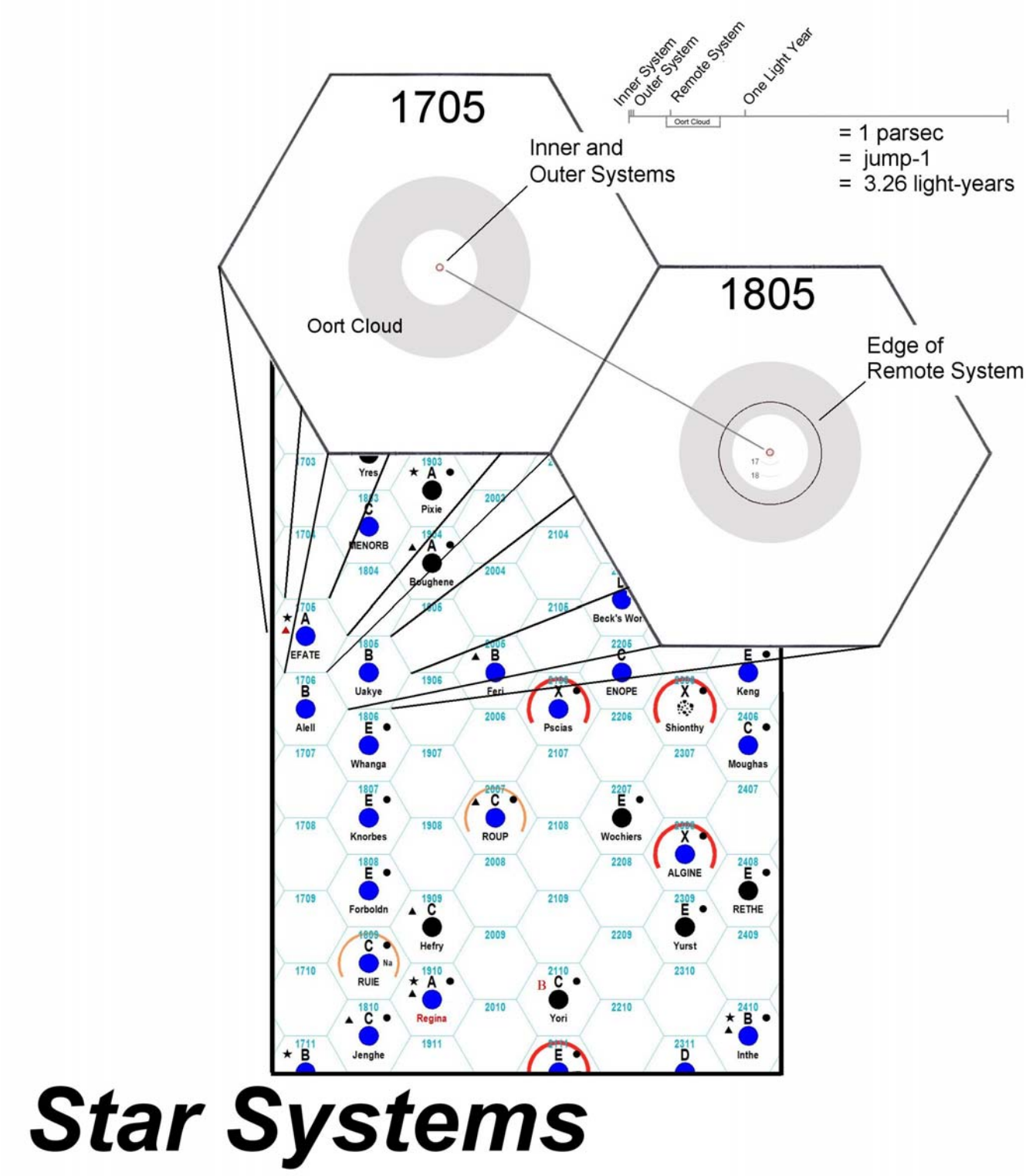
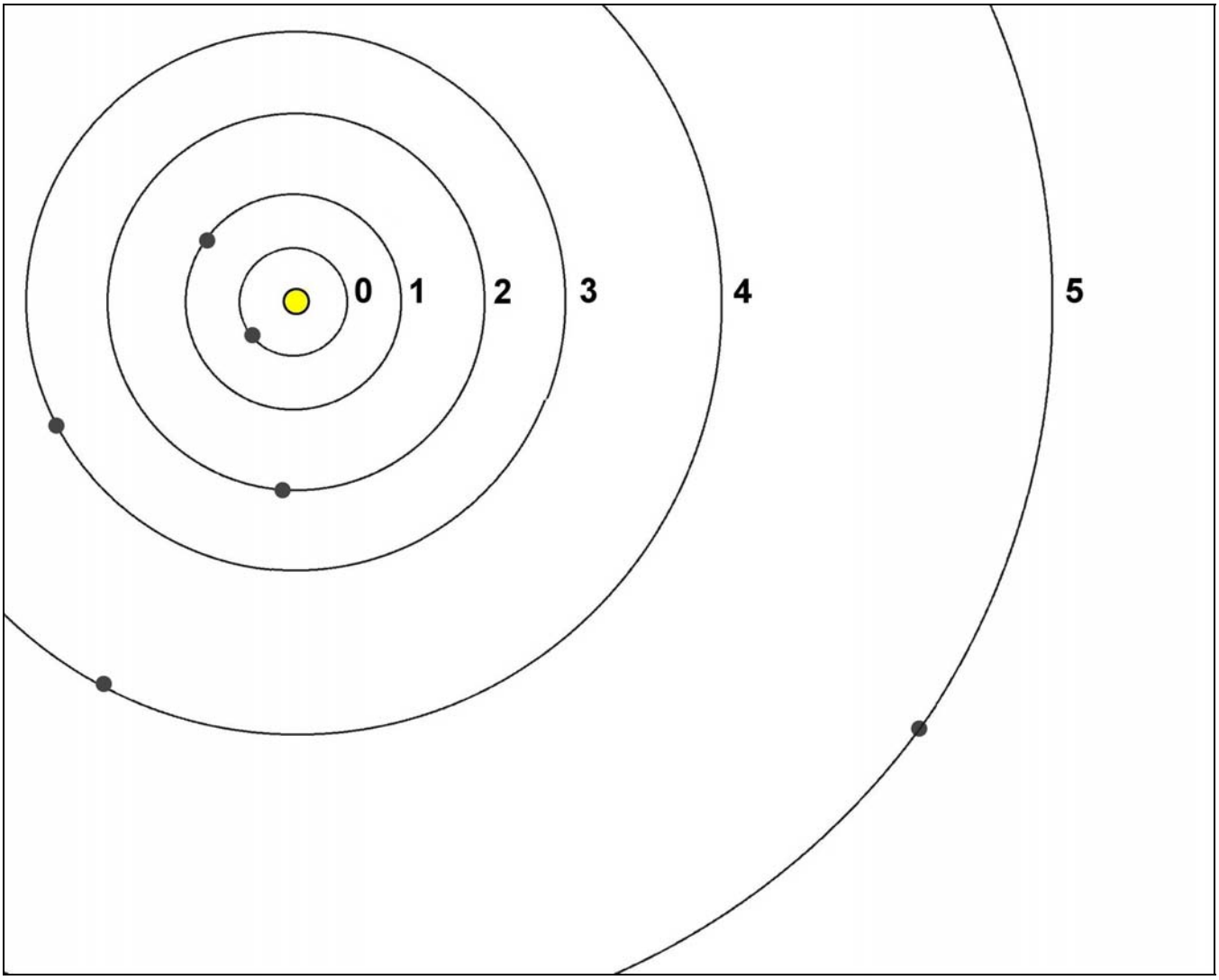



Each system hex is the potential home to a central system and perhaps several subordinate systems.

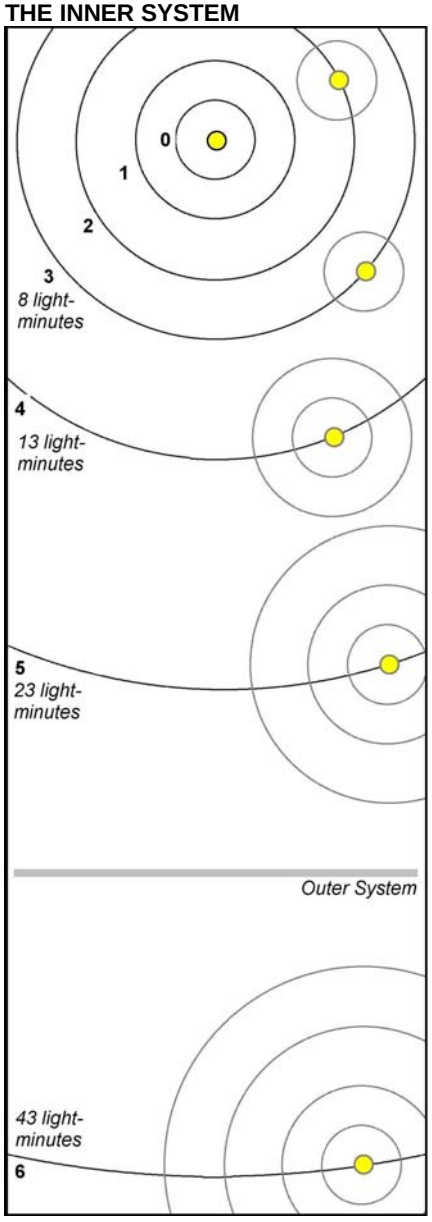
# THE TYPICAL STAR SYSTEM




**The Typical Star System Contains:**

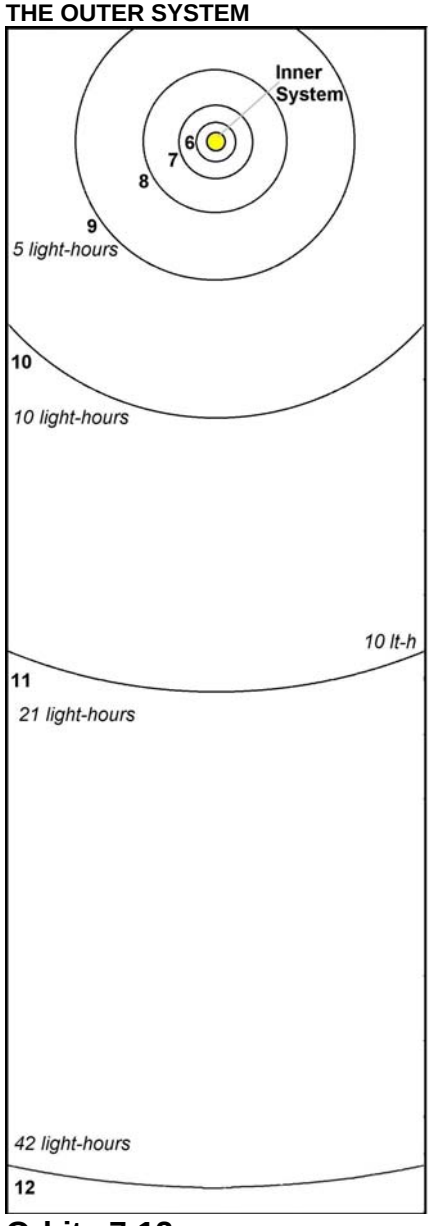
A Central Star
Orbits numbered 0 (zero) upward
Worlds (including planets, gas giants, and asteroids) occupying some (or all) of these orbits.

**THE INNER SYSTEM**



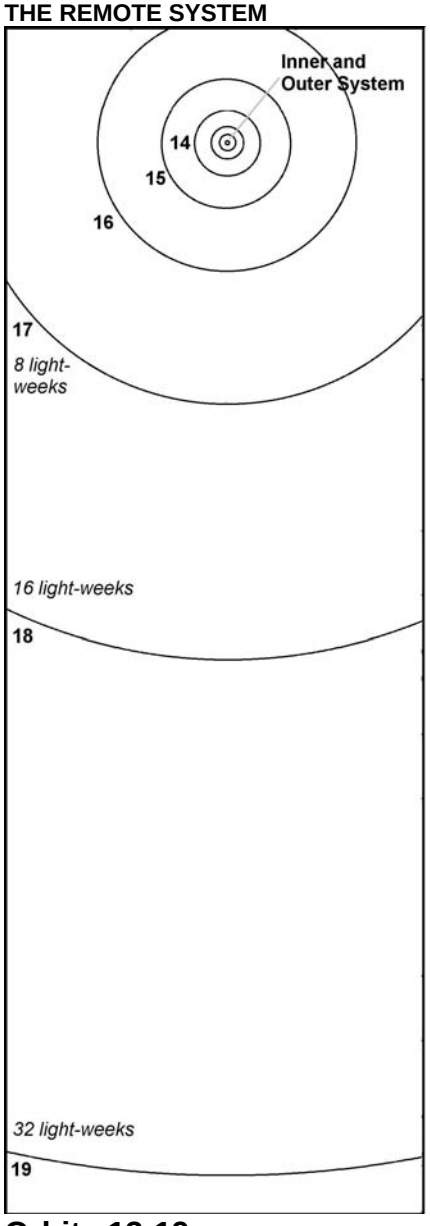

**Orbits 0-6**

**THE OUTER SYSTEM**

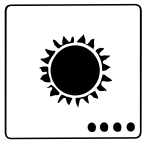



**Orbits 7-12**

**THE REMOTE SYSTEM**




**Orbits 13-19**



# Star Systems and Their Worlds

Star systems contain accumulations of stars, gas giants, and worlds.

Traveller System Generation is a process that provides increasing levels of detail and complexity as a Star System is explored.

**MOARN Map Only As Really Necessary.** Some journeys stop only momentarily in star systems; the information required about that is little more than the type of world present and perhaps the location of a gas giant for starship refueling. Other systems create a need for extensive information: details of several worlds, the location of companion stars, and even information about worlds in the remote or outer system.

**Traveller System Generation** is a hierarchical process which can be started and stopped as the situation requires. The referee need create only as much information as the players need; as more is required, more can be generated.

### UNDERSTANDING STAR SYSTEMS

A star system consists of a central star and a family of planets.

**Multiple Stars.** Some systems have more than one star. The central star is the Primary. There may be other stars which are Close (Orbits 0-1-2-3-4-5), Near (6-7-8-9-10-11), or Far (Orbits 12-13-14-15-16-17). Each of these stars may have a Companion which is extremely close.

**Orbits.** Each star is encircled by a series of Orbits number beginning with 0 and extending as far as Orbit-19. Orbits are numbered to correspond to these in the Solar System (that is, 1= Mercury, 2= Venus, 3= Earth). An additional Orbit-0 is allowed inside the orbit of Mercury.

**Worlds.** Each star may have a variety of worlds: planets, gas giants, asteroid and planetoid belts, satellites, and worldlets.

#### The Mainworld

The focus of each system is its Mainworld: the single most important world in the system. If the Mainworld has a high population, other worlds in the system are probably explored and even settled. If the Mainworld has a low population, the other worlds in the system are likely barren.

The Mainworld is the world referenced in astrogation data bases and is generally the destination of most travelers entering the system (just as Terra is the likely destination of those visiting the Sol system).

### DESCRIBING SYSTEMS

Star systems are recorded and described on a series of FillForms. Most systems can be described on the Inner System FillForm which covers the central star and orbits 0 through 6. Where necessary, additional Fillforms can be used for the Outer System and the Remote System.

### CREATING STAR SYSTEMS AND THEIR WORLDS

The process of creating star is governed by the System Generation Checklist and Charts A through G.

## A SYSTEM CHECKLIST

The System Checklist details the steps to be taken in creating star systems.

#### The Second Survey Format

When large data bases of system information are called for, they can be presented in the Second Survey Format: one line per star system showing the Mainworld of the system and other data appropriate for astrogation.

#### Sector Name

The Sector Name is known before the information is created, as is the hex location of the system.

## B MAINWORLD

The Mainworld is the most important world in the system. The first step in system creation is generation of information about the Mainworld.

**Starport.** The starport is on the Mainworld. Other spaceports (for other worlds) can be created later in the process.

**Mainworld Type.** The Mainworld may be a Planet occupying an orbit, or it may be a Satellite orbiting a Gas Giant (or a larger planet). It is possible for a Planet Mainworld to be an Asteroid Belt (determined when World Size is generated).

If the Mainworld is a Satellite, Flux determines the Orbit name (a letter from Ay to Zee) and if it is Close or Far from its world.

#### The Habitable Zone

The Habitable Zone is that region in a star system which is hospitable to humans (and many similar sophonts).

Inner System Reference Chart H and Outer System Reference Chart J show the orbits which are in the Habitable Zone for various star types.

**HZ** is the abbreviation for Habitable Zone. An orbit is the HZ allows the world to have liquid water and climate hospitable to humans and similar sophonts.

**HZ+1** is one orbit farther from the star; the resulting climate is Cold (at the lower edge of human endurance).

**HZ-1** is on orbit closer to the star; the resulting climate is Hot (near the upper limits of human endurance).

**Twilight Zone.** A Planet in Orbit 0 or Orbit 1 is tidally locked to its star. Although the world may be in the HZ, hospitable conditions are present only in a narrow Twilight Zone.

**Locked.** A Satellite in Close Orbit to its planet is Locked to it; Satellites do not have Twilight Zones.

**Gas Giants and Belts**

The number of Gas Giants in the system and the number of Planetoid Belts can be generated.

**Gas Giants** in a system = 2D /2 -2 (ignore fractions and treat less-than-zero as zero) which produces a range from 0 to 4 with some chance of none at all. This value is for the entire stellar hex regardless of the number of subsystems.

**Planetoid Belts** in a system = 1D – 3 (ignore fractions and treat less-than-zero as zero) which produces a range from 0 to 3 with a fair chance of zero. This value does not include the Mainworld if it is an Asteroid Belt. For terminology purposes, an Asteroid Belt is a Mainworld; an Planetoid belt is not a Mainworld.

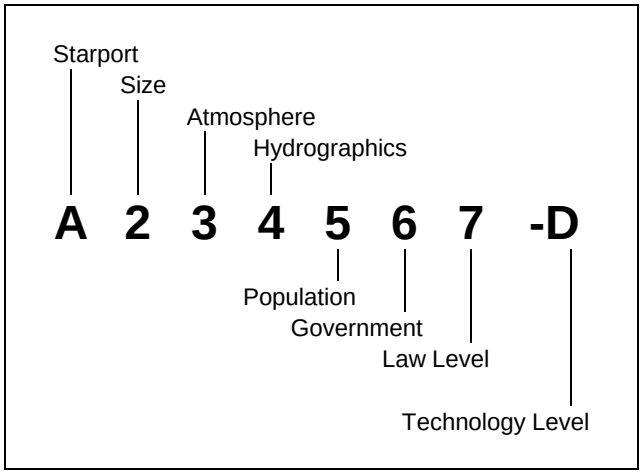
**Using Chart B**

Chart B provides basic information about the Mainworld. Ships can look up this information in data bases and can make decisions before setting course for the system. The presence of Gas Giants allows wilderness refueling.

## C StSAHPGL-T

The basic information contained in the Universal World Profile can be created with the instructions on the Chart A Checklist.

**THE UWP**




**Using Chart C**

Chart C allows the information in the UWP to be decoded and understood.

The instructions for creating the elements of the UWP are appended to each table.

## D TRADE CLASSIFICATIONS

The Trade Classifications reflect specific types of information about the Mainworld (and to a lesser extent, other locations in the system).

## E THE EXTENSIONS

The Extensions provide additional information about the Mainworld.

**The Importance Extension**

The **Importance Extension (Ix)** ranks worlds within a region. It can range from +4 to -2. A world with +4 is Important; a world with 0 or less is Unimportant.

**Trade Routes.** Trade Routes within a sector connect Important Worlds with Jump-4 or less. If such a route is not possible, intermediate connections with less important worlds are possible.

**Capitals.** The most Important world in a subsector is the Subsector Capital; the most important world in a Sector is the Sector Capital.

When more than one world is of the highest Importance, the one with the most Trade Classifications is considered most Important.

**The Economic Extension**

The **Economic Extension (Ex)** is a measure of the strength of a world economy and provides basic insights into the economy's structure and capabilities.

The Economic Extension is useful in evaluating the budgets and outputs of a world, and for comparing the economics of different worlds.

By detailing the Resources (= 2D plus GG and Belts), Labor (= by Population), and Infrastructure (= 2D + Importance), a general picture of the economic strength of the World emerges.

Barriers add a handicap: legal, cultural, and social inefficiencies which may increase or reduce overall economic strength.

**Resource Units.** The Economic Extension can be used to compute the Resource Units of a world (in effect, its world budget).

# RU

**Resource Units = R * L * I * (5-B)**

If any value = 0, use 1 instead (to avoid multiplying by zero).

Resource units can be negative: a world can be a net drain for Resource Units.

**Barriers.** All economies have barriers to total efficiency. In the Economic Extension, Barriers range from 0 to 10, with higher value values (because of the structure of the formula) being the most destructive to an economy.

In the RU formula, Barriers at 6 or more turn the RUs available negative: the Barriers are so destructive as to make the economy a net drain. Such barriers represent a welfare state; cultural influences which do not value wealth, even physical limitations.

On the other hand, since nearly all economies have barriers, lower-than-expected Barriers are a positive multiplier increasing available RU.

**The Golden World.** The theoretical (possibly apochryphal) world with maximum values under the Economic Extension would not only have an immense RU value, it would have virtually no Barriers to production: its citizens would value work, production, efficiency, and even customer satisfaction above all else.

**Fractional Budgets.** RU Resource Units are relative values: they are best understood in comparison to other

worlds. Assuming World Alpha produces RU= 100 and World Beta produces RU= 50, one can assume Alpha has an economy twice the size of Beta.

Similarly, if Alpha has a naval budget for ship production, Beta probably has half that budget.

**The Cultural Extension**

The **Cultural Extension (Cx)** is a broad insight into the expected social behaviors of the citizens of the world.

## F NABZ Nil

Additional Information about the world is produced by Chart F.

**Nobility.** The Imperium assigns a representative to each mainworld; this imperial Noble interacts with the local government and population, serves as an ambassador, and promotes trade and commerce. This noble may be a local appointed by the Emperor, or may be an offworlder assigned to the post.

When a world has a significant non-human population, the Noble often has a local counterpart who deals with non-human locals.

**Allegiance.** Worlds within the Imperium owe their loyalty to the empire; worlds just beyond the Imperial borders may be Non-Aligned (carefully maintaining its neutrality), or Client-State (independent, but interacting with the empire at various levels).

Worlds may be members of interstellar groups and owe their allegiance to them.

**Bases.** Worlds may have bases for military, scout, or naval purposes.

**Travel Zones**

Some worlds pose a variety of dangers to travelers. The Travel Zone classification system assigns to worlds a basic warning level based on experience.

Most worlds are **Travel Zone Green**: safe (relatively safe) to visit. Green status is assumed within the Imperium unless otherwise posted.

Some worlds are **Travel Zone Red:** dangerous to visitors. The level of danger is severe enough that the world is Interdicted and travel to the world is prohibited (with Trade Classification Forbidden). The level of enforcement of Red Zones varies: some systems are patrolled by Quarantine fleets; others have merely a warning beacon.

Some worlds are **Travel Zone Amber**: visitors are advised to use caution. Travel Zone Amber has two levels: Dangerous and Puzzling, each reflected in a Trade Classification.

Amber worlds with low population (Pop= 6 or less) are labeled Amber if local conditions may prove to be dangerous (as reflected by the low population). Amber worlds with higher population (Pop= 7 or more) may require caution by visitors, but the fact that large numbers live on the world makes the classification less about danger and more about intriguing or exotic conditions.

**Native Status**

Most worlds capable of supporting native intelligent live have a (or had a now-extinct) population of sophonts. The chart identifies the status of such sophonts.

**System Stars**

The precise number of stars in a system and their spectral types can be created using the charts.

About half of all star systems will be single stars without companions.

It is possible for a system to have eight stars: A Primary and a Companion, a Close star in the inner system and its Companion, a Near star in the Outer System and its companion, and a Far star in the Remote system and its Companion (the chance of such a system is extremely small).

**Stellar Spectral Type**

The precise spectral identity of the stars in the system are generated using the Spectral Type chart.

**The Size of Additional Star Systems**

The number of available orbits for system stars is restricted.

The Primary Star may have orbits out to Orbit-19 (not all need be, or will be, filled).

Close, Near, and Far stars may fill orbits around them to their own Orbit minus 3. For example, a Close Star in orbit 3 around its Primary can have no (= 3 – 3) planet orbits. A Far star in Orbit 17 around its Primary can have planets in orbits around it out to Orbit 14 (= 17 – 3).

The Sub Orbit Column of the Orbital Distance Chart 5a (in the Ranges Chapter) shows available orbits.

## G PLACING WORLDS

Chart G places the Mainworld in a specific Orbit and creates and places other worlds in the system. If the supply of worlds exceeds the available orbits, the excess worlds are ignored.

**Placing Worlds**

Worlds in a system must be places in orbits.

The Placing Worlds Chart provides priorities and deals with several exceptions.

The Mainworld is placed first. If it is a satellite, then a Gas Giant must be placed in that orbit to accommodate it. If there is no Gas Giant in the system, then a BigWorld (Size=-2D +7) must be placed in that orbit.

If the Mainworld is an Asteroid Belt, it is placed using the Belt Column of the Basic Placement Chart without regard to Habitable Zone.

**Rotate Placement.** The Placing Worlds Chart calls for Rotating Placement of various worlds in the system. If the system has more than one star (Close, Near, Far), place the first of the worlds concerned in orbit around the Primary, the second in orbit around the Close, the third in orbit around the Near, and the fourth in orbit around the Far (if possible). Repeat the process if necessary.

**Precluded Orbits.** Some stars re so large that they engulf some of the orbits in the system and preclude their availablility.

The Surface of the Star… Column of the Orbital Distance Chart 5a (in the Ranges Chapter) shows preculuded orbits.

Worlds other than the Mainworld are subject to restrictions: Maximum Population is Mainworld Population minus 1. All worlds other than the Mainworld have Spaceports rather than Starports.

**Other Worlds**

The creation of additional worlds uses a simplified procedure:

Inner Worlds are in orbits HZ minus 2 or more.

Hospitable Worlds are in orbits HZ – 1 to HZ +1.

Outer Worlds are in orbits HZ +2 or greater.

Consult the charts to determine the specific type of world and then create it using the information from the Other Worlds column.

Similar tables direct the creation of Satellites as necessary.

**Hospitables** are potentially habitable or exploitable worlds located in the Habitable Zone.

**Planetoids** are the worldlets of a Belt. The Population, Government, and Law Level represent the general level throughout the Belt.

**Iceworlds** are frozen worlds beyond the HZ.

**RadWorlds** are worlds with extreme levels of radiation. Local values for RadWorlds are provided in Range Table 3b Strangeworlds.

**Infernos** are worlds with extremes of temperature. Local values for Infernos are provided in Range Table 3b Strangeworlds.

**BigWorlds** are worlds with larger than expected Size. Occasionally, a satellite Mainworld in a system without Gas Giants requires a BigWorld as its primary. Bigworld may also occur throughout a system.

**Worldlets** are worlds with generally small Size.

**Inner Worlds** are located starward of the Habitable Zone.

**Stormworlds** are worlds wracked by constant atmospheric turbulence. Local values for Stormworld are provided in Range Table 3b Strangeworlds.

**Satellites**

When necessary, satellites for worlds and for gas giants can be generated.

**Ring.** The table may create one or more Rings.

**Even More Worlds**

This system does not create the many small chunks of rock and ice throughout most systems.

# THE REGINA SYSTEM

Hex 1910 of the Spinward Marches sector was created as an example using charts.

## A

The Sector Name is known: The Spinward Marches.
The Hex Location is already known: 1910.
The Mainworld Name is Regina.

## B

Starport= 2D=4 = Type A. Excellent Quality.
Mainworld Type= Flux = - 4 = Far Satellite.
Satellite Orbit = Flux = -2 = Arr.
Habitable Zone Variance = Flux = 0 = no variance.
Climate (based on HZ=0) = Temperate.
Gas Giants = 2D / 2 - 2 = 10 / 2 – 2 = 3.
Planetoid Belts = 1D – 3 = 2 – 3 = 0.

## C

Mainworld Size = 2D – 2 = 7 = 7,000 miles diameter.
Atmosphere = Flux + Size = +1 + 7 = 8 = Dense.
Hydrographics = Flux + Size = +1 + 7 = 8 = 80 of the world surface is covered by seas.
Population = 2D – 2 = 8. Hundreds of millions.
Government = Flux + Pop = +1 + 8 = 9 = Impersonal Bureaucracy.
Law Level = Flux + Gov = +0 + 9 = 9 = High Law.
Tech Level = 1D + Mods (Starport A = +6) = 4 + 6 = 10. TL-10 = approximately 2100 AD.

## D

Trade Classifications =
Rich (Atm=8, Pop=8).
Pre-Agricultural (Atm=8, Hyd=8, Pop=8).
Pre-High (Pop= 8).

## E.

Importance Extension = { +4 } = Important.
= Starport A = +1, TL A = +1, Rich = +1, Pre-Ag = +1.
Economic Extension = ( A8B6 )
Resources= 2D + GG + Belts = 7 + 3 + 0 = 10 = A.
Labor = Pop = 8.
Infrastructure = 2D + Importance = 7 + 4 = 11 = B.
Barriers = 2D - 2 = 6
Cultural Extension = [ 6C5C ]
Homogeneity = Pop + Flux = 8 -2 = 6.
Acceptance = Pop + Importance = 8 + 4 = 12 = C.
Strangeness = 2D – 2 = 5.
Symbols = TL + Flux = 10 + 2 = 12 = C.

## F

Nobility = cCe = Baronet, a Baron, and a Viscount
Based on Rich, Pre-Ag, Pre-High.
Allegiance = Im = a member world of the Imperium.
Bases = NS
Naval Base from the table. 2D = 5 = Yes.
Scout Base from the table. 2D = 3 = Yes.
Travel Zones. Imposed by the Referee. = None.
Native Status. Based on Pop 7 or greater and Atm 2 or greater, the world has a Native population.

**System Stars**

The system automatically has a Primary.
Primary Companion = Flux = +4 = Yes.
Close Star = Flux = 0 = No. Near Star = Flux = -2 = No.
Far Star = Flux = +4 = Yes.
Far Star Companion = Flux = +1 = No.

The Regina system has a Primary and a Companion, and a Far star in the remote system, and without a companion.

**Stellar Data**

Primary = F7 V. Primary Spectral Type = Flux = -1 = F. Primary Spectral Decimal = use the Even Distribution Table from Dice = 7. Primary Size = Flux = 0 and consult the Spectral F column = V.

Primary Companion = DM. Companion Spectral Type = -1 + 1D-1 = 4 = M. Companion Decimal = 4. Companion Size = Flux + 1D -1 +3 = +7 = D. Spectral decimal is ignored for Size= D.

Far Star = M6 V. Spectral Type = Flux + 1D -1 = 0 + 3 = M. Spectral Decimal = 6. Stellar Size = Flux + 1D -1 = 0 + 2 = 2 = V.

Place the Stars in orbits. The Primary is the central star of the system. Its Companion orbits it inside Orbit 0. The Far star is in orbit 11 + 1D = 11 + 5 = Orbit 16.

## G

Total Worlds In The System = 1+ 3 + 0 + 2D = 1+ 3 + 0 + 8 = 12.

Mainworld. Regina is in the HZ. The Inner System Reference map shows the HZ for the Primary F7 V is Orbit 4. Because Regina is a Satellite, place a Gas Giant in Orbit 4. Regin orbits the Gas Giant.

Gas Giants. The system has three Gas Giants.

The first Gas Giant has been placed in Orbit 4 of the Inner System. Consult the GG Table for its details = 2D = 7 = Siz S (80,000 miles diameter = about equal to Jupiter). It is a Large Gas Giant LGG.

Place the second Gas Giant. HZ= 4. Consult the GG Table for its details = 2 = Siz M (30,000 miles diameter). It is a Small Gas Giant SGG. Consult the Basic Placement Chart for SGG location = 2D = 2 = HZ-2. Place the GG in Orbit 4 -2 = Orbit 2.

Rotate placement of Gas Giants through the systems.

Place the third Gas Giant orbiting the M6 V Far star (begin a new Inner System Fillform for the star). The HZ for an M6 V is Orbit 0. Consult the GG Table for its details = 5 = Siz Q (60,000 miles diameter). It is a Small Gas Giant SGG. Convert it to an ice Giant. Consult the Basic Placement Chart for IG location = 2D = 2 = HZ+2. Place the IG in Orbit 0 + 2 = Orbit 2.

The system has no Planetoid Belts.

Create world 5 of the system's 12. On World1 Column, 2D = 5 = Orbit 4 = which becomes a Satellite of the Gas Giant in Orbit 4. As a Satellite in Orbit 4, consult the HZ Hospitables Satellite table = 1D = 4 = Hospitable. Determine its orbit from the World and Orbits Table Chart B = Flux = -1 = Satellite Orbit Eff. Create the Spaceport = Mainworld Pop -2D + 5 = 8 – 2 + 6 = 0 = Starport F. Create World Size = 2D -2 = 5.

Continue the process of world creation Atm=6 Hyd=4 Pop= 6 Gov = 6 Law = 9. TL = 6.

# SystemGen Checklist

Use the procedures in this Checklist to create star systems and their component worlds.

**A**

**Checklist**

**The Second Survey Format**

| Hex | Name | UWP StSAHPGL-T | TC and Rem | { Ix } ( Ex ) [ Cx ] | N | B | Z | PBG | W | A | Stellar |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0810 | Miigamshiirshag | E300000-0 | As Hi In Va Ci | { -2 } (8056) [7685] | B | - | - | 624 | 7 | Im | M1 V M6 VII |

The Second Survey Format shows tabular information about a star system (and especially its Mainworld) for ready reference in astrogation, merchant trade, and general inquiries. It consists of the following details.

**THE ELEMENTS OF SYSTEM DATA**

**Sector.** The Sector Name and general identity is created and known before this proceess begins.

**Hex.** The hex location identifier for the location of the system within the sector.

**Mainworld Name.** The generally accepted name of the Mainworld of the system. Generated by the referee.

**UWP.** The standard Universal World Profile (in the format StSAHPGL-T) for the Mainworld in the system.

**TC Trade Classifications.** The Trade Classifications (and Remarks) for the mainworld.

**Ex Extensions.** Guides to the character of the Mainworld: Importance, Economic, and Cultural.

**N Nobility.** Within the Imperium, the noble rank of the individual assigned by the Empire as representative to the MainWorld. More than one is possible.

**Bases.** The nature of Military, Naval, and Scout bases on the world.

**Z Travel Zone.** Guidance about potential dangers on the World.

**PBG Population Belts Giants.** Three digits 0-9 representing he significant digit for the population of the Mainworld, the number of Planetoid Belts in the System, and the number of Gas Giants in the system.

**W Worlds.** The number of worlds in the system = MainWorld + Belts + Gas Giants + Stars + 2D. This number does not include Worldlets and Satellites (other than the Mainworld if is a Satellite).

**A Allegiance.** The larger government to which the system owes allegiance (if any).

**Stellar.** The Spectral identification of the stars of the system.

**MOARN Map Only As Really Necessary.**

The charts allow the star system creation process to be started and stopped as necessary. There is no need to create complete or comprehensive maps before they are needed.

**MASTER SYSTEM GENERATION CHECKLIST**

| | | | |
|---|---|---|---|
| **A** | 1 | | Sector Name and Hex Location. |
| | 2 | | Mainworld Name. |
| **B** | | St | Starport. =2D for Starport Type. |
| | | | MainWorld Type. =Flux for (Planet or Satellite). |
| | | | If Satellite, =Flux for Satellite Orbit Name. |
| | | | Habitable Zone Variance. =Flux |
| | | | Climate. Note based on HZ. |
| | | | Gas Giants. =2D /2 -2. |
| | | | Planetoid Belts. =1D -3. |
| **C** | 3 | | StSAHPGL-T |
| | | S | World Size. = 2D-2. |
| | | A | Atmosphere: =Flux + Size. If Siz =0, Atm =0. |
| | | H | Hydrographics. =Flux+ Size + Mods. Max= A. |
| | | P | Population. =2D-2. |
| | | G | Government. =Flux +Pop. |
| | | L | Law. =Flux + Gov. |
| | | T | Tech Level. =1D + Mods. |
| **D** | 4 | TC | Trade Classifications. Note all required. |
| | | | Defer Secondary, Political, Special TC. |
| **E** | 5 | | Extensions. |
| | | Ix | Importance Extension. |
| | | Ex | Economic Extension. |
| | | Cx | Cultural Extension. |
| **F** | 6 | | Additional Data. |
| | | N | Nobility. Based on Trade Classifications. |
| | | A | Allegiance. Imposed by referee. |
| | | B | Bases. Naval. Scout. Depot. Way Station. |
| | | Z | Travel Zones. Imposed by referee. |
| | | Nil | Native Intelligent Life and Status. |
| | 7 | | System Stars |
| | | | Star Spectral Types |
| **G** | 8 | W | Total Worlds In the System. |
| | | | Mainworld Placement. |
| | | | Gas Giant Placement |
| | | | Planetoid Belt Placement |
| | | | Create other Worlds |

# Mainworld

Create the essential details for the Mainworld using the tables on this page.

**B**

**Basics**

**ABOUT THE MAINWORLD**

The Mainworld is the most important world in the system (although the world may well be not very important).

This page allows the creation of basic information about a Mainworld appropriate for astrogation planning.

**CHECKLIST**

**1. Starport.** 2D for Starport Type.

**2. MainWorld Type.** Flux for Mainworld Type (Planet, Satellite).

A. If Satellite, Flux for Orbit Name.

**3. Habitable Zone Variance.** Flux for Location in HZ.

**4. Climate.** Note based on HZ.

**5. Gas Giants.** Roll 2D /2 -2.

**6. Planetoid Belts.** Roll 1D -3.

**IMPORTANT TERMS**

**World.** A planet or satellite.

**Planet.** A world orbiting a star.

**Satellite.** A world orbiting a planet.

**Mainworld.** The most important world in a system.

**Belt.** An asteroid belt (which may be a mainworld) or a planetoid belt.

**Gas Giant.** Massive hydrogen-atmosphere planet.

## St STARPORTS

**The Starport on the Mainworld**

| 2D | Type | Quality | Yards | Repairs | Fuel | Downport | Highport | Bases |
|---|---|---|---|---|---|---|---|---|
| 2 3 4 | **A** | Excellent | Starships | Overhaul | Both | Yes | if Pop =7+ | Naval Base Possible<br>Scout Base Possible |
| 5 6 | **B** | Good | Spacecraft | Overhaul | Both | Yes | if Pop =8+ | Naval Base Possible<br>Scout Base Possible |
| 7 8 | **C** | Routine | No | Major Damage | Unrefined | Yes | if Pop =9+ | Scout Base Possible |
| 9 | **D** | Poor | | Minor Damage | Unrefined | Yes | | Scout Base Possible |
| 10 11 | **E** | Frontier | | No | No | Beacon | | |
| 12 | **X** | None | | No | No | No | | |

**SPACEPORTS**

**Spaceports on non-MainWorlds**

| Roll | Type | Quality | Yards | Repairs | Fuel | Downport | Highport | Bases |
|---|---|---|---|---|---|---|---|---|
| 2 | **F** | Good | No | Minor Damage | Unrefined | Yes | No | Fa Farming Possible. |
| 3 | **G** | Poor | No | Superficial | Unrefined | Yes | No | Mi Mining Possible. |
| 4 5 | **H** | Primitive | No | No | No | Beacon | No | Co Colony Possible.<br>Pe Penal Colony Possible. |
| 6+ | **Y** | None | No | No | No | No | No | Re Reserve Possible. |

Roll= ( Mainworld Pop – 2D ) +5.

This table is shown for reference.

**WORLDS AND ORBITS**

| Flux | Main World | HZ Variance | Satellite Orbit Close | Far |
|---|---|---|---|---|
| - 6 | Close Satellite | - 2 | Ay | En |
| - 5 | Far Satellite | - 1 | Bee | Oh |
| - 4 | Far Satellite | - 1 | Cee | Pee |
| - 3 | Close Satellite | - 1 | Dee | Que |
| - 2 | Planet | 0 | Ee | Arr |
| - 1 | Planet | 0 | Eff | Ess |
| 0 | Planet | 0 | Gee | Tee |
| +1 | Planet | 0 | Aitch | Yu |
| +2 | Planet | 0 | Eye | Vee |
| +3 | Planet | +1 | Jay | Dub |
| +4 | Planet | +1 | Kay | Ex |
| +5 | Planet | +1 | Ell | Wye |
| +6 | Planet | +2 | Em | Zee |

**Mainworld.** Is it Planet or Satellite?

**HZ Variance.** Determine the variation from the Habitable Zone.

**Satellite Orbit.** Note orbit name.

**CLIMATE**

Mark Mainworld orbit with its Climate.

| | | |
|---|---|---|
| HZ | =Temperate | |
| HZ - 1 | =Hot | |
| HZ +1 | =Cold | |
| HZ = 0 or 1 | =Twilight Zone | = Tz |
| Close Satellite | =Locked | = Lk |

**Hot.** Upper human endurance limit.

**Cold.** Lower human endurance limit.

**Twilight Zone.** A world in Orbit 0 or 1 is tidally locked and has a Temperate band at the Twilight Zone, plus a Hot hemisphere facing the Primary and a Cold hemisphere away from the Primary.

**Locked.** A Close Satellite (Ay through Em) is Locked to its planet. Satellites do not have Twilight Zones.

**GAS GIANTS AND BELTS**

Determine the number of Gas Giants and Planetoid Belts in the syste (Ignore fractions; treat less than zero as zero).

Gas Giants = 2D /2 - 2

Planetoid Belts = 1D -3

**SAHPGL-T (Next Pages)**

**S. Size.** Planetary Size: 2D-2.

**A. Atmosphere:** Flux + Size.
If Size =0, Atmosphere =0.

**H. Hydrographics.** Flux+ Size.
Maximum A. If Size =0-1, Hyd =0;
If Atm =0-1 or A+, Hyd DM - 4.

**P. Population.** 2D-2.

**G. Government.** Flux +Pop.

**L. Law.** Flux + Gov.
Convert negative values to 0.

**TL. Tech Level.** 1D + Mods.

(convert all values less than 0 to 0).

# The UWP

Create and understand the elements of the Universal World Profile using these tables.

**C**

**StSAHPGL-T**

## S SIZE

| Digit | Diameter | |
|---|---|---|
| 0 | Asteroid Belt | |
| 1 | 1,000 miles | 1,600 km |
| 2 | 2,000 miles | 3,200 km |
| 3 | 3.000 miles | 4,800 km |
| 4 | 4,000 miles | 6,400 km |
| 5 | 5,000 miles | 8,000 km |
| 6 | 6,000 miles | 9,600 km |
| 7 | 7,000 miles | 12,200 km |
| 8 | 8,000 miles | 13,800 km |
| 9 | 9,000 miles | 14,400 km |
| A | 10,000 miles | 16,000 km |
| B | 11,000 miles | 17,600 km |
| C | 12,000 miles | 19,200 km |
| D | 13,000 miles | 20,800 km |
| E | 14,000 miles | 22,400 km |
| F | 15,000 miles | 24,000 km |

Siz= 2D -2. If =10, reroll 1D + 9.

## A ATMOSPHERE

| Digit | Description | Effects |
|---|---|---|
| 0 | Vacuum | S3 |
| 1 | Trace | S3 |
| 2 | VThin, Tainted | P1 S2 |
| 3 | VThin | S2 |
| 4 | Thin, Tainted | P1 S1 |
| 5 | Thin | S1 |
| 6 | Standard | |
| 7 | Standard, Tainted | P1 |
| 8 | Dense | |
| 9 | Dense, Tainted | P1 |
| A | Exotic | P1 |
| B | Corrosive | C1 P1 |
| C | Insidious | C2 P1 |
| D | Dense High | varies |
| E | Ellipsoid | varies |
| F | Thin Low | varies |

Atm= Flux + Size. If Siz=0, Atm =0.

## H HYDROGRAPHICS

| Digit | Description |
|---|---|
| 0 | Desert World. |
| 1 | 10% water. |
| 2 | 20% water. |
| 3 | 30% water. |
| 4 | 40% water. |
| 5 | 50% water. |
| 6 | 60% water. |
| 7 | 70% water. |
| 8 | 80% water. |
| 9 | 90% water. |
| A | Water World. |

Hyd= Flux+ Size. Max= A. If Siz =0-1, Hyd =0; If Atm =0-1, A+, Hyd DM - 4.

## P POPULATION

| Digit | Description |
|---|---|
| 0 | unpopulated |
| 1 | tens |
| 2 | hundreds |
| 3 | thousands |
| 4 | ten thousands |
| 5 | hundred thousands |
| 6 | millions |
| 7 | ten millions |
| 8 | hundred millions |
| 9 | billions |
| A | ten billions |
| B | hundred billions |
| C | trillions |
| D | ten trillions |
| E | hundred trillions |
| F | quadrillions |

Pop= 2D -2. If = 10, reroll 9 + 1D.

## G GOVERNMENT

Digit Description

0 **No Government Structure.** Family bonds predominate.

1 **Company/ Corporation.** Rule by a managerial elite.

2 **Participating Democracy.** Rule by popular vote.

3 **Self-Perpetuating Oligarchy.** Rule by a restricted minority with little or no input from the masses.

4 **Representative Democracy.** Government by proxy.

5 **Feudal Technocracy.** Governmental relationships based on mutually beneficial technical activities.

6 **Captive Government / Colony.** Rule by a leadership answerable to an outside group.

7 **Balkanization**. Rival governments compete for control.

8 **Civil Service Bureaucracy.** Rule by agencies employing individuals selected by merit.

9 **Impersonal Bureaucracy.** Rule by impersonal agencies.

A **Charismatic Dictatorship.** Government by a single leader enjoying the confidence of the citizens.

B **Non-Charismatic Dictatorship.** Government by the successor to a charismatic dictator.

**C Charismatic Oligarchy.** Government by a select group, organization, or class enjoying the overwhelming confidence of the citizenry.

D **Religious Dictatorship.** With little or no regard for the needs of the citizenry.

E **Religious Autocracy.** Government by a single religious leader having absolute power over the citizenry.

F **Totalitarian Oligarchy.** Government by an all-powerful minority which maintains absolute control through widespread coercion and oppression.

Gov= Flux + Pop. Gov greater than F = F.

## L LAW LEVEL

Digit Description

0 **No Law.** No prohibitions.

1 **Low Law.** Prohibition of WMD, Psi weapons.

2 **Low Law**. Prohibition of "Portable" Weapons.

3 **Low Law.** Prohibition of Acid, Fire, Gas weapons.

4 **Moderate Law.** Laser, Fusion, Plasma weapons prohibited.

5 **Moderate Law.** Prohibition of Shock, EMP, Rad, Freeze, Mag, Grav weapons.

6 **Moderate Law.** Prohibition of MachineGuns.

7 **Moderate Law**. Prohibition of Pistols.

8 **High Law.** Open display of weapons prohibited.

9 **High Law.** Weapons outside the home prohibited.

A **Extreme Law.** Weapon possession prohibited.

B **Extreme Law.** Regional passports required.

C **Extreme Law.** Unrestricted invasion of privacy.

D **Extreme Law.** Paramilitary law enforcement.

E **Extreme Law.** Full-fledged police state.

F **Extreme Law.** Daily life rigidly controlled.

G **Extreme Law.** Disproportionate punishments.

H **Extreme Law.** Legalized oppressive practices.

J **Extreme Law.** Routinely oppressive and restrictive.

Law= Flux + Gov. Law Level greater than J = J.

**TECH LEVEL= 1D +**

Starport A= +6. B= +4. C= +2. X= -4. F=+1
Siz 0 1= +2. Siz 2 3 4= +1.
Atm 0 1 2 3 = +1. Atm A B C D E F = +1.
Hyd 9 = +1. Hyd A= +2.
Pop 1 2 3 4 5 = +1. Pop 9 = +2. Pop A= +4.
Gov 0 5 = +1. Gov D = -2.

The Technology Chapter defines Tech Levels.

# Trade Classifications

Create the applicable Trade Classifications for the Mainworld. As necessary, create the applicable Trade classifications for other worlds in the system.

**D**

**TCs**

| Group | Code | Siz | Atm | Hyd | Pop | Gov | Law | Definition -- Formula |
|---|---|---|---|---|---|---|---|---|
| Planetary | As | 0 | 0 | 0 | -- | -- | -- | Asteroid Siz= 0. |
| | De | -- | 23456789 | 0 | -- | -- | -- | Desert Hyd= 0. Atm= 2-9 |
| | Fl | -- | ABC | 123456789A | -- | -- | -- | Fluid Atm= A+. Hyd= 1+ |
| | Ga | 678 | 568 | 567 | -- | -- | -- | Garden World |
| | He | 3456789A | 2479ABC | 012 | -- | -- | -- | Hellworld |
| | Ic | -- | 01 | 123456789A | -- | -- | -- | Ice-Capped |
| | Oc | ABC | -- | A | -- | -- | -- | Ocean World Hyd=A, Siz= A+ |
| | Va | -- | 0 | -- | -- | -- | -- | Vacuum Atm=0 |
| | Wa | 56789 | -- | A | -- | -- | -- | Water World Hyd=A. Siz = 9 -. |
| Population | Di | -- | -- | -- | 0 | 0 | 0 | Dieback (000-T) PGL=000. TL>0 |
| | Ba | -- | -- | -- | 0 | 0 | 0 | Barren PGL-T=000-0 |
| | Lo | -- | -- | -- | 123 | -- | -- | Low Population Pop= 1-3 |
| | Ni | -- | -- | -- | 456 | -- | -- | Non-industrial Pop= 4-6 |
| | Ph | -- | | -- | 8 | -- | | Pre-High Pop=8 |
| | Hi | -- | -- | -- | 9ABC | -- | -- | High Population Pop=9+ |
| Economic | Pa | -- | 456789 | 45678 | 48 | -- | -- | Pre-Ag Atm= 4-9. Hyd= 4-8. Pop= 4,8 |
| | Ag | -- | 456789 | 45678 | 567 | -- | -- | Ag Atm= 4-9. Hyd= 4-8. Pop= 567 |
| | Na | -- | 0123 | 0123 | 6789ABC | -- | -- | Non-Ag Atm= 3-. Hyd= 3-. Pop=6+ |
| | Pi | -- | 012479 | -- | 78 | -- | -- | Pre-Ind Atm=Vac or Taint. Pop=7,8 |
| | In | -- | 012479 | -- | 9ABC | -- | -- | Industrial Atm=Vac or Taint. Pop=9+ |
| | Po | -- | 2345 | 0123 | -- | -- | -- | Poor Atm=2-5. Hyd=3- |
| | Pr | -- | 68 | -- | 59 | -- | -- | Pre-Rich Atm=6,8. Pop-5,9. |
| | Ri | -- | 68 | -- | 678 | -- | -- | Rich Atm=6,8. Pop=6-8 |
| Climate | Fr | 23456789 | -- | 123456789A | -- | -- | -- | Frozen Siz=2-9. Hyd=1+. HZ +2 or outer |
| | Ho | -- | -- | -- | -- | -- | -- | Hot HZ -1 |
| | Co | -- | -- | -- | -- | -- | -- | Cold HZ+1 |
| | Lk | -- | -- | -- | -- | -- | -- | Locked Close Satellite |
| | Tr | 6789 | 456789 | 34567 | -- | -- | -- | Tropic HZ -1 |
| | Tu | 6789 | 456789 | 34567 | -- | -- | -- | Tundra HZ +1 |
| | Tz | -- | -- | -- | -- | -- | -- | Twilight Zone Orbit 0-1 |
| Secondary | Fa | -- | 456789 | 45678 | 23456 | -- | | Farming Not MW. HZ |
| | Mi | -- | -- | -- | 23456 | -- | | Mining Not MW. MW=In. |
| | Co | -- | -- | -- | 56789A | 6 | 0123 | Colony |
| | Pe | -- | -- | -- | 34567 | 6 | 6789 | Penal Colony |
| | Re | -- | -- | -- | 1234 | 6 | 45 | Reserve |
| Political | Cp | -- | -- | -- | -- | -- | | Subsector Capital |
| | Cs | -- | -- | -- | -- | -- | | Sector Capital |
| | Cx | -- | -- | -- | -- | -- | | Capital |
| | An | -- | -- | -- | -- | -- | | Ancient Site |
| | Ab | -- | -- | -- | -- | -- | | Data Repository |
| Special | Sa | -- | -- | -- | -- | -- | -- | Satellite |
| | Fo | -- | -- | -- | -- | -- | -- | Forbidden (Red Zone) |
| | Pz | -- | -- | -- | 789ABC | -- | -- | Puzzle (Amber Zone) |
| | Da | -- | -- | -- | 0123456 | -- | -- | Danger (Amber Zone) |

Ba requires Starport E, X. Cp, Cs, Cx require Starport A. Politicals and Specials assigned by Referee (not generated).
Lk, Ho, and Co refer to climate but are not properly TCs.

# The Extensions

Create the Importance Extension, Economic Extension, and Cultural Extension for the system.

**E**

**Ix Ex Cx**

## Ix THE IMPORTANCE EXTENSION

**{ +4 }**

The **Importance Extension** is contained between {braces}.

The **Importance Extension (Ix)** ranks worlds within a region. It governs the locations of capitals and trade routes.

**IMPORTANCE EXTENSION=**

| Characteristic | Value |
|---|---|
| Starport Type A or B | +1 |
| Starport D or worse. | - 1 |
| TL A or more | +1 |
| TL 7 or less | - 1 |
| per Ag Hi In Pi Ri Pr Pa | +1 |

**Important= +4.**
**Unimportant= 0 or less.**

**Trade Routes.** Important Worlds are linked by established Trade Routes of J-4 or less.

**Capitals**. Important worlds are more likely to be Capitals of subsectors and sectors.

## Ex THE ECONOMIC EXTENSION

Resources Infrastructure

**(RLIB)**

Labor Barriers

The **Economic Extension** is contained between (parentheses)].

The **Economic Extension (Ex)** is the strength of a world economy and provides basic insights into the economy's structure and capabilities.

**ECONOMIC EXTENSION=**

| Characteristic | Value |
|---|---|
| Resources= | 2D + GG + Belts |
| Labor= | Pop |
| Infrastructure= | 2D + Importance |
| If Ba, Di, Lo, then | = 0. If Ni, then 1D. |
| Barriers= | 2D -2 |

**Resources** of a world are any materials available for processing and exploitation. They include natural resources, minerals, ores, metals, energy sources, biological assets, and any other materials of limited availability and suitable for production as goods suitable for sale.

**Labor** for a world is the workforce available for the processing and exploitation of Resources.

**Infrastructure** for a world is the established technical structures that support the population, and especially support exploitation of resources. Infrastructure includes roads, power grids, communications systems, and factories.

**Barriers** are existing inefficiencies in the economy. Barriers include legal impediments to efficiency, tax rates, customs which promote absenteeism or inhibit rewards for merit, and social structures which mismatch ability and job.

**RU**

**Resource Units = R * L * I * (5 - B)**

If any value = 0, use 1 instead (to avoid multiplication by zero).

## Cx THE CULTURAL EXTENSION

Strangeness
Homogeneity

**[HASS]**

Acceptance Symbols

The **Cultural Extension** is contained between [brackets].

The **Cultural Extension (Cx)** is a broad insight into the expected social behaviors of the citizens of the world.

**CULTURAL EXTENSION=**

| Characteristic | Value |
|---|---|
| Homogeneity | =Pop + Flux. |
| | Less than 0 = 1 |
| Acceptance | = Pop + Importance |
| Strangeness | 5 + Flux |
| Symbols | TL + Flux |

**Homogeneity** is a measure of the degree to which members of society hold common beliefs. Members of very homogeneous cultures are in strong agreement on the fundamentals of society (usually basic rights, religion, and methods of interaction). Members of non-homogeneous cultures hold many different beliefs on the fundamentals of society.

**Acceptance** is the degree of xenophobia or xenophilia in the culture. High Acceptance is evidenced by friendliness to outsiders and offworlders; Low Acceptance is characterized by fear or rejection of outsiders.

**Strangeness** is the degree of difference for the norms of interstellar society.

High Strangeness is evidenced by unusual or outwardly incomprehensible actions, statements, or responses in the course daily activity. Low Strangeness reflects activities close to interstellar norms.

**Symbols** used by the culture may range from the concrete (idols; totems; statuary) to the abstract (symbolized belief systems; group affiliations).

**Importance Extension** and the **Economic Extension** apply to the entire system; **Cultural Extension** applies generally to the entire system, although individual worlds may have their own Cultural Extensions.

# Additional Information

Note the additional information for the system.

Generate the stars for the system and place them on the appropriate fillforms.

**F**

**NABZ Nil**

## N NOBILITY

| Code | Ranking Noble | TC |
|---|---|---|
| A | Gentleman. | |
| B | Knight | any |
| c | Baronet | Pa Pr |
| C | Baron | Ag Ri |
| D | Marquis | Pi |
| e | Viscount | Ph |
| E | Count | Hi |
| F | Duke | In |
| G | Archduke | |
| H | Emperor | |

Noble assignment is based on the Trade Classifications of the world.

## A ALLEGIANCE

| Code | Description |
|---|---|
| Im | Imperial. |
| Cs | Client-State |
| Na | Non-Aligned |
| Va | Vargr |
| As | Aslan |
| Zh | Zhodani |
| So | Solomani |
| Kk | K'kree |
| Hv | Hiver |

Many other allegiance abbreviations are possible.

## B BASES

| Code | Description |
|---|---|
| N | Naval Base |
| D | Naval Depot |
| S | Scout Base |
| W | Scout Way Station |
| M | Military Base |

A **Depot** is established approximately one per 1000 worlds.

A **Way Station** is placed approximately one per 50 parsecs along major trade routes.

Military Base as needed.

**GENERATING BASES**

| | Naval | | Scout | | | |
|---|---|---|---|---|---|---|
| 2D | A | B | A | B | C | D |
| 2 | N | N | S | S | S | S |
| 3 | N | N | S | S | S | S |
| 4 | N | N | S | S | S | S |
| 5 | N | N | - | S | S | S |
| 6 | N | | - | - | S | S |
| 7 | - | - | - | - | - | S |
| 8 | - | - | - | - | - | - |
| 9 | - | - | - | - | - | - |
| 10 | - | - | - | - | - | - |
| 11 | - | - | - | - | - | - |
| 12 | - | - | - | - | - | - |

Columns are Starport Types. Roll once for each Base type.

## Z TRAVEL ZONES

| Code | Description | TC |
|---|---|---|
| G | Green | |
| A | Amber | Da Pz |
| R | Red | Fo |
| Da | Dangerous | Pop=0-6 |
| Pu | Puzzling | Pop=7+ |
| Fo | Forbidden | |

## W WORLDS

Total worlds in the system =

MW + GG + Belts + 2D

## NIL NATIVE INTELLIGENT LIFE / NATIVE STATUS

| Pop | Atm | TL | Comment | (create sophonts as necessary) |
|---|---|---|---|---|
| 7+ | 2-9 | 1+ | Intelligent Life evolved on this world. | Natives |
| 7+ | A+ | 1+ | Local Intelligent Life is incompatible with human environments | Exotics |
| 7+ | 0-1 | 1+ | Sophonts evolved elsewhere and settled here many years ago. | Transplants |
| 0 | 2+ | 1+ | Intelligent Life evolved on this world, but is now extinct. | Extinct |
| 0 | 0-1 | 1+ | Evidence of Transplants, but they are no longer present. | Vanished |
| 1-2-3 | | | Non-permanent commercial or scientific activity. | Transients |
| 4-5-6 | | | The initial steps of creating a colony. | Settlers |
| if Gov= 1 | | | Locals are company employees. | Corporate. |
| if Gov= 6 | | | Locals are colonists from a nearby world. | Colonists. |

## 1 GENERATE SYSTEM STARS

| Flux | Primary | Close | Near | Far | Companion |
|---|---|---|---|---|---|
| - 5 | Primary | -- | -- | -- | -- |
| - 4 | Primary | -- | -- | -- | -- |
| - 3 | Primary | -- | -- | -- | -- |
| - 2 | Primary | -- | -- | -- | -- |
| - 1 | Primary | -- | -- | -- | -- |
| 0 | Primary | -- | -- | -- | -- |
| +1 | Primary | -- | -- | -- | -- |
| +2 | Primary | -- | -- | -- | -- |
| +3 | Primary | Close | Near | Far | Companion |
| +4 | Primary | Close | Near | Far | Companion |
| +5 | Primary | Close | Near | Far | Companion |

Primary is always present. Roll Flux for Close, Near, and Far stars in the system. Roll Flux for Companions (if present) to Primary, Close, Near, and Far. A system may have as many as eight stars (Primary + Companion, Close + Companion, Near + Companion, and Far + Companion).

**Place Stars In Orbits**

Companion = Inside Orbit 0.
Close= 1D -1. In Orbits = 0-1-2-3-4-5
Near = 5+ 1D. In Orbits = 6-7-8-9-10-11
Far = 11 + 1D. In Orbits = 12-13-14-15-16-17

## 2 SPECTRAL TYPE Size

| Flux | Sp | O | B | A | F | G | K | M |
|---|---|---|---|---|---|---|---|---|
| - 5 | OB | Ia | Ia | Ia | II | II | II | II |
| - 4 | A | Ib | Ib | Ib | III | III | III | II |
| - 3 | A | II | II | II | IV | IV | IV | II |
| - 2 | F | III | III | III | V | V | V | III |
| - 1 | F | III | III | IV | V | V | V | V |
| 0 | G | III | III | V | V | V | V | V |
| +1 | K | V | III | V | V | V | V | V |
| +2 | K | V | V | V | V | V | V | V |
| +3 | M | V | V | V | V | V | V | V |
| +4 | M | IV | IV | V | VI | VI | VI | VI |
| +5 | M | D | D | D | D | D | D | D |
| +6 | BD | D | D | D | D | D | D | D |

**Spectral Type.** Roll Flux for the Primary. For all others, Primary Flux + (1D-1).

**Spectral Decimal.** Roll decimal 0 thru 9.

**Stellar Size.** Roll Flux for the Primary; For all others, Primary Flux + (1D+2).

Size IV not possible for K5-K9, M0-M9.
Size VI not possible for A0-A9, F0-F4.
If Size= D, ignore Spectral Decimal.
If Spectral= BD, ignore remaining rolls. (BD= Brown Dwarf).

# Gas Giants and Other Worlds

Create Gas Giants and place them in orbits on the System Fillform.
Fill other orbits with Other Worlds.

**G**

**Other Worlds**

## W WORLDS

Total Worlds In System=

+ Mainworld
+ Gas Giants
+ Belts
+ 2D

**OTHER WORLDS**
Subject to

Max Pop =MW Pop - 1.
St= Spaceport.

**Hospitable=** StSAHPGL-T

**Planetoids=** St000PGL-T

**Iceworld=** StSAHPGL-T
Pop= DM - 6

**RadWorld=** StSAH000-0
Siz= 2D

**Inferno**= YSB0000-0
Siz= 2D

**BigWorld=** StSAHPGL-T
Siz= 2D +7
any with Siz= B+ is BW.

**Worldlet=** StSAHPGL-T
Siz= 1D - 3

**Inner World** StSAHPGL-T
Pop= DM - 4
Hyd= DM - 4

**Stormworld** StSAHPGL-T
Siz= 2D
Atm= DM +4
Hyd= DM - 4
Pop= DM – 6

**NUMBER OF SATELLITES**

Gas Giants= 1D-1
Inners = 1D-5
Hospitables= 1D-4
Outers= 1D-3
= total number of satellites for the world.

**Zero exactly** = Ring and reroll. Treat less than zero as none.

**PLACING WORLDS**

| | |
|---|---|
| **Place Mainworld** | **If Satellite,** place GG in MW Orbit.<br>**If Satellite and No Giants**, place a BigWorld in MW Orbit.<br>**If Asteroid Belt,** place as Belt without regard to HZ. |
| **Place Gas Giants** | **Rotate Placement Per Star**. |
| **Place Planetoid Belts** | **Rotate Placement Per Star**. |
| **Place Other Worlds** | **Rotate Placement Per Star**, place worlds using World1 Column.<br>**Last World,** place using World2 Column. |

## GG GAS GIANTS

| 2D | Size | WSize | Diameter | Type |
|---|---|---|---|---|
| 1 | L | 20 | 20,000 miles | SGG |
| 2 | M | 21 | 30,000 miles | SGG |
| 3 | N | 22 | 40,000 miles | SGG |
| 4 | P | 23 | 50,000 miles | SGG |
| 5 | Q | 24 | 60,000 miles | SGG |
| 6 | R | 25 | 70,000 miles | LGG |
| 7 | S | 26 | 80,000 miles | LGG |
| 8 | T | 27 | 90,000 miles | LGG |
| 9 | U | 28 | 100,000 miles | LGG |
| 10 | V | 29 | 110,000 miles | LGG |
| 11 | W | 30 | 120,000 miles | LGG |
| 12 | X | 31 | 130,000 miles | LGG |

Convert every second SGG Small Gas Giant to IGG Ice Giant (of the same size).

Convert every fifth LGG to a BD Brown Dwarf (of Siz x 4; mark Size with* as in R*).

**BASIC PLACEMENT CHART**

| 2D | LGG | SGG | IG | Belt | World1 | World2 |
|---|---|---|---|---|---|---|
| 2 | - 3 | - 2 | +1 | - 1 | 10 | 17 |
| 3 | - 2 | - 1 | +2 | HZ | 8 | 16 |
| 4 | - 1 | HZ | +3 | +1 | 6 | 15 |
| 5 | HZ | +1 | +4 | +2 | 4 | 14 |
| 6 | +1 | +2 | +5 | +3 | 2 | 13 |
| 7 | +2 | +3 | +6 | +4 | 0 | 12 |
| 8 | +3 | +4 | +7 | +5 | 1 | 11 |
| 9 | +4 | +5 | +8 | +6 | 3 | 10 |
| 10 | +5 | +6 | +9 | +7 | 5 | 9 |
| 11 | +6 | +7 | +10 | +8 | 7 | 8 |
| 12 | +7 | +8 | +11 | +9 | 0 | 7 |

GG and Belt placement is based on the HZ.
World placement is based on Orbit.
If an orbit is duplicated or precluded, adjust to an adjacent or the closest possible orbit.

**Gas Giant Skimming:** Ship's G must exceed World Size/8.

**The Inner Worlds**
= Orbits inside HZ - 1.

**The Hospitables**
= Orbits HZ-1, HZ, HZ+1.

**The Outer Worlds**
= Orbits beyond HZ+1.

## - HZ INNERS

| 1D | Description |
|---|---|
| 1 | Worldlet |
| 2 | Inferno |
| 3 | Inner World |
| 4 | BigWorld |
| 5 | Stormworld |
| 6 | Radworld |

## HZ HOSPITABLES

| Code | Description |
|---|---|
| 1 | Worldlet |
| 2 | Inferno |
| 3 | Hospitable |
| 4 | BigWorld |
| 5 | Stormworld |
| 6 | Radworld |

## +HZ OUTERS

| Code | Description |
|---|---|
| 1 | Worldlet |
| 2 | Iceworld |
| 3 | Iceworld |
| 4 | BigWorld |
| 5 | Iceworld |
| 6 | Radworld |

**INNER SATELLITES**

| 1D | Description |
|---|---|
| 1 | Worldlet |
| 2 | Worldlet |
| 3 | Inferno |
| 4 | Inner World |
| 5 | Stormworld |
| 6 | Radworld |
| 7 | Bigworld |

**HOSPITABLE SATELLITES**

| 1D | Description |
|---|---|
| 1 | Worldlet |
| 2 | Worldlet |
| 3 | Inferno |
| 4 | Hospitable |
| 5 | Stormworld |
| 6 | Radworld |
| 7 | Bigworld |

**OUTER SATELLITES**

| 1D | Description |
|---|---|
| 1 | Worldlet |
| 2 | Worldlet |
| 3 | Iceworld |
| 4 | Innerworld |
| 5 | Stormworld |
| 6 | Radworld |
| 7 | Bigworld |

DM+1 if satellite of GG.
Close Satellites are Locked to the Planet.
If Satellite Size is equal or greater than Planet Size, reduce it to Planet Size -3.

# Inner System Reference

This page shows the locations and distances of the Inner System. Habitable Zones are shown by orbit and Stellar Type.

The Diameter limits for Jump, Maneuver, and Gravitic Drives are shown for Astrogation planning.

**H**

**Inner**

### THE 100D JUMP DRIVE LIMIT

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 10 | 9 | 7 | 6 | 5 | 5 | | * |
| A5 | 10 | 9 | 7 | 5 | 4 | 4 | | * |
| F0 | 11 | 9 | 7 | 5 | 4 | 3 | | * |
| F5 | 11 | 9 | 7 | 5 | 4 | 3 | 3 | * |
| G0 | 11 | 10 | 8 | 6 | 4 | 2 | 2 | * |
| G5 | 12 | 10 | 8 | 7 | 4 | 2 | 1 | * |
| K0 | 12 | 11 | 9 | 7 | 5 | 2 | 0 | * |
| K5 | 13 | 12 | 10 | 9 | | 1 | 0 | * |
| M0 | 14 | 13 | 11 | 9 | | 1 | 0 | * |
| M5 | 15 | 14 | 13 | 11 | | 0 | * | * |
| M9 | 15 | 15 | 13 | 12 | | * | * | * |

100 D Limit is within the Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Jump Drives cannot operate inside the 100D Limit.

### THE 1000D MANEUVER DRIVE LIMIT

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 13 | 12 | 11 | 9 | 9 | 8 | | * |
| A5 | 14 | 12 | 10 | 9 | 8 | 7 | | * |
| F0 | 14 | 12 | 10 | 9 | 8 | 7 | | * |
| F5 | 14 | 12 | 11 | 9 | 8 | 7 | 7 | * |
| G0 | 15 | 13 | 11 | 9 | 8 | 6 | 6 | * |
| G5 | 15 | 14 | 12 | 10 | 8 | 6 | 5 | * |
| K0 | 16 | 14 | 12 | 10 | 8 | 6 | 5 | * |
| K5 | 16 | 15 | 13 | 12 | | 6 | 5 | * |
| M0 | 17 | 16 | 14 | 12 | | 5 | 4 | * |
| M5 | 18 | 17 | 16 | 14 | | 5 | 2 | * |
| M9 | 18 | 18 | 16 | 15 | | 4 | 1 | * |

1000 D Limit is beyond Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Maneuver Drives (M-Drives) cannot operate outside the 1000D Limit.

### THE 10D GRAVITIC DRIVE LIMIT

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 7 | 5 | 4 | 1 | 1 | 0 | * | * |
| A5 | 7 | 5 | 3 | 1 | 0 | * | * | * |
| F0 | 7 | 6 | 3 | 1 | 0 | * | * | * |
| F5 | 7 | 6 | 4 | 1 | 0 | * | * | * |
| G0 | 8 | 6 | 4 | 1 | 0 | * | * | * |
| G5 | 9 | 7 | 5 | 3 | 0 | * | * | * |
| K0 | 10 | 7 | 6 | 3 | 0 | * | * | * |
| K5 | 10 | 8 | 7 | 5 | | * | * | * |
| M0 | 11 | 10 | 8 | 6 | | * | * | * |
| M5 | 11 | 11 | 9 | 8 | | * | * | * |
| M9 | 12 | 11 | 10 | 8 | | * | * | * |

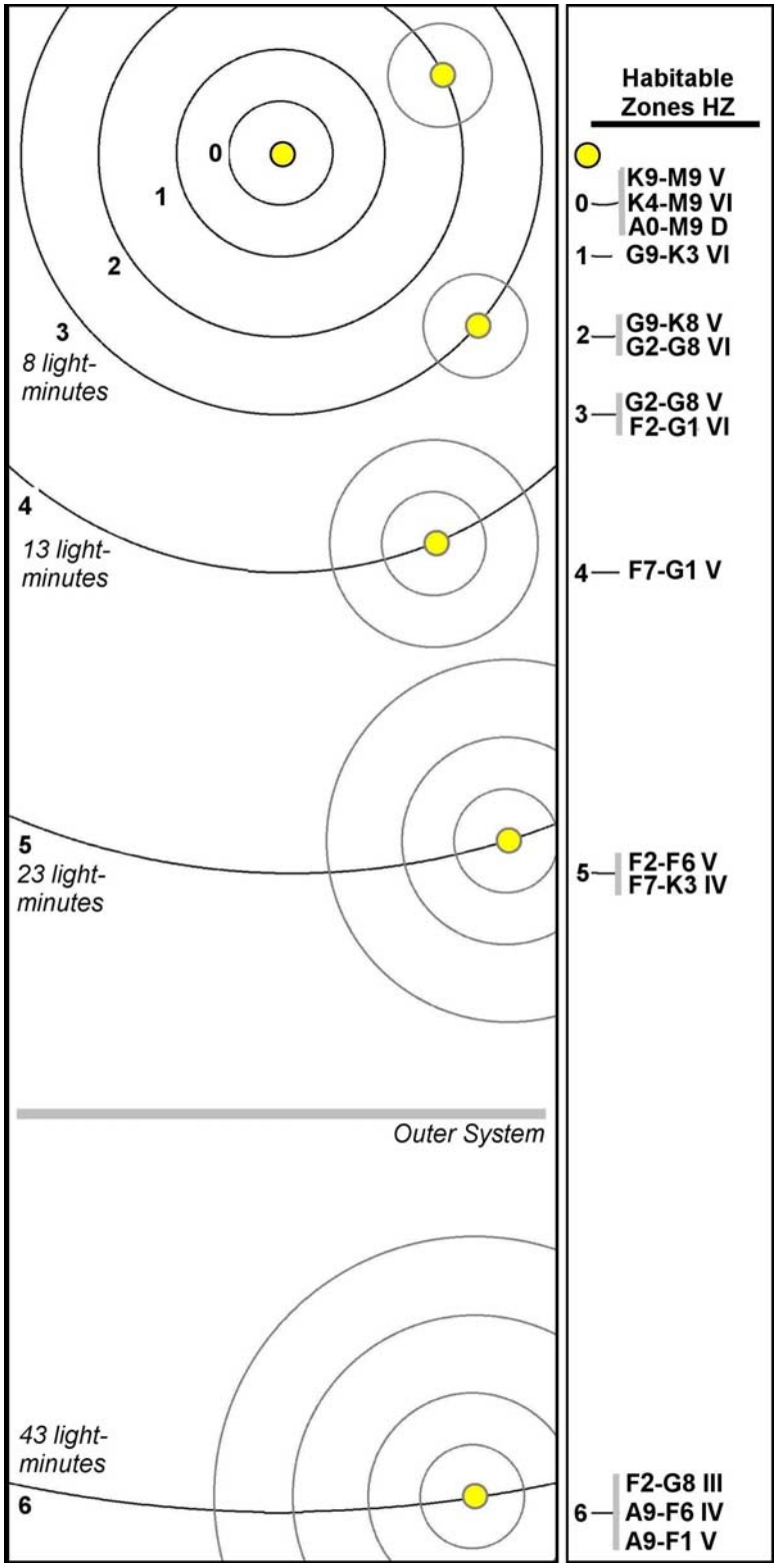
10 D Limit is beyond the Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Gravitic Drives (G-Drives) cannot operate outside the 10D Limit.

### THE INNER SYSTEM



# Outer System Reference

This page shows the locations and distances of the Outer System. Habitable Zones are shown by orbit and Stellar Type.

The Diameter limits for Jump, Maneuver, and Gravitic Drives are shown for Astrogation planning.

**J**

**Outer**

### THE 100D JUMP DRIVE LIMIT

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 10 | 9 | 7 | 6 | 5 | 5 | | * |
| A5 | 10 | 9 | 7 | 5 | 4 | 4 | | * |
| F0 | 11 | 9 | 7 | 5 | 4 | 3 | | * |
| F5 | 11 | 9 | 7 | 5 | 4 | 3 | 3 | * |
| G0 | 11 | 10 | 8 | 6 | 4 | 2 | 2 | * |
| G5 | 12 | 10 | 8 | 7 | 4 | 2 | 1 | * |
| K0 | 12 | 11 | 9 | 7 | 5 | 2 | 0 | * |
| K5 | 13 | 12 | 10 | 9 | | 1 | 0 | * |
| M0 | 14 | 13 | 11 | 9 | | 1 | 0 | * |
| M5 | 15 | 14 | 13 | 11 | | 0 | * | * |
| M9 | 15 | 15 | 13 | 12 | | * | * | * |

100 D Limit is within the Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Jump Drives cannot operate inside the 100D Limit.

### THE 1000D MANEUVER DRIVE LIMIT

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 13 | 12 | 11 | 9 | 9 | 8 | | * |
| A5 | 14 | 12 | 10 | 9 | 8 | 7 | | * |
| F0 | 14 | 12 | 10 | 9 | 8 | 7 | | * |
| F5 | 14 | 12 | 11 | 9 | 8 | 7 | 7 | * |
| G0 | 15 | 13 | 11 | 9 | 8 | 6 | 6 | * |
| G5 | 15 | 14 | 12 | 10 | 8 | 6 | 5 | * |
| K0 | 16 | 14 | 12 | 10 | 8 | 6 | 5 | * |
| K5 | 16 | 15 | 13 | 12 | | 6 | 5 | * |
| M0 | 17 | 16 | 14 | 12 | | 5 | 4 | * |
| M5 | 18 | 17 | 16 | 14 | | 5 | 2 | * |
| M9 | 18 | 18 | 16 | 15 | | 4 | 1 | * |

1000 D Limit is beyond Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Maneuver Drives (M-Drives) cannot operate outside the 1000D Limit.

### THE 10D GRAVITIC DRIVE LIMIT

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 7 | 5 | 4 | 1 | 1 | 0 | * | * |
| A5 | 7 | 5 | 3 | 1 | 0 | * | * | * |
| F0 | 7 | 6 | 3 | 1 | 0 | * | * | * |
| F5 | 7 | 6 | 4 | 1 | 0 | * | * | * |
| G0 | 8 | 6 | 4 | 1 | 0 | * | * | * |
| G5 | 9 | 7 | 5 | 3 | 0 | * | * | * |
| K0 | 10 | 7 | 6 | 3 | 0 | * | * | * |
| K5 | 10 | 8 | 7 | 5 | | * | * | * |
| M0 | 11 | 10 | 8 | 6 | | * | * | * |
| M5 | 11 | 11 | 9 | 8 | | * | * | * |
| M9 | 12 | 11 | 10 | 8 | | * | * | * |

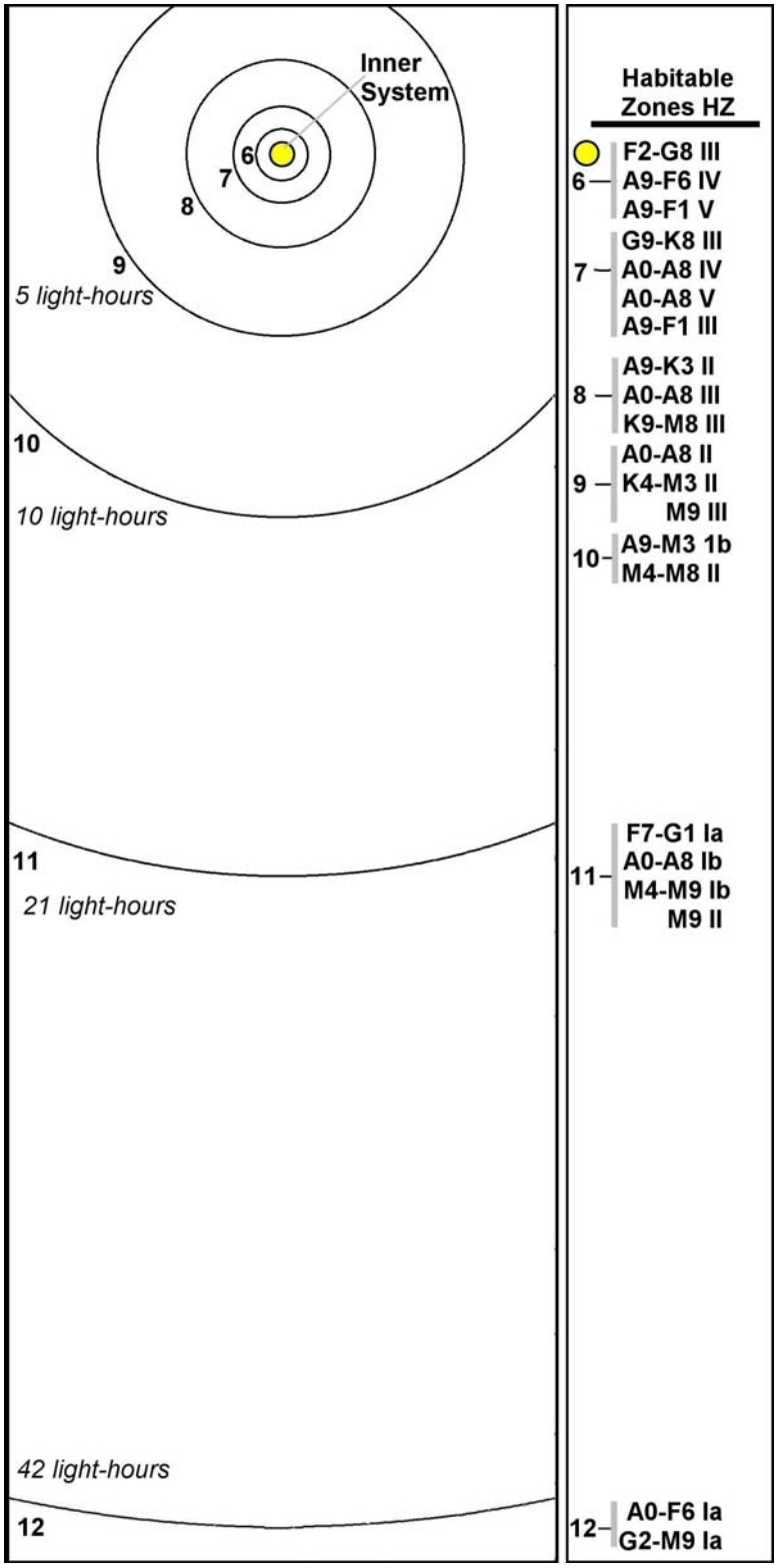
10 D Limit is beyond the Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Gravitic Drives (G-Drives) cannot operate outside the 10D Limit.

### THE OUTER SYSTEM



# Remote System Reference

This page shows the locations and distances of the Remote System. The Remote System has no Habitable Zones).

The Diameter limits for Jump, Maneuver, and Gravitic Drives are shown for Astrogation planning.

**K**

**Remote**

**THE 100D JUMP DRIVE LIMIT**

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 10 | 9 | 7 | 6 | 5 | 5 | | * |
| A5 | 10 | 9 | 7 | 5 | 4 | 4 | | * |
| F0 | 11 | 9 | 7 | 5 | 4 | 3 | | * |
| F5 | 11 | 9 | 7 | 5 | 4 | 3 | 3 | * |
| G0 | 11 | 10 | 8 | 6 | 4 | 2 | 2 | * |
| G5 | 12 | 10 | 8 | 7 | 4 | 2 | 1 | * |
| K0 | 12 | 11 | 9 | 7 | 5 | 2 | 0 | * |
| K5 | 13 | 12 | 10 | 9 | | 1 | 0 | * |
| M0 | 14 | 13 | 11 | 9 | | 1 | 0 | * |
| M5 | 15 | 14 | 13 | 11 | | 0 | * | * |
| M9 | 15 | 15 | 13 | 12 | | * | * | * |

100 D Limit is within the Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Jump Drives cannot operate inside the 100D Limit.

**THE 1000D MANEUVER DRIVE LIMIT**

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 13 | 12 | 11 | 9 | 9 | 8 | | * |
| A5 | 14 | 12 | 10 | 9 | 8 | 7 | | * |
| F0 | 14 | 12 | 10 | 9 | 8 | 7 | | * |
| F5 | 14 | 12 | 11 | 9 | 8 | 7 | 7 | * |
| G0 | 15 | 13 | 11 | 9 | 8 | 6 | 6 | * |
| G5 | 15 | 14 | 12 | 10 | 8 | 6 | 5 | * |
| K0 | 16 | 14 | 12 | 10 | 8 | 6 | 5 | * |
| K5 | 16 | 15 | 13 | 12 | | 6 | 5 | * |
| M0 | 17 | 16 | 14 | 12 | | 5 | 4 | * |
| M5 | 18 | 17 | 16 | 14 | | 5 | 2 | * |
| M9 | 18 | 18 | 16 | 15 | | 4 | 1 | * |

1000 D Limit is beyond Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Maneuver Drives (M-Drives) cannot operate outside the 1000D Limit.

**THE 10D GRAVITIC DRIVE LIMIT**

| | Ia | Ib | II | III | IV | V | VI | D |
|---|---|---|---|---|---|---|---|---|
| A0 | 7 | 5 | 4 | 1 | 1 | 0 | * | * |
| A5 | 7 | 5 | 3 | 1 | 0 | * | * | * |
| F0 | 7 | 6 | 3 | 1 | 0 | * | * | * |
| F5 | 7 | 6 | 4 | 1 | 0 | * | * | * |
| G0 | 8 | 6 | 4 | 1 | 0 | * | * | * |
| G5 | 9 | 7 | 5 | 3 | 0 | * | * | * |
| K0 | 10 | 7 | 6 | 3 | 0 | * | * | * |
| K5 | 10 | 8 | 7 | 5 | | * | * | * |
| M0 | 11 | 10 | 8 | 6 | | * | * | * |
| M5 | 11 | 11 | 9 | 8 | | * | * | * |
| M9 | 12 | 11 | 10 | 8 | | * | * | * |

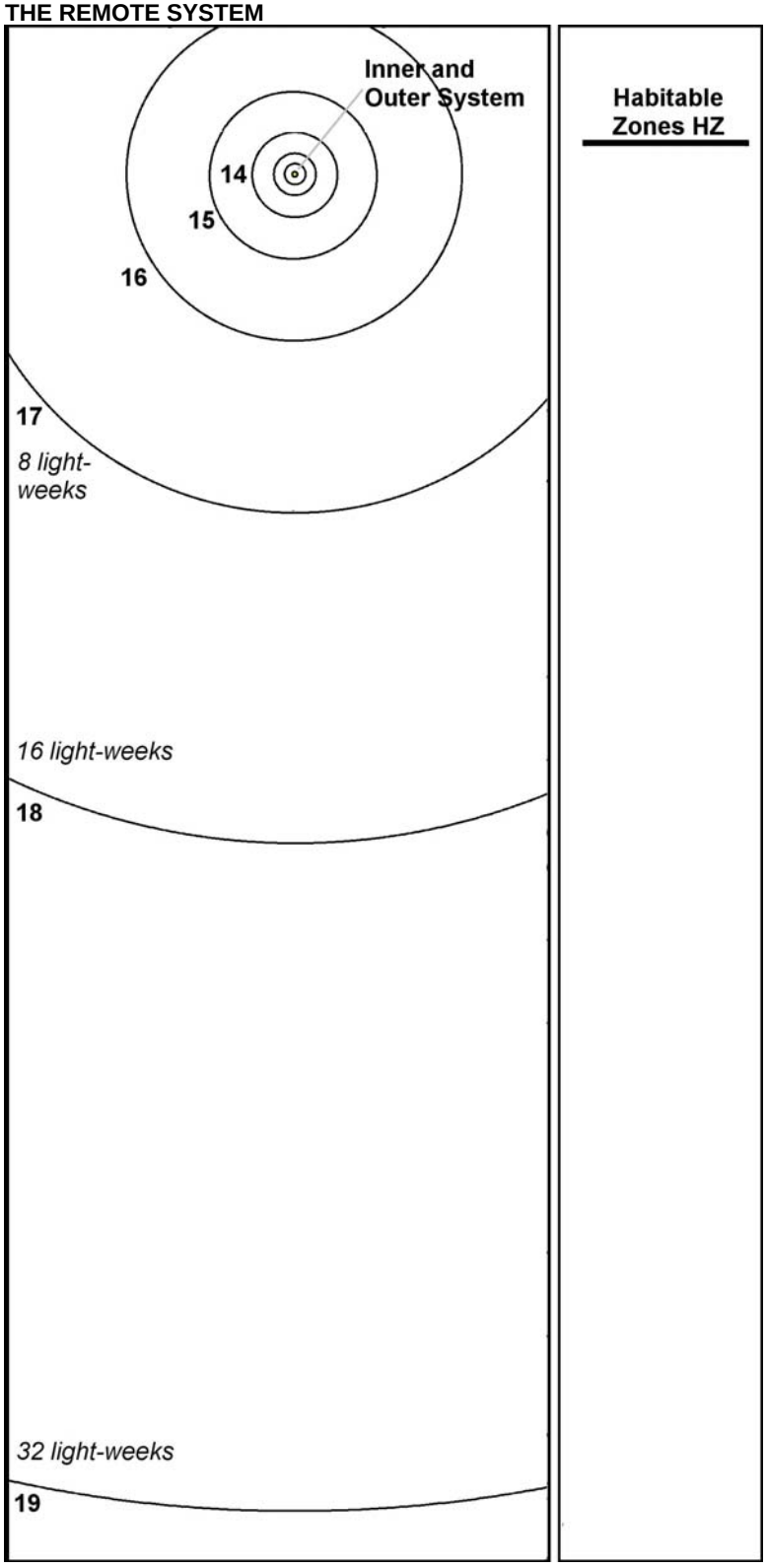
10 D Limit is beyond the Orbit Number shown.

***** = inside Orbit 0.

Blank (K5-M9 IV, A0-F4 VI). Not possible.

Gravitic Drives (G-Drives) cannot operate outside the 10D Limit.

**THE REMOTE SYSTEM**



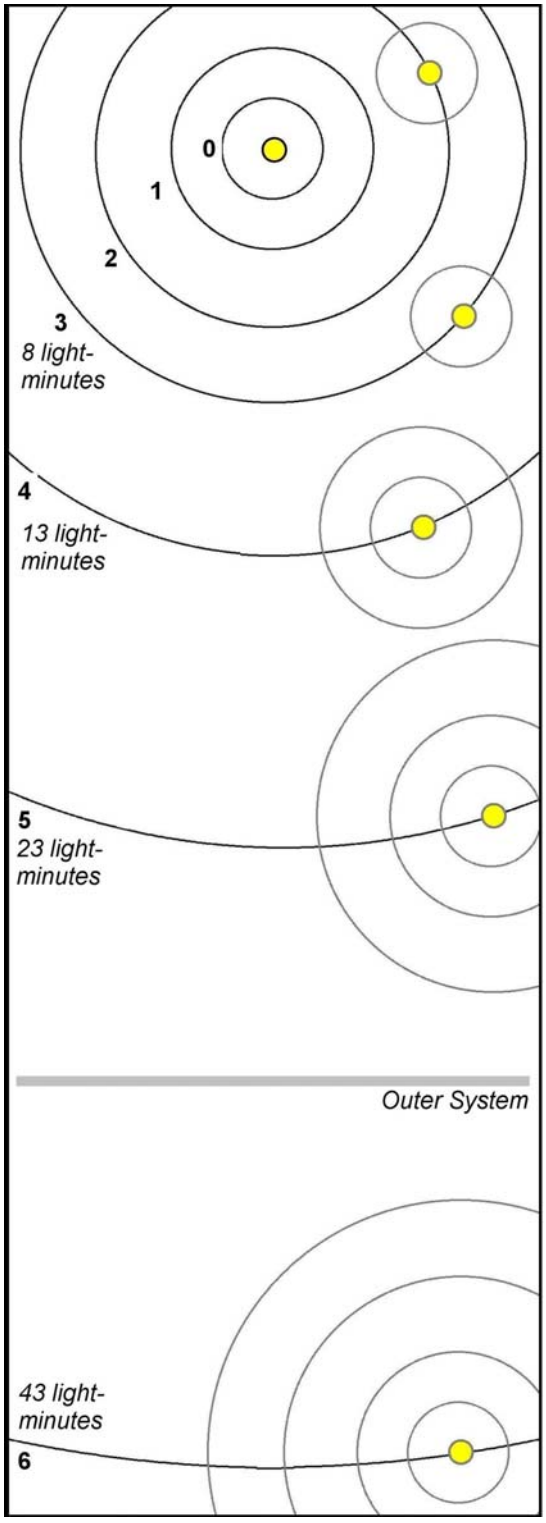
# Inner System Fillform

Record the details of the Inner System on this FillForm. Mark worldnames on the map as necessary.

**Fillform**

**Inner**

**THE INNER SYSTEM**




**LOCATION AND DETAILS**

| Location (Sector and Hex) | | | | |
|---|---|---|---|---|
| Mainworld Name | | | Star Name and Spectral | |
| Mainworld Type (Planet or Satellite) | | | If Satellite, Orbit Name | |
| HZ Variance | MW Climate | System GG | System Belts | Filled Orbits |

**MAINWORLD StSAHPGL-T**

| St | Siz | Atm | Hyd | Pop | Gov | Law | - | Tech | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

| Trade Classifications and Remarks |
|---|
| |

| Noble | Alleg | Bases | Zone | Ix | Ex | Cx |
|---|---|---|---|---|---|---|
| | | | | { } | ( ) | [ ] |

| Native Status |
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**OCCUPIED ORBITS**

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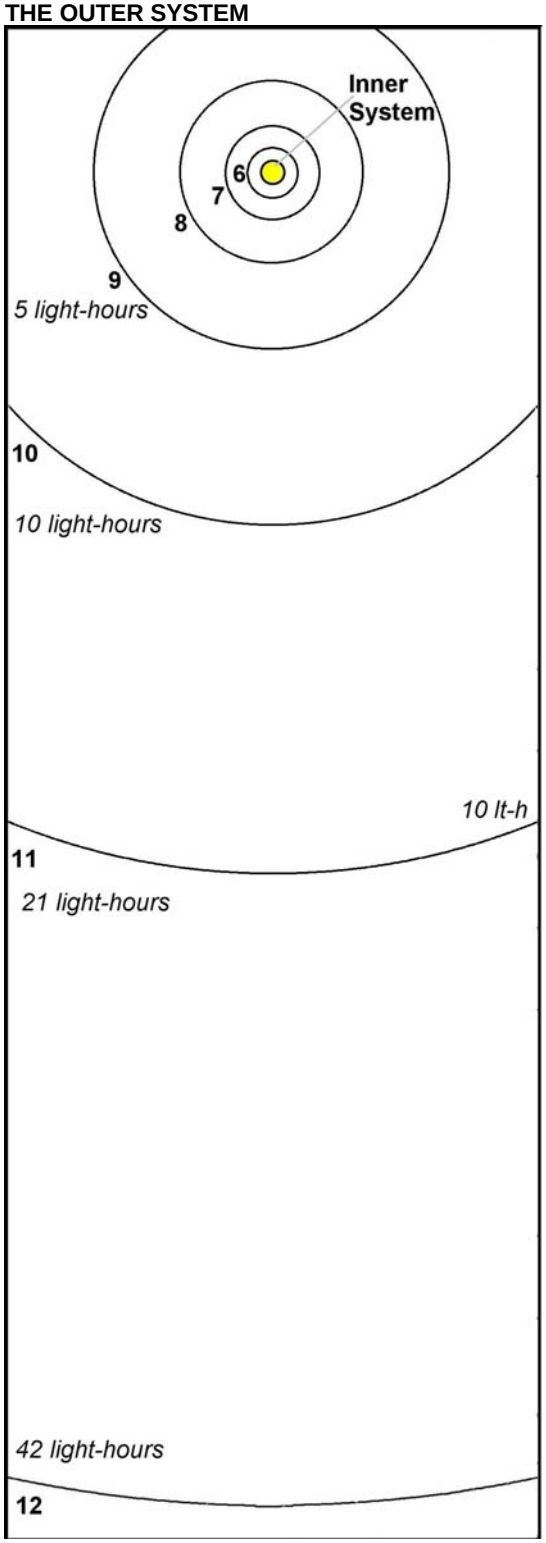
# Outer System Fillform

Record the details of the Outer System on this FillForm. Mark worldnames on the map as necessary.

**Fillform**

**Outer**

**THE OUTER SYSTEM**




**LOCATION AND DETAILS**

| Location (Sector and Hex) | |
|---|---|
| Mainworld Name | Star Name and Spectral |

**OCCUPIED ORBITS**

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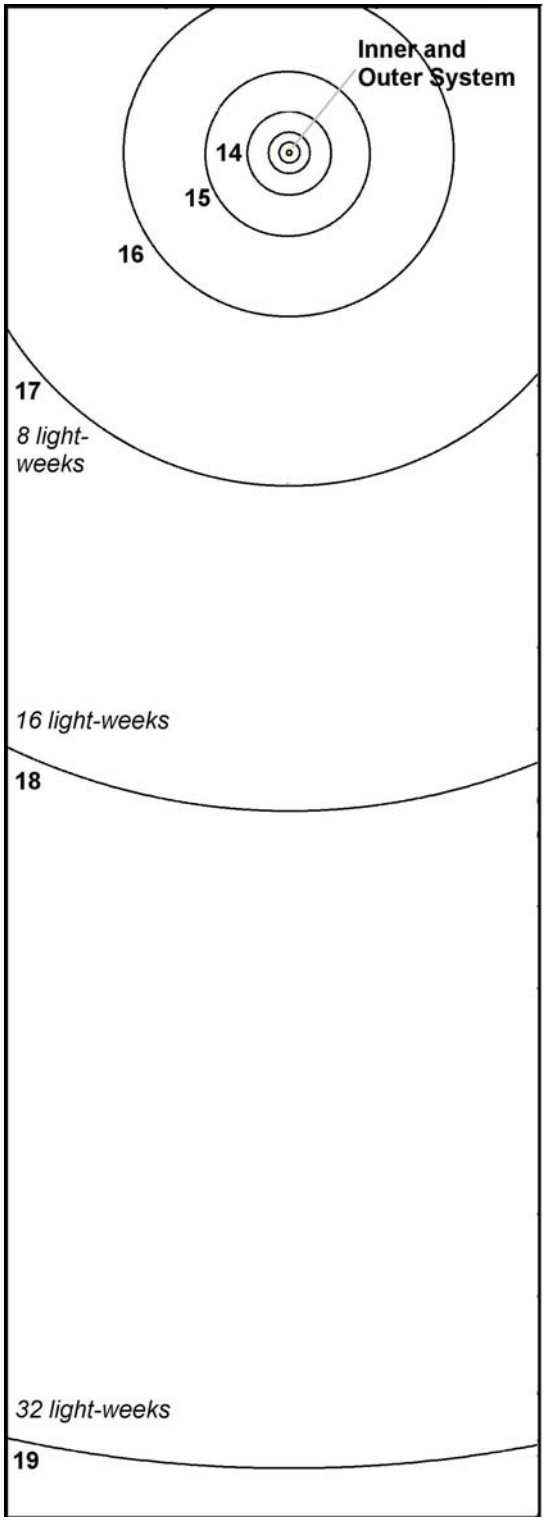
# Remote System Fillform

Record the details of the Remote System on this FillForm. Mark worldnames on the map as necessary.

**Fillform**

**Remote**

**THE REMOTE SYSTEM**




**LOCATION AND DETAILS**

| Location (Sector and Hex) | |
|---|---|
| Mainworld Name | Star Name and Spectral |

**OCCUPIED ORBITS**

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