Imperium - Ships

When each player starts out in Imperium they are given a class A starship (the smallest) and enough supplies to go a short distance from your home planet.

Ships are built based upon a certain tonnage size, which determines the number and size of items they may carry. There is no notion of a "military" or "civilian" starship. Any ship may carry any item in any quantity that will fit, although there are limits on how many items may be used at a time on items such as engines or weapons. Certain items also require a minimum crew to operate.

SHIP COMPONENTS

The Hull

The hull is the most important part of the ship. If the hull is destroyed, the ship will explode, taking all of the items aboard with it. Of course by the time the hull is gone, the items have probably been severely damaged anyway.

The hull is the only part of the ship that can not be removed and replaced. It has a tech level based on the tech level of the planet it is built on at the time it is built. The tech level may be increased by bringing the ship back to port, however.

The hull is not normally accessed as an item. It is instead referred to by the ship number itself, since the two can not be separated.

Engines

Engines provide the power for the ship, as well as the ability to move between the stars. Engines are all considered to be the same size, but you can load more than one (cargo limits permitting) to increase the ship's speed, the rate the energy banks recharge, etc. Engines also have a tech level, which is the tech level of the planet they were built on, at the time they were built.

You can have various tech level engines in each ship, but the lower tech engines will bring down the average tech level of the higher engines. In general a higher tech level engine will provide more power, and will weigh less. Like most items, engines may be brought up in tech level. But bringing up an engines tech level will not make them lighter.

Computers

Computers control almost every aspect of the ship. It is impossible for the ship to operate without them. The more computers you have, the better range you will get out of your sensors, the more accurate your weapons will be, and teleports will be more reliable.

Weapons

There are several types of weapons available, including hybrid of a blaster and a laser, called a "blaser", and photon torpedoes.

Blasers

Blasers do less damage than photon torpedoes, but as they are guided by the ships computer to their target and they travel at the speed of light, they are much more accurate. Blasers take their energy from the ship itself, and so they drain the ships energy banks, and if used too much they may make it impossible to leave the sector until the energy banks recharge.

Photon torpedoes

Photon torpedoes do more damage than blasers, but because they travel slower than light, and occupy physical space, they are less accurate. They require an explosive charge, which must be carried by the starship, and which may explode if the starship takes enough damage. But they can usually destroy an

enemy ship with one or two shots (if the ship has no armor), so they have some value.

Sensors

The ships' sensors allow it to map out subsectors, and if it's technology level is high enough, to map out sectors as well. Sensors are also used to scan for ships in the area, and the higher the tech level, the more likely they are to pick up smaller ships farther away.

Sensors depend on the ship having functional computers, and having more or better computers will help to increase the range of the sensors, as well as the likelihood that ships will be detected.

Teleports

Teleports allow a ship transport goods from ship to ship or ship to surface with other ships or planets in the same subsector. The higher the tech factor the larger the item that can be transported, and the more reliably the transfer will occur. For teleports, "larger" means the individual item size, not necessarily the gross item size. For instance, 1 person is considered "larger" than 1 ton of ore, since 1 ton of ore consists of a homogeneous mix of smaller ore pieces. It won't hurt anything if the teleports fuse a few pieces of the ore together, but you wouldn't want that for living things, thus teleporting people is only possible on higher-tech teleport systems. Teleports also depend on computers being operational.

Shields

Shields provide a non-ablative (well, you are trading energy use for armor use) defense for the ship. The number and tech level of the shield units you have installed will determine how much energy you may put into the shields at any one time.

SHIP DEFENSES

A ship defends itself by firing on ships that attack it, employing a "defense shield", and/or by carrying some amount of ablative armor. A ship with higher-tech hull and engines will also get the "defense" of being less visible to other ships. The armor will absorb all of the points of damage the ship should have taken until there is no more armor left, at which point the ship begins to take damage. Shields work similarly, except that they use energy that has been set aside for this purpose instead of an ablative layer.

Armor is large and heavy, and the ship must be brought back to port to have more armor added. Armor also increases the odds that your ship will be detected by sensor scans. Ships may also carry small fighter craft which can be used to defend it, if the ship is large enough.

STARTING SHIP

Players start the game with a single "Class A" ship, loaded with a single engine, a single computer, a single life support system, a single sensor array, the equivalent of 2 fuel tanks worth of fuel, 10 civilians, 5 scientists, 10 military, and 5 officers. The ship will have no armor, and will be located on the surface of the players home planet. All the "big" items on the ship will be created at the tech level of the player's race.

SHIP OPERATIONS

Ships operate on "energy" stored in a toroidal Makazu field in each engine. These fields are fed via "active fuel arrays", which hold fuel that has been emptied out of "fuel tanks" that were loaded onto the ship. Once the player loads a fuel tank into the active fuel array it can not be unloaded. The engines will draw fuel from the active fuel array in an attempt to keep the Makazu field at maximum charge (as per basic magnetrinophysics). As each engine contains a part of the field, adding another engine will increase the amount of energy that may be stored up. When removing an engine it is necessary to drain the energy from the engine to be removed into the remaining engines, which will maintain the extra energy (to some degree - don't expect to remove 6 engines and store all that energy in just one), but will not replenish it when it is used up. Thus, a ship with more engines will

be able to move more quickly from one place to another on the same amount of fuel than a ship with less engines. Damage to the ships engines can be cause the destruction of the whole ship if the Makazu field collapses with a large amount of energy still contained in it.

Shields work on a the principle of a modified Makazu field, which may not have been developed by all players or races. Basically, instead of containing the field inside the unit, as an engine does, a larger toroid is formed with the unit in the middle. Since this would leave the ship unprotected from most angles, the computer is used to "spin" the toroid by changing the dimensional stabilizer. It is possible for the ship inside the field to fire through the shield as the shield, as the ships computers will alter the rotation as needed to allow the weapons to pass through.

SHIP CAPACITIES

The different ship classes have different capacities for cargo, as well as how many of a certain item may be "installed" for use by the ship. Following is the DEFAULT number of these things, which MAY have been changed by the person setting up the game you are playing:

Ship Class	Cargo Limit
A	3010
B	6010
C	12020
D	24320
E	51310
M (Miner)	3000

Note that a class M (miner) ship class can NOT carry all types of goods.

SHIP MOBILITY COSTS

Each of the ship classes has a different base "mobility cost". That is, a fixed rate by which the other costs of moving the ship from sector to sector are scaled.

Ship Class	Nav Costs
A	423
B	644
C	871
D	1016
E	1405

Note as the miner class of ships is incapable of moving from place to place on it's own, it is not listed.

SHIP MANUFACTURING COSTS

Each of the ships costs a varying amount of planetary production units to build (taken from the "hull" production type). There is also a monetary cost to build each ship, which is usually 9 times the production cost.

Ship Class	Production Cost
A	120
B	275
C	425
D	800
E	1625
M (Miner)	275

SHIP CREW REQUIREMENTS

Each of the ship classes require a certain number of "crew" members to be present for them to operate. What is meant by "crew" will depend on the situation, but usually it refers to more educated passengers such as scientists or officers. Should you not have sufficient crew to operate a ship in it's present configuration you may be forced to remove an engine or weapon to bring the ship's systems down to a more manageable number.

Ship Class	Crew Per Engine	Crew Per Weapon
A	2	2
B	5	2
C	8	2
D	20	8
E	40	16
M (Miner)	0	0

Note:

The M (miner) ship class is special, and is discussed in it's own doc file. Suffice it to say that you have no need of them unless you intend to sell them to other players or you have mineral-poor habitable planets surrounded by mineral-rich in-habitable planets which would make it worthwhile for you to go to the effort of picking them up and dropping them off.