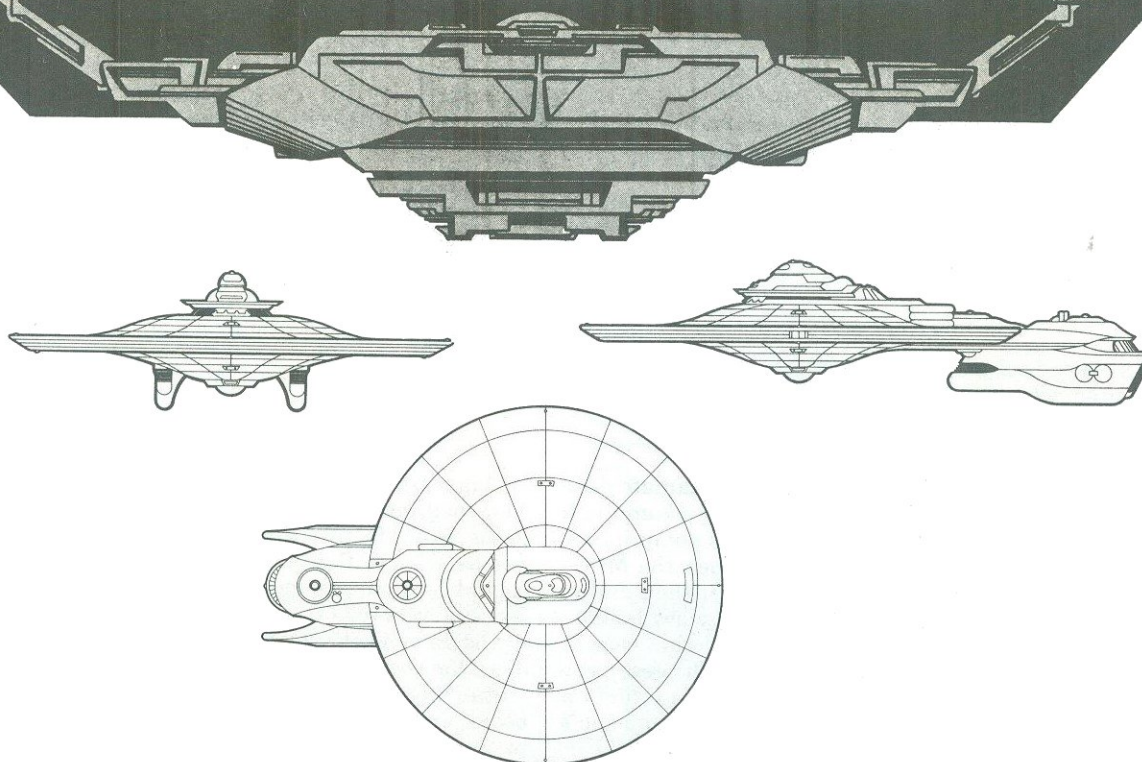


JAYNZ SHIPS OF THE GALAXY



FEDERATION FLAMMARION CLASS VIII/IX LARGE RESEARCH VESSEL

CONSTRUCTION DATA:

Model Numbers	Mk.I	Mk.III
Ship Class	VIII	IX
Date Entering Service	2/0905	2/2212
Number Constructed	130	27

HULL DATA:

Superstructure Points	18	24
Damage Chart	C	C
Size:		
Length	210m	210m
Width	165m	165m
Height	50m	51m
Mass Displacement	114,775mt	126,918mt

Cargo:

Cargo Units	650 SCU	615 SCU
Cargo Capacity	32,000mt	30,765mt
Landing Capability	None	None

EQUIPMENT DATA:

Control Computer Type	M-4	M-4
Transporters:		
Standard 6-person	4	4
Emergency 25-person	2	1
Cargo	2	1

OTHER DATA:

Crew	210	184
Research Staff	100	91
Troops	—	100
Shuttlecraft:		
Standard 7-person	4	4
Armed troop shuttle	—	1
Cargo shuttles	2	2

ENGINES AND POWER DATA:

Total Power Units Available	32	38
Movement Point Ratio	3/1	4/1
Warp Engine Type	FWE-1	FWE-2
Number	2	2
Power Units Available	8 each	13 each
Stress Charts	G/K	G/K
Maximum Safe Cruising Speed	Warp 7	Warp 6
Emergency Speed	Warp 9	Warp 8
Impulse Engine Type	FIE-2	FIF-1
Power Units Available	16	12

WEAPONS AND FIRING DATA:

Beam Weapon Type	FH-1	FH-6
Number	6 in 3 banks	12 in 6 banks
Firing Arcs	2f, 2p/a, 2s/a	4f, 4p, 4s
Firing Chart	F	N
Maximum Power	2	3
Damage Modifiers:		
+2		(1-7)
+1		(8-13)
Beam Weapon Type		FH-4
Number		2 in 1 bank
Firing Arcs		2a
Firing Chart		Q
Maximum Power		3
Damage Modifiers:		
+2		(1-8)
+1		(9-14)

SHIELDS DATA:

Deflector Shield Type	FSD	FSK
Shield Point Ratio	1/2	1/2
Maximum Shield Power	6	15

COMBAT EFFICIENCY:

D	50.74	54.1
WDF	3.0	32.8

The Federation has always placed a high value on basic scientific research, and that means not just collecting samples of new and interesting life-forms, minerals or what-have-you, but transporting scientists and their equipment to sites of special interest. To aid this purpose the Federation has built or sponsored many kinds of research vessels, from special-purpose one-of-a-kind spacelabs to various sizes of general-purpose ships. Among the most famous of these, as well as the largest, is the *Flammarion* Class of Large Research Vessels.

Flammarions are rightly called the flagships of Federation spaceborne research facilities. The size of a standard light cruiser, *Flammarions* carry more personnel and more equipment devoted entirely to scientific study than any other class of ships in space.

The original specification for the *Flammarion* called for a large

general-purpose research vessel intended to operate in any quarter of the Federation, capable of sustaining both a purely scientific research staff and a separate ship's operating crew for up to three years without replenishment, entirely self-sustaining including the capability of repairing or resupplying all the advanced equipment it would carry, and fully navigable. Three shipbuilders submitted bids, and the Office of Research and Exploration selected Themis Shipyards of Aldebaran as prime contractor. Themis was then brand-new, and their prior experience in shipbuilding had been limited to aircraft and in-system shuttles. To their credit, their design has proved durable, superior, and very successful.

Themis built the *Flammarion* on two basic principles: The ship should have a complete but simple, efficient layout, and the engineer-

ing should be as maintenance-free and durable — and cost-effective — as then-present technology could make it.

The original *Flammarions* were built around the FWE-1 tandem-mounted warp engines. Stodgy, not too powerful but well-built and forgiving, they proved an ideal powerplant for a vessel intended for operating in deep space far from repair yards. They provided quite respectable speed for their rather compact size as well, a consideration important to reduce transit time and operating costs. They were also cheap and plentiful, thanks to the Four Years War.

For maximum efficiency and ease of design the standard Star Fleet dish-shaped primary hull was copied, centered around the new and highly advanced M-4 computer system augmented by 240 tita-Bbytes of additional memory with an additional spare backup processor dedicated entirely to supporting up to 240 networked stand-alone computers and/or tricorders. Around the computer core, largely following the Star Fleet example, are the labs, the specialized compartments, and the quarters for crew and scientists. A Star Fleet rating would have no problem becoming familiar with the ship in minutes, realizing a great savings in cross-training time for crews.

The scientists and their staffs, who would be permanently assigned for the duration of a cruise or a project, would likewise have little trouble with the design. Space for over seventy labs, each dedicated to a different scientific discipline, is allocated on the same decks as their assigned personnel. Research staff and crew thus never trip over each other performing their normal day-to-day activities, avoiding friction and resentment too often present on such vessels.

The scientific accommodations are lavish. On top of the wide variety of labs, each fully equipped with the latest in machinery and data for their one particular specialty, each *Flammarion* comes complete with four large, amazingly precise environment simulators for the safe storage of captive life-forms, including one purely for aquatic specimens. In addition, the ships carry four shuttlecraft capable of mounting internal or external sensors, samplers or other devices for space or planetside research beyond the hull. The original design also included two large cargo shuttles for the transport of portable shelters, life-support machinery, and equipment for ground-based work and study. They can also be used to transport either one of the two 30-ton self-propelled wheeled Labmobiles carried aboard. Expense in outfitting has not been spared, not when the ship is to go hundreds of light-years away from civilization.

The primary mission of a *Flammarion* is long-term multi-discipline investigation of large or at least important phenomena in space, whether planet, star-system, nebula, or other object, force or region. The Office of Research and Exploration dispatches a vessel to one of these things which it deems worthy of long-term full-press study, and leaves the matter of duration and intensity of study to the Director of Research on board, who is also head of the scientific staff. The Star Fleet crew and Captain have no other duties than to run the ship, maintain all machinery, and protect ship and staff from harm, accidental or intentional. It's soft and cushy duty, but not usually the way to higher command.

Flammarions have served with quiet distinction for many years in very many out-of-the-way places. They have had, on the whole, a very respectable record, marred only by the occasional accident or alien attack. They have only two main sins, neither of them the fault of the ship itself.

For one, the large size of the staff combined with the long-term

nature of their missions has tended to produce rather ingrown scientific research teams, each with their own peculiar 'personality', usually based on some particular interest or specialty of the Chief of Research. The Office of Research and Exploration has found that it must link *Flammarion* with research tasks very carefully, as each ship and staff will tend to focus rather more attention on its own high-priority areas at the expense of others. ORE tries hard to screen out potential Chiefs of Research with a point to prove or an intellectual axe to grind who might 'pre-direct' the desired conclusion to research, but the problem remains.

For the other, the unexpected demise of the U.S.S. *Grissom* deep in Federation space near the so-called 'Genesis planet' and the growing tensions between the Federation and the Klingon Empire have made large and lightly-armed vessels like the *Flammarion* a potential liability to Star Fleet. Admiral Randolph Morrow, Admiral Commander of Star Fleet, the General Staff and the Chief of Star Fleet Operations have issued orders to the effect that such vessels as the *Flammarion* cannot be spared escorting armed vessels to protect them from attack. Nor would authorization to operate outside of the Core Worlds of the Federation be issued to such vessels, in view of the danger of loss.

Themis Shipyards, to keep their lucrative contract, did some rapid redesign to equip each *Flammarion* with sufficient weapons and shields to make them combat-worthy, hence keeping them in Star Fleet's inventory. The Mark III *Flammarion*, strengthened, up-engined, bumped up to the next tonnage class and given more than twice the original armament, has now entered service. While it is in no way a warship, it has sufficient phaser power to pose a threat to any attacker approaching from any angle at close range. In addition some cargo space has been sacrificed to allow each vessel to carry a sizable contingent of Federation Marines complete with vehicles and their own armed shuttlecraft, sufficient to deal with threats on the ground as well as any boarding attempt.

The redesign has met with Star Fleet's approval, and older models of the ship are being converted at Aldebaran, Sol and Alpha Centauri shipyards as fast as they come in. For every new Mk. III Themis builds, four old ones are upgraded to Mk. III status. The combined production rate of new and rebuilt ships is 6 a year.

Of the 269 *Flammarions* built (including 112 Mk. IIs, almost identical to the Mk. Is), 231 remain in service. Of the remainder, 10 were transferred to the SFIC, 7 were lost in operation to various causes, 3 were lost to hostile vessels, and 5 were lost for unknown reasons — disappeared in transit, or while doing non-hazardous research, with no surviving clues — 2 were scrapped, and 11 were sold to the private sector.

Because of the advanced computer system and their similarity to other Star Fleet vessels, none of these *Flammarions* were sold to interests outside the Federation.

Flammarion Class design by J. M. Kuzee and Pete Rogan.

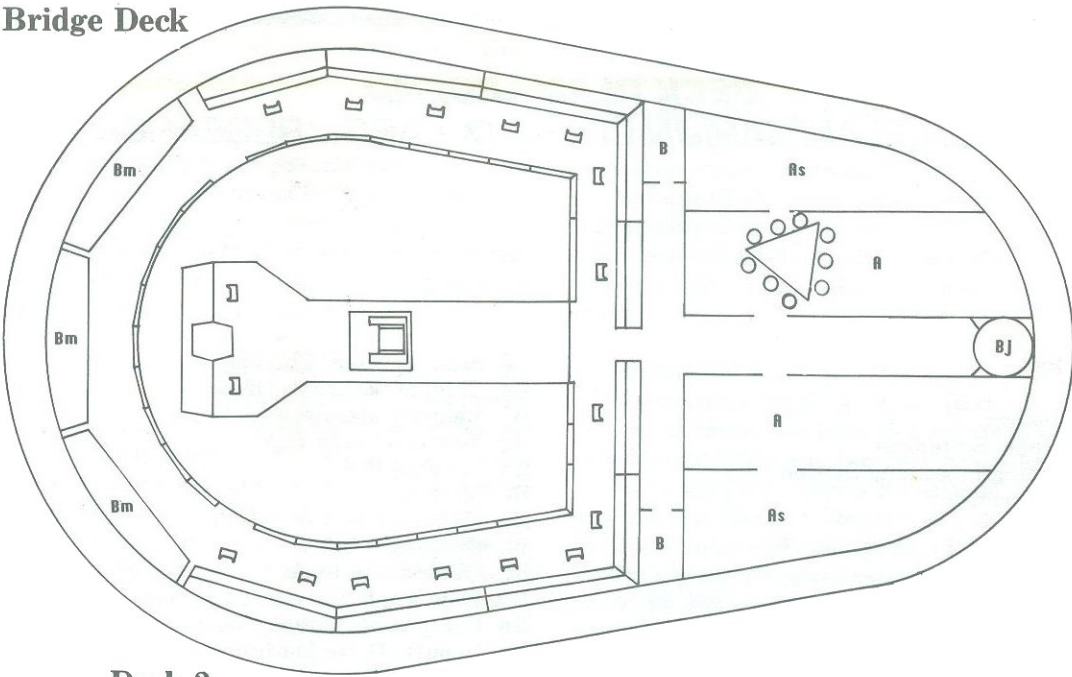


DECK PLAN LEGEND

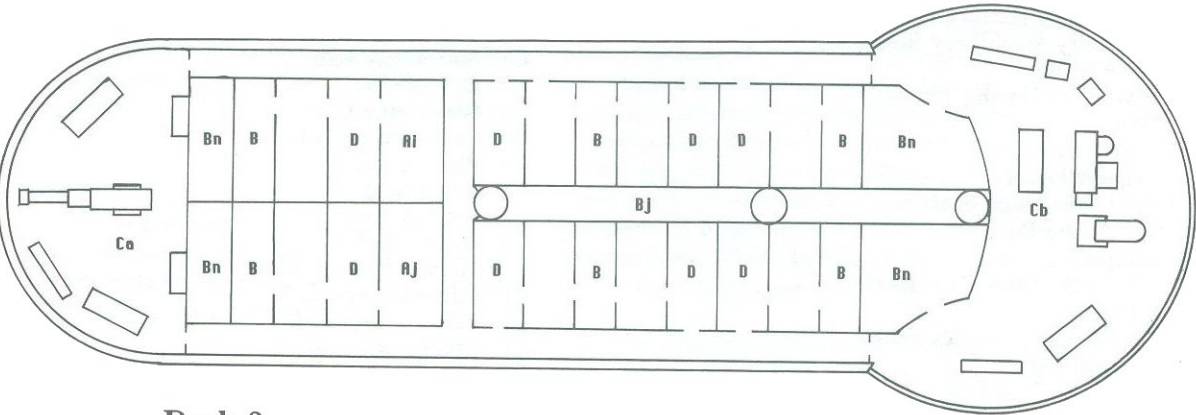
FEDERATION *FLAMMARION* CLASS IX LARGE RESEARCH VESSEL

A Briefing Room	Bd Security Area/ Checkpoint
B Head	Be Chief of Security's Office
C Officer's Lounge	Bf Weapons Maintenance Shops
D Officer's Single Stateroom	Bg Weapons Cargo Holds
E Water Pumping/Processing Station	Bh Landing Pad
F Single Stateroom	Bi Shuttle
G Double Stateroom	Bj Elevator/Elevator Shafts
H Storage	Bk Chaplain's Office
I Enlisted Lounge	Bl Observation Deck
J Emergency Standard Gasses Room	Bm Wide Angle Viewscreen
K Air Conditioning Machinery Room	Bn Equipment Storage
L Circuit Breaker and Switching Room	Bo Impulse Drive Machinery
M Phaser Bank	Bp Cargo Hold
N Fire Control Station	Bq Deflector Systems
O Emergency Battery Room	Br Air Conditioning Vent Systems
P Auxiliary Machinery Room	Bs Marine Parade Ground/Exercise Area
Q Mess Room	Ca Astronomy Lab
R Power and Wiring Trunk	Cb Energy Lab
S Gym	Cc Geography Lab
T Recreation Area	Cd Cartography Lab
U Privacy Room	Ce Physics Lab
V Food Processing Station	Cf Xenobiology Lab
W Vid Phone Booths	Cg Zoology Lab
X Chapel	Ch Botany Lab
Y 6-Man Standard Transporter	Ci Marine Biology Lab
Z Library	Cj Micro-Biology Lab
Aa Operating Room (Medical)	Ck Paleontology Lab
Ab Medical Lab	Cl Archeology Lab
Ac Intensive Care Unit	Cm Anthropology Lab
Ad Medical Research Lab	Cn Historonics Lab
Ae Observation Units (Medical)	Co Linguistics Lab
Af General Utility Room	Cp Cryptography Lab
Ag Doctor's Office	Cq Geology Lab
Ah Chief Medical Officer's Office	Cr Meteorology Lab
Ai Captain's Office	Cs Metallurgy Lab
Aj First Officer's Office	Ct Astrophysics Lab
Ak Chief Navigator's Office	Cu Robotics Lab
Al Convalescent Care Rooms	Cv Cybernetics Lab
Am Ship's Computer & Emergency Bridge	Cw Electronics Lab
An Engineering Compartments	Cx Micro-Electronics Lab
Ao Engineering Maintenance Shops	Cy Chemistry Lab
Ap Engineering Computer	Cz Bio-Chemistry Lab
Aq Elevator Maintenance	Da Radiation Lab
Ar Medical Research Library	Db Isotope Lab
As Ship's Computer	Dc Computer Science/Artificial Intelligence Lab
At Ship's Laundry	Dd Natural Habitat Simulators
Au Basic Food Processing Facility	De Natural Habitat Simulators (Marine)
Av Supply Conveyor	Df Environmental Maintenance Equipment
Aw Emergency 25-man Transporter	Dg Munitions Lab
Ax Cargo/Troop/Vehicle Transporter	Dh Probe Data Receiving Station
Ay Cargo Elevator	Di Chemistry Storage
Az Brig Area	Dj Metal Storage
Ba Marine Squad Bay	Dk Paleontology Storage
Bb Squad/Small Arms Armory	Di Archeology Storage
Bc Main Armory	Dm Biology Storage

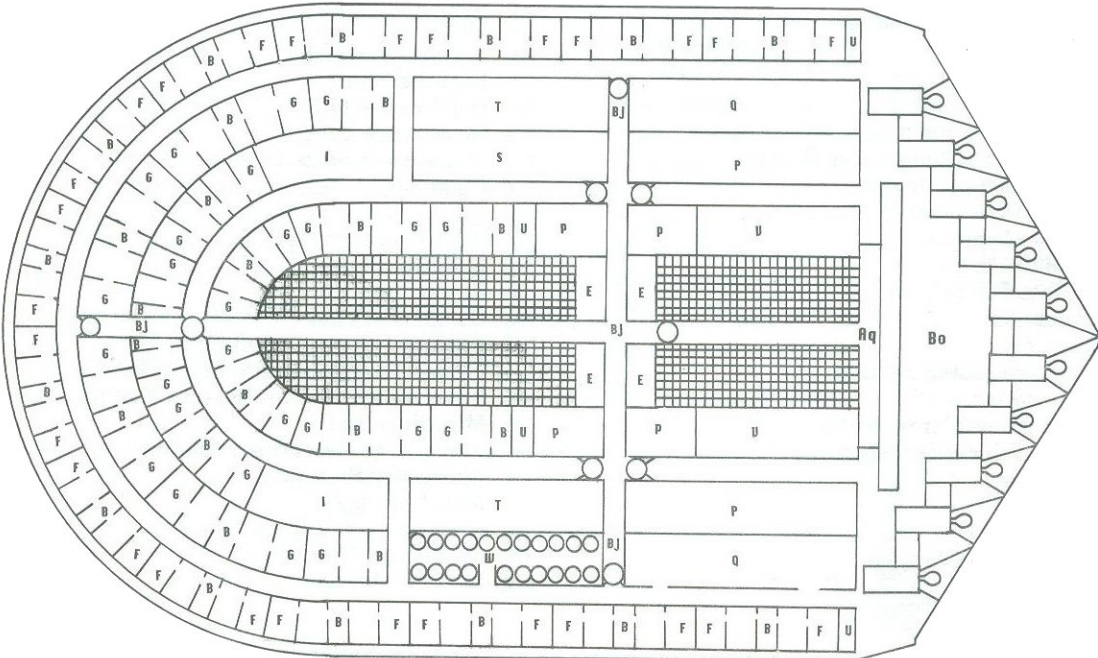
Bridge Deck



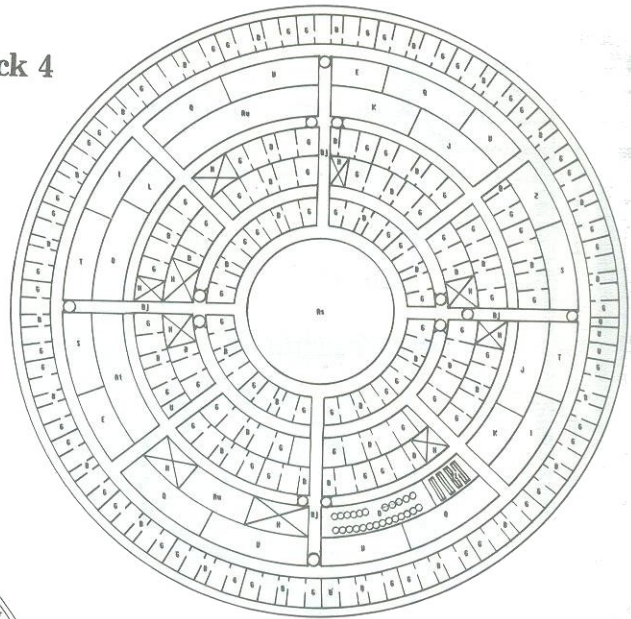
Deck 2
Sr. Officer's Quarters



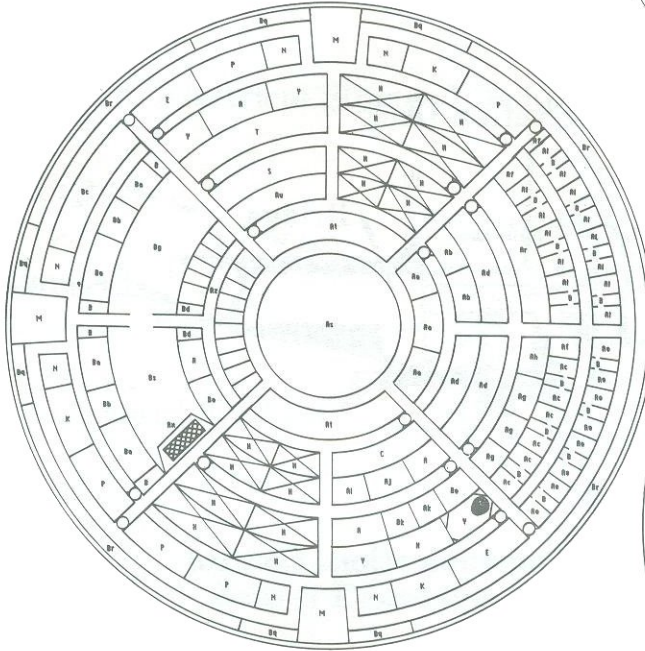
Deck 3
Jr. Officer's/Enlisted Quarters



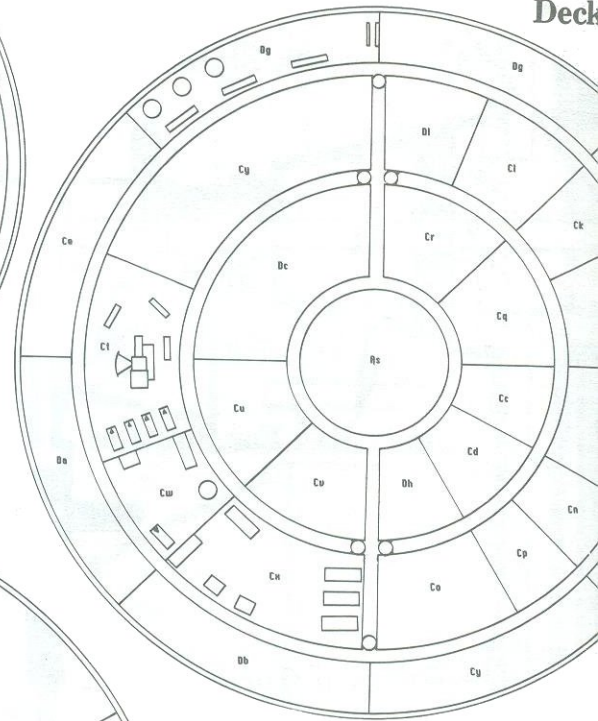
Deck 4



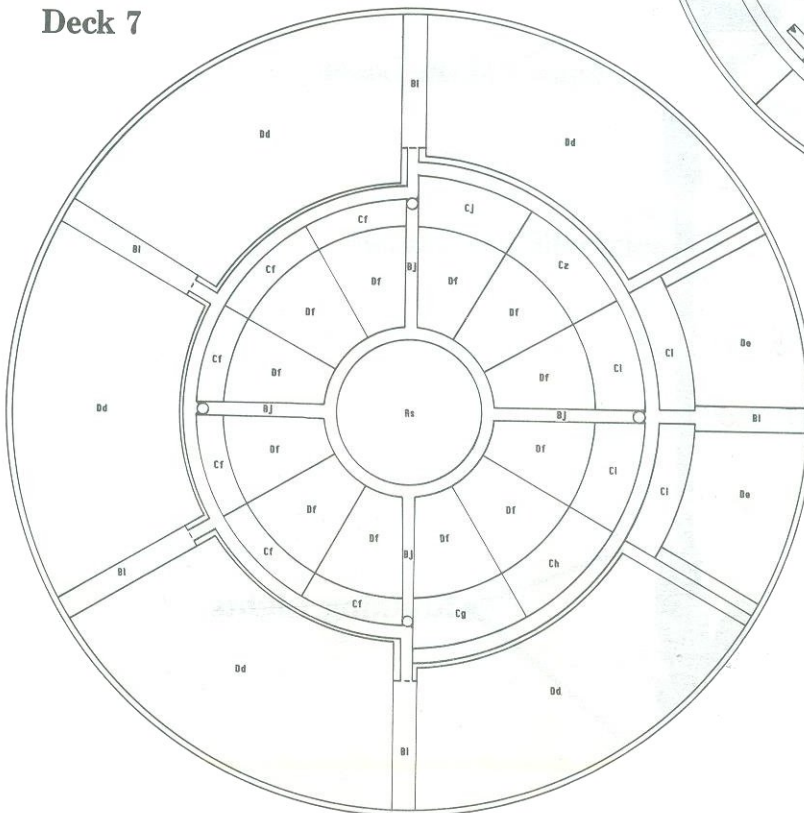
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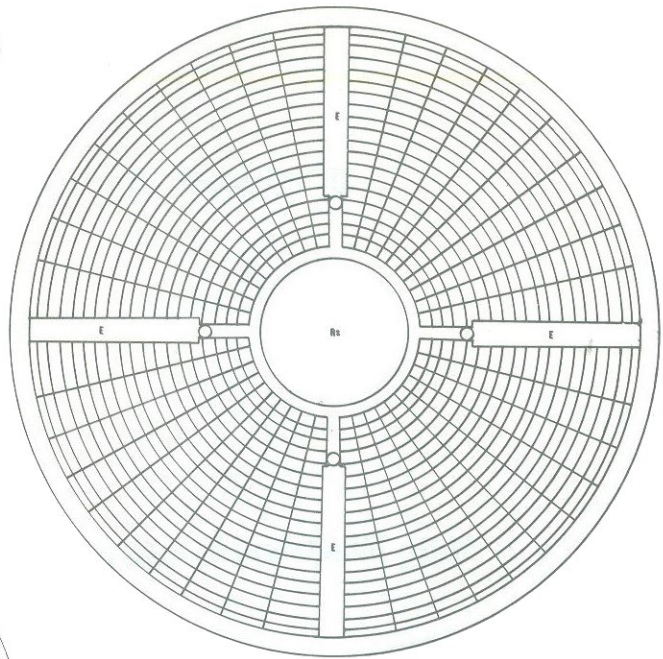
Deck



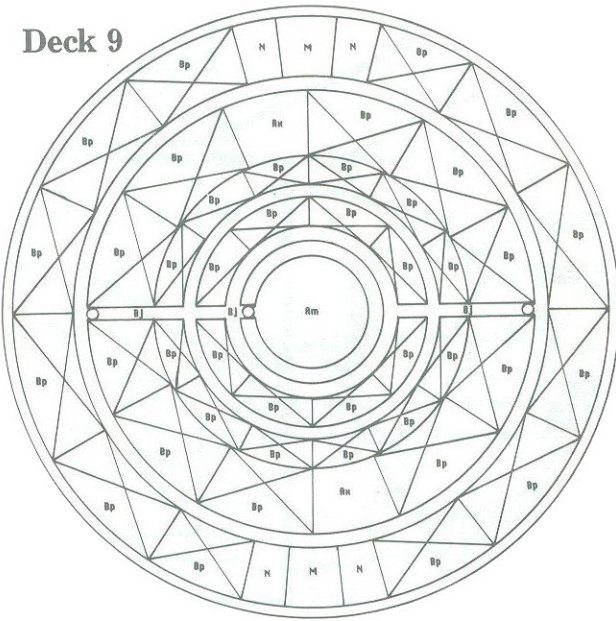
Deck 7



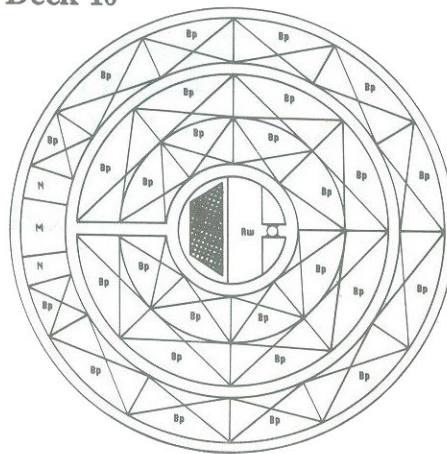
Deck 8



Deck 9



Deck 10



Deck 11

