GURPS Spaceships is the companion to GURPS Space, presenting rules for TL7-12 spacecraft, from tiny lifeboats to giant dreadnoughts. It covers spaceship design, travel, and operations, along with a (mapless) space combat system.

The ship design and operation rules in GURPS Spaceships are more abstract than those found in GURPS Vehicle Design or GURPS Traveller: Interstellar Wars . . . but they're much faster, with a minimum of math and a maximum of colorful options. It takes only minutes to build even the largest spaceship . . . and wrapped around the design system are basic space travel and combat systems to get you into space right away.

GURPS Spaceships doesn't include detailed finance, trade, or hex-grid based combat rules . . . but these are on the way! It's the core book in a series whose other volumes will present examples of ready-to-use spacecraft and comprehensive rules for commercial space flight, warfare, exploration, ports, industry, and other aspects of space travel.

GURPS Spaceships requires only the GURPS Basic Set, but GURPS Space is highly recommended for its guidelines on stardrives, characters, campaigns, and settings.

By David L. Pulver    Edited by Jake Steinmann
Cover Art by Bob Stevlic
Illustrated by Robert Barger, Steve Crompton, Jesse DeGraff, Glenn Grant, John Hartwell, Denis Loubet, Allen Nunis, Shea Anton Pensa, Fred Rawles, Dan Smith, Michael Surbrook, John D. Waltrip, and George “Speed” Webber
GURPS Spaceships is the companion to GURPS Space, presenting rules for TL7-12 spacecraft, from tiny lifeboats to giant dreadnoughts. It covers spaceship design, travel, and operations, along with a (mapless) space combat system.

The ship design and operation rules in GURPS Spaceships are more abstract than those found in GURPS Vehicle Design or GURPS Traveller: Interstellar Wars . . . but they're much faster, with a minimum of math and a maximum of colorful options. It takes only minutes to build even the largest spaceship . . . and wrapped around the design system are basic space travel and combat systems to get you into space right away.

GURPS Spaceships doesn't include detailed finance, trade, or hex-grid based combat rules . . . but these are on the way! It's the core book in a series whose other volumes will present examples of ready-to-use spacecraft and comprehensive rules for commercial space flight, warfare, exploration, ports, industry, and other aspects of space travel.

GURPS Spaceships requires only the GURPS Basic Set, but GURPS Space is highly recommended for its guidelines on stardrives, characters, campaigns, and settings.

By David L. Pulver  Edited by Jake Steinmann
Cover Art by Bob Stevlic
Illustrated by Robert Barger, Steve Crompton, Jesse DeGraff, Glenn Grant, John Hartwell, Denis Loubet, Allen Nunis, Shea Anton Pensa, Fred Rawles, Dan Smith, Michael Surbrook, John D. Waltrip, and George “Speed” Webber

$14.95

GURPS
Fourth Edition

SPACESHIPS

BY DAVID L. PULVER

STEVE JACKSON GAMES

www.sjgames.com
# CONTENTS

**INTRODUCTION** ........................................... 4
   About GURPS ........................................... 4
   About The Series ......................................... 4
   Publication History ....................................... 4
   About the Author ......................................... 4

1. SPACECRAFT ........................................... 5
   SPACECRAFT STATISTICS ................................. 5
      Scaling Statistics ..................................... 5
   EXAMPLES ............................................... 6
      Star Flower-class Tramp Freighter ................. 6
      Midnight Sun-class Orbital Shuttle ............... 7

2. SPACECRAFT SYSTEMS ................................ 8
   DESIGN .................................................. 8
      Scaling Up Spacecraft ................................ 9
      Spacecraft Hulls ...................................... 9
   SYSTEM DESCRIPTIONS .................................. 9
      Free Equipment ...................................... 10
      Additional Equipment ................................. 10
      Armor, Ice ........................................... 11
      Armor, Stone ......................................... 11
      Armor, Steel .......................................... 11
      Armor, Light Alloy .................................... 11
      Armor, Metallic Laminate ............................. 12
      Armor, Advanced Metallic Laminate ............... 12
      Armor, Nanocomposite ................................. 12
      Armor, Organic ....................................... 12
      Armor, Diamondoid ..................................... 13
      Armor, Exotic Laminate ............................... 13
      Cargo Hold ........................................... 13
      Cloaking Device ....................................... 13
      Contragravity Lifter .................................. 14
      Control Room .......................................... 14
      Defensive ECM ......................................... 14
      Engine Room .......................................... 15

Enhanced, Multipurpose, Science, and Tactical
Comm/Sensor Arrays ...................................... 15
External Clamp ............................................ 15
Factory .................................................... 16
Force Screen .............................................. 16
Fuel Tank .................................................. 17
Habitat ..................................................... 17
Hangar Bay ............................................... 18
Specialized Rooms for Habitats ....................... 18
Jet Engine .................................................. 19
Jump Gate .................................................. 19
Mining and Refinery ..................................... 19
Open Space ................................................. 19

---

GURPS System Design ı STEVE JACKSON
GURPS Line Editor ı SEAN PUNCH
Indexer ı THOMAS WEIGEL
Page Design ı PHIL REED and JUSTIN DE WITT

Managing Editor ı PHIL REED
Art Director ı WILL SCHOONOVER
Production Artist ı ALEX FERNANDEZ
Print Buyers ı MONICA STEPHENS and WILL SCHOONOVER

Marketing Director ı PAUL CHAPMAN
Sales Manager ı ROSS JEPSON
Errata Coordinator ı ANDY VETROMILE
GURPS FAQ MAINTAINER ı STÉPHANE THÉRIAULT

Lead Playtester: Jeff Wilson


GURPS, Warehouse 23, and the all-seeing pyramid are registered trademarks of Steve Jackson Games Incorporated. Pyramid, Spaceships, e23, and the names of all products published by Steve Jackson Games Incorporated are registered trademarks or trademarks of Steve Jackson Games Incorporated, or used under license. GURPS Spaceships is copyright © 2007 by Steve Jackson Games Incorporated. All rights reserved.

The scanning, uploading, and distribution of this material via the Internet or via any other means without the permission of the publisher is illegal, and punishable by law. Please purchase only authorized electronic editions, and do not participate in or encourage the electronic piracy of copyrighted materials. Your support of the author's rights is appreciated.
3. SPACE TRAVEL............. 36
MANEUVER DRIVES............. 36
Newtonian Space Flight
and Delta-V.................. 37
Travel with Reactionless Drives... 38
Continuous Acceleration
with Reaction Drives......... 38
Interplanetary Transfer Orbits.. 38
Lightsails and Magsails.... 39
STARDIVES.................. 40
Hyperdrive.................. 40
Atmospheric Flight........... 40
Jump Drive................... 41
Warp Drive................... 41
SPACE OPERATIONS.......... 41
Access...................... 41
Cargo Handling.............. 44
Computers and Software.... 44
Comm/Sensor Arrays......... 44
Detection................... 45
Overloading Life Support.. 46
Repair and Maintenance.... 46
CONSUMABLES............. 46
Refueling................... 46
Food......................... 47
Ammunition................ 47
Drop Capsules............ 47
DAMAGE.................. 60
Beam Damage................ 60
Ballistic Attack Damage... 60
Hull Damage and Hit Location. 61
ACTION ABOARD............. 63
Damage Control............. 64
Boarding................... 65
Launching Small Craft...... 65
SPECIAL RULES............. 65
Formations................ 65
Ground Fire................ 65
Main Radiators in Combat... 65
Tractor Beams in Combat... 66
Precision Attacks.......... 66
Targeting Exposed Systems 66
Weapons in Ordinary Combat 66
WEAPON TABLES........... 67
Beam Weapon Tables....... 67
Guns and Launchers Tables. 68
INDEX..................... 69
INTRODUCTION

This book describes how spacecraft are designed and explains what the systems built into them do. Several examples of spacecraft from different tech levels are also provided, along with rules for space flight and a basic space combat system.

Why a new system for describing spacecraft? GURPS has had several spaceships creation systems, but they were intended for gamers who wanted to spend hours building a single ship. If you enjoy that level of detail, GURPS Vehicle Design System and GURPS Traveller: Interstellar Wars are recommended. This system is more abstract, but it’s also faster. The design rules are tightly integrated into the mechanics for space combat, simplifying procedures for character actions, power allocation, and hit location.

PUBLICATION HISTORY

GURPS Spaceships includes revised and expanded versions of the space travel rules that first appeared in GURPS Space (by William Barton and Steve Jackson) and the ship combat rules that David Pulver added to GURPS Space 3rd Edition.

ABOUT THE AUTHOR

David L. Pulver is a freelance writer and game designer based in Victoria, British Columbia. He is the co-author of the GURPS Basic Set 4th Edition and author of Transhuman Space and numerous other roleplaying games and supplements.

About GURPS

Steve Jackson Games is committed to full support of GURPS players. Our address is SJ Games, P.O. Box 18957, Austin, TX 78760. Please include a self-addressed, stamped envelope (SASE) any time you write us! We can also be reached by e-mail: info@sjgames.com. Resources include:

Pyramid (www.sjgames.com/pyramid). Our online magazine includes new GURPS rules and articles. It also covers the d20 system, Ars Magica, BESM, Call of Cthulhu, and many more top games – and other Steve Jackson Games releases like Illuminati, Car Wars, Transhuman Space, and more. Pyramid subscribers also get opportunities to playtest new GURPS books!

New supplements and adventures. GURPS continues to grow, and we’ll be happy to let you know what’s new. For a current catalog, send us a legal-sized SASE, or just visit www.warehouse23.com.

e23. Our e-publishing division offers GURPS adventures, play aids, and support not available anywhere else! Just head over to e23.sjgames.com.

Errata. Everyone makes mistakes, including us – but we do our best to fix our errors. Up-to-date errata sheets for all GURPS releases, including this book, are available on our website – see below.


Bibliographies. Many of our books have extensive bibliographies, and we’re putting them online – with links to let you buy the books that interest you! Go to the book’s web page and look for the “Bibliography” link.

Rules and statistics in this book are specifically for the GURPS Basic Set, Fourth Edition. Page references that begin with B refer to that book, not this one.
**Factory (TL8) [Any!]**

This is an industrial system capable of fabricating spare parts or other goods. Use Machinist skill to operate it. The $/hr entry on the table shows the production capacity in dollars per hour worth of goods it can assemble, if provided with appropriate blueprints. Factories are unavailable for small SM+5 craft.

*Fabricator (TL8): A high-tech machine shop. Requires component parts equal in mass and costing 40% of the good’s value.*

<table>
<thead>
<tr>
<th>SM</th>
<th>$/hr</th>
<th>lbs./hr*</th>
<th>Workspaces</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+6</td>
<td>5k</td>
<td>0.5</td>
<td>0</td>
<td>5M</td>
</tr>
<tr>
<td>+7</td>
<td>15k</td>
<td>1.5</td>
<td>0</td>
<td>15M</td>
</tr>
<tr>
<td>+8</td>
<td>50k</td>
<td>5</td>
<td>0</td>
<td>50M</td>
</tr>
<tr>
<td>+9</td>
<td>150k</td>
<td>15</td>
<td>0</td>
<td>150M</td>
</tr>
<tr>
<td>+10</td>
<td>500k</td>
<td>50</td>
<td>1</td>
<td>500M</td>
</tr>
<tr>
<td>+11</td>
<td>1.5M</td>
<td>150</td>
<td>10</td>
<td>5B</td>
</tr>
<tr>
<td>+12</td>
<td>5M</td>
<td>500</td>
<td>30</td>
<td>5B</td>
</tr>
<tr>
<td>+13</td>
<td>15M</td>
<td>1,500</td>
<td>100</td>
<td>50B</td>
</tr>
<tr>
<td>+14</td>
<td>50M</td>
<td>5,000</td>
<td>300</td>
<td>50B</td>
</tr>
<tr>
<td>+15</td>
<td>150M</td>
<td>15,000</td>
<td>300</td>
<td>50B</td>
</tr>
</tbody>
</table>

Multiply $/hr by 2 for robofacs or 20 for nanofactories.

* Replicators use this statistic (instead of $/hr).

Multiply cost by 2 for robofacs, 4 for nanofactories, or 20 for replicators.

*Repair Skill: Mechanic (Machine Tools) for Fabricator; Mechanic (Robotics) for Robofac, Mechanic (Nanomachines) for Nanofactory, Electronics Repair (MT) for Replicator.*

**Force Screen (TL11^) [Any!]**

This system generates a protective force field around the entire vessel – it protects all hull sections, not just the one it is installed in. It is rated for the semi-ablative (p. B47) dDR that it provides. The table shows the field’s dDR and the cost per (high-energy) system. Subtract force screen dDR first, then any armor dDR on the hull section struck.

A force screen regenerates 10% of its lost dDR every second, provided it is powered up. During space combat turns (which represent several seconds to several minutes) the screen is assumed to completely regenerate lost dDR each turn, but it offers reduced protection against repeated attacks during the turn.

A spacecraft may only have one force screen up at any one time. Screens may be light or heavy:

*Light Force Screen:* A relatively inexpensive design; use the listed dDR.

*Heavy Force Screen:* A high-power screen; it may function as a light screen, or it can double the dDR by using a second Power Point to reinforce the field.

The screen only provides protection while powered up. For more or less powerful screens and other options, see Force Screen Variants (p. 32).

<table>
<thead>
<tr>
<th>SM</th>
<th>+5</th>
<th>+6</th>
<th>+7</th>
<th>+8</th>
<th>+9</th>
<th>+10</th>
<th>+11</th>
<th>+12</th>
<th>+13</th>
<th>+14</th>
<th>+15</th>
</tr>
</thead>
<tbody>
<tr>
<td>TL11^ dDR</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>70</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>500</td>
<td>700</td>
<td>1,000</td>
</tr>
<tr>
<td>TL12^ dDR</td>
<td>30</td>
<td>50</td>
<td>70</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>500</td>
<td>700</td>
<td>1,000</td>
<td>1,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light screen</td>
</tr>
<tr>
<td>Heavy screen</td>
</tr>
<tr>
<td>Workspaces</td>
</tr>
</tbody>
</table>

*Repair Skill: Armoury (Force Shields).*

**Spacecraft Systems**
**Solar System Travel Table**

<table>
<thead>
<tr>
<th>Planet</th>
<th>Orbital Radius</th>
<th>Orbital Velocity</th>
<th>Orbital Period</th>
<th>G</th>
<th>Escape Velocity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>28G</td>
<td>383 mps</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.39 AU</td>
<td>29.6 mps</td>
<td>0.24 yr.</td>
<td>0.38G</td>
<td>2.7 mps</td>
</tr>
<tr>
<td>Venus</td>
<td>0.72 AU</td>
<td>21.8 mps</td>
<td>0.62 yr.</td>
<td>0.91G</td>
<td>6.4 mps</td>
</tr>
<tr>
<td>Earth</td>
<td>1 AU</td>
<td>18.5 mps</td>
<td>1 yr.</td>
<td>1G</td>
<td>6.96 mps</td>
</tr>
<tr>
<td>– Luna</td>
<td>1 AU</td>
<td>–</td>
<td>–</td>
<td>0.16G</td>
<td>1 mps</td>
</tr>
<tr>
<td>Mars</td>
<td>1.5 AU</td>
<td>15.1 mps</td>
<td>1.88 yr.</td>
<td>0.38G</td>
<td>3.1 mps</td>
</tr>
<tr>
<td>Ceres*</td>
<td>2.7 AU</td>
<td>11.3 mps</td>
<td>4.6 yr.</td>
<td>0.03G</td>
<td>0.32 mps</td>
</tr>
<tr>
<td>Jupiter</td>
<td>5.2 AU</td>
<td>8.1 mps</td>
<td>11.9 yr.</td>
<td>2.36G</td>
<td>37 mps</td>
</tr>
<tr>
<td>Saturn</td>
<td>9.5 AU</td>
<td>6 mps</td>
<td>29.5 yr.</td>
<td>0.92G</td>
<td>22 mps</td>
</tr>
<tr>
<td>Uranus</td>
<td>19 AU</td>
<td>4.2 mps</td>
<td>84 yr.</td>
<td>0.89G</td>
<td>13.2 mps</td>
</tr>
<tr>
<td>Neptune</td>
<td>30 AU</td>
<td>3.4 mps</td>
<td>165 yr.</td>
<td>1.19G</td>
<td>14.6 mps</td>
</tr>
<tr>
<td>Pluto*</td>
<td>40 AU</td>
<td>2.9 mps</td>
<td>248 yr.</td>
<td>0.067G</td>
<td>0.68 mps</td>
</tr>
<tr>
<td>Oort Cloud (comets)</td>
<td>about 10,000 AU</td>
<td>0.59 mps</td>
<td>200 yr.</td>
<td>neg.</td>
<td>neg.</td>
</tr>
</tbody>
</table>

* Ceres is the largest main belt asteroid; Pluto is a large Kuiper Belt object. Oort cloud statistics are for a typical long-period comet.

**Newtonian Space Flight and Delta-V**

The top speed of a spacecraft that uses a reaction drive is really its "delta-V": the maximum change of velocity it can perform before running out of reaction mass (rocket fuel, etc.). Each acceleration or deceleration "costs" a fraction of this delta-V.

The important spacecraft statistics are the acceleration of the reaction drive engines and the fuel tank’s delta-V reserve of reaction mass for those engines.

The GM will want to know how far the destination is, in miles or AU, as well as the escape velocity (in mps) and gravity (in G) of the origin or destination worlds.

**Example:** The *Princess of Helium* is a passenger liner with a fusion torch drive. She’s presently in Mars orbit. She has enough reaction mass in her fuel tanks to give the ship a delta-V reserve of 55 mps, and her drive has a 1G acceleration using her fusion torch engines. She’s bound for Earth, which at this time we’ll assume is about 1.5 AU from Mars.

**Getting into Space**

To take off from a planet and reach a low orbit around a body requires a delta-V equal to 80% of the planet’s escape velocity. This is 5.6 mps for Earth orbit. The spacecraft’s acceleration must exceed gravity (1G, for Earth), or it must have wings (in atmosphere) or contragravity lifters.

To reach low orbit around a celestial body and then break orbit, escaping its pull of gravity, requires a delta-V equal to escape velocity. This is about 7 mps for Earth. The spacecraft’s acceleration must also exceed gravity (1G, for Earth), or it must be winged (in atmosphere) or have contragravity lifters.

A spacecraft that is already in low orbit uses delta-V equal to about 30% of escape velocity to break orbit. This is about 2 mps to leave Earth orbit.

A winged or contragravity lifter-equipped spacecraft with jet engines (or reaction engines with the ram-rocket design feature) in a very thin or denser atmosphere (p. B249) needs less delta-V to reach orbit or escape velocity. First calculate air speed (see Air Performance, p. 35) using only the jet engine or ram-rockets; then divide mph by 3,600 (giving air speed in mps); then subtract this from required delta-V.

If escape velocity of other planets is not known, values can be determined from a planet’s mass and radius relative to Earth. Multiply the above velocities by the square root of (Me/Re), where Me is mass in Earth masses and Re is planetary radius in Earth radii.

**Stars and Escape Velocity:** The sun’s escape velocity is 383 mps. For other stars and remnants such as neutron stars or black holes, multiply this velocity by the square root of (Ms/Rs), where Ms is the mass in solar masses and Rs is the radii in solar radius.

**Time required is to lift off or break orbit:**

\[ T = \frac{dV}{0.045/A} \]

T is time in hours.

dV is the total delta-V required.

A is the spacecraft’s acceleration in G.

**Example:** The *Princess of Helium* is orbiting Mars and wants to break orbit. This requires 30% of Mars escape velocity. The escape velocity of Mars is 3.1 mps (see table), so she needs 0.93 mps. She reduces the reaction mass in her tanks from 55 mps to 54.07 mps. She could accelerate at full 1G, but since her passengers are from Mars, she decides to use less than that: a gentle 0.5G, intermediate between Earth and Mars gravity. Accelerating at 0.5G, time required is 0.93 \times 0.045/0.5G = 0.084 hours, or about 5 minutes. After a brief acceleration, she’s free of Mars’ gravity!

**Space Travel with Reaction Drives**

Orbital maneuvers, or interplanetary travel once a spacecraft has escaped orbit, require accelerating to the desired cruising velocity, coasting through space, then decelerating to the velocity required to orbit the destination.

To plot a space journey for a reaction drive-propelled spacecraft, decide how much of the spacecraft’s delta-V reserve will be used to accelerate. This delta-V is the cruising velocity. An equal amount, minus the destination’s own escape velocity, must then be used to decelerate, unless the spacecraft is to fly past or impact the destination.
**When Not To Use These Rules**

These rules are intended to handle battles at great distances, often involving large crews. Don’t use them where standard one-second combat turns and range calculations in yards are more appropriate! E.g., if a spaceship is strafing a party of adventurers on the ground, fighting an airplane, or boarded, feel free to switch to the standard GURPS Basic Set vehicle rules. Refer to the vessel's short-form statistic block (multiplying dDR by 10 and dST/HP by 10 to get the unscaled values) and use Weapons in Ordinary Combat (p. 66).

---

**ACTION DURING A TURN**

On a spacecraft’s turn, all player characters aboard, and any NPCs performing important roles, take their own turns, organized as shown below.

During the spacecraft’s turn, PCs and other key characters decide what duties they’ll perform, if they differ from last turn. If characters are moving about the vessel or staying put, this is also resolved now (including boarding of small craft).

Characters aboard a single spacecraft take their own individual turns in the order shown below. Following this ensures that the commander’s skill rolls for handling the ship can affect the crew, that the engineer provides power to drives and weapons so the pilot and gunners can use them, and so on. However, this isn’t a war game – the GM should feel free to vary the sequence as dramatically appropriate!

Characters may perform a single task without penalty, or, since each turn represents a lengthy period, may combine multiple tasks at a penalty; see Multitasking (p. 50). There’s no need to try and do every task, e.g., the single crew member on a space fighter might decide to perform only a piloting and a gunnery task, ignoring everything else. Similarly, a space station or vessel that’s out of fuel may omit piloting tasks.

1. **Command Tasks**: One character acting as commanding officer (and optionally one acting as executive officer) may perform Command Tasks (p. 50).

2. **Engineering Tasks**: One character acting as chief engineer may allocate power (if necessary) and optionally perform an extra action from the Engineering Tasks (p. 51).

3. **Navigation Tasks**: One character serving as navigator may perform Navigation Tasks (p. 52).

4. **Piloting Tasks**: One character serving as pilot may perform Piloting Tasks (p. 53). At the start of this phase, any attack vector or collision course results achieved by another spacecraft against the pilot’s vessel are removed (but engagement or rendezvous results will remain) – see Range (p. 57). If no one is performing a pilot task, the spacecraft performs an Uncontrolled Drift (p. 56). If a collision course result is achieved, the pilot may opt to attempt a collision attack, but need not do so.

5. **Electronics Operation Tasks**: All characters acting as sensor or comm operators can perform Communications Tasks (p. 53) or Sensor Tasks (p. 52) for the systems they control.

6. **Gunnery Tasks**: All characters controlling functional weapons may perform Gunnery Tasks (p. 53), or may alternatively delay performing tasks until Step 7, after the piloting tasks have been performed and the range has (possibly) changed.

7. **Crew Tasks**: Other crew members may perform tasks or other actions. The only activities given special rules here are Damage Control Tasks (p. 54), but there are plenty of opportunities for other activity. Medics can treat the injured in their system, stewards can try to calm passengers, boarding parties can rally at airlocks or fight aboard ship, passengers can hide in cabins, don space suits, or try to hijack the ship, etc.

**CHARACTER ACTIONS**

Since each turn is longer than one second, characters don’t take maneuvers. Instead, they perform tasks that represent multiple maneuvers over a period of time.

Character actions are divided into several task categories, such as Command or Gunnery, which determine when tasks are performed. These are often assigned to specific people (e.g., the pilot performs Piloting tasks) but a title isn’t necessary, e.g., the ship’s cook could run to a control station and take over the ship’s helm.

Sapient computer programs (see GURPS Ultra-Tech) that are running on the spacecraft’s computer network may perform certain tasks, if so noted. Aside from existing in the computer network, they use the same rules as other characters.

**Multitasking**

Characters can try to perform more than one different task in a turn, with certain restrictions. A character can only perform those tasks possible from the system he spent the entire turn in. The same task can’t be performed multiple times in a turn.

There is a skill penalty for multitasking, which is applied to all tasks:

- 2 per added task after the first, if it’s part of the same category, e.g., two different Command tasks.

- 4 per added task after the first of a different category, e.g., both a Command and a Piloting task.

If a character will multitask, indicate it when they perform the first task, so that the penalty can be applied to all tasks they perform during the turn.

**Command Tasks**

“Chief engineer, I need those engines on line now! Get me more power!”

---

**50 BASIC SPACE COMBAT**
INDEX

Acceleration bonus, 54-56.
Acceleration, 5, 6.
Accuracy, 5.
Advantaged status, 55, 57.
Air performance, 35.
Airlocks, 10, 41-42.
Ambush, 48.
Ammunition, 47.
Antimatter, 20, 23.
Armor, 10-13, 29-30; indestructible, 29-30.
Artificial gravity, 29.
Atmospheres, 30, 40.
Attaching to ships, 15.
Attack vector, 55.
Attacks, 57-60.
Automation, 57; see also Workspaces.
Bearing, 57.
Boarding, 41-44, 65.
Booster stage, 7.
Breaches, 43.
Cargo, 13, 43-44; bay doors, 43.
Casualties, 62-63.
Cloaking device, 13.
Closing maneuver, 55-56.
Collisions, 55, 61.
Combat scale, 48.
Commsensor arrays, 14-15, 33, 44-46, 52-53.
Command, 50-51.
Computers, 14, 31, 44.
Contragravity lifter, 14.
Control room, 14, 33, 51; control stations, 51.
Controlled drift, 56.
Cosmic power, 31.
Cost, 9.
Crew 6, 10, 29, 33-34; automation and, 29.
Damage, 60, 61; resistance, 61.
Decade scale, 5, 10-13, 16, 66.
Defensive ECM, 14.
Delta-V, 6, 21, 37, 49, 54-55.
Design features, 29-30.
 Destruction, 61-62; systems, 62.
Detection, 45.
Disabled systems, 62.
Distances in combat, 48-49, 55-57.
Docking, 42.
Dodge, 60.
Drift, 56.
Emergency power, 52.
Emergency thrust, 52.
Encounter distance, 48-49.
Encounter velocity, 49.
Engine room, 15.
Engineering, 51-52.
Escape, 65.
Evasive action, 56.
Explosions, 59, 62-63.
Exposed systems, 66.
External clamp, 15.
FTL travel, 40-41.
Facing, 55.
Factory, 16.
Fast passes, 49, 54.
Fixed mount, 57.
Food, 47.
Force screen, 16, 31-32.
Formation, 65.
Free equipment, 10.
Freefall skill, 63.
Fuel, 17, 33, 46-47; fuel tanks, 17.
Gravity systems, 29-30, 33; gravitic compensators, 29; pseudo-velocity, 33.
Ground fire, 65.
Habitat, 17-18.
Hangar bay, 18, 43; bay doors, 43.
Hit Points, negative, 61-62.
Hit locations, 5, 61, 66.
Holding course, 56.
Huge ships, 9.
Hull breaches, 43-44.
Hull sections, 5, 8-9, 58, 61; restrictions, 9.
Hyperdrive, 40-41.
Jet engine, 19.
Jump drive, 41.
Jump gate, 19.
Landing, 40.
Leadership, 50-51.
Life support, 17, 46-47.
Lightsails, 39.
Magsails, 39.
Maneuver drives, 36-40.
Maneuvers, 53, 55-56, 65; modifiers, 55.
Midnight Sun-class ship, 7.
Mining equipment, 19.
Movement on the ship, 63-64.
Multi-purpose systems, 24.
Multi-tasking, 50.
Multiple targets, 58.
NMP propulsion, 33.
Navigation, 52.
Occupancy, 6, 17, 35, 46.
Open areas, 19.
Orbit, getting to, 37.
Orbital shuttle, 7.
Passage tubes, 42.
Passengers, 20, 34; seating, 20.
Performance, 34-35.
Piloting, 53, 55-56.
Point Defense, 53, 59.
Power plants, 20, 23.
Precision attacks, 66; see also Hit Locations.
Radiation damage, 63.
Ramscoop, 21, 38.
Range, 48-49, 55-57.
Rate of fire, 57-59; rapid fire, 59.
Reaction engines, 21-24, 37-38.
Reaction mass, 46.
Reactionless engines, 24, 38-39.
Reactionless stardrive, 33.
Reconfigurable systems, 24.
Refinery equipment, 19.
Relative velocity, 59.
Repair, 10, 18, 46, 64.
Rescue, 64.
Retreating, 56.
Robot arm, 24.
Scaling, 5; see also Decade Scale.
Sensors, 44.
Setting design switches, 31-33.
Singularity drive, 33.
Size modifier, 6, 8-9.
Small ships, 65.
Soft-landing system, 24.
Solar panels, 25.
Space sails, 25, 39.
Spin gravity, 30.
Spinal battery, 57.
Star Flower-class ship, 6-7.
Stardrives, 25, 40-41.
Stasis web, 26.
Statistics, 5-6, 8, 34-35.
Stealth, 30.
Streamlined, 9-10, 30.
Surge damage, 63.
Surprise, 48-49, 51.
Systems, 5, 9-10, 24; reconfigurable, 24.
Tactics, 51.
Tasks, 50-54; command, 50-51; communication, 53-54; damage control, 54; engineering, 51-52; gunnery, 53; navigation, 52; NPC, 54; piloting, 53; pre-battle, 51; sensory, 52-53.
Teleport projector, 18.
Total energy conversion, 20, 23.
Towing, 15, 66; tractor beams, 66.
Tramp freighter, 6-7.
Travel, 36-38; distances, 36; Solar System, 37; transfer orbits, 38.
Travel time, 38-39.
Turn length, 48-50.
Uncontrolled drift, 56.
Upper stage, 7, 26.
Vehicle statistics, 5-6, 8, 34-35.
Volatile systems, 62.
Warheads, 61, 68; conventional, 61; nuclear and antimatter, 68.
Warp drive, 41.
Wealth, 34.
Weapons, 26-29, 31, 33, 57-61, 67-68; ballistic, 28-29, 59-61, 68; beam, 28, 31, 33, 58, 60, 67; launcher, 29, 68; tables, 67-68; types, 28; firing, 57-60.
Wings, 30.
Workspaces, 10, 29, 33; see also Automation.
Wormholes, 41.
STUCK FOR AN ADVENTURE? NO PROBLEM.

Warehouse 23 sells high-quality game adventures and supplements in print and PDF formats.

- Free downloadable adventures for *GURPS*, *In Nomine*, and *Traveller*!

- Fun gaming accessories – shot glasses, shirts, specialty six-siders, and more!

- PDFs from Atlas Games, Amarillo Design Bureau, Pelgrane Press, Goodman Games, and many others – plus gems from the up-and-comers.

- Original material for *Transhuman Space* and new *GURPS* supplements from Kenneth Hite, Phil Masters, David Pulver, Sean Punch, and William Stoddard!

- Fully searchable files of *GURPS Fourth Edition* supplements.

- Digital editions of out-of-print classics, from *Orcslayer* and the complete run of *ADQ* to *GURPS China* and *GURPS Ice Age*.

- Buy board games and roleplaying PDFs in the same order! Download digital purchases again whenever you need to.