

BLOOD AND SPACE:

STARSHIP CONSTRUCTION MANUAL

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STARSHIP CONSTRUCTION MANUAL

INTRODUCTION

Welcome to the last book in RPGObjects' *Blood and Space II* line of books, the starship construction manual!

Before we begin, let us take a moment to discuss what this book is, and what it is not.

What this book is: This book has three primary purposes: to assist the game master in the creation of new starship hulls and weapons, the two starship systems most likely to require a specific feel for the game master's campaign; to assist the intrepid player who wants a ship that is neither battlecruiser nor destroyer but something all his own; and finally to allow a player to heavily modify a starship almost until it is unrecognizable from its original purpose, such as taking an old hunk of junk bulk cruiser and turning it into the fastest smuggling ship in the galaxy.

What this book is not: This book is not intended as a physics text nor was it written to require one. If your favorite starship construction rules require a spreadsheet, go in peace and send no more.

This book is also not intended to supplant the basic rules for how starships are put together in the future core rules. It was meant to assist those using that system but who want a little more variety (especially the ability to design completely new hull types from scratch).

THE DESIGN PROCESS

These rules are drawn from the RPGObjects' product *Blood and Circuits* and are reproduced here for completeness, so that this product does not require anything else to aid the game master and players in designing their own starships. Those who find this system interesting and would like to see how it applies to weapons, armor, robots, computers and land vehicles might wish to investigate the aforementioned product.

1. THEORETICAL DESIGN

The first step in designing a new item is deciding what it is and what you want it to do. Go through the tables that follow in this chapter and write down what you want the item to be and do, then total the materials cost and invention points the item will require (these topics are covered in depth later in this chapter).

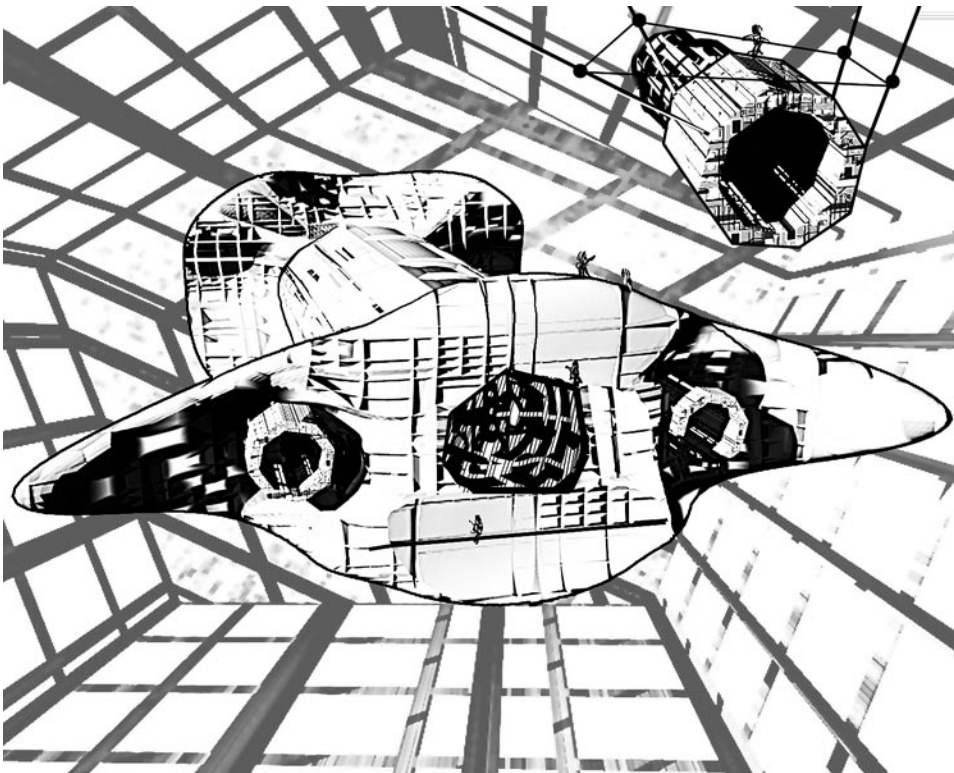
2. GATHER RAW MATERIALS

This involves making a wealth check. If the character fails he must choose to wait while searching for suitable materials (at a price he can afford) or settle for cheaper or less suitable materials and increase the item's prototype modifier.

Determining Purchase DC: The purchase DC for an item you are designing is actually the cost of the raw materials.

Materials for exotic items can be restricted in much the same way as items themselves and may be rated as Licensed (+1), Restricted (+2) or Military (+3). The additional cost (+1-+3) is for a character without the necessary access buying the materials on the black market.

Progress Levels: The Progress Level of an item also factors into the materials cost of an item. For each PL above the current technological level (PL 5 for campaigns taking place in the modern era) add +5 to the materials cost of an item. Any item more than one PL higher than the modern era (PL 7 or higher) cannot be made at all except with the GM's permission. Usually this means the campaign involves super-science or superpowers.



Niles Antilles stood in the control tower of the UEG Repulse, watching the radar screen with intense anxiety. On the screen a pair of flashing lights made a lazy turn, banking and changing their course back toward the massive space carrier.

As the twin fighters began to edge back toward the flight deck, the com relay crackled to life, “This is Space Superiority Craft X-77 Bravo, request permission to begin simulated combat landing number nine.”

The fleet engineers, who had designed the fighters, intended to be the next generation of SCC Fighters, looked calmly over the numbers flowing by on their screens and nodded to the Flight Control Officer.

“Roger SCC X-77, you are cleared to begin your simulated combat landing.”

With that the Flight Control Officer keyed a microphone, his voice echoing in the expansive flight deck below, “Attention all Flight Deck personnel. Prepare to receive fighters on combat approach, repeat prepare for combat approach.”

A series of high pitched shrieks and flashing lights accompanied this announcement and suddenly the flight deck was awash in activity, men and women running full tilt to their positions, clearing equipment out of the way, CPOs yelling and swearing at their crews to move faster.

On the radar screen the lazy maneuver of the fighters had transformed itself. The craft were now moving at combat speeds, performing the high speed landings designed to bring the craft in one side of the massive hanger deck, refuel and rearm, and return the craft to space as soon as possible.

It was one part night carrier landing in combat, one part frantic high-stakes car race pit stop, and the most dangerous thing a carrier pilot did in a reliable spacecraft, which so far hadn’t been the case with the SCC X-77.

The twin dots moved closer and closer, the forward thrust of the craft propelling them faster and faster through the frictionless void toward the tiny, also moving surface of the flight deck.

At the moment the fighters’ landing skids in the surface, the major innovation of the X-77 came into play, the reverse thrusters in the nose of the spacecraft that would assist the arresting tractors, allowing the spacecraft to come in at a much higher velocity. While this posed its own series of dangers, it was better than being picked off by enemy fighters one by one as you reduced speed so you could land.

That is if the damn things worked.

The thrusters fired and for a brief moment it appeared the craft was slowing. Then a high pitched shriek filled the flight deck and the decelerator burned out.

The pilots’ voices were filled with the anxiety everyone on the flight deck and in the com tower was

3. SKILL CHECKS

Make skill checks to generate invention points. The time it takes to make each check is determined by the character’s ranks in the craft skill being used to create the item. Each check adds one to the item’s prototype modifier.

4. ITEM COMPLETED

Game master writes down total prototype modifier. Bugs are discovered when a character using the device rolls a natural one or whenever an opponent threatens a critical against him while using the device. Bugs impose a permanent penalty when using the device until corrected by use of the Repair skill.

INVENTION POINTS

In this optional system an item is created slowly by successive skill checks. The cost of an invention is rated in invention points and each time the inventor works on it (how long will be determined by the inventor’s skill- see below) he makes a Craft skill check (d20+ his total skill modifier) and adds the points together. When he has generated more invention points than the item requires he has completed a working prototype. Note that while this effectively means that even a character with 1 rank in a Craft skill could eventually make a very complex item (if he was willing to take a *long* time to do it) there are some significant advantages to having a high skill, namely prototype modifiers (see below).

Time Between Skill Checks: How long it takes a character to generate invention points is a function of the ranks he has invested in the requisite craft skill required to construct the object. A character with a very high number of ranks will have made similar objects before and have all the needed tools on hand to perform his task. A character with a low number of ranks, on the other hand, is essentially learning as he goes and will need to make frequent work stoppages to gather tools he didn’t think to have on hand and to consult manuals on the construction of the item in question.

| Skill Ranks | Check Time |
|-------------|---------------|
| 1-5 | 3 days |
| 6-10 | Daily |
| 11-15 | Twice per day |
| 16-20 | Four per day |
| 21+ | Hourly |

This assumes a character works on an item part time (between adventuring and career responsibilities). If a character does nothing else but work on the item he may make checks one-step higher on the table. This requires a character to not adventure for the entire time required to make his next invention check and also reduces the wealth gained from Profession checks when a character gains his next level by 1-4 points (if a character burns the midnight oil repeatedly between levels he might actually end up *losing*

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wealth when he makes his next Profession check - this could represent the character burning savings to pay bills or perhaps being demoted at his day job).

A character may also move one step up the table if he has skilled assistants working with him on the project. All assistants must have at least one rank in the requisite class skill required by the item. To make checks faster the character must have at least one worker for each 20 invention points the finished item will cost (so an item that will cost 300 points requires 15 assistants to speed up construction).

Skill Checks and Prototype Modifiers: Each time a character makes a skill check he adds one prototype modifier to the item in question (see below for more information on how these affect the finished product). Since a character with a high skill will have to make fewer checks to accumulate the invention points necessary for success this also means he will generate fewer bugs in the creation of his devices (certain feats and class abilities might reduce this amount even further).

PROTOTYPES

Every time you invent a new (or significantly modify an existing) item it will always have **ahem** design flaws. Perhaps the metal in the firing pin will get suddenly tired of being where it was or a hundred other unforeseen problems could crop up in the design or implementation of an item. This concept is handled with *prototype modifiers*.

Prototype Modifiers: A core concept to all equipment design is the prototype modifier. Prototype modifiers occur naturally during the creation of an item and represent minor flaws that must be corrected as they are discovered. This occurs even in “known” technologies and not just in the creation of something completely fantastic and new (such as a car that doubles as a submarine). For example new race car engines, designed by experienced race car engine designers, still have flaws the first few times they are used in a race, even though the designer has built similar high-tolerance engines before and despite the fact that the internal combustion engine is a thoroughly understood technology.

GENERATING PROTOTYPE MODIFIERS

Prototype modifiers are generated in three basic ways: skill checks, rush jobs and cheap materials.

Skill Checks: Each time you make a skill check to generate invention points you generate one prototype modifier. This means a character with a high skill will tend to generate items with fewer bugs.

Rush Jobs: You may add additional prototype modifiers to an item to complete it faster. Each time you make a skill check you may declare you are rushing and add to your skill roll as if you had just spent an action point. However instead of deducting an action point from your total the GM adds

feeling as the craft broke free from the tractor and shot toward the far side of the flight deck, which opened again onto the void of space, “Abort! Abort! Fly through!”

One of the fighters lifted up slightly off the flight deck, careful not rise too high and into the ceiling above. A split second before it would have hit the force field at the far end maintaining the atmosphere of the flight deck, synchronized computers in the carrier and the fighter turned off the force field allowing the craft to safely skid back into space. A massive blast of wind filled the flight deck as a burst of atmosphere followed the craft into space, one unlucky member of the flight crew was actually knocked off his feet by it, but quickly scrambled back upright as the force field returned to its former position and the atmosphere pumps whined and complained in their attempts to return the atmosphere to its former level of pressure.

The lead pilot’s wingman hadn’t been so lucky. The tract sheered off part of her landing skid and in the process turned the fighter’s nose toward the far wall. The pilot tried like hell to turn the nose back toward the far end, but with the extreme speed and high number of Gs she was pulling, it was impossible.

The entire massive spacecraft rocked and shook as the tank of fuel exploded. The fire grew quickly in the oxygen-rich atmosphere of the flight deck, seeming to take on a life of its own as the flight crews ran off the flight deck. The Flight Control Officer again addressed the flight crews running for the side portals, as if he needed to, “Attention Flight Crew personnel, emergency fire control procedures in effect, emergency depressurization of the flight deck will occur in 10 seconds... 9 seconds... 8...”

And exactly 8 seconds later both force fields dropped, exposing the entire flight deck to the vacuum of space. The flames actually grew for a split second as the air moved in a mass with hurricane force but then was instantly extinguished as it attempted, in vain, to follow its fuel into space.

As the force fields returned to their normal place a second group of crewman, these masked and suited to protect them from the cold and lack of atmosphere moved onto the flight deck to cover the craft with flame-retardant foam to eliminate any chance of a spark reigniting the blaze when oxygen returned to the flight deck.

Meanwhile the engineers watched the data, seemingly oblivious to the damage and death occurring on the deck below, “I don’t understand, we compensated for the last flaw, it should have worked.”

Antilles walked over to the engineer, hands clenched into fists behind his back that wanted to take the tiny man and pummel him against the bulkhead, “You’re damned right it should have, and until you can give me

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and my pilots a reason why it didn't, this whole crackpot idea is going back onto the drawing screen where it belongs."

The engineer turned, oblivious to how close he came to being a bloody smear on the bulkhead, "But Admiral, with respect, this project has authorization direct from..."

Antilles silenced the man with his presence as he stepped so close his chest actually brushed against the man when he inhaled, "I don't care if you have the imprint of the President of the UEG on those orders, mister, no fighter takes off from this carrier without my direct authorization and I will not give that authorization until you prove, to my satisfaction, that no further damage will occur to my people or my flight deck. Is that clear?"

The engineer just nodded, his voice having left him.

Antilles, also silent, turned on his heel and left the tower, heading down to the flight deck to survey the damage first hand.

one to the invention's total prototype modifier.

Note that if you actually spend one or more action points to aid in the completion of a device this does not count as a rush job, it is simply good fortune or divine inspiration at work.

Cheap materials: You may add prototype modifiers to an item to make it cheaper. You may add +2 to your wealth check to pay for the item's raw materials for each +1 you add to the invention's total prototype modifier. You may even decide to do this after you make your wealth check. For example if you are attempting to build an invention whose raw materials cost is 20 and you roll a 10 on your wealth check you may decide to settle on cheaper materials and begin construction now rather than wait to gather the needed materials, adding 5 to the item's eventual prototype modifier (since the wealth DC is the number of hours it takes to make a wealth check a wealth-challenged character might end up spending as much or more time shopping for quality raw materials as building the item itself).

EFFECTS OF PROTOTYPE MODIFIERS

At certain times during each game, when you roll a 1, whenever anyone attacking you scores a critical threat or whenever the GM wants to be fiendish (this latter can happen no more than once per game, however- the GM doesn't get to be fiendish every round of a critical combat- sorry guys!), he will activate a prototype modifier, giving you a -1d6 modifier to one aspect of your device, such as to hit, damage, defense, movement, etc. until the bug is worked out. Think of prototype modifiers as anti-action points.

Each time a prototype modifier is activated the prototype modifier of the item is permanently reduced by one. The

prototype modifier represents potential bugs and you have just found one.

Bugs generated by prototype modifiers last until repaired (see below).

Working the Bugs Out: A character has three chances to work out a bug. The first attempt may be made in combat as an attack action and requires a Repair skill check (DC 20 + the item's current prototype modifier).

The second attempt can also be attempted in the field and requires 5 minutes (50 rounds) to perform. This check also requires a Repair skill check (DC 15 + the item's current prototype modifier).

The final attempt can only be performed in a workshop and requires 4-24 hours to perform (4d6 hours). This check also requires a Repair skill check (DC 10 + the item's current prototype modifier).

If this final skill check fails the bug is in fact a *design flaw* and is a permanent feature of the device (including any copies of the device that have been made - the next prototype modifier activated after a flaw is discovered will be that flaw and may never be repaired). However some copies of a device through random chance might have been spared this design flaw. Copies of an item that have already had their prototype modifier reduced to 0 (meaning all bugs have been identified and possibly worked out) are mysteriously free of this design flaw.

Back to the Drawing Board-Eliminating Design Flaws: So how exactly *do* you get rid of design flaws if you have failed to correct the problem? The answer is you must go back to the drawing board.

To benefit from going back to the drawing board you must make an *exact* copy of the item you are attempting to improve without adding any new features. If you succumb to this temptation (known as "feature creep") you have started an entirely new design that will have an entirely new prototype modifier with potentially new (and totally different) bugs and design flaws.

The process is much the same as making a copy of an item; however, you must spend invention points equal to fifty times the design flaw's penalty (so 50 for a flaw that imposes a -1 penalty through 300 for a flaw that imposes a -6 penalty). Craft rolls to generate these points do *not* add to the item's prototype modifier.

When these points have been spent the design flaw has been puzzled out and corrected and the completed item will be free of it.

NEW CHARACTER CLASSES

STARSHIP DESIGNER

You love to design new starships and have the knowledge of engineering and space sciences to allow you to construct spacecraft for almost any purpose, from the smallest courier to the largest galaxy-traversing explorer.

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TABLE 1: THE STARSHIP DESIGNER

| Level | Base Attack Bonus | Fort Save | Ref Save | Will Save | Special | Defense Bonus | Reputation Bonus |
|-------|-------------------|-----------|----------|-----------|---|---------------|------------------|
| 1st | +0 | +0 | +2 | +0 | Starship Affinity +1 | +1 | +0 |
| 2nd | +1 | +1 | +3 | +1 | Bug Hunter (Starship) +1 | +1 | +0 |
| 3rd | +2 | +1 | +3 | +1 | Bonus Feat | +2 | +0 |
| 4th | +3 | +1 | +4 | +1 | Bug Hunter (Starships) +2 | +2 | +0 |
| 5th | +3 | +2 | +4 | +2 | Starship Affinity +2 | +3 | +1 |
| 6th | +4 | +2 | +5 | +2 | Bug Hunter (Starships) +3; Bonus Feat | +3 | +1 |
| 7th | +5 | +2 | +5 | +2 | Slipstream | +4 | +1 |
| 8th | +6 | +3 | +6 | +3 | Bug Hunter (Starships) +4 | +4 | +1 |
| 9th | +6 | +3 | +6 | +3 | Bonus Feat | +5 | +2 |
| 10th | +7 | +3 | +7 | +3 | Starship Affinity +3; Bug Hunter (Starships) +5 | +5 | +2 |

REQUIREMENTS

To qualify to become a starship engineer, a character must fulfill the following criteria. (The fastest path into this class is through the Smart Hero base class).

Skills: Pilot 3 ranks, Craft (mechanical) 3 ranks, Craft (structural) 6 ranks, Knowledge (physical sciences) 6 ranks

Feats: Starship Operation (any one)

CLASS INFORMATION

The following information pertains to the starship engineer advanced class.

Hit Die: 1d8

Action Points: 6 plus one-half character level, rounded

down.

Class Skills: The starship engineer's class skills (and the key ability for each skill) are Computer Use (Int), Craft (electronic, mechanical, structural) (Int), Disable Device (Int), Knowledge (Business, Current Events, Physical Sciences, Popular Culture, Technology) (Int), Navigate (Int), Pilot (Dex), Repair (Int), and Research (Int).

Skill Points at Each Level: 5+Int. modifier

CLASS FEATURES

All of the following are features of the starship engineer advanced class.

Starship Affinity: The starship engineer has a feel for his creations, gaining the listed bonus to Pilot skill checks with a starship he has built. The starship engineer also adds the listed bonus to his vehicle's defense if he takes that vehicle into combat.

Bug Hunter (Starships): Any starship made by the starship engineer has its prototype modifier reduced by this amount. The starship engineer also gains the listed bonus to any Repair checks to fix a bug.

Slipstream: At this level the starship engineer has achieved a mastery of high-performance starship design most can only dream of. On a Craft (structural) check (generating 100 Invention Points) and a Wealth check (DC 10) the starship engineer increases the top speed of any starship he juices by 100' per starship engineer level.

Bonus Feats: At 3rd, 6th and 9th levels the starship engineer gains a bonus feat from the following list: Armor Proficiency (light), Armor Proficiency (medium), Builder, Gearhead, Mastercrafter, Salvage, Starship Gunnery, Starship Dodge, Starship Mobility, Starship Operation, Starship Strafe. The starship engineer must meet the prerequisite of any feat selected.

STARSHIP TEST PILOT

Test pilots are those rare individuals who thrive under the worst sort of pressure. These brave men and women not only fly state of the art combat spacecraft, they fly them *first* before all the bugs are worked out. While this makes test pilots



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TABLE 2: THE STARSHIP TEST PILOT

| Level | Base Attack Bonus | Fort Save | Ref Save | Will Save | Special | Defense Bonus | Reputation Bonus |
|-------|-------------------|-----------|----------|-----------|-------------------------------|---------------|------------------|
| 1st | +0 | +0 | +2 | +0 | Right Stuff +1 | +1 | +0 |
| 2nd | +1 | +1 | +3 | +1 | Workaround +1 | +1 | +0 |
| 3rd | +2 | +1 | +3 | +1 | Bonus Feat | +2 | +1 |
| 4th | +3 | +1 | +4 | +1 | Workaround +2 | +2 | +1 |
| 5th | +3 | +2 | +4 | +2 | Right Stuff +2 | +3 | +1 |
| 6th | +4 | +2 | +5 | +2 | Bonus Feat; Workaround +3 | +3 | +2 |
| 7th | +5 | +2 | +5 | +2 | Outside of the Envelope | +4 | +2 |
| 8th | +6 | +3 | +6 | +3 | Workaround +4 | +4 | +2 |
| 9th | +6 | +3 | +6 | +3 | Bonus Feat | +5 | +3 |
| 10th | +7 | +3 | +7 | +3 | Right Stuff +3; Workaround +5 | +5 | +3 |

essential to the peacetime operation of space fleets, it also makes them invaluable during wartime, as these hardy souls bring the two qualities that make a tremendous combat pilot to the cockpit: natural piloting skill and fearlessness.

REQUIREMENTS

To qualify to become a test pilot a character must meet the following criteria (the quickest path into this class is through the Fast Hero basic class).

Base attack bonus: +2

Skills: Pilot 6 ranks, Repair 3 ranks

Feats: Starship Operation (any one)

CLASS INFORMATION

The following information pertains to the test pilot advanced class.

Hit Die: 1d8

Action Points: 6+ one-half character level, rounded down, every time the character gains a new level in this class.

Class Skills: The test pilot's class skills (and the ability for each skill) are: Bluff (Cha), Computer Use (Int), Craft (electronic, mechanical) (Int), Knowledge (popular culture, streetwise, technology) (Int), Navigate (Int), Pilot (Dex), Profession (Wis), Repair (Int)

Skill points at each level: 5+int. modifier

CLASS FEATURES

All of the following are features of the test pilot advanced class.

Right Stuff: The test pilot is one of the finest pilots to ever sit in a cockpit, period. He gains the bonus listed on the class table to all piloting skill checks and to the Defense of any ultralight or light starship that he pilots.

Workaround: When a bug presents itself the test pilot actually improves under the pressure. When a bug presents itself in a starship the test pilot gains the listed bonus to any affected area, possibly allowing him to ignore minor bugs at higher levels. This does not remove the bug (that's the designer's job) but does (hopefully) allow the test pilot to ignore the flaw long enough to return home.

Bonus Feat: At 3rd, 6th, and 9th level, the test pilot gets a bonus feat. The bonus feat must be selected from the following list, and the test pilot must meet all the

prerequisites of the feat to select it.

Barrel Roll, Evasive Maneuvers, Formation Flying, Gearhead, Renown, Spacer, Starship Battle Run, Starship Dodge, Starship Gunnery, Starship Mobility, Starship Operation, Starship Strafe, Teamwork, Wingman, Zero-G Training.

Outside of the envelope: When placed under pressure test pilots seem to thrive, rather than fold, as most lifeforms would. When the test pilot spends an action point to aid a pilot check he adds all applicable dice rather than the highest die.

STARSHIP DESIGN

MODULAR STARSHIP DESIGN

1. Choose or design a hull
2. Choose or design the craft's engines
3. Choose or design the craft's weapons
4. Choose or design the craft's miscellaneous systems

HULL DESIGN

MODULAR HULL DESIGN

1. Determine Hull Class
2. Purchase additional hit dice (optional)
3. Determine ship's weapon hardpoints and maximum defensive systems
4. Increase crew requirements (optional)

DETERMINE HULL CLASS

The first step in designing a starship hull is determining the hull class: ultralight, light, medium, heavy or superheavy. The hull classification will determine a starship's base HD, and minimum crew requirements. A starship's class will also determine how many weapon hardpoints the ship has, how expensive additional hit dice are and so forth.

The terms used in the hull type descriptions are explained below.

Base Purchase DC: This is the cost to construct an unmodified hull of the chosen type. Unmodified means

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the hull type constructed has the minimum HD, Weapon Hardpoints and Crew for its type.

Base Invention Points: This is the cost to construct an unmodified hull of the chosen type. Unmodified means the hull type constructed has the minimum HD, Weapon Hardpoints and Crew for its type.

Minimum and Maximum Size: This is the ship's minimum and maximum size.

Minimum HD: This is the number of hit dice possessed by an unmodified hull of the chosen type.

Cost for additional HD: This is the increase to the base purchase price and invention point costs to increase the hit dice of the chosen hull type.

Minimum crew: This represents the minimum number of people needed to fly the hull type. A ship cannot operate with less than one-fourth the minimum crew requirement. It does not include personnel needed to use any weapons installed on the hull once it is built.

The minimum is a function of the starship's HD. The designer may increase or decrease this minimum to make the craft more or less expensive. Every time the minimum crew is halved, increase the cost of the hull by +1 Purchase DC and +10 Invention Points. Each time the minimum crew is double decrease the cost of the hull by -1 Purchase DC and -10 Invention Points.

Base Progress Level: This is the progress level at which hulls of the chosen type begin to appear in large numbers. Ships can be made of this hull type one progress level earlier, but the base purchase DC is increased by +5 and the base invention point cost is increased by +50.

ULTRALIGHT STARSHIP HULLS

Ultralight starships serve as shuttles, small passenger craft, light cargo vessels and fighters.

Base Purchase DC: 16

Base Invention Points (Craft Structural DC): 160 (16)

Minimum Size: Huge

Maximum Size: Colossal

Minimum HD: 4d20

Maximum HD: 30d20

Cost per 2 additional HD: +3 Purchase DC, +30 Invention Points (or +3 Craft Structural DC)

Weapon Hardpoints: 1 per 3 HD

Defensive Systems: 1 per 3 HD

Minimum Crew: 1 per 3 HD

Base Progress Level: 6

LIGHT STARSHIP HULLS

Light starships serve as freighters, corvettes, frigates and destroyers.

Base Purchase DC: 22

Base Invention Points (Craft Structural DC): 220 (22)

Minimum Size: Colossal

Maximum Size: Colossal

Minimum HD: 36d20

Maximum HD: 120d20

Cost per 2 additional HD: +2 Purchase DC, +20 Invention Points (or +2 Craft Structural DC)

Weapon Hardpoints: 1 per 10 HD

Defensive Systems: 1 per 10 HD

Minimum Crew: 1 per 10 HD

Base Progress Level: 6

MEDIUM STARSHIP HULLS

Medium starships serve as large freighters and cruisers.

Base Purchase DC: 24

Base Invention Points (Craft Structural DC): 240 (24)

Minimum Size: Colossal

Maximum Size: Colossal

Minimum HD: 125d20

Maximum HD: 300d20

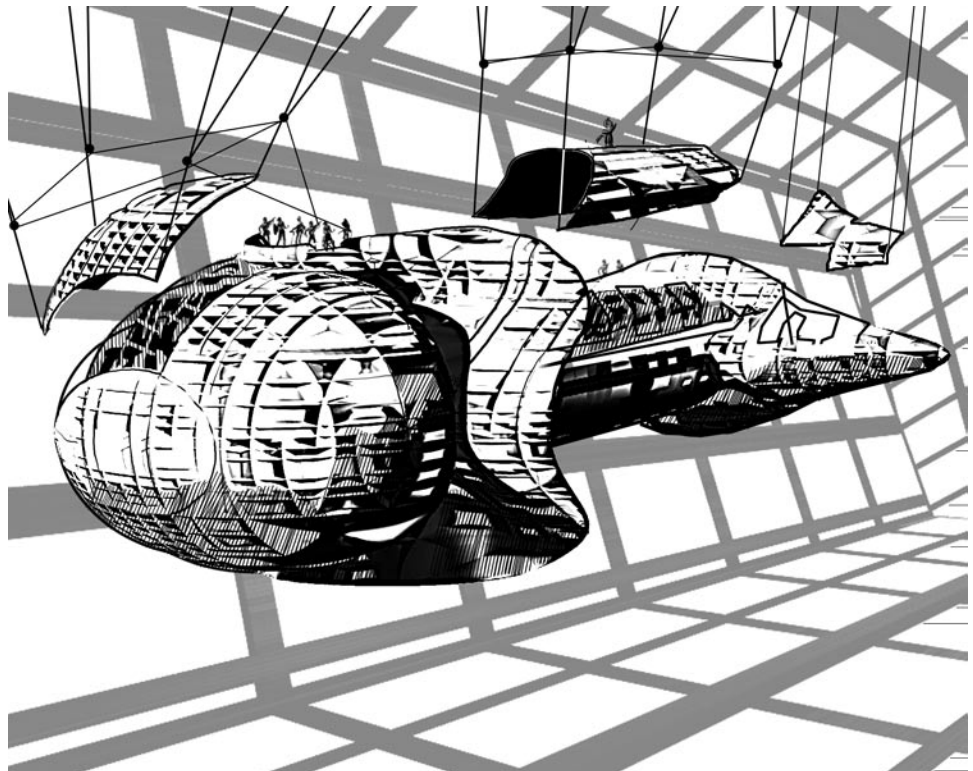
Cost per 5 additional HD: +1 Purchase DC, +10 Invention Points (or +1 Craft Structural DC)

Weapon Hardpoints: 1 per 50 HD

Defensive Systems: 1 per 50 HD

Minimum Crew: 1 per 10 HD

Base Progress Level: 6



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TABLE 3: WEAPON DAMAGE DICE

| Damage Dice | Purchase DC | Invention Points (Craft [mechanical] DC) | Materials Restriction | Minimum Ship Size |
|-------------|-------------|---|-----------------------|-------------------|
| 4 | 16 | 160 (16) | Res. (+2) | Huge |
| 6 | 18 | 180 (18) | Res. (+2) | Huge |
| 8 | 20 | 200 (20) | Res. (+2) | Gargantuan |
| 10 | 22 | 220 (22) | Res. (+2) | Gargantuan |
| 12 | 24 | 240 (24) | Res. (+2) | Colossal |
| 14 | 26 | 260 (26) | Mil. (+3) | Colossal |
| 16 | 28 | 280 (28) | Mil. (+3) | Colossal |
| 18 | 30 | 300 (30) | Mil. (+3) | Colossal |
| 20 | 32 | 320 (32) | Mil. (+3) | Colossal |

HEAVY STARSHIP HULLS

These ships fill the role of battleships and carriers.

Base Purchase DC: 26

Base Invention Points (Craft Structural DC): 260 (26)

Minimum Size: Colossal

Maximum Size: Colossal

Minimum HD: 250d20

Maximum HD: 750d20

Cost per 10 additional HD: +1 Purchase DC, +10 Invention Points (or +1 Craft Structural DC)

Weapon Hardpoints: 1 per 50 HD

Defensive Systems: 1 per 50 HD

Minimum Crew: 1 per 10 HD

Base Progress Level: 6

SUPERHEAVY STARSHIP HULLS

These ships fill roles as wide ranging as colony ships to dreadnoughts. Anything too large to fit in an earlier category will be handled by this largest of starship hulls.

Base Purchase DC: 29

Base Invention Points (Craft Structural DC): 290 (29)

Minimum Size: Colossal

Maximum Size: Colossal

Minimum HD: 800d20

Maximum HD: No maximum limit

Cost per 10 additional HD: +1 Purchase DC, +10 Invention Points (or +1 Craft Structural DC)

Weapon Hardpoints: 1 per 150 HD

Defensive Systems: 1 per 150 HD

Minimum Crew: 1 per 5 HD

Base Progress Level: 7

WEAPONS DESIGN

ADAPTING WEAPONS

There is a chance that a player may wish to build a weapon that already exists in the future core rules. To do this, simply divide the cost of the weapon by 1.5 to determine the purchase price. Multiply this number by 10 to determine the invention point cost (or simply use the purchase price as the DC for a Craft [mechanical] skill check).

MODIFIERS

DIE TYPE

| Die Type | Purchase DC | Invention Points | Materials Restriction |
|----------|-------------|------------------|-----------------------|
| D8 | +0 | +0 | Lic. (+1) |
| D10 | +4 | +40 (+4) | Res. (+2) |
| D12 | +8 | +80 (+8) | Mil. (+3) |
| D20 | +12 | +120 (+12) | Mil. (+3) |
| D100 | +16 | +160 (+16) | Mil. (+3) |

DAMAGE TYPE

Ballistic

Purchase DC modifier/Invention Point modifier: -2 purchase DC, -20 invention point modifiers

Fire

Purchase DC modifier/Invention Point modifier: -2 purchase DC, -20 invention point modifiers

Energy

Purchase DC modifier/Invention Point modifier: -0 purchase DC, -0 invention point modifiers

WEAPON TYPE

Directed Fire

Purchase DC modifier/Invention Point modifier: +2 purchase DC, +20 invention point modifiers

Missile

Purchase DC modifier/Invention Point modifier: -4 purchase DC, -40 invention point modifiers

Mine

Purchase DC modifier/Invention Point modifier: -8 purchase DC, -80 invention point modifiers

STARSHIP CONSTRUCTION MANUAL

RANGE

Each 1,000 ft. Range Increment

Purchase DC and Invention Points (Craft mechanical DC): +2 and +20 (+2)

Special: All starship weapons have a range increment of 1,000 ft. which does not increase the purchase price or the invention point cost.

RATE OF FIRE

Automatic Rate of Fire

Purchase DC and Invention Points (Craft mechanical DC): +2 and +20 (+2)

Effect: Weapon can fire with an automatic rate of fire. Only weapons with charges may have this modifier. Energy weapons may never have this modifier even if they have charges.

Special: A weapon may be modified in this fashion but the purchase DC and Invention Point cost are increased to +10 and +100 respectively.

SIZE

Compact

Purchase DC and Invention Points (Craft mechanical DC): +2 and +20 (+2)

Effect: This modifier reduces the minimum hull size of a ranged weapon by one category to a minimum of Huge.

Special: A weapon may not be modified to have this ability it must be included as part of a weapon's construction. This modifier may only be purchased once.

PROGRESS LEVEL

Progress Level

Each PL above 6 purchase DC and invention point modifier: -1 and -10 (-1)

Effect: This modifier represents the advance of technology. A powerful weapon will be easier to build in an advanced society than in a more primitive one.

CREATING OTHER ITEMS

The focus in this product is on the two items that the game master is most likely to want to tweak mechanically to craft starships that better fit the theme of his campaign: hulls and weapons. However many players may wish to create every item on their ship from scratch, even the armor and miscellaneous systems.

The truly devoted mechanical genius will find much in the companion product to this book, the Modern d20 sourcebook *Blood and Circuits* to aid them in their endeavors. For those wishing only to build something "off the rack" from the Future core rules or for a simple way to determine the difficulty of creating an item, some guidance is provided below.

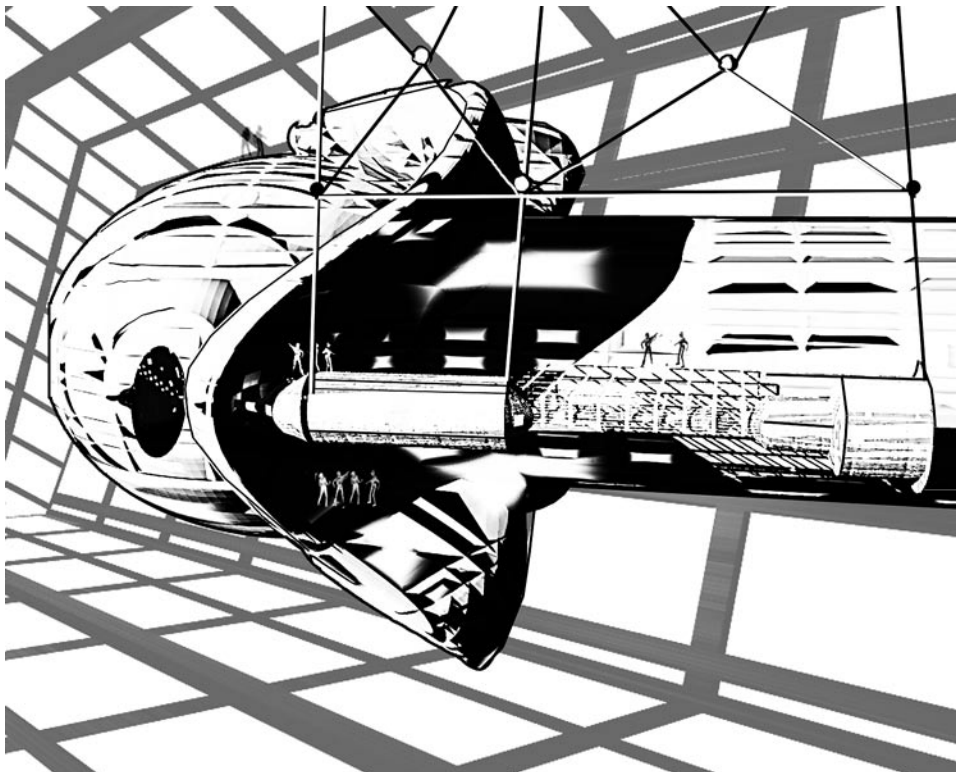
Building standard items from the future core rules:

Take the item's price (the Wealth DC required to buy it) and divide by 1.5. This becomes the item's purchase DC (the Wealth cost for the materials the item requires).

Take the item's purchase DC and multiply by 10. This is the invention points required to craft the item. If the standard "one roll" system is being used the DC to construct the item is simply the purchase DC.

Regardless of the number of rolls needed to create an "off the rack" item, the item will have a prototype modifier of 1-4 (1d4).

If the completed item, bought retail would have a restriction, the materials to make it may as well. Reduce the restriction level by one for the materials to construct the item. So the materials to construct a Licensed (+1) item need no special access, an item with Restricted (+2) access would require a License and so forth. The exception to this is an item rated as Illegal (+4). Even the materials for these items are so highly restricted that they are illegal as well.



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Building original items (the easy way): If a character wishes to construct a completely new item from scratch, the GM can simply assign the item a purchase DC as he would assign any skill DC (using the standard craft rules as a guide), then multiply that by 10 to receive the invention point cost of the item. Again this book's companion product, *Blood and Circuits* will provide much more guidance, but the above system will serve in most cases.

EXAMPLE OF STARSHIP CREATION

Shell Therrin, a 6th level character (Smart 3/Starship Designer 3) decides to build a new class of heavy fighter to aid the Sons of Jove in their conflict against the United Earth Government. She has informs the game master that she has begun to draw up the plans for this vehicle in preparation of the building of a prototype.

Shell has 9 ranks in the Craft (Structural) and Craft (mechanical) skills.

STARSHIP HULL

First Shell designs the hull. Since this is a fighter she decides the craft will be an ultralight starship, which has a base purchase DC of 16 and a base invention point cost of 160. Since Shell wants these fighters to be tough and survivable as the main attack craft of the rebellion she ups their hit dice from the base of 4d20 to 10d20. Adding 6 HD increases the wealth cost by +9 and the invention point cost by +90, resulting in a final purchase price of 25 and a final invention point cost of 250. Shell decides to take 10 on all her Craft checks, meaning the prototype will take 13 days to construct.

Shell decides to purchase the fighter's engines and defensive systems on the black market, leaving her more time to design a unique weapon for the craft.

STARSHIP WEAPONS

Since the craft will operate in the rock-filled surrounding of the Jovian moons, Shell designs a new weapon that will capture small micro-meteors and then fire them at high speed at enemy vessels.

Since her fighters are small to more easily hide from UEG military vessels, she makes the number of dice for her starship weapon 6, the maximum that can be installed on a Huge hull. This has a base purchase DC of 18 and a base invention point cost of 180. Because of the extreme speeds generated by these weapons (and because her fighters will often have to engage much larger vessels) Shell makes the attack die of the weapon d12, increasing the purchase cost by +8 and the invention point cost +80. The costs for the weapon being a direct fire weapon and inflicting physical damage cancel out, leaving the purchase price of the prototype at 26 and the invention point cost 260. Taking 10 on all her Craft (mechanical) checks, Shell can complete the weapon in 14 days.

SOJ-FIGHTER (PL 6)

This fighter designed by Shell Therrin, technical wizard behind many of the craft and weapons used by the terrorists (or freedom-fighters) the Sons of Jove is the size of a small shuttle, but is incredibly tough and durable.

| | |
|----------------------------------|--|
| Type: Ultralight | Size: Huge (–2 size) |
| Subtype: SOJ Fighter | Tactical Speed: 3,500 ft. (7 sq.) |
| Defense: 13 | Length: 24 feet |
| Flat-footed Defense: 11 | Weight: 24,000 lb. |
| Autopilot Defense: 9 | Targeting System Bonus: +1 |
| Hardness: 20 | Crew: 1 (trained +4) |
| Hit Dice: 10d20 (200 hp) | Passenger Capacity: 4 |
| Initiative Modifier: +2 | Cargo Capacity: 2,400 lb. |
| Pilot's Class Bonus: +3 | Grapple Modifier: +8 |
| Pilot's Dex Modifier: +2 | Base Purchase DC: 62 |
| Gunner's Attack Bonus: +2 | Restriction: Illegal (+4) |

Attack: 3 Slingshot Mass Drivers +1 ranged (6d12)

Attack of Opportunity: None

Standard PL 6 Design Specs:

Engines: Ion engine, thrusters

Armor: Polymeric

Defense Systems: Autopilot system

Sensors: Class II sensor array, targeting system

Communications: Laser transceiver, radio transceiver

Weapons: 3 Slingshot Mass Drivers

Grappling Systems: None

STARSHIP CONSTRUCTION MANUAL

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