Green Sun: Rise & Fall

Starter Pack

This bundle, collectively known as the **Starter Pack**, consists of a number of documents that ought to be useful to the new player, or had been suggested by the playtesters, as being useful to have.

Turn Sheet
This is a simple page with a suggestion as to how you may wish to set out your orders. <u>This is not the required format</u>, just one possibility at the start of the game.

Ship design sheet
This is a simple page with a suggestion as to how you may wish to set out your design for a new ship. <u>This is not the required format</u>, just a guide. Included is also a worked example of the FT-5/50 – a vessel mentioned in the Rule Booklet.

Sample Ships
The specifications for three 'sample ship' are provided. These are free for you to use and will have been added to your list of available ship designs (and are separate from the three free designs of your own).

System Scan
An explanation of the report your ships provide when scanning a new system, along with background information of what may be found within a system.

What can I do where?
 A short article list which components of a ship may be upgraded/repaired/replaced and at which location.

What do I do now?
A slightly tongue-in-cheek piece of advice of how to play the game if you are stuck for ideas of your own…

Player: Race:

ORDER SHEET (v1.0)

Build

What to build (& number)	Location	Cost	Notes

Moves

Ship, or fleet of ships	Location Start	Location End	Move Order Standard Route/[tl]/[ss]/[os]/[ls]

Research

Area	Research Teams allocated	
General Tech		
		Total of Teams used. (*just as a check*)

Special Action

Player: Race:

SHIP DESIGN SHEET (v1.0)

Ship Class:

Unit	No	Unit Cost				Total Cost				Total Mass	Notes	Fail*
		M	P	E(1)	E(2)	M	P	E(1)	E(2)			
FTL												
Sublight												
Bridge	1	-	-	-	-	-	-	-	-	-	+5 Scanners +5 Sensors	-
Endurance												
Scanner												
Sensor												
Cargo												
Total												

Fail (optional) the sequence in which systems will fail in the event of damage.

Engine thrust allocation:

	Thrust	Effect	Mass	Effect/Mass
TOAL				
Speed				
Manoeuvrability				

Player: A Dunks   Race: Hoopers

SHIP DESIGN SHEET (v1.0)

Ship Class: FT-5/50

Unit	No	Unit Cost				Total Cost				Total Mass	Notes	Fail*
		M	P	E(1)	E(2)	M	P	E(1)	E(2)			
FTL *Jump-I*	1	20	20	-	10	20	20	-	10	25		-
Sublight *Sub-I*	3	15	15	5	-	45	45	15	-	30	Thrust = 150	-
Bridge	1	-	-	-	-	-	-	-	-	-	+5 Scanners +5 Sensors	-
Endurance *End-I*	5	5 +1	+1	-	-	30	5	-	-	10	Endurance = 5	-
Scanner *Scan-I*	1	10	5	-	-	10	5	-	-	10	+5 Scanner =10 Scanner	-
Sensor *Sen-I*	1	nil	nil	-	-	nil	nil	-	-	-	+5 Sensor = 10 Sensor	-
Cargo *Cargo-I*	40	2	1	-	-	80	40	-	-	40	40Kt Cargo	-
Total						185	115	15	10	130		

Fail (optional) the sequence in which systems will fail in the event of damage.

Engine thrust allocation:

	Thrust	Effect	Mass	Effect/Mass
TOAL	130	130	130	1.0 TOAL
Speed	20	20	130	0.15 *sp*
Manoeuvrability	0	0	130	0.0 *mv*

Sample ships

The following three vessels are provided as examples of what may be built with the equipment your technology provides at Tech level 0. These designs are <u>already added to your design list</u> and may be built if so desired. However, it is very likely that they will become obsolete very quickly, after even the slightest amount of research.

SV-1

Sublight I x1	15M + 15P + 5E*	10Kt	Thrust = 50
Bridge			+5 Scanner, +5 Sensor
Total	15M + 15P + 5E*	10Kt	

No FTL Drive, No Endurance

* exact type of Exotic will depend on your world condition.

TOAL = 49 Thrust	Max G world = 4.9
Speed = 1 Thrust	sp = 0.1
Manoeuvrability = 0	mv = 0

Description - This is a basic sublight survey vessel, capable of landing and taking off from a world with a maximum G of 4.9 and is small enough to be carried aboard another vessel with a Cargo space of at least 10Kt. As it has no Endurance at *adjustment* it must end its moved aboard a parent ship, or on an inhabited world or else the crew will perish, and the vessels will be lost. If given any order the vessel will complete the move, and automatically return to its starting position, if physically possible.

MT-50

Sublight I x2	30M + 30P + 10E*	20Kt	Thrust = 100
Bridge			+5 Scanner, +5 Sensor
Cargo x50	100M + 50P	50Kt	Capacity 50 Kt
Total	130M + 80P + 10E*	70Kt	

No FTL Drive, No Endurance

* exact type of Exotic will depend on your world condition.

TOAL = 93 Thrust	Max G world = 1.33
Speed = 7 Thrust	sp = 0.1
Manoeuvrability = 0	mv = 0

Description - This is a basic sublight lifter vessel, capable of landing and taking off from a world with a maximum G of 1.33 and is designed to lift up to 50Kt into space. As it has no Endurance at *adjustment* it must end its moved aboard a parent ship, or on an inhabited world or else the crew will perish, and the vessel will be lost. If given any order the vessel will complete the move, and automatically return to its starting position, if physically possible.

SC-1

Jump I x 1	20M + 20P + 10E*	25Kt	Jump 4
Sublight I x2	30M + 30P + 10E*	20Kt	Thrust = 100
Bridge			+5 Scanner, +5 Sensor
Scanner I	10M + 5P	10Kt	+5 Scanner
Sensor I			+5 Sensor
Endurance I x5	30M + 5P	25Kt	Endurance = 5 sgyear
Total	90M + 60P + 20E*	80Kt	

exact type of Exotic will depend on your world condition.

TOAL = 92 Thrust	Max G world = 1.15
Speed = 8 Thrust	sp = 0.1
Manoeuvrability = 0	mv = 0

Description - This is a basic FTL scout vessel, capable of landing and taking off from a world with a maximum G of 1.15. It is limited to a jump distance of 4 and has an Endurance of just 5 sgyears. When collecting data, it generates 100 Sensor Points.

System Scan

When one of your ships carries out a system scan [ss] of a new star system, dependent upon the quantity of Scan Points your ship is able to generate will determine the information that will be supplied. The example below is the result of a [ss] with just 100 Scan Points:

Star Type: YS   Star Name: Ben's Star

Orbit	Temp	G	Atmos	Pressure	Metals	Petramatter	Exotic
4	290						
7	190						
10	150						

There is a Kuiper belt starting at orbit 23 with a total equivalent Gmass = 0.01 & resources 0.001/0.0/0.0

Jump Routes:
    #1   Volvox   (6)
    #2   Psilomane   (2)
    #3   (3)

Hyperspace destinations:
    Gamma   (7)
    Kappa   Barstia   (1)
    Upsilon   Trachyte   (6)
    Psi   (3)

The information is read as follows:

Star Type   This will be the type of star that is at the centre of the solar system. In 95% of the case this will be a Yellow Sun, just like our own local star. Astronomically it is actually a *yellow dwarf,* but the word 'dwarf' can be confusing. In the rare case of a non-YS being detected, your astronomers will get excited.

Star Name   This is the name given to the star by the player first player to become aware of its presence. (*This one is named for my dog*).

Orbit/Temperature This is a list of the orbits that are 'occupied', in this case three, number 4, 7 and 10, each will contain either by an asteroid belt, a planetoid, or a full-grown planet. The Temperature represents the surface temperature of whatever is there. Details of what is there will be revealed by carrying out an orbital scan [os] of the orbit, or by a land & survey [ls] to the body that is there. It is possible to skip the [os] and go straight to the [ls], but if

you do not know the Gravity of the world you risk getting stuck there if your TOAL is insufficient, assuming you do not crash in the first place.

G, Atmos, Pressure etc. This sort of information is revealed by carrying out [os], or better still, a [ls] order.

Kuiper belt   A region of particulate matter in the outer part of the solar system (*more details on this are on next page*).

Dependent upon your FTL technology, none, one or both of the following will be shown as part of the information given for the relevant star system.

Jump routes   This shows the three jump routes out of the system (you will have come from one of them), their names if the destination has been named (otherwise blank) and the jump distanced to that destination.

Hyperspace dest'   This shows the hyperspace destinations that are within range of this star (you will have come from one of them). In this case there are four are shown, of which two are unnamed as they have not been seen before. The final figure (in brackets) is the hyperspace distance to the destination.

The *Classic Theory for Planetary Formation* suggests that certain types of body will form in certain orbits. The table below and the information that follows is a guide to what may be anticipated where. The classic theory covers around 95% of solar systems, should you encounter something falling outside the classic theory, your astronomer will get very excited.

	Vulcanoid	Rocky	Asteroids	Gas	Icy	TNO
Orbit	1	2-5	6-8	9-13	14-18	19-25
Equivalent Planet		Mercury Venus Earth Mars		Jupiter Saturn	Uranus Neptune	'Pluto'

Vulcanoid   Orbit 1 - These are almost mythical bodies that orbit very close to the central star that the classic theory does not account for their existence. They are hot, inhospitable worlds, devoid of atmosphere, liquid water and life. They are however believed to be rich in mineral resources.

Rocky   Orbits 2-5 - These are modest sized planets with a rocky core and solid surface, siting in the 'Goldilocks' zone they are prone to harbour life.

Asteroids   Orbits 6-8 - These orbits are occupied by debris left over from the planet forming phase, which was not swept up by the other planets. Shepherded into broad 'belts' these collections consist of fragments ranging from dust particles a few micrometres in size, up to relative giants a hundred metres or more. If

there are adjacent orbits occupied with asteroids, there is no boundary between them the belt covers both orbits. It is very unlikely life could evolve here.

Gas   Orbits 9-13 - Also known as Gas Giants, these huge worlds consist of great quantities of mostly hydrogen gas and may contain as much as 85% of all the non-star matter in the system. With no defined surface, under the immense pressure of these worlds, the atmosphere transitions from gas to liquid deep within the cloud layer. Any metal or mineral content, if there is any, will be so deep as to be unrecoverable. Petramatter, by comparison, is abundant. Life may arise within the cloudy atmosphere and would be described as being 'aquatic' in nature.

Icy   Orbits 14-18 - These large icy worlds inhabit the outer reaches of the solar system. Consisting of a rocky core beneath a varied atmosphere, their size and material composition suggest they did not originate this far out but migrated out here early in the planet formation process. Metals and mineral, while present, are extremely hard to extract, Petramatter is common. Life may evolve on these worlds, somehow adapted to the extreme cold.

TNO   Orbits 19-25 - The outer most region of a solar system is littered with debris from the planet creation process. While the 'Kuiper belt' is spread across several orbits, there may be larger bodies, almost to the size of proto-planets, that have settled in one of these orbits. These Trans Neptune Objects (TNO) are not worlds in the true sense, but great rocks floating in space. Poor in resources they may have an atmosphere but are far too cold to harbour any native lifeforms.

Kuiper belt   While most of the matter left over from the planets formation has been hoovered up by the worlds in the inner portion of the system, the orbits normally occupied by TNOs lack sufficient matter to have cleaned up everything, thus these orbits are littered with debris. Similar to that in the asteroid belt this matter consists of fragments ranging from dust particles a few micrometres in size, up to a few centimetres across. The range of orbits a Kuiper belt extends over, will contain around 95% of the matter of the belt, the quoted figures being as if all this matter were swept up into one body.

What Can I do, and where?

Ships once built are not fixed for eternity, they do degrade, consume fuel, resources and Endurance, while breakthroughs in technology may make some of their systems out of date, or even obsolete. Even without recourse to new technology areas it is possible to extend the lifetime, or usefulness, of a ship by replacing or upgrading certain portions of it. The following table, and the list after it, details what can be done, and where.

Action(s)	Location				
	Ship Alone (anywhere)	Ship to Ship (anywhere)	Inhabited World		
			Orbit	Space Dock	Surface
Reload	Y	Y	Y	Y	Y
Re-supply	N	Y	Y	Y	Y
Refit	N	N	(N)	Y	Y
Upgrade	N	N	N	Y	Y

Note - an 'Inhabited World' means a world that is either your home system, or one you have a colony on (with at least one extraction or refinery). This may include those of an alien race if they are allied, or a client, in which case the degree of assistance will have been negotiated with the GM.

Reload   To move items already onboard the ship, from storage to where they are required, or carry out repairs.
- Repair items (e.g., collapsed Energised Plates).
- Move ordnance from cargo space to weapon (e.g., Drones)

Re-supply   To transfer items from one ship, to another (both ships need to be in the same orbit & may need to be docked).
- Crew
- Endurance (if compatible)
- Sensor Software (if upgrade compatible)
- Ordnance (e.g., Drones)
- Small Craft/Fighters
- Cargo

Refit   To replace spent items, replace minor equipment, in a process that could take up to a few sgmonths.
- Jump cores
- Sensor Hardware
- Refit capable hardware (see description in tech data)

Upgrade   The replacement of one or more parts of the vessel with newer version(s) in a process that normally takes the full sgyear.
- Upgrade capable hardware (see description in tech data)

What do I do now?

So, you have submitted your Racial Design and received your Set Up turn (usually a file named "YOUR NAME 000") showing everything you know about your new race., the question then is 'What do I do now?'.

The following is a just a suggestion and is loosely based upon what the players before you have done. It would seem there are three (four) different approaches to how you play **Green Sun: Rise & Fall**:

- Adventurous
- Pragmatic
- Cautious
- (Procrastination)

Before going any further here are a few notes that may help you understand the game and how to proceed:

A quick explanation of some the terms that are used in reference to the submitting of your orders:

Orders   A set of instructions given to the GM for your race. A set of orders will consist of a combination of Move, Design, Research and Special Actions as well as any instruction to build ships, installations or whatever else. The GM processes these and the results returned to the player. You may submit several sets of orders during a *Turn*.

Turn   (aka Turn Cycle) is the period between one *Adjustment* and the next *Adjustment* and represents one game year (sgyear) for your race. The Turn will consist of an exchange of one or more sets of *Orders* and a final *Adjustment*.

Adjustment   The final action of the turn, the GM carries out the accounting of all the players expenditure over the *Turn* and adjusts all the figures to show the status at the end of the sgyear. Credit orders are reset, population expands, resources are extracted and/or refined and ships have their Endurance modified. This is then sent to the player ready to begin their next *Turn*.

It is very likely that you will begin the game with more research Teams than you have Research Orders. As a result of the rule that you cannot allocate more Teams to a topic than you Research tech level (which starts out at 1), for your first turn you will have some redundant Research Teams. Do not worry about this, it will be resolved ready for your second Turn.

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Now, on with the suggestions…

Adventurous

This is a bold '*let's get out there and see*' approach with little regard for the possibility of failure, perhaps even embracing it as part of the learning experience.

Suggested actions.
1. Allocate 1 Research Team to the topic 'Research'.
2. Allocate the remaining Research Teams, 1 to each topic you wish to advance.
3. Build the SC-1 (the basic Scout Ship from your free designs). *If by chance your home world Gravity is greater than 1.32 then this will be the slightly more expensive SC-1a.*
4. Give you new ship an instruction to fly to an adjacent star (choose one of the routes that has a Jump distance of 4 or less), using a translight [tl] order.
5. Name your ship and consider what the crew, and the population of your home world, is thinking about this new venture.
6. Think of some question you wish to use your Special Action on. If you are struggling to think of what to use it on, you may consider just asking '*What can I use my Special Action on?*' and the GM will pick an appropriate subject for you. This may only be done once in the game.

Submit your orders and await the response from the GM, then dependant upon what comes back possibly move your ship, either to a new star or to explore something it had found. You may also wish to start designing new ships using any new technology your research had discovered.

Pragmatic

This is a more realistic approach, perhaps understanding that your starting resources will limit your progress (*unless you took the Extra Resources option during the Start Up*). While there may be a desire to '*get out there and see*' this is tempered by the concern over resources

Suggested actions.
1. Allocate 1 Research Team to the topic 'Research'.
2. Allocate the remaining Research Teams, 1 to each topic you wish to advance, certainly include Production.
3. Look at your extraction and refining installations and calculated which one is working the least efficiently (it is most likely to be the ME I or the MR I) and consider building another one of these.
4. Consider building an SV-1 (the basic Survey Vessel from your free designs).
5. Give your new ship an instruction to scan your home system using the system scan [ss] order.
6. Name your ship and consider what the crew, and the population of your home world, is thinking about this new venture.
7. Think of some question you wish to use your Special Action on. If you are struggling to think of what to use it on, you may consider just asking '*What can I use my Special*

Action on?' and the GM will pick an appropriate subject for you. This may only be done once in the game.

Submit your orders and await the response from the GM, then dependant upon what comes back possibly move your ship to explore something it may have found. You may also wish to start designing new ships using any new technology your research had discovered.

Cautious

This is a more cautious approach, perhaps feeling a bit overawed by the apparent complexity of the game.

Suggested actions.
1. Allocate 1 Research Team to the topic 'Research'.
2. Allocate the remaining Research Teams, 1 to each topic you wish to advance, certainly include Production.
3. Think of some question you wish to use your Special Action on. If you are struggling to think of what to use it on, you may consider just asking '*What can I use my Special Action on?*' and the GM will pick an appropriate subject for you. This may only be done once in the game.

Submit your orders and await the response from the GM. In the meantime, speak with the GM and other players on Discord, try and find out from these other people what you could be doing.

Procrastination

This is not really a lack of action but an overly cautious approach, perhaps feeling more than a bit overawed by the apparent complexity of the game.

Suggested actions.
1. Do nothing (*not actually recommended*), just see what happens…

Speak with the GM and other players on Discord, try and find out from these other people what you could be doing.