-combat skill. They make their rolls after everyone else. If they are hit then they loose this action. Characters can gain Disadvantage from being knocked prone, pushed down from suppressive fire, taking a non-combat action such as trying to use a computer or picking a lock, or being surprised. You can't have Advantage and Disadvantage on the same round. Disadvantage overrides Advantage.

Safe or Bold

Characters are able to either play it safe or go bold when they do various actions. The mechanical difference is in the dice the player rolls. If they are playing it safe then they roll 1d10. If they want to push things, they can go bold and roll 1d20! However, with a bold roll comes a critical range (crit range) and an error range. This means that you have a greater chance of success but you also have a chance to completely fail or even make a botch (critical error).

This lets players who are not comfortable with error ranges take their time and play it safe. They don’t need to push things. This can slow down their actions making many of their simple actions into complex actions.

Once they get more comfortable with combat and they want to push things then they can go bold! This can also represent actions that are inherently risky, such as defusing a bomb.

Certain situations can also call for a Safe roll over a Bold roll. If you have someone monitoring you, such as a part of a crew, then all of your rolls may be Safe. Militaries tend to not like one guy out of a crew taking unnecessary risks. The rest of the crew may enforce this.

Personal Scale Actions

There are Free Actions, Quick Actions, Simple Actions, and Complex Actions. You can do a free action and two simple actions or a free action and a complex action.

Types of Actions

Free Actions

Free actions are simple and quick things that don't really take any time. You can do free actions on anyone's turn. You should restrict yourself to one free action but the GM may allow others. It may be possible to do more than one free action if the GM allows it. It depends on the action type. For instance it is a free action to speak but you can usually do that and another free action without a problem. If you do several things that would be normally considered free actions then they will eat up the rest of your action becoming simple actions instead. You can do three or four free actions that way but it depends on common sense.

Quick Actions

You can do a quick action in your turn instead of your free action. If you do more than one quick action then the second quick action becomes a simple action. If you don't take a full move action you can take a 5 foot step as a quick action.

Simple Actions

These are moving and light attacks. You can do a base number of two simple actions. If you are using a combat skill that gives you extra attacks then you can take that larger number of simple actions only if that is the only thing that you are doing. This means that you can fire three times with a gun or fire once and move once.

The only time that you can take three actions with mixed types is if all of the skills you are using are at focused or higher. So if you want to do a move action and two attack actions then your Athletics and your Combat Skill must both be at Focused or higher. You have to be fast enough with everything that you do in a round in order to get the extra attack, otherwise you are slowing yourself down. If you have three skills at focused then you could do three different actions in a round!

Complex Actions

Complex Actions are Actions that take the whole round. They don't equal a number of simple actions. If you do a complex action you can't do any simple actions. Some feats can turn a complex action into a simple action. Some Complex Actions may be listed with a larger amount of time then a round.

Action Types

Free Actions	**Simple Actions**	**Complex Actions**
Drop Object	Aid another	Use Complex Device (slow)
Drop Prone	Concentrate (slow)	Use Complex Skill (slow)
Gesture	Take Aim (slow)	Charging
Speak	Hustle	Evaluate Situation
Press a button your finger is on	Walk	Run
	Use Simple Object	
Quick Actions	Reload Weapon (slow)	
Fast Draw	Stand up from prone	
Change gun mode		
Insert or Remove a Clip		
Stand up from sitting		
Short step		

Vehicle Scale Actions

Vehicle Scale Actions are a little different from Personal Scale Actions. Many of the same actions count for personnel within a vehicle as Personal Scale but other actions involving the vehicle itself require an adjustment.

You have Free Actions, Quick Actions, Simple Actions, and Complex Actions. You can take one or two Free Actions, one Quick Action, and two Simple Actions OR one Complex Action. So that means that you can do a few easy things and then either two Simple Actions or one Complex Action.

Free Actions

Free Actions are basically the same as in Personal Scale. You can take a couple of Free Actions.

Quick Actions

Quick Actions are mainly very minor things. Things you can do with one hand and little concentration. This is things like turn something off, change the song, turn on or off wiper, etc. This also includes controlling a vehicle in easy terrain.

If you do more than one quick action then the second quick action becomes a simple action.

Simple Actions

Simple Actions are standard types of actions such as firing a weapon, make a perception check, or control the vehicle on standard terrain.

Complex Actions

Complex Actions are limited since you are already driving, to things that involve focusing on your driving. In the case of aircraft or spacecraft, this includes launching the craft. Doing a sensor search can be done, if you are not trying to control the vehicle this action, such as coasting or flying normally. Controlling the vehicle in difficult terrain or going evasive will require a complex action.

Action Types

Free Actions	**Simple Actions**	**Complex Actions**
Drop Object	Aid another	Use Complex Device (slow)
Drop Prone	Concentrate (slow)	Use Complex Skill (slow)
Gesture	Take Aim (slow)	Evaluate Situation (tactical)
Speak	Use Simple Object	Difficult Terrain
Press a button your finger is on	Reload Weapon (slow)	Launch Craft
	Normal Terrain	Sensor Search
Quick Actions	Perception Check	Evasive
Easy Terrain		

Ship Scale Action

Adding a crew to an Action Economy changes things. Instead of dealing with every crewman as a character, you deal with the crew as a whole. The center of all actions on a ship is the Commanding Officer. The limiter in quick actions is the time it takes to tell the CO what is going on, the CO considering the situation, and giving commands back to the crew.

This means that most actions taken by the CO are complex actions. The CO starts a chain of events that the crew carries out. Once the crew has their orders, they may act on their own.

There are Free Actions, Complex Actions, and Extended Actions. Free Actions cover the crew going out and fulfilling an order. You can do as many Free Actions as you want.

Extended Actions are actions that can take several rounds to occur, such as actually launching of craft, changing Postures, and other actions by the crew. These don’t interfere with the ability of the CO to give new orders.

Free Actions	**Complex Actions**	**Extended Actions**
Communicate	Launch Ships	Change Posture
Fire Weapons	Attacking a New Target	
Sensors	Tactical Check	

Submarine

Submarines are a bit different in that the captain is directing each action or doing the action so most things are complex actions.

Complex Actions

Launch Torpedoes
Dive
Rise
Tactical Check

Extended Actions
Change Posture

Postures

Ship Combat is based on different Postures instead of different maneuvers, like Vehicle Combat. You can only be in one posture at a time. Each posture will modify your move, signatures, and attack bonuses.

Postures
Standard – Not at Battlestations. Everyday operation.
Battlestations – Can go to Battlestations to get ready for combat. This will bring up defenses and prepare weapons.
Evasive – Higher defense and maneuverability but can't attack. Not all ships have this capability.
Silent Running – Lowest Signature ratings, low speed
Damaged – Higher signatures due to damage. Low Speed
Crippled – Even higher signatures due to damage. Lower speed.

Lower signatures are better. Higher sensors are better.
Add the sensor rating of the scanning ship to the signature of the target. The total will show the threshold to detect.

Posture	Attack	Speed %	Maneuver	Passive Sensors	Active Sensors	Defenses	Signature
Standard	0	100	Full	Full	Full	Full	+0
Battlestations	Full	100	Full	Full	Full	Full	-4
Evasive	0	100	Full	Full	Full	Full	-2
Silent Running	1/2	1/4	1/2	Full	NA	Full	+6
Damaged	1/2	1/2	1/2	1/2	1/2	1/2	-2
Crippled	1/4	1/4	1/4	1/4	1/4	1/4	-4

Movement

Naval Movement

Naval craft are moving through the oceans of a world. This limits their ability to turn quickly. When they turn their front end makes the turn and the back end follows. Ships can only turn one facing unit per move. If the ship is three hexes long, it will have to travel three hexes per face change. If the ship is two hexes then travel two hexes per face turn.

Aircraft Movement

Aircraft turn as a one hex ship.

Starship Movement

Large starships seem to move slowly through the void but they are not moving through a medium, such as an ocean, so they can move quite nimbly compared to old wet naval ships. They have large contragravity fields and thrusters all over to allow an excellent freedom of movement, especially at lower speeds. They can slide, turn in place, or roll like a much smaller craft. However, their main thrusters are aft so most of their speed will be along their axis.

Large capital ships can take their move from either end of the ship. The ship can slide with the point that is moving.

No turn radius is needed.

Combat Terrains

Restricted Terrains

These are slow speeds to deal with obstacles. In a car, this would be 10-15 mph. The Steering rating is about ¼ of the Evasive rating.

This is also Restricted Terrain based on the front line not moving much.

Certain kinds of vehicles are designed for Restricted Terrains and can have a higher Steering rating. Dune Buggies are a good example of this.

Others are terrible at this – such as Busses.

Hampered Terrains

These are speeds to deal with hampering conditions. In a car, this would be 45-55 mph. The Maneuver rating is about ½ of the Evasive rating.

This is also Hampered Terrain based on being near the front line or being near a coast line that confines the combat.

Certain kinds of vehicles are designed for Hampered Terrains – such as small drift racers. Others are terrible at this.

Open Terrains

These include the maximum speeds of the vehicle. Use the Steering, Maneuver, or Evasive rating based on the speed of the vehicle.

Hybrid Terrains

You can have a map that is Hampered in one section and Restricted in another. This is a very common situation. The map could be split in half this way. This could be combat at the edge of an asteroid field or a dock yard. This will mean that one group is tied to one terrain type and the other

is tied to the other terrain type. This allows one group to maintain cover from another or to take advantage of some vehicle's superior terrain handling.

Smaller vehicles may consider Restricted Terrain as only Hampered.

Example Movement Ratings

Restricted Terrains (5-8 criticals)
- Maneuver 1 (34)
- Move 2

Hampered Terrains (1-4 criticals)
- Maneuver 2 (35)
- Move 4

Open Terrains
- Maneuver 3 (36)
- Top Speed Mach 10
- Hyperdrive Capable, backup

This means that while that ship is in Restricted Terrain, it has maximum Maneuver of 1 and a Move of 2. For any attacks and defense where Maneuver is applied, you would use this Maneuver rating.

While in Restricted Terrain, on a map, the ship has a Move of 2. This means that it will move 2 hexes for each move action.

This also applies when the ship is moving that slowly on its own. This could be to match the speed of another ship or due to damage (see critical damage).

While in Hampered Terrain, this ship has a Maneuver of 2 and a Move of 4. It's got a little better movement there.

In Open Terrains, this ship has a maximum Maneuver of 3 so that is the best that it can do. Once in Open Terrain, combat goes into a relative movement system instead of dealing with individual hexes of movement. This would be more of a race. The top speed is compared to each ship and the highest speed gets to decide to engage or disengage.

Crew

When you have a larger crew, you can't go through what ever crewman does. This system generalizes those actions based on their overall effects.

Crew Quality

Crew Quality

Crew Level	Skill	Resolve	Tactics
Rabble	B	B	U
Untested	T	T	B
Average	P	T	T
Battle-tested	F	P	P
Veteran	E	F	F

Crew Quality

The crew quality covers the crew in general. When you encounter a group of the crew, they will often be of a lower quality.

Rabble – Untrained crew, usually from pressing people into service.

Untested – This is a crew that only has basic training. Some of most crews will be poor due to training cadets.

Average – Standard training/possibly unbloodied – This crew knows what to do in general but they haven't really been battle tested. Some of most crews will be average due to lower ranked enlisted and officers.

Battle-tested – Battle tested crew with good experience. Ships during extended peace times may not have anyone at this level.

Veteran – Veterans of several battles over a long period of time. Ships during extended peace times may not have anyone at this level.

Skill

As in personal combat, vehicle defense is partially based on the skill of the driver or pilot. This means that there are minimum skill ratings and skill penalties to operate that vehicle.

However, a lot of vehicles are limited in their ability to move quickly so there is a limit to their effective skill. Any vehicle with negative maneuver rating has a maximum skill rating as well.

Drivers/ pilots can make an Abort to Dodge action.

Attacks

Vehicle attacks are made based on an Operations roll instead of a Ranged roll.

Complexity

This is a penalty to pilot or drive this vehicle due to the amount of skill to just get them operating.

Piloting

Vehicle Attacks

Attack Rolls

This system reduces combat down to a single roll. There is no separate damage roll or confirming a critical. It is based around the idea that your attack roll determines everything at once. If you roll well then you do more damage. There is a static base damage value instead of a damage roll.

Attack rolls by Fighters and Gunners using their own sight can be a d20 but anything else instrument based is a d10 roll.

Target Number

If you are attacking within visual range of a ship then you use the Profile of the ship as the target number. If you are attacking outside of visual range, then you use the Signature as the target number.

If the target ship is using Stealth or Jamming then it will increase the target number for attacks by that much, depending on the nature of the Stealth or Jamming.

The Range modifier is modified by the Ranging Bonus. This will be added to the ship's stat block ahead of time. Then you take the Range Modifier for the range band you are from your target.

Fire Control

The attacker will start with the Fire Control for that ship and add the Range modifier for the range that they are attacking from.

If you are using a fighter where you are lining up shots with the fighter then you add the maneuver rating of the fighter to the Fire Control of the attack. Fighters would need to go to their hampered speed to attack since if they go to Open speed, they have a higher maneuver rating but they can't attack. This is their evasive maneuver rating at that speed.

If you are firing from a gunner's well or from a larger ship then your maneuver actually works against you. You subtract it from your Fire Control.

Ranges

Scale Chart +35 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank	+5	1 light minute	Scale 1+	
Short	+0	3 light minutes	Scale 4+	Nav Sensors, CWIS
Medium	-5	3 light hours	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long	-15	.1 light year	Scale 20+	Long Range Sensors, LRM
Extreme	-25	1 light year	Scale 34+	

Criticals

If you roll a 19 or 20 on a d20 then you get a critical. Technically, you are adding +5 or +6 to the roll, but to make things run faster you just get a 25 as your new dice total for either dice roll.

A critical just means that you do a great job but it doesn't guarantee a success on the roll. If a 25 + your skill or fire control isn't enough to get that target number then you can't make it under these circumstances. You need to adjust something to improve your odds.

Base Damage

Each weapon will have a base damage listed as a number, a slash, and another number. The first number is the base damage of the attack. The second number is the penetration of the attack. See the Damage Rules for more about Penetration.

Compare the base damage to the wound chart of the target. This will give you a Light, Moderate, Serious, Heavy, or Deadly wound level. Each one of these will have a number with them:

Light 1
Moderate 2
Serious 3
Heavy 4
Deadly 5

This gives you the base damage for that attack that has now been scaled for that particular target!

Margin of Success

Once you figure out the base damage, you need to look at the margin of success on the attack. This is the amount over the target number that you ended up with.

So if you have a Fire Control total of 33 plus you roll an 12, then you have a total of 45. If the target number (Profile or Signature) was a 38, then you would have a Margin of Success of 7.

For every 5 points of MoS, you increase the Wound level. This is called a Boost. So if you got a Light wound, then a MoS of 7, you would Boost to a Moderate wound.

You must do at least a Light Wound in order for MoS to apply.

Burst

Some weapons are firing quickly and do extra damage from several hits. This system uses the Margin of Success mechanic to cover this. Weapons will have a Burst rating. Add that Burst rating either to the Fire Control OR to the Margin of Success, depending on if you are doing a spray and prey or concentrated fire.

Vehicle Defenses

Profile

This is the target number to hit this object or vehicle directly, when not using your sensors only. This is basically for shooting at a ship within visual range. The base Profile assumes the vehicle is at rest. If it is maneuvering then add the maneuver rating for the speed level it is traveling.

The Profile is often broken down into side, top, and front profiles.

Signatures

The Defense rating for Ships and Vehicles is called a Signature. This is the number for vehicle attacks to hit based on Sensors. This is also the number for sensors to detect a vehicle.

If the vehicle has different Signatures based on different types of sensors, it will be listed here.

Stealth

A stealth rating can be added to the target number of the signature or the Profile, depending how the stealth system works.

Vehicle Damage

Damage Scaling

A slap to a person is a killing blow to a bug. You want to find out what kind of effect an attack will have on various sizes and types of creatures and objects. Did they even feel it? Was it a significant hit? Did it stun them?

The object of Damage Scaling is to convert generalized hit point damage to any penalties that effect the target. As the target takes damage, how much are they effected? These penalties are cumulative and effect nearly everything that the target tries to do. Light damage gives you a -1 to all actions. Moderate damage is -2, Serious is -3, and Heavy is -4. This is the penalty the target takes from just that one hit!

Instead of keeping up with a person having 45 hit points and subtract from that, you just keep up with the penalty. A character could take a Light wound, a Light Wound, and a Moderate Wound, for a total of -4 damage marks. That is much easier to keep up with AND it functions as the penalty for that character's actions.

Each scale of creature or object has a Damage Scale based on their size and density. It is written as follows: (Toughness) Light/Moderate/Serious/Heavy/Deadly+ such as (5) 10/15/20/25/26+. This chart is the standard chart for a normal scale human. The first part in parenthesis is the Toughness. Any damage at or below that amount is ignored. It's a paper cut. You may bleed but it does no significant damage. The second is Light damage. Anything over the Toughness but less than or equal to the Light damage level is a Light Wound, so 6-10 counts based on that chart. Same thing for the other levels. Any damage at 26 or greater is instantly deadly damage. The Wound Level can be determined at a glance this way.

Boosting the damage becomes extremely easy this way. If you do at least Light damage to a target and buy a Damage Boost then it just goes up one damage level to a Moderate Wound. You are capable of damaging the target and you have your attack hit a more vulnerable location.

Several of the damage levels have additional effects. A serious wound will stun you and a heavy wound will stagger you. This means that getting hit in combat has an immediate effect and removes the problem of a video game like damage track where you are fine until down.

Physical Defense

Armor in SMARTd20 is based around the PD (ie the Hardness of the target) versus the Penetration of the attack. If the penetration is greater than or equal to the PD of the target then the damage applies. If the penetration is lower than the PD, there is no effect outside of a loud bang of metal against metal!

Damage Tracks

There are several different damage tracks. The track of damage reflects what was hit on that vehicle or object or creature.

Armor – damage to the armor itself.
Superstructure - SS – cargo and non-vital damage.
Systems – System damage.
Shields – This blocks that much damage.

Armor

Armor is extra material, usually steel, that is added to absorb some of the incoming damage. It can be destroyed. Each point of armor is a point of damage that doesn't get through to the inside of the vehicle. Armor will usually have the highest PD of all of the damage tracks. Once you run out of Armor, any additional damage goes to Superstructure.

Military vehicles and some creatures have Armor.

Superstructure (SS)

Superstructure is the frame and non-vital parts of a ship. This will usually be the largest amount of damage class on a particular vehicle or object. Once you run out of Superstructure then any additional damage goes to Systems. The vehicle will stop moving at this point. If the object doesn't have Systems then it will collapse once it runs out of Superstructure. If the vehicle or object is in space or in the ocean, it will collapse once it runs out of Superstructure even if there are Systems points left.

When a vehicle takes any physical damage, it goes to the Superstructure. If it takes Systems damage, then it takes the same amount in Superstructure. The exception to this is stun damage to the criticals. See Systems

Systems

Systems are the controls and systems of the vehicle. This will usually be at least half of the Superstructure but it varies with vehicle type.

Damage above Light Wounds goes to Systems Damage. So if you take a Moderate Wound (-2) then you take 2 points of Systems Damage AND 2 points of Superstructure.

Shields

The ship has force fields that take damage like armor. It makes a bubble around the vehicle at a listed distance. If the distance is Point Blank then the Shields go directly around the shape of the ship and you can't get between the Shields and the Hull. If the distance is listed as Short Range then a person can get between. For a capital ship, a fighter can fly along the hull within the shields.

Hit Location (optional)

I don’t recommend using this in larger engagements or for newer players.

Start with the Damage Level after Boosts. Roll 1d20 for hit location. Rolling a 1 means the damage goes down one level and rolling 20 means the damage goes up one level.

Rolling a location means that location takes 1 damage mark at that location. Don’t combine them with the personal scale concept of serious wound. So a sensor hit is a light wound -1 to sensors, not a serious wound.

Mech Hit Location

Roll	**Medium**	**Roll**	**Serious**	**Roll**	**Heavy**
1-3	Left Arm OO	2-4	Gyro OO	2-4	Pilot O
4-6	Right Arm OO	5-8	Jump Jets OO	5-8	Life Support O
7-9	Anti-Infantry Weapons OO	9-11	Left Leg OO	9-12	Ammo O
10-11	Secondary Weapons OO	12-14	Right Leg OO	13-20	Engine OOO
12	Nav Sensors	15-16	Heat Sinks OOO		
13	Long Range Sensors	17	Tactical Sensors		
14-16	Primary Weapons OO	18	Jamming		
17-19	Missiles OO	19	Sensor Penetration		

Aircraft Hit Location

Roll	**Medium**	**Roll**	**Serious**	**Roll**	**Heavy**
1-6	Secondary Weapons OO	2-4	Tactical Sensors	2-4	Pilot O
7-13	Nav Sensors	5-7	Jamming	5-8	Life Support O
14-19	Long Range Sensors	8-10	Sensor Penetration	9-12	Ammo O
		11-15	Primary Weapons OO	13-20	Engine OOO
		16-19	Missiles OO		

Alt Aircraft Hit Location

Locations	Fore	Aft	Side	Missed	Medium	Serious	Heavy	Deadly
Body	-0	-0	-0	Miss	1-12	1-4		
Cockpit	-2	-8	-6	Body			1-5	1-6
Engine	-8	-2	-4	Body		5-8	6-10	
Fuel	-8	-6	-4	Engine				7-13

Intake	-2	-8	-4	Engine		9-12	11-15	
Missiles/Bombs	-4	-4	-4	Body				14-20
Sensors	-4	-10	-8	Body	13-20	13-16		
Wings	-2	-2	-4	Body		17-20	16-20	

Ground Vehicle Hit Location

Roll	**Medium**	**Roll**	**Serious**	**Roll**	**Heavy**
1-6	Anti-Infantry Weapons OO	2-4	Tactical Sensors	2-4	Pilot O
7-13	Secondary Weapons OO	5-7	Jamming	5-12	Ammo O
14-19	Nav Sensors	8-10	Sensor Penetration	13-20	Engine OOO
		11-15	Primary Weapons OO		
		16-19	Missiles OO		

Hyperion Class Heavy Cruiser

Length 1025m Scale: 21F Str +30 Crew: 350 Passengers: 0 Wounds (651) 1258/1461/1866/3081/3082+ Armor 12 PD 64 Superstructure 16 PD 62 Systems 12 PD 58 Restricted Terrains (7-12 criticals) Maneuver 1 (23) Move 2 Hampered Terrains (1-6 criticals) Maneuver 2 (24) Move 4 Open Terrains Maneuver 3 (25) Top Speed Mach 10 Hyperdrive Capable, backup	Profile 22 Signature 22 Crew Quality – veteran Piloting F Operations F Tactics F Complexity -10 Computers +10 Sensors Cat II/+12 + R Ranging +35 ECM 21 Fire Control 13 + R – M Limit 14+ Point Defense 25 + R – M Error 1-4

Craft: 2 Light Shuttles, 6 Starfuries

Weapons – Fore

Capitol Laser Cannons (x2) 2000/66
Medium Plasma Cannon (x2) 820/64
Medium Pulse Cannon 1300/58, Burst +3
Particle Cannon (x3) 1500/66
PD Interceptor 150/52, Burst +4

Weapons – Side

Medium Pulse Cannon 1300/58, Burst +3
PD Interceptor 150/52, Burst +4

Weapons – Aft

Capitol Laser Cannons (x2) 2000/66
PD Interceptor 150/52, Burst +4

Scale Chart +20 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank -10	+10	100 m	Scale 1+	
Short -15	+5	8 km	Scale 4+	Nav Sensors, CWIS
Medium -20	+0	3 light sec	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long -30	-10	5 light min	Scale 20+	Long Range Sensors, LRM
Extreme -40	-20	5 light hours	Scale 34+	

Mk2 SA-23E Mitchell-Hyundyne Starfury

Scale: 7D Str +30
Crew: 1 (F) Passengers: 0
Cargo: 65 kg Fuel: 2 days
Wounds (35) 70/81/105/175/176+

Superstructure 10 PD 36
Systems 5 PD 32

Restricted Terrains (3-5 criticals)
Maneuver 8 (41)
Move 6
Hampered Terrains (1-2 criticals)
Maneuver 10 (45)
Move 12
Open Terrains
Maneuver 14 (50) no attack
Top Speed

Profile 36
Signature 36

Crew Quality – veteran
Piloting F
Operations F
Tactics F
Complexity -10

Sensors Cat II/+6
Ranging +20
ECM 21
Fire Control +22 +M+R

Weapons:
Pulse Lasers (x2) 150/44

Scale Chart +20 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank -10	+10	100 m	Scale 1+	
Short -15	+5	8 km	Scale 4+	Nav Sensors, CWIS
Medium -20	+0	3 light sec	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long -30	-10	5 light min	Scale 20+	Long Range Sensors, LRM

Constitution I Class USS Enterprise

Scale: 17J Str +170 Length: 298m Crew: Passengers: Restricted Terrains (5-8 criticals) Maneuver 3 (30) Move 6 Hampered Terrains (1-4 criticals) Maneuver5 (32) Move 12 Open Terrains Maneuver 8 (35) Top Speed ¼ C Warp Drive 5.06 Crew Quality Veteran Operations F Tactics F Complexity -10	Hull Wounds (900) 1575/1800/2250/3600/3601+ Superstructure 14 PD 62 Systems 10 PD 58 Shields 17K Wounds (1125) 2025/2325/2925/4725/4726+ Shields 10 PD 70 Profile 27 Side 27 Top 25 Fore/Aft 29 Signature 27 Computers +10 Sensors Cat II/+12 + R Ranging +35 ECM 21 Fire Control 13 + R – M

Craft 2 Shuttles

Weapons
Phasers - 2000/65
Torpedoes - Photorp 2500/70

Cyclone Cycle CVR-3
Str 15
Scale 5H
Crew: 1

Cycle Mode Restricted Terrains Crit 3-4 Steering Rating 3 (30) Move 6 Hampered Terrains Crit 1-2 Maneuver Rating 5 (32) Move 12 Open Terrains Evasive Rating 10 (37) Top Speed 175 mph Hover Mode Hampered Terrains Maneuver Rating 8 (35) Move 6 Open Terrains Evasive Rating 15 (42) Top Speed 20 mph	Wounds (41) 82/96/123/206/207+ Armor 4 PD Superstructure 8 PD Systems 4 PD Sensors Cat II/45 ECM 18 Jamming Bonus 3 Ranging Bonus +20 Fire Control +10 + R - M Profile 27 Signature 25 Crew Quality - Veterans Operations - E Tactics F Complexity -15

Weapons

GR 103 Mini-Missile Delivery System Burst 5 Range Long

Scale Chart

Battlefield	Example	Distance	Limits	Notes
Point Blank +15	Across a street	120ft/40m/1 in	Scale 4+	
Short +0	Across a field or a city block	1050ft/350m/2-12 in	Scale 6+	Nav Sensors
Medium -5	Across downtown or small city	2400ft/800m/13-26 in	Scale 8+	Jamming +12, Stealth +10, Tactical +10
Long -10	Across a city	30,000 yards/m/27-1000 in	Scale 10+	Long Range Sensors, Lasers, Point Defense
Extreme -15	Surrounding area of a city	50,000 yards/m/1000-1666 in		

Invid Fighter Scout
Str 25
Scale 7H
Crew: 1

Walking Mode Restricted Terrains Crit 3-4 Steering Rating 4 (29) Move 4 Hampered Terrains Crit 1-2 Maneuver Rating 6 (31) Move 8 Open Terrains Evasive Rating 8 (33) Top Speed 40 mph Hover Mode Hampered Terrains Crit 1-2 Maneuver Rating 8 (33) Move 12 Open Terrains Evasive Rating 15 (40) Top Speed 680 mph (Mach 1)	Wounds (57) 114/134/172/288/289+ Armor 4 PD 38 Superstructure 8 PD 36 Systems 4 PD 32 Sensors Cat II/45 ECM 18 Jamming Bonus 3 Profile 25 Signature 25 Crew Quality - Veterans Operations - E Tactics F Complexity -15

Weapons

Claws 30/46
2x Light Plasma Cannons 70/44, Burst 4

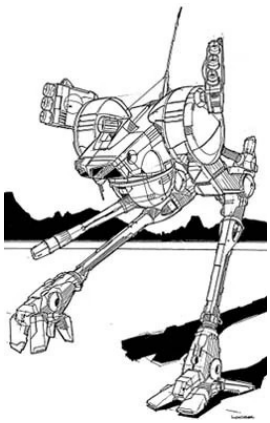
Invid Scout
Str 25
Scale 7H
Crew: 1

Walking Mode Restricted Terrains Crit 3-4 Steering Rating 4 (29) Move 4 Hampered Terrains Crit 1-2 Maneuver Rating 6 (31) Move 8 Open Terrains Evasive Rating 8 (33) Top Speed 40 mph Hover Mode Hampered Terrains Crit 1-2 Maneuver Rating 8 (33) Move 12 Open Terrains Evasive Rating 15 (40) Top Speed 680 mph (Mach 1)	Wounds (57) 114/134/172/288/289+ Armor 4 PD 38 Superstructure 8 PD 36 Systems 4 PD 32 Sensors Cat II/45 ECM 18 Jamming Bonus 3 Profile 25 Signature 25 Crew Quality - Veterans Operations - E Tactics F Complexity -15

Weapons

Claws 30/46

SMARTd20 BattleTech Mechs

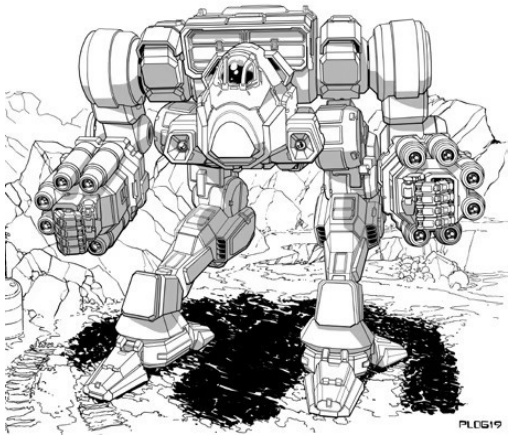
Mech: Locust LCT-3M Scale 9F Size Light Mech 20 tons Wounds (53) 98/113/143/233/234+ Armor 4 PD 40 Superstructure 8 PD 38 Systems 4 PD 34 Restricted Terrains (3-4 criticals) Steering Rating 3 (26) Move 12 Hampered Terrains (1-2 criticals) Maneuver Rating 5 (28) Move 16 Open Terrains Evasive 10 (33) no attack Top Speed 129.6 kph Profile 23 Signature 19	Complexity -10 Operations (P) +0 Tactics (T) +5 Fleet Bonus +1 Special: Heat OV 0 AMS, CASE Sensors – Cat II +12 Ranging Bonus +20 Fire Control +8 + R – M ECM 22 Jamming 12 ECM Attack +2	

Gear

Type	Damage	Burst	Range	Notes
ER Small Lasers x8	100/53	+8	Long	Point Defense
Medium Pulse Laser	130/56	+0	Long	

Scale Chart

Battlefield	Example	Distance	Limits	Notes
Point Blank +15	Across a street	120ft/40m/1 in	Scale 4+	
Short +0	Across a field or a city block	1050ft/350m/2-12 in	Scale 6+	Nav Sensors
Medium -5	Across downtown or small city	2400ft/800m/13-26 in	Scale 8+	Jamming +12, Stealth +10, Tactical +10
Long -10	Across a city	30,000 yards/m/27-1000 in	Scale 10+	Long Range Sensors, Lasers, Point Defense
Extreme -15	Surrounding area of a city	50,000 yards/m/1000-1666 in		

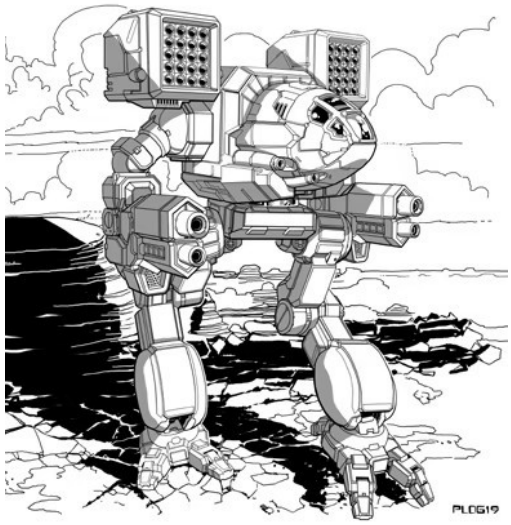
Mech: Nova (Black Hawk) Scale 10F Size Medium Mech 50 tons Wounds (58) 108/124/158/258/259+ Armor 8 PD 44 Superstructure 10 PD 42 Systems 8 PD 38 Restricted Terrains (3-4 criticals) Steering Rating 2 (26) Move 7j Hampered Terrains (1-2 criticals) Maneuver Rating 4 (28) Move 10j Open Terrains Evasive 9 (33) no attack Top Speed 86 kph Profile 22 Signature 19 ECM 25 ED 30	Complexity -10 Operations (P) +0 Tactics (T) +5 Special: Heat OV 1 AMS, CASE, OMNI Sensors – Cat II +12 Ranging Bonus +20 Fire Control +8 + R – M	

Weapons

Type	Damage	Burst	Range	Notes
ER Medium Laser	125/55	+12	Long	
EM Attack	125/55s	+5	Medium	

Scale Chart

Battlefield	Example	Distance	Limits	Notes
Point Blank +15	Across a street	120ft/40m/1 in	Scale 4+	
Short +0	Across a field or a city block	1050ft/350m/2-12 in	Scale 6+	Nav Sensors
Medium -5	Across downtown or small city	2400ft/800m/13-26 in	Scale 8+	Jamming +12, Stealth +10, Tactical +10
Long -10	Across a city	30,000 yards/m/27-1000 in	Scale 10+	Long Range Sensors, Lasers, Point Defense
Extreme -15	Surrounding area of a city	50,000 yards/m/1000-1666 in		

Mech: Timber Wolf (Mad Cat) Scale 10F Size Heavy Mech 75 Tons Wounds (58) 108/124/158/258/259+ Armor 8 PD 48 Superstructure 12 PD 46 Systems 8 PD 42 Restricted Terrains (3-4 criticals) Steering Rating 2 (26) Move 7 Hampered Terrains (1-2 criticals) Maneuver Rating 4 (28) Move 10 Open Terrains Evasive 9 (33) no attack Top Speed 86 kph Profile 22 Signature 19	Complexity -10 Operations (P) +0 Tactics (T) +5 Special: Heat OV 1 CASE, OMNI Sensors – Cat II +12 Ranging Bonus +20 Fire Control +8 + R – M	

Weapons

Type	Damage	Burst	Range	Notes
ER Large Laser	90/58	+2	Long	
ER Medium Laser	75/55	+2	Long	
Medium Pulse Laser	80/56		Long	
LRM-20	150/70	+2	Long	
Machine Gun	60/52	+2	Short	

Scale Chart

Battlefield	Example	Distance	Limits	Notes
Point Blank +15	Across a street	120ft/40m/1 in	Scale 4+	
Short +0	Across a field or a city block	1050ft/350m/2-12 in	Scale 6+	Nav Sensors
Medium -5	Across downtown or small city	2400ft/800m/13-26 in	Scale 8+	Jamming +12, Stealth +10, Tactical +10
Long -10	Across a city	30,000 yards/m/27-1000 in	Scale 10+	Long Range Sensors, Lasers, Point Defense
Extreme -15	Surrounding area of a city	50,000 yards/m/1000-1666 in		

Imperial - Class Star Destroyer Mk II

Scale: 22F Str +170 Manufacturer: Kuat Drive Yards Cost: 40,000,000,000 Availability: Imperial Military Crew: 37,000 Passengers: 9,700 troops Cargo: 36,000 Tons Fuel: 6 years Restricted Terrains (5-8 criticals) Maneuver 1 (23) Move 2 Hampered Terrains (1-4 criticals) Maneuver 2 (24) Move 4 Open Terrains Maneuver 3 (25) Top Speed Mach 10 Hyperdrive Capable, backup Crew Quality Veteran Operations F Tactics F Complexity -10	Wounds (719) 1394/1619/2069/3419/3420+ Shields 10 PD 66 Short Range Armor Armor 8 PD 64 Superstructure 16 PD 62 Systems 12 PD 58 Computers +10 Sensors Cat II/+12 + R Ranging +35 ECM 21 Fire Control 13 + R – M Limit 14+ Point Defense 25 + R – M Error 1-4 Profile 22 Side 22 Top 21 Fore/Aft 24 Signature 22 Components Scale 14F Profile 29 Wounds (143) 278/323/413/683/684+ Hardness 58

Craft: 72 TIE Series Fighters, 5 Alpha-class XG-1 Star Wings, 15 Delta Class DX-9 or DX-9s Transports, 12 AT Barges, 8 Lambda-class T-4a Shuttles, 1 Gamma-class Assault Shuttle, 1 TIE Shuttle Craft, Skipray Blastboats (variable), Repair and Recovery Vehicles, Various other Landing Craft, 20 AT-AT Walkers, 40 AT-ST Walkers, 1 Prefabricated Garrison Base

Weapons – Fore

Tractor Beams x8 (Str +100/+10)
Capitol Turbolaser Batteries (x10) 860/66
Capitol Ion Batteries (x10) 860/66 stun,
PD: Heavy Lasers (x5) 150/52,

Weapons – Side

Tractor Beams x5 (Str +100/+10)
Capitol Turbolaser Batteries (x6) 860/66
Capitol Ion Batteries (x2) 860/66 stun
PD: Heavy Lasers (x5) 150/52, Acc +23

Weapons – Aft

Tractor Beams x2 (Str +100/+10), Acc +11
Capitol Turbolaser Batteries (x2) 860/66
Capitol Ion Batteries (x4) 860/66 stun,
PD: Heavy Lasers 150/52

Scale Chart +35 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank -10	+5	1 light minute	Scale 1+	
Short -15	+0	3 light minutes	Scale 4+	Nav Sensors, CWIS
Medium -20	-5	3 light hours	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long -30	-15	.1 light year	Scale 20+	Long Range Sensors, LRM
Extreme -40	-25	1 light year	Scale 34+	

Mon Calamari MC80a Star Cruiser

Scale: 20F Str +160 Manufacturer: Mon Calamari Shipyards Cost: 75,000,000 Availability: Alliance Military Crew: 5,400 Passengers: 1,200 troops Cargo: 20,000 Tons Fuel: 2 years Restricted Terrains (4-8 criticals) Maneuver 1 (24) Move 2 Hampered Terrains (1-3 criticals) Maneuver 2 (25) Move 4 Open Terrains Maneuver 3 (26) Top Speed Mach 10 Hyperdrive Capable, backup Crew Quality Veteran Operations F +12 (-10) +2 Tactics F +12 Complexity -10	Wounds (584) 1124/1304/1664/2744/2745+ Shields 8 PD 66 Armor 8 PD 64 Superstructure 16 PD 62 Systems 8 PD 58 Sensors Cat II/+15 ECM 21 Ranging +35 Fire Control 13 + R – M Limit 14+ Point Defense 25 + R – M Error 1-4 Profile Side 23 Top 23 Fore/Aft 25 Signature 23 Components Scale 14F Profile 29 Wounds (143) 278/323/413/683/684+ Hardness 58

Craft: 72 Starfighters, 5 Shuttles

Weapons – Fore
PD: Quad Lasers (x2) 150/30
Capitol Ion Batteries (x3): 860/340 stun
Capitol Turbolaser Batteries (x5): 860/340
Capitol Missile Launchers (x2)
Tractor Beams x2 (Str +100/+10)

Weapons – Side
PD: Quad Lasers (x6) 150/30,
Capitol Ion Batteries (x10): 860/340 stun
Capitol Turbolaser Batteries (x10): 860/340
Capitol Missile Launchers (x4)
Tractor Beams x3 (Str +100/+10)

Weapons – Aft
PD: Quad Lasers (x2) 150/30,
Capitol Turbolaser Batteries (x2): 860/340

Scale Chart +35 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank -10	+5	1 light minute	Scale 1+	
Short -15	+0	3 light minutes	Scale 4+	Nav Sensors, CWIS
Medium -20	-5	3 light hours	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long -30	-15	.1 light year	Scale 20+	Long Range Sensors, LRM
Extreme -40	-25	1 light year	Scale 34+	

Neutron Star Class Bulk Cruiser

Scale: 18F Str +140
Manufacturer: Rendilli Hyperworks
Cost: 2,800,000
Availability: Imperial Military
Crew: 2,200 Passengers: 250 troops
Cargo: 325 Tons Fuel: 1 year

Superstructure 15 PD 58
Systems 5 PD 54

Restricted Terrains (3-5 criticals)
Maneuver 2 (16)
Move 3
Hampered Terrains (1-2 criticals)
Maneuver 3 (18)
Move 6
Open Terrains
Maneuver 4 (22)
Top Speed
Profile
Side 36
Top 36
Fore/Aft 38

Wounds (425) 830/965/1235/2045/2046+

Signature 36

Components Scale 14E
Profile 19
Wounds (68) 128/148/188/308/309+
Hardness 58

Sensors Cat II/43
ECM 21
Fleet Bonus 4
Ranging +35
Fire Control 13 + R – M Limit 14+
Point Defense 25 + R – M Error 1-4

Crew Quality Veteran
Operations F
Tactics F
Complexity -10

Weapons – Fore
Heavy Lasers (x10) 40/44,
Turbolasers (x12) : 800/66

Weapons – Side
Heavy Lasers (x10) 40/44
Turbolasers (x12) : 800/66
Tractor Beams x1 (Str +80)

Weapons – Aft
Heavy Lasers (x10) 40/44
Turbolasers (x6) 800/66

Scale Chart +20 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank -10	+10	1 light minute	Scale 1+	
Short -15	+5	3 light minutes	Scale 4+	Nav Sensors, CWIS
Medium -20	+0	3 light hours	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long -30	-10	.1 light year	Scale 20+	Long Range Sensors, LRM
Extreme -40	-20	1 light year	Scale 34+	

T-65B X-Wing

Scale: 9F Str +50
Manufacturer: Incom
Cost: 150,000 (65,000 used)
Availability: Alliance Military
Crew: 1 Passengers: 0
Cargo: 110 kg Fuel: 1 week
Wounds (53) 98/113/143/233/234+

Shields 4 PD 42 Short Range Armor
Superstructure 10 PD 38
Systems 5 PD 34

Restricted Terrains (3-5 criticals)
Maneuver 4 (49)
Move 6
Hampered Terrains (1-2 criticals)
Maneuver 6 (51)
Move 12
Open Terrains
Maneuver 10 (55) no attack
Top Speed

Profile 34
Signature 45

Sensors Cat II/+8
Ranging +35
ECM 21
Fire Control +22 +M+R

Crew Quality – veteran
Piloting F +12 (-10) +2
Operations F +12 (-10) +2
Tactics F +12
Complexity -10

Weapons:

Heavy Lasers (x4) 150/62, Burst +8
Light Missile Launchers (x2)

Scale Chart +35 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank	+5	1 light minute	Scale 1+	
Short	+0	3 light minutes	Scale 4+	Nav Sensors, CWIS
Medium	-5	3 light hours	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long	-15	.1 light year	Scale 20+	Long Range Sensors, LRM
Extreme	-25	1 light year	Scale 34+	

TIE/In Tie Fighter

Scale: 8F Str +30
Manufacturer: Sienar Fleet Systems
Cost: 60,000 (25,000 used)
Availability: Imperial Military
Crew: 1 (F) Passengers: 0
Cargo: 65 kg Fuel: 2 days
Wounds (40) 80/93/120/200/201+

Superstructure 10 PD 36
Systems 5 PD 32

Restricted Terrains (3-5 criticals)
Maneuver 5 (40)
Move 6
Hampered Terrains (1-2 criticals)
Maneuver 9 (44)
Move 12
Open Terrains
Maneuver 14 (49) no attack
Top Speed

Profile 35
Signature 35

Crew Quality – veteran
Piloting F
Operations F
Tactics F
Complexity -10

Sensors Cat II/+6
Ranging +20
ECM 21
Fire Control +22 +M+R

Weapons:

Heavy Lasers (x2) 150/44, Burst +4

Scale Chart +20 Ranging

Category	Ranging	Range	Limits	Notes
Point Blank +5	+10	1 light minute	Scale 1+	
Short +0	+5	3 light minutes	Scale 4+	Nav Sensors, CWIS
Medium -5	+0	3 light hours	Scale 14+	Tactical Sensors, Science Sensors, Primary Weapons
Long -15	-10	.1 light year	Scale 20+	Long Range Sensors, LRM
Extreme -25	-20	1 light year	Scale 34+	