

Appendix EPAT1 – The Existential Patents

- This Appendix contains all of the Existential Patents (17) which positions may purchase with Inheritance Points during the set-up or prosecute normally once the game begins.
- Existential Patents are those Patents which are available prior to the start of the game; they are available and can be acquired during set up. Existential Patents recognize technology that must preexist the invention of Stardrive, which marks entry into the 1st Era of interstellar technology at the beginning of the game or shortly afterward.
- See Appendix IPT2 for Flat Rate Costs of Existential Patents during set up.

Existential Patents	Page #	Section Introduced	Other Sections
Industry	CLVII	Construction	Taxation
Orbital Shipyard	CLVIII	Construction	Combat
Orbital City	CLIX	Construction	Census
Generic Star Drive (GSD)	CLX	Stardrive	Movement
Ship Systems	CLXI	Movement	Expansion Commerce
Logistical Support Ship	CLXII	Movement	Construction
Scout Ship	CLXIII	Expansion	Intelligence
Cargo Ship	CLXIV	Commerce	Construction
Colony Transport	CLXV	Expansion	Combat
Controlled Environment Technology	CLXVI	Expansion	Taxation
Ground Defense Base	CLXVII	Combat	Carriers & Fighters
Orbital Defense Base	CLXVIII	Construction	Combat
System Defense Base	CLXIX	Combat	
1 st Era Warship	CLXX	Combat	Technology
1 st Era Carrier	CLXXI	Carriers & Fighters	
1 st Era Fighters	CLXXII	Carriers & Fighters	
1 st Era Ship Missiles	CLXXIII	Carriers & Fighters	

Existential Patent: Industry

Theory: EGY ⇔ MTR ⇔ IND

OpQal: Enhancement Technology (ET, colony enhancement)

Effects (Theory – 1 = 2)

IND – May build Industry Installations on Friendly, Naturalized and Converted colonies by activation of the Construction Power costing 2 RPs each.¹

MTR – Industry produces .5 RP each during taxation.

Cost (Base 5 RPs/Effect) = Special (modified, above)

IND – May build a maximum of 1 Industry for every 2.5 populations on a colony.

MTR – Each time Census or Taxation Power is activated, Pollution Potentials are generated at each colony that has Industry.²

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

❖ Habitability loss does not apply to Unpleasant and Hostile planets.

✓ With maximum Industry, every five population factors can produce 2 RPs.

¹ See Industry, 2 Construction, p. 666, for Industry colony enhancement details and limits.

² See Pollution Potentials, 3 Taxation & Census, p. 320.

Existential Patent: Orbital Shipyard

Theory: EGY ⇔ MTR ⇔ SHP ⇔ IND

OpQal: Enhancement Technology (ET, colony enhancement)

Effects (Theory – 1 = 3)

IND – May build Orbital Shipyard at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

SHP – Orbital Shipyards build starships and lay keels, and build Orbital and System Defense Bases, and Orbital Cities.²

MTR – Orbital Shipyard may build as many ships or lay as many keels in a turn as the colony can afford.³

Cost (Base 5 RPs/Effect) = 15 RPs each

IND – Limit one Orbital Shipyard at one time per colony.⁴

SHP – Construction of ships and Orbital Cities requires two turns, one turn to lay keel (pay half cost of ship) and second turn to build the ship (pay other half of cost of ship).⁵

MTR – Colony must have minimum 10 population factors to build an Orbital Shipyard

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Orbital Shipyards are targeted in Colony Combats as non-warships.⁶
- ❖ Keels are targeted in Colony Combats as non-warships
- ❖ Unfinished ships are targeted in Colony Combats as non-warships.
- ❖ Destruction of Orbital Shipyard does not destroy keels and unfinished warships.
- ❖ Obviously, an Orbital Shipyard is not required to build an Orbital Shipyard.

- ✓ A colony with 75 populations and no industry or a colony with 25 populations and maximum industry (10 industry) could build an Orbital Shipyard by itself. A colony with only 10 population factors would need unloading from Cargo Ships to build an Orbital Shipyard.
- ✓ Positions which begin the game with the Homeworld, Lost Colony or Outposter Primal States may not begin the game with any ships unless they have first obtained the Orbital Shipyard Existential Technology and purchased at least one Orbital Shipyard. This balances out somewhat their early population base and industry advantages vs. Expedition Leader, Nomadic Warfleet, and Truly Alien Primal States.

¹ See Orbital Shipyard, 3 Construction, p. 667 for most details relating to Orbital Shipyards.

² See Orbital City and Orbital Defense Base, 3 Construction, pp. 667-668.

³ See Laying Keel and Shipbuilding, 3 Construction, p. 675.

⁴ See Orbital Shipyard, 3 Construction, p. 667.

⁵ See Laying Keel and Shipbuilding, 3 Construction, p. 675.

⁶ See Civilian Targets, 3 Combat, p. 978.

Existential Patent: Orbital City

Theory: SHP ⇔ PLT ⇔ LIF ⇔ LIF ⇔ IND

OpQal: Enhancement Technology (ET, colony enhancement)

Effects (Theory – 1 = 4)

IND – May build Orbital City at any Orbital Shipyard in two turns at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

LIF – Populations may permanently reside on Orbital Cities.

PLN – Populations on Orbital Cities do not count against Maximum Habitability.²

SHP – Populations are loaded to (and unloaded from) Orbital Cities like Colony Ships by use of Expansion Power.³

Cost (Base 5 RPs/Effect) = 20 RPs each

IND – Each Orbital City holds 15 population factors of one Native Population Type, may have Industry.⁴

SHP – Orbital City may not move or leave planet; and is targeted as a civilian orbital target, and has no attack.⁵

LIF – Populations on Orbital Cities do not grow when Census Power is activated⁶ but do produce when taxed.

PLN – Total population on Orbital Cities may not exceed half of planet's *original* Maximum Habitability.⁷

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Orbital Cities are targeted in Colony Combats as non-warships.
- ❖ Population on destroyed Orbital Cities is killed.
- ❖ Population on Orbital Cities are a separate colony if the native population type is different from any colony on the planet; otherwise, they are considered to be part of the colony of their native population type on the planet.
- ❖ When they are considered part of a colony on that planet, populations on Orbital Cities participate in taxation when the Taxation Power is activated.
- ❖ When populations on Orbital Cities are considered a separate colony, even if owned by the owner of the colony(s) on the planet, Orbital Cities are taxed as a separate colony.
- ❖ A planet may have Orbital Cities and no population on the ground.
- ❖ Industry may be built on Orbital Cities to the limits of the population.

¹ See Orbital City, 2 Construction, p. 667.

² See Dayworld, 3 Taxation & Census, p. 316.

³ See Sardine Tins and Opening the Can Of..., 3 Expansion, pp. 911, 914-915.

⁴ See Industry, 2 Construction, p. 665 and Sardine Tins, 3 Expansion, pp. 911-912.

⁵ See Civilian Targets, 3 Combat, p. 978.

⁶ See Cabin Fever, 4 Taxation & Census, p. 326.

⁷ See Dayworld, 3 Taxation & Census, p. 316.

Existential Stardrive Patent: Generic Stardrive (GSD)

Movement Formula: Distance between any two stars is the absolute value of $(x_1 - x_2)$ plus $(y_1 - y_2)$ plus $(z_1 - z_2)$ where the first coordinates are the origin star and the second coordinates are the destination star. All fractions are truncated.

Put another way: The total difference between the three numbers making up the respective Positional Values of the origin star and the destination star is the **movement distance** between them.

Base Ship Speed: Base ship speed is two movement per turn, with distance calculated using the above formula.

Operational Characteristics: This stardrive does not make any noise as it travels through space or when it takes off; it does not take off to the sounds of blaring, heart-pounding orchestra music.

The maximum possible ship speed for this stardrive is 8 movement per turn.

Ships equipped with this stardrive may not change destinations during the voyage and may not stop or turn around between stars. All trips are directly from the origin to the destination at a constant speed, in a straight line.

Ships equipped with this stardrive always move at the maximum possible speed. Movement at lower speeds is not possible.

Stardrive ignores mass of ships, all ships move equally with this stardrive.

User Manual: (to be filled in by the Concierge)

Simmung: *Space is open for business!*

- ✓ As this is a Stardrive Patent, it looks different than regular Patents and is not prosecuted the same. See Stardrive section.
- ✓ Positions must have a Stardrive technology before purchasing or prosecuting any starship Patents. Positions beginning as the Expedition Leader, Nomadic Warfleet, or Truly Alien Primal States must begin the game with Stardrive. It is highly recommended that all positions begin with the Generic Stardrive Patent—you can't be interstellar without a stardrive.

Existential Patent: Ship Systems

Theory: SHP ⇔ LIF ⇔ LIF

OpQual: Enhancement Technology (ET, permanent ship enhancement).

Effects (Theory – 1 = 2)

LIF – Starship Operational Flight Limitation (OFL) is two Regular Turns.¹

LIF – Starship Operational Supply Limitation (OSL) is two Regular Turns.

Cost = *none (see Operational Qualities for COT Patents)

SHP – May not obtain (buy during set up, prosecute later) any starship patent, except Scouts, until Ship System Patent is obtained.²

LIF – Starships that exceed their OFL & ODL combined are subject to Supply Rolls and may be lost.³

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

❖ Ship Patent includes 1st Era Carrier Patents.

- ✓ This Patent allows a starship to scamper out two turns, and then scamper back to a supporting colony in two turns, maximum four turns round trip.

¹ See Life Support, 3 Movement, p. 854.

² See Star-Driven, 7 Beginnings, p. 72 and Physical Item Technologies, 2 Patents, p. 739.

³ See Death Ship and Running on Empty, et seq., 3 Movement, pp. 856, 862.

Existential Patent: Logistical Support Ship (1st Era)

Theory: SDR ⇔ IND ⇔ SHP ⇔ IND ⇔ SHP

OpQal: Physical Item Technology (PIT)

Effects (Theory – 1 = 4)

IND – May build Logistical Support Ships at any Orbital Shipyard at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

SHP – Logistical Support Ships may load and transport *Supplies*, Fighters, Missiles, or other enhancements from colonies for use by other ships.²

IND – Logistical Support Ship capacity and items carried are measured in RP value.³

SHP – Logistical Support Ships may automatically transfer anything they are carrying to another eligible ship or colony that begins the turn co-located with the Log Ship⁴ or in by joining an ongoing combat.⁵

Cost (special)

IND – Logistical Support Ships cost 15 RPs to build, Orbital Shipyard required.⁶

IND – Logistical Support Ships may carry 20 RPs worth of Supplies, Fighters, Missiles, or other enhancements.⁷

SHP – Logistical Support Ships are targeted as non-warships in combat and may not initiate combat or attack,⁸ may move using Combat Movement however.⁹

SHP – Logistical Support Ships may not use any Fighters, Missiles, or any enhancements they are transporting, Log Ships may only use Supplies.¹⁰

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ A ship receiving a transfer must be able to legally use what is received.¹¹
- ❖ Logistical Support Ships are the only ships that may carry Supplies which extend the Operational Supply Limitation (OSL) of other ships when transferred.
- ❖ In combat, the receiving ship or Defense Base may not do anything else for the round.
- ❖ Unless there is a reason otherwise, Logistical Support Ships may carry Fighters and Missiles of any Era and transfer to any eligible ship, regardless of the relative Eras of the Log Ship and the receiving ship.

¹ See Logistical Support Ships, 3 Movement, p. 860.

² See Costly Resupply, 3 Construction, p. 679.

³ See Costly Resupply, 3 Construction, p. 679 and Take Your Protein Pills, 3 Movement, p. 860.

⁴ See Transfers, 3 Construction, p. 679 and Running Outtime, 3 Movement, p. 861.

⁵ See Combat Resupply, 4 Movement, p. 868 and Victuals & Vitals, 3 Combat, p. 975.

⁶ See Logistical Support Ships, 3 Movement, p. 860.

⁷ See Costly Resupply, 3 Construction, p. 679 and Take Your Protein Pills, 3 Movement, p. 860.

⁸ See Victuals & Vitals and Civilian Targets, 3 Combat, p. 975, 978.

⁹ See Warship, 1 Combat, p. 941.

¹⁰ See Logistical Support Ships, 3 Movement, p. 860.

¹¹ See Combat Resupply, 4 Movement, p. 868.

Existential Patent: Scout Ship (1st Era)

Theory: SDR ⇔ IND ⇔ IND ⇔ SHP ⇔ DEF

OpQal: Physical Item Technology (PIT)

Effects (Theory – 1 = 4)

IND – May build Scout Ships at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

IND – May build Scout Ships at colonies that do not have an Orbital Shipyard.²

SHP – Scout Ships have two extra turns of Operational Flight Limitation and Operation Supply Limitation (OFL/OSL).³

DEF – Scout Ships receive one Defensive Shift in Combat.⁴

Cost (special)

IND – Scout Ships constructed at Orbital Shipyards cost 8 RPs each.⁵

IND – Scout Ships constructed “on the ground” (i.e. without an Orbital Shipyard) cost 10 RPs each.⁶

DEF – Scout Ships are targeted as non-warships in combat.⁷

SHP – Scout Ships may never attack, are unarmed and targeted as non-warships, and may not be armed even with Enhancements such as Ship Missiles.⁸

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Scout Ships which are not moving to a destination system with a supporting colony must move by activation of the Expansion Power for the purpose of Scouting.⁹

- ✓ The Scout Ship is the only starship that may be constructed without an Orbital Shipyard. This allows all positions which start the game with Stardrive to have Scout Ships at the beginning of the game. Additionally, this ability also allows small frontier colonies, those lacking Orbital Shipyards, to participate in farther exploration by constructing Scouts on the frontier to replace those that have gone out before, or been lost.
- ✓ Without the Ship Systems Existential Patent, a ship has no turns of OFL/OSL and cannot move away from a supporting colony and cannot be constructed. The Scout Ship’s two extra turns allow it to be constructed and to move without Ship Systems Existential Patent.

¹ See Building Up, 1 Expansion, p. 880.

² See Building Up, 1 Expansion, p. 880.

³ See Imperial Interstellar Scout Service, 3 Movement, p. 855 and Scout’s Honor, 1 Expansion, p. 879.

⁴ See Scout’s Honor, 1 Expansion, p. 879 and Civilian Targets, 3 Combat, p. 878.

⁵ See Building Up, 1 Expansion, p. 880.

⁶ See Building Up, 1 Expansion, p. 880.

⁷ See Scout’s Honor, 1 Expansion, p. 879.

⁸ See Scout’s Honor, 1 Expansion, p. 879.

⁹ See Through the Never, 3 Expansion, p. 907

Existential Patent: Cargo Ship (1st Era)

Theory: SDR ⇔ IND ⇔ IND ⇔ SHP

OpQal: Physical Item Technology (PIT)

Effects (Theory – 1 = 4)

IND – May build Cargo Ships at an Orbital Shipyard at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

SHP – Cargo Ships are the only ships that may load, transport and unload RPs to and from colonies.²

IND – RPs unloaded to colonies may gain enhanced value.³

SHP – Cargo Ships may resupply at any **alien colony** by Loading/Unloading or with permission or may attempt to resupply in any starsystem if there is no Supporting Colony.⁴

Cost (special)

IND – Cargo Ships cost 8 RPs to build.⁵

IND – Cargo Ships may carry up to 15 RPs and may not transport anything else.⁶

SHP – Cargo Ships are targeted as non-warships in combat and may not initiate combat or attack.⁷

SHP – Cargo Ships may not move to any system where there is not a known colony.⁸

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ A colony to which RPs are unloaded be able to legally use what is received in the same turn as the Unload or the RPs are lost.⁹

- ✓ Cargo Ships are pure economics. A Cargo Ship that is too small is not economical in terms of Power Activations. A Cargo Ship that is too big and expensive is not necessarily economical either. At 8 RPs cost, any colony that can build an Orbital Shipyard can build a Cargo Ship. The ability of the Cargo Ship to transport 15 RPs worth of Cargo is equivalent to transporting an entire Colony Transport, Log Ship, Orbital Shipyard, or Ground Defense Base, or enough to lay the keel on a 1st Era Warship or build a load of 1st Era Ship Missiles or Fighters.

¹ See Cargo Ships, 1 Commerce, p. 1187.

² See Cargo Ships, 1 Commerce, p. 1187.

³ See Cargo Manifest, 2 Commerce, p. 1204, see also Intrinsically Profitable, p. 1206 and Cha-Ching!, p. 1207. Id.

⁴ See Cold Lunch, 1 Commerce, pp. 1190-1191.

⁵ See Cargo Ships, 1 Commerce, p. 1187.

⁶ See Cargo Ships, 1 Commerce, p. 1187.

⁷ See Cargo Ships in Combat, 1 Commerce, p. 1187.

⁸ See Cargo Ships in Combat and Trade Mission, 1 Commerce, pp. 1187, 1189.

⁹ See Gross Domestic Product, 1 Construction, p. 662.

Existential Patent: Colony Transport (1st Era Colony Ship)

Theory: SDR ⇔ IND ⇔ SHP ⇔ SHP ⇔ PLN

OpQal: Physical Item Technology (PIT)

Effects (Theory – 1 = 4)

IND – May build Colony Transports at any Orbital Shipyard at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

SHP – Only ship that can Transport populations between planets and starsystems.²

SHP – Only ship that can Load and Unload population to and from established colonies.³

PLN – Only ship that can Land to establish new colonies on planets not currently colonized by the population type on the Colony Transport.⁴

Cost (special)

IND – Colony Transports constructed cost 10 RPs each.⁵

SHP – Colony Transports each hold three population factors of one Native Population Type.⁶

PLN – Colony Transports are consumed by Landing to form a new colony, and are thus removed from the game.⁷

SHP – Colony Transports are targeted as non-warships and may never attack or be armed.⁸

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Colony Transports, as Colony Ships, may never go to an unexplored system.⁹
- ❖ Population onboard Colony Transports when they are destroyed are lost.¹⁰
- ❖ Population onboard Colony Transports does not produce or grow when Taxation and Census powers are activated.¹¹
- ❖ Colony Transports loaded with population are moved *only* by activation of the Expansion Power for the purpose of Transporting Population.¹²
- ❖ Loading and unloading of population to and from established colonies is not automatic, “loading” and “unloading” rolls required with an activation of the Expansion Power for the proper purpose.¹³

¹ See Building Up, 1 Expansion, p. 880.

² See Colony Cans, 1 Expansion, p. 879 and Sardine Tins, 3 Expansion, p. 911.

³ See Sardine Tins, 3 Expansion, p. 911.

⁴ See The Landing, 4 Expansion, p. 920.

⁵ See Building Up, 1 Expansion, p. 880.

⁶ See Sardine Tins, 3 Expansion, pp. 911-912.

⁷ See Pandorum, 4 Expansion, p. 923.

⁸ See Colonies in a Can, 3 Expansion, p. 913.

⁹ See Send the Enterprise!, 3 Expansion, p. 909.

¹⁰ See Colonies in a Can, 3 Expansion, p. 913.

¹¹ See Colonies in a Can, 3 Expansion, p. 913 and Cabin Fever, 4 Taxation & Census, p. 326.

¹² See Engage!, 1 Movement, p. 838 and Colonization, 1 Expansion, p. 876.

¹³ See Sardine Tins and Opening the Can Of..., 3 Expansion, pp. 911, 914.

Existential Patent: Controlled Environment Technology (CET)

Theory: LIF \Leftrightarrow PLN \Leftrightarrow SHP

OpQal: Enhancement Technology (ET, permanent, based on Colony Transport Patent)

Effects (Theory – 1 = 2)

PLN – Allows Colony Ships to establish new colonies on planets with a Habitability Class of Unpleasant or Hostile to the Native Population Type of the species that developed this technology.¹

SHP – Is a permanent Enhancement to each Colony Transport.²

Cost = (Base 5 RPs/Effect) = 10 RPs (for each Colony Ship)

PLN – Population on Unpleasant Planets grow by one factor per Census activation.³

LIF – Population on Hostile Planets do not grow when Census Power is activated.⁴

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ CET applies only to the Native Population Type of the position that developed it. It is possible to develop CET for other Native Population Types if the position had a significant population and long term close exposure to that Native Population Type.⁵
- ❖ CET does not change the Habitability Class of the colony planet.⁶

- ✓ It can be deduced that CET initially provides a controlled environment for three population factors. Hence, if larger capacity Colony Ships are developed later, they may either require a new CET or use of multiple CET enhancements per ship. It may also be concluded that, at least on Unpleasant Planets, CET expands slowly with the population.

¹ See Wagon Train to the Stars and Building Up, 1 Expansion, pp. 879-880 and The Landing and Survival & Ethical Dilemmas, 4 Expansion, pp. 920, 922.

² See Building Up, 1 Expansion, p. 880.

³ See Unpleasant & Hostile Planets, 4 Taxation & Census, p. 326.

⁴ See Unpleasant & Hostile Planets, 4 Taxation & Census, p. 326.

⁵ See Building Up, 1 Expansion, p. 880.

⁶ See Wagon Train to the Stars, 1 Expansion, p. 879.

Existential Patent: Ground Defense Base

Theory: IND \Leftrightarrow DEF \Leftrightarrow DEF \Leftrightarrow WEP

OpQal: Enhancement Technology (ET, Installation, colony enhancement)

Effects (Theory – 1 = 3)

INP – A Ground Defense Base, 1 per 3 population factors *on the planet's surface* may be built by activation of the Construction Power in a single turn at any Friendly, Naturalized or Converted colony (Orbital Shipyard not required).¹

DEF – Ground Defense Bases convert to Ground Units if the colony is attacked in Ground Combat (i.e. act as fortifications, tunnels, extra heavy weapons).²

WEP – Ground Defense Bases have a base chance to hit of 20% times the Current Era in Colony Combat³ and have a 25% chance of firing at outgoing Raiding Fighters.⁴

Cost = (Base 5 RPs/Effect) = 15 RPs⁵

WEP – Ground Defense Bases may not Combat Screen in Colony Combat.⁶

DEF – Ground Defense Bases may participate in any Colony Combat on the second round (come closer, that's right, good boy, you want this right?...BANG!).⁷

DEF – Ground Defense Bases may not retreat from combat or leave the surface.⁸

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Fire at Raiding Fighters by Ground Defense Bases occurs after damage inflicted by the Raiding Fighters.⁹
- ❖ Current Era multiplier refers to the Era of the Colony Defenses.¹⁰
- ❖ Ground Bases fire Close-in Defense against attacking Fighters.¹¹
- ❖ Ground Bases damaged in Ground Combat are repaired by activation of the Construction Power and do not function until repaired.¹²
- ❖ Ground Defense Bases may only be attacked in the first round of a Colony Combat if there are no Orbital or System Defense Bases.¹³

- ✓ Colony Defense Era Upgrades are expensive, but eventually the multipliers make Defense Bases (all kinds) more powerful than 3rd Era Warships. However, in the early and mid-game, warship Era progression will easily outrun Defense progression.

¹ See Orbital Defense Base, 2 Construction, p. 668.

² See Verdun, 4 Combat, p. 997.

³ See Firing Solution, 3 Combat, p. 978.

⁴ See Giv'n Them Some Flak, Carriers & Fighters, p. 1088.

⁵ See Orbital Defense Base, 2 Construction, p. 668.

⁶ See Colony Screens, 3 Carriers & Fighters, pp. 1068-1069.

⁷ See Something Here from Somewhere Else, 2 Combat, p. 961.

⁸ See Something Here from Somewhere Else, 2 Combat, p. 961.

⁹ See Giv'n Them Some Flak, Carriers & Fighters, p. 1088.

¹⁰ See Colony Defense Era Upgrade, 2 Combat, p. 954.

¹¹ See Fortress North America, 4 Combat, p. 997.

¹² See Orbital Defense Base, 2 Construction, p. 668 and Verdun, 4 Combat, p. 997.

¹³ See Something Here from Somewhere Else, 2 Combat, p. 961.

Existential Patent: Orbital Defense Base

Theory: EGY ⇔ IND ⇔ DEF ⇔ DEF ⇔ WPN

OpQal: Enhancement Technology (ET, Installation, colony enhancement)

Effects (Theory – 1 = 4)

IND – Orbital Defense Bases may be built at an Orbital Shipyard at any Friendly, Naturalized, or Converted colony by activation of the Construction Power.¹

DEF – Orbital Defense Bases receive one Defensive Shift in the first combat round.²

DEF – Orbital Defense Bases have a 40% chance to fire at incoming Raiding Fighters.³

WPN – Orbital Defense Bases have a base 30% chance times current Era to hit in Colony Combat.⁴

Cost (Base 5 RPs/Effect) = 20 RPs each⁵

IND – One Orbital Defense Base may be built per 10 population factors on colony.⁶

DEF – Orbital Defense Bases cannot retreat from combat or leave planet.⁷

DEF – Orbital Defense Bases may only Combat Screen other things in orbit.⁸

WEP – Orbital Defense Bases may only participate in Colony Combat⁹ and sometimes in Ground Combat.¹⁰

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Fire at Raiding Fighters by Orbital Defense Bases occurs before damage inflicted by the Raiding Fighters.¹¹
- ❖ Current Era multiplier refers to the Era of the Colony Defenses.¹²

- ✓ Orbital Defense Bases – not warships – are the primary colony defense. If your warships are pinned to defending a colony, or colonies, they might as well be defense bases.
- ✓ In the 1st Era, Orbital Defense Bases are equal to 1st Era Warships, but afterward, in the 2nd and 3rd Eras, Orbital Defense Bases gain the edge.

¹ See Orbital Defense Base, 2 Construction, p. 668.

² See Combat Shifts, 3 Combat, p. 978.

³ See Under Your Desk, 4 Carriers & Fighters, p. 1086.

⁴ See Firing Solution, 3 Combat, p. 978.

⁵ See Orbital Defense Base, 2 Construction, p. 668.

⁶ See Orbital Defense Base, 2 Construction, p. 668.

⁷ See Colony Defense Bases and Something Here from Somewhere Else, 2 Combat, pp. 954, 961.

⁸ See Combat Screening, 3 Carriers & Fighters, p. 1067.

⁹ See Something Here from Somewhere Else, 2 Combat, p. 961 and Keep Your Friends Close, Your Enemies Closer, 3 Combat, p. 972.

¹⁰ See Fire at Will and Razor Rain, 4 Combat, pp. 991, 993.

¹¹ See Under Your Desk, 4 Carriers & Fighters, p. 1086.

¹² See Colony Defense Era Upgrade, 2 Combat, p. 954.

Existential Patent: System Defense Base

Theory: EGY ⇔ IND ⇔ DEF ⇔ DEF ⇔ DEF ⇔ WPN

OpQal: Enhancement Technology (ET, Installation, colony enhancement)

Effects (Theory – 1 = 5)

IND – System Defense Bases may be built at an Orbital Shipyard in one turn at any Friendly, Naturalized, or Converted colony by activation of the Construction Power.¹

DEF – System Defense Bases receive one Defensive Shift on the first combat round.²

DEF – System Defense Bases may carry 30 RPs of Ship Missiles (2/3 of their cost, normal is RP capacity equal to half of cost for warships, less for Carriers).³

DEF – Attackers may only attack System Bases in the first round of any Colony Combat and only System Bases (and colony Fighters) can fire at the attackers.⁴

WPN – System Defense Bases have a base 30% chance times current Era to hit in Colony Combat.⁵

Cost (Base 5 RPs/Effect) = 45 RPs each (*see below)⁶

IND – One System Defense Base may be built per 30 population factors on colony.⁷

DEF – System Defense Bases cost an extra 20 RPs each.⁸

DEF – System Defense Bases cannot retreat from combat or leave planet.⁹

DEF – Attackers may choose to initiate combat against only the System Defense Bases without engaging the rest of the colony defenses in Colony Combat.¹⁰

WEP – System Defense Bases may not fire at Raiding Fighters.¹¹

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Current Era multiplier refers to the Era of the Colony Defenses.¹²
- ❖ Colony Combat may not be initiated against the colony if System Bases are attacked separately. Orbital and Ground Defense Bases may not join or be targeted, but Fighter Complements on the planet may choose to join.¹³

¹ See Orbital Defense Base, 2 Construction, p. 668.

² See Combat Shifts, 3 Combat, p. 978.

³ See Torpedoes at Trafalgar, 4 Carriers & Fighters, p. 1080.

⁴ See Something Here from Somewhere Else, 2 Combat, p. 960.

⁵ See Firing Solution, 3 Combat, p. 978.

⁶ See Orbital Defense Base, 2 Construction, p. 668.

⁷ See Orbital Defense Base, 2 Construction, p. 668.

⁸ See Orbital Defense Base, 2 Construction, p. 668.

⁹ See Colony Defense Bases and Something Here from Somewhere Else, 2 Combat, pp. 954, 961.

¹⁰ See Rule 20 Permissive Joinder, 3 Combat, p. 973.

¹¹ See Under Your Desk, 4 Carriers & Fighters, p. 1086.

¹² See Colony Defense Era Upgrade, 2 Combat, p. 954.

¹³ See Rule 20 Permissive Joinder, 3 Combat, p. 973.

Existential Patent: 1st Era Warship

Theory: SDR ⇔ IND ⇔ WEP ⇔ WEP ⇔ WEP ⇔ DEF

OpQal: Physical Item Technology (PIT)

Effects (Theory – 1 = 5)

IND – May build 1st Era Warships at any Orbital Shipyard at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

WEP – 1st Era Warship may initiate combat vs. ships and colonies.²

WEP – Base Chance to hit when attacking is 30% (vs. ships and defense bases).³

WEP – May destroy during Orbital Bombardment 3 population factors on Conquered Colony and/or participate in Pacification Combat.⁴

DEF – May re-roll one failed Hazard Roll when entering an unexplored system.⁵

Cost (special)

IND – 1st Era Warships cost 30 RPs to build.⁶

DEF – When attacked by higher Era ships and bases, the attackers receive one Offensive Shift per Era difference.⁷

WEP – May only have one target assigned per Combat Round (i.e. fires/acts once per round).⁸

WEP – May fire Close-in Defense against Fighters and Ship Missiles.⁹

WEP – May not Combat Screen against Fighters.¹⁰

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ 1st Era Warships are assumed to be the average Ship of the Line of the Era, with no class differentiation.¹¹
- ❖ Combat may be initiated by either Initiate Combat, Combat Alert or by initiating combat upon arrival via Combat Movement.¹²
- ❖ 1st Era Warships may not carry or support Fighters, but may be equipped with expendable Ship Missiles which give an additional attack.¹³

¹ See First Era Warship, 2 Combat, p. 952.

² See Warships, 1 Combat, p. 941.

³ See Firing Solution, 3 Combat, p. 978.

⁴ See In This Dust that Was a City, 3 Combat, p. 961 and Resistance is Futile, 6 Combat, p. 1022.

⁵ See Dead Before the Opening Credits, 3 Expansion, p. 910.

⁶ See First Era Warship, 2 Combat, p. 952.

⁷ See Combat Shifts, 3 Combat, p. 978.

⁸ See Combat Resolution, 3 Combat, p. 976.

⁹ See Close-in Defense Weaponry, 2 Carriers & Fighters, p. 1059 and Fire-and-Forget, 4 Carriers & Fighters, p. 1081.

¹⁰ See Nolo Contendre, 3 Carriers & Fighters, p. 1070.

¹¹ See Ship of the Line, 2 Combat, p. 952.

¹² See The Combat Power, Warships, and Move Out!, 1 Combat, pp. 941-942.

¹³ See Fighters vs. Ship Missiles and First Fire, 4 Carriers & Fighters, pp. 1080-1081.

Existential Patent: 1st Era Carrier

Theory: SDR ⇔ IND ⇔ SHP ⇔ WEP ⇔ DEF ⇔ DEF

OpQal: Physical Item Technology (PIT)

Effects (Theory – 1 = 5)

IND – May build 1st Era Carriers at any Orbital Shipyard at any Friendly, Naturalized or Converted colony by activation of the Construction Power.¹

WEP – 1st Era Carrier may initiate combat vs. ships and colonies (with or without Fighters).²

SHP – Carrier may load, transport, launch, and support operation of a Fighter Complements whose RPs equal to half of its base construction cost;³ Fighter Complements are ready to launch as soon as the Carrier arrives in system and there is no delay in the ability of a Carrier to initiate combat.

DEF – Carriers fire Close in Defense Weaponry with the same chance to hit as a warship of the same Era and add one to each damage die roll.⁴

DEF – Carriers may not be attacked by Defense Bases in Colony Combats unless it direct fires at a target in the same Combat Round.⁵

Cost (special)

IND – The maximum size of a 1st Era Carrier is 100 RPs (supporting a 50 RP Fighter Complement).⁶

SHP – Carrier may retreat with Fighter Complement only if they are Combat Screening the Carrier on the round of the retreat (or they are left behind).⁷

DEF – When attacked by higher Era ships and bases, the attackers receive one Offensive Shift per Era difference.⁸

DEF – Carriers may not Combat Screen against Fighters.⁹

WEP – Carriers have one direct fire per round and the target receives two Defensive Shifts in addition to normal Era Shifts, if applicable.¹⁰

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Fighter Complement is not included in the cost of Carrier construction. Fighter Complements must be constructed and transferred to the Carrier separately.¹¹
- ❖ Damage from Carrier Close in Defense Weaponry Fire cannot exceed 10 RPs per damage die roll.¹²
- ❖ Carriers may be attacked by Ship Missiles and colony-based Fighters in Colony Combat on any round, regardless of whether the Carrier direct fires or not.¹³
- ❖ Fighters from a destroyed Carrier must find another place to land or perish on the next Combat Round.¹⁴

¹ See Carriers, 1 Carriers & Fighters, p. 1049.

² See Carriers, 1 Carriers & Fighters, p. 1049 and Warships, 1 Combat, p. 941.

³ See How Big is Your Flight Stick?, 1 Carriers, p. 1050.

⁴ See Battle at Planet Midway, 2 Carriers & Fighters, p. 1060.

⁵ See Carrier Direct Fire, 1 Carriers & Fighters, p. 1051.

⁶ See Carriers, 1 Carriers & Fighters, p. 1049.

⁷ See Carrier Operations, 1 Carriers & Fighters, p. 1050.

⁸ See Combat Shifts, 3 Combat, p. 978.

⁹ See Nolo Contendre, 3 Carriers & Fighters, p. 1070.

¹⁰ See Carrier Direct Fire, 1 Carriers & Fighters, p. 1051.

¹¹ See Laying Keel, 3 Construction, p. 675 and How Big is Your Flight Stick?, 1 Carriers & Fighters, p. 1050.

¹² See Battle at Planet Midway, 2 Carriers & Fighters, p. 1060.

¹³ See Carrier Direct Fire, 1 Carriers & Fighters, p. 1051.

¹⁴ See Space Debris, 1 Carriers & Fighters, p. 1051.

Existential Patent: 1st Era Fighters

Theory: SHP ⇔ IND ⇔ WEP ⇔ WEP ⇔ WEP

OpQal: Enhancement Technology (ET, colony or ship (i.e. Carriers) enhancement)

Effects (Theory – 1 = 4)

SHP – Fighters may be built at any Friendly, Naturalized, or Converted colony by activation of the Construction Power for the purpose of Colony Enhancement.¹

WEP – Fighters may initiate combat and join combats,² Fighters attack first in each Combat Round.³

WEP – Each Fighter Complement has two attacks (sorties) or two combat screening assignments (interceptions) per Combat Round⁴ and cannot be blocked by non-Fighter Combat Screens.⁵

WEP – Fighters may pass through colony defenses and enemy ships, to Raid or Strike an unconquered colony.⁶

Cost (Base 5 RPs/Effect) = special (*see below)

SHP – Fighters have zero turns of Operational Supply Limitation (OFL/OSL), must always be attached to a ship or colony.⁷

WEP – First successful Fighter attack against target Engages target, requires two successful Fighter (and/or Ship Missile) attacks in the same combat round to “hit” the target.⁸

WEP – Fighter Complements are measured in RPs, therefore, cost is special, not related to effects.⁹

IND – Maximum colony Fighter Complement size is 1 RP per population factor on colony.¹⁰

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Newly built Fighters form a new Fighter Complement, if none exists, or are added to the existing Fighter Complement. Each colony and Carrier may have only one Fighter Complement to which all assigned Fighters belong.¹¹
- ❖ Engaged targets can fire Close-in Defense, but have less chance of doing whatever they were assigned to do.¹²

¹ See On the Flight Deck, 1 Carriers & Fighters, p. 1047.

² See On the Flight Deck, 1 Carriers & Fighters, p. 1047.

³ See Blacksheep, 2 Carriers & Fighters, p. 1054.

⁴ See Blacksheep, 2 Carriers & Fighters, p. 1054.

⁵ See Nolo Contendre, 3 Carriers & Fighters, p. 1070.

⁶ See World in Flames, 4 Carriers & Fighters, p. 1084.

⁷ See See How Big is Your Flight Stick, 1 Carriers & Fighters, p. 1050.

⁸ See Engaged and A Hurt, 2 Carriers & Fighters, pp. 1055-1056.

⁹ See How Big is Your Flight Stick, 1 Carriers & Fighters, p. 1050, and Blacksheep, 2 Carriers & Fighters, p. 1054.

¹⁰ See How Big is Your Flight Stick, 1 Carriers & Fighters, p. 1050.

¹¹ See On the Flight Deck, 1 Carriers & Fighters, p. 1047.

¹² See Engaged, 2 Carriers & Fighters, p. 1055.

Existential Patent: 1st Era Ship Missiles

Theory: EGY ⇔ SHP ⇔ IND ⇔ WEP

OpQual: Enhancement Technology (ET, expendable, based on any Warship, Carrier, or Defense Base patent)

Effects (Theory – 1 = 3)

IND – Ship Missiles may be built at any Friendly, Naturalized, or Converted colony by activation of the Construction Power for the purpose of Colony Enhancement.¹

SHP – Ship Missiles (all or some) may be fired by any Warship, Carrier, or Orbital or System Defense Base in any combat round in addition to the unit's normal attack or assignment.²

WEP – Engaged results from successful Ship Missile attacks carryover to the next Combat Round, and are cumulative with other successful Ship Missile and Fighter attacks.³

Cost (Base 5 RPs/Effect) = special (*see below)

WEP – Ship Missile attacks resolve last in the Combat Round (but before retreats)⁴ and are resolved as Fighter attacks.⁵

SHP – Ship Missiles are measured in RPs, therefore, cost is special, not related to effects.⁶

IND – Each Warship, or Base may carry Ship Missiles equal to half of its construction cost, while Carriers may be equipped with Ship Missiles equal to one third of the construction cost of the Carrier.⁷

Manual (Post-patent notes and rulings by the Concierge to flesh out technology, only as necessary; advanced rulings requests are prohibited!):

- ❖ Ship Missile attacks from multiple ships on one target must be resolved separately (as waves of missiles).⁸
- ❖ Ship Missiles cannot be used against Ship Missiles or Fighters.⁹
- ❖ Ship Missiles are lost if the unit they are attached to is destroyed.¹⁰
- ❖ Ground Bases cannot fire Ship Missiles.¹¹
- ❖ Ship Missiles may not receive the benefits of Enlightenment.¹²

¹ See Torpedoes at Trafalgar, 4 Carriers & Fighters, p. 1080.

² See First Fire, 4 Carriers & Fighters, p. 1081.

³ See First Fire and Fire-and-Forget, 4 Carriers & Fighters, p. 1081.

⁴ See Combat Resolution, 3 Combat, p. 976 and First Fire, 4 Carriers & Fighters, p. 1081.

⁵ See Fire-and-Forget, 4 Carriers & Fighters, p. 1081.

⁶ See Torpedoes at Trafalgar, 4 Carriers & Fighters, p. 1080.

⁷ See Torpedoes at Trafalgar, 4 Carriers & Fighters, p. 1080.

⁸ See Fire-and-Forget, 4 Carriers & Fighters, p. 1081.

⁹ See Fire-and-Forget, 4 Carriers, pp. 1081-1082

¹⁰ See Fighters vs. Ship Missiles, 4 Carriers & Fighters, p. 1080.

¹¹ See Torpedoes at Trafalgar, 4 Carriers & Fighters, p. 1080.

¹² See Fire-and-Forget, 4 Carriers & Fighters, pp. 1081-1082 and Harsh Mistress, 2 Colleges, p. 478.