0-hr

ARMADA CODEX™

CRUCIBLE

PROCESSING STATION

Ryan Wolfe

01:05

Crucible

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Seizing upon a singular opportunity to defeat our ancient foes, a secret signal called all loyal Terran starships and crew to the very heart of enemy power at a precisely coordinated moment. Here, in the Zero Hour Engagement, the enemy was broken and humanity won a reprieve from extinction. The names of those brave citizens who answered the call are immortalized across countless annals and monuments. It is the purpose of this codex to enumerate the valiant starships of the zero hour armada so that they too may never be forgotten.

0 hr: Crucible

by Ryan Wolfe of *0 hr: art & technology*
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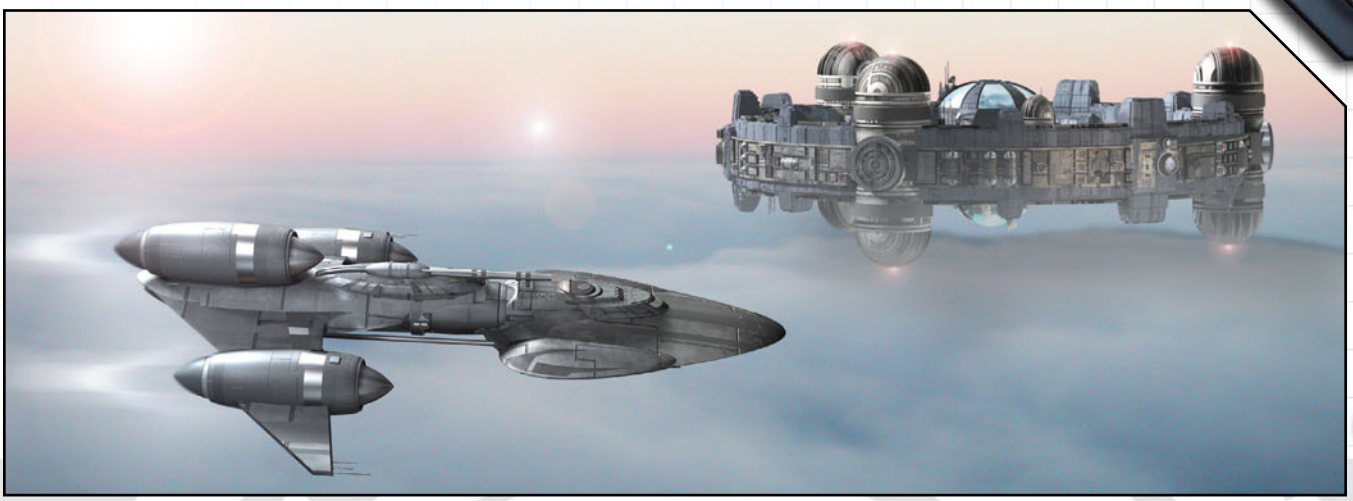


Overview

The Crucible-class, produced by Aves Engineering, is typically referred to as a station rather than a ship though a case could be made for either label. The craft has all of the systems and most of the capabilities of a starship of similar size. But it is ring shaped, rotates, and cannot make planetfall. It is also very slow – being designed to move into place and then remain in that location or orbit for a long period of time. In the end, the label more describes the purpose, rather than the capabilities, of the vessel.

Likewise, the Crucible-class gets its name from the function of the initial designs. Two plans were developed in parallel: the first a material processing plant and the second a personnel training facility. Though very different in purpose, both are tasked with transforming raw material into something greater (ore into metal, or raw recruits into trained officers) while removing that which is worthless or unfit.

Though the maps are the same, the equipment and facilities on board are customized at construction to the job at hand. One Crucible-class station could be an ore smelter removing Dark Metal (a Neutronium precursor composed of an exotic mix of normal and non-baryonic matter) from solid chunks of stellar debris. Another could be a gas mining operation sifting valuable He-3 from the atmosphere of a gas giant, or condensing Hydrogen from a nebula in deep space.

At the other end of the spectrum, this type of station is also well suited to be used as a training facility for the public or private sector. One could be deployed near the front lines as an elite military academy. A similar station could be a semi-mobile business hub for a corporation or crime syndicate. Such a facility could also be an interstellar "rest stop" with rooms and fuel for those passing through. In these cases the industrial sector is just used to keep the station perpetually fueled (pulling a trickle of Hydrogen from the interstellar medium) – with any surplus being exported or sold.

The "Darkforge" ore processing facility over Hoshiko V.

The ConFederation academy "Lyceum III" near Chandra.

Components

Another eye-catching design from Aves Engineering, the Crucible-class is not a large station but it can support many different roles. Though the aesthetic is a throwback to earlier times the station is built using thoroughly modern construction techniques. Likewise, it is equipped with all of the amenities one would expect in a vessel fresh out of the shipyard.

The shape of the Crucible design is an homage to the early days of space colonization when stations were often wheel shaped and rotated to simulate gravity. However, the nostalgia only goes so far and modern technology is also used in the design to keep costs and comfort within reasonable parameters.

It is important to note that the simulated gravity in the ring section is oriented with "down" being towards the outside surface of the ring. Centrifugal force is used to "prime" the grav plating in the ring – meaning the generators here only have to amplify an existing field rather than establish one from scratch. This set up is also very efficient – allowing the station to go for extended periods without refueling.

The hub, however, has "down" oriented towards the logical bottom of the station. This means that the hub has a different down than the ring areas. In fact, the gravitic systems in the hub have to cancel out the small centrifugal force there in addition to creating an artificial field.

A transit sphere system is used to ease the transition between these areas of differing orientation. Each sphere has its own low gravity field that keeps the bottom of the chamber feeling like "down" even though the sphere itself rotates through 90 degrees as it moves along the transit tube from ring to hub or vice versa. The rotation is detectable to those inside but is not generally disorienting.

One may wonder why rotation alone is not used to simulate gravity in the ring sections. This is because the small circumference of the station would mandate a very high rotational speed to achieve a significant force and such speeds would be nausea inducing to those on board. Without artificial enhancement the centrifugal force in the ring while rotating is less than one tenth of standard Earth gravity.

The station could function normally without rotating, and could even maintain proper interior orientation while near a planetary surface, but energy consumption is an order of magnitude higher during these periods. The station is not designed for planetary landings, though it can hover and maneuver very close to the surface using its gravitic systems. As expected, this also puts a heavy strain on the station's power systems and so such close passes are kept short when possible.

To support these occasionally necessary expenditures, as well as the demands of the industrial processing facilities, the Crucible-class station is equipped with a high capacity power generation system. The large primary fusion reactor has an impressive layout with an exposed core design utilizing gravitic containment. This is another example of the form over function approach that has become a hallmark of recent years. Post-war prosperity and optimism has encouraged many shipwrights to push technological boundaries and bring aesthetics to the forefront of their art. Many have also discovered that impressive looking designs sell far better than similar craft with less interesting visual appeal.

Due to its limited mobility, the Crucible class gets low marks in speed, maneuverability, and atmospheric performance. Its high rating in durability is due to its size and solid construction.

By default, the Crucible-class does not have a Faster-Than-Light system installed. Instead the station relies on jump gates or transport ships for long distance travel. Station architecture is designed to accommodate such a system - it is simply a matter of cost and construction time. Given the mission profile for most of these stations the FTL drive is provided as an upgrade rather than standard equipment. Adding an FTL system would bump the cost of the station into the next category.

Typical armament on a Crucible-class station is mainly defensive and is supplemented by a suite of electronic counter-measures. There are launch tubes scattered around the circumference of the ring to accommodate a small selection of missiles, drones, and ECM decoys. Turrets, fixed emplacements, and additional missile tubes can be added – and commonly are for stations deployed in war zones or high-crime areas.

It should be noted that the station does not have any sort of shuttle bay or hangar facilities. There are three points on the ring where shuttles or other craft may dock. In addition, there is an extendable docking tube at the top of hub where a larger ship could connect. Regardless, it is expected that visiting ships attach to the station only for loading and unloading, and then remain parked nearby while those onboard the facility take care of business.

Optional missile emplacements and plasma gun turrets.

Emergency hub separation

In the event of a fatal attack or catastrophic failure, the hub is capable of separating from the ring. Each of the three spokes joining it to the ring can be explosively severed near their mid-way point while the fusion reactor is vented to provide crude thrust for the hub.

Depending on where the fatal damage has occurred, all personnel would move to either the hub or the ring. The two parts would then be separated and the now uninhabited section left to its demise while the intact portion (hub or ring) drifted clear to await rescue. Depending on the situation a separated hub or ring could remain habitable for two to four weeks, though functioning as little more than a giant life boat during this time.

The aforementioned transit spheres can also serve as life boats. Licensed from Sendai Corp., this is the same system found in the larger Argos stations. Each Crucible holds a dozen such spheres, four in each spoke (and programmed to move to one side or the other in the event of hub separation).

CRUCIBLE

Classification	space station
Origin	Confederation of Terra
Registration	commercial or military
Dimensions	272 x 272 x 108 ft. (LWH)

Register Tonnage	11,946
Cargo Capacity	1000 register tons
Standard Crew	24
Passenger Capacity	80

Notes

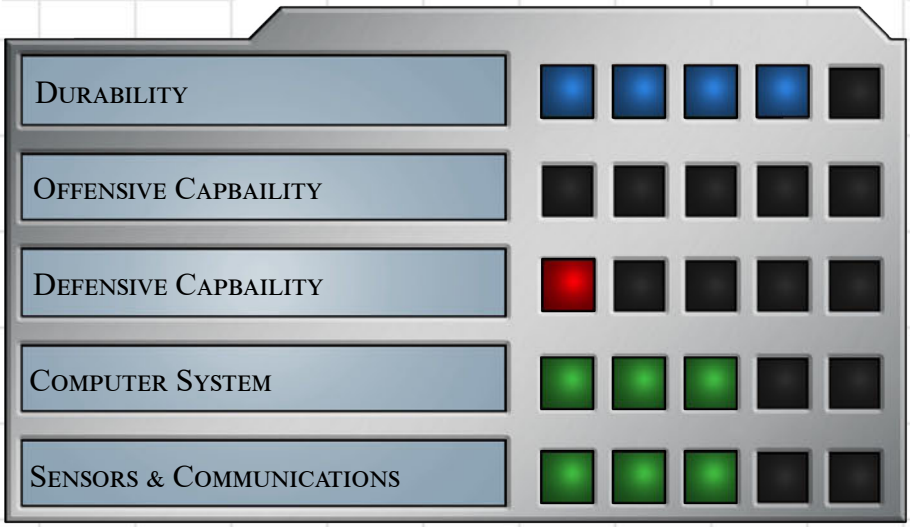
- Configured at construction for specific processing duties
- Extended mission profile
- Cannot land
- No vehicles carried

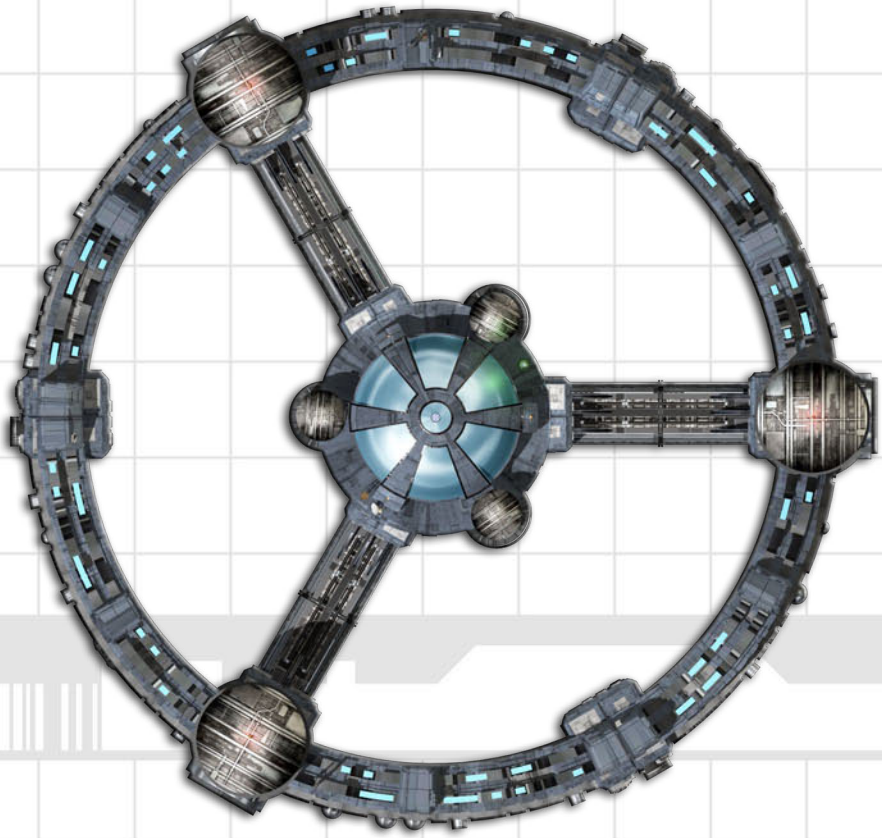
Default Armament

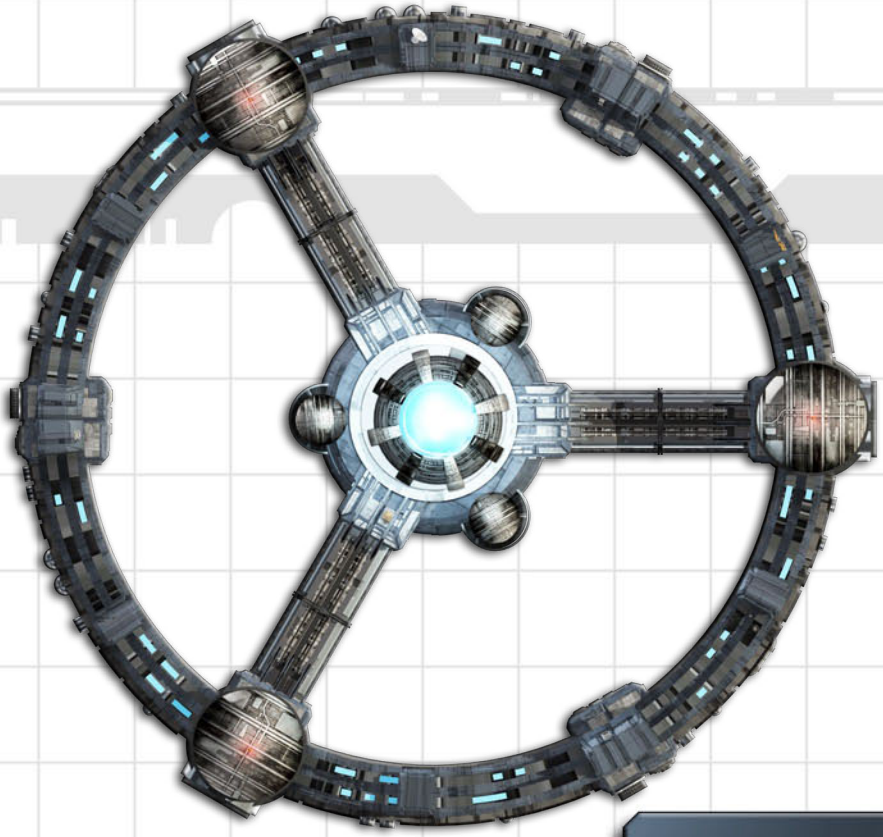
- Three internal missile tubes
  12 missiles total
  mix of explosive, drones, and ECM

Common Options

- Plasma gun turrets
- External missile emplacements
- FTL jump drive







60 ft

Interior Areas

The habitable area within the station can be broadly divided between the central hub and the encircling ring. The ring is further divided into three sectors with a repeating structure. Spokes join each sector to the hub, but these spokes do not contain any habitable space except for the transit spheres contained within their tubes (like elevators within shafts).

Hub: Overview

The central hub of the station contains several critical systems. The power core and bridge are here as well as important medical and support facilities. It is both the hub and the heart of the station.

Hub: Upper Level

1. Grand Dome

The upper section of the hub is a single chamber beneath the huge dome that forms the top of the station. Massive over-arching windows provide an expansive view of the surrounding space. The interior of the dome is decorated in subdued earth tones transitioning to muted blues and greys higher up. The floor is covered in luxurious artificial grass. Combined with the careful lighting, which varies over a 24 hour cycle, this great space is reminiscent of a manicured urban park, complete with outdoor café and amphitheater.

2. Outside Café

Coming up the wide, curved stairs from the mid level, one sees immediately before them a number of tables scattered across this section of lawn. This café is actually just a fancy cafeteria, but it is definitely the most pleasant place to dine on the station. This is where all station personnel (crew, workers, and/or students) eat their meals in shifts, ensuring that everyone gets to spend some time each day in the wide open space of the Dome. A storage room nearby holds the supplies needed to maintain the café as well as grounds keeping gear.

3. Inside Café

In the center of the circular park is a smaller, though still quite large, dome made of polished synthetic stone. This is additional dining space with an interior décor of stone tile and artificial candle light. Diamond-paned windows allow in additional light from outside.

A lift tube column runs through the center of this circular dining room, continuing down through the kitchen to the bridge and up through the ceiling and out the top of the Grand Dome. At the upper end of the shaft is a pressure hatch and universal coupling mechanism. This apparatus allows larger ships to dock atop the hub rather than on the ring (where the additional mass could unbalance the rotation).

A single, magnetically-levitated disk moves between the four destinations and there are also hand holds recessed into the wall for emergency access. In addition to providing VIP visitors with direct access to the bridge it is the primary means of moving food and wait staff between the café and the kitchen directly below.

A second, smaller, column is set into the wall of the dining area. This low tech tube contains a ladder leading down to the kitchen and bridge and then even further down to engineering. It does not lead any further upwards from here. Though there are several control surfaces and diagnostic systems set into the walls of this service tube, it is only used in emergencies or when one is too impatient to wait for the lift.

4. Lyceum

At the other side of the circular park, opposite the café, is an amphitheater focused upon a central podium. This open air academy is used to present lectures and other presentations. Wall screens behind the retractable podium allow for the viewing of educational information or entertainment videos as well. The room clockwise from the podium (towards the stairs) is the storage area for this unique classroom, and also holds emergency equipment.

5. Park

The remaining area beneath the dome is purposefully undeveloped. It provides an expanse of empty lawn for relaxation and recreation. The alcove in this section holds a pair of vending machines filled with snacks and beverages.

Hub: Middle Level

The middle level of the hub is tall enough that many areas have a second story room above them. These are typically accessed by stairs. In areas without such an upper level, the ceiling is quite high, which helps to alleviate what could otherwise be a claustrophobic area.

At three points around this circular level are transit sphere access points (fancy, spherical elevators) that carry crew back and forth from the hub to the ring. Above and parallel to each transit tube is a zero-G crawlway for use in emergencies.

6. Bridge

The heart of any Crucible-class outpost, this circular chamber has seated workstations for three crew members plus a raised command console for the officer in charge. The front wall of the room sports a huge, curved, display screen.

All major systems can be monitored and controlled from this nerve center. A lift column cuts through the center of the room, leading up to the kitchen, café, and docking hatch at the top of the dome beyond that. Engineering is directly below, accessible via ladder.

7. Medical – Recovery

The station's sick bay is divided between two rooms. This one on the lower level is used for pre-op preparation and post-op

Cerulean Syndicatus hideout near the Charybdis Singularity.

recovery as well as a general ward for the sick or injured. In addition to three beds there is a desk and workstation for the doctor on duty.

8. Captain's Office
The captain is afforded a spacious office appointed with a large desk, wall screen, and comfortable seating for guests. The desk has a built in control surface and rise-up video screen – both activated with the touch of a button.

The transit stop between this office and medical leads to Sector 3.

9. Ready Room
Near the captain's office and bridge is a conference room reserved for mission briefings and other station business. The large table seats ten and has a holographic projection ring built into the center. A trio of video monitors are also available for data display. A small beverage and supply station rounds out the room.

10. Restroom Hall
This hall has individual toilet facilities along one side and lockers along the other. The restrooms can also serve as shower stalls, though they are seldom used as such. The lockers are not for personal use and contain a wide variety of items, from cleaning supplies to emergency gear, to small arms and ammo. All are secured and accessible only by those in the proper department.

Long stairways near here lead up to the Grand Dome and down to engineering. Both stairways can be sealed off with pressure doors but are open by default.

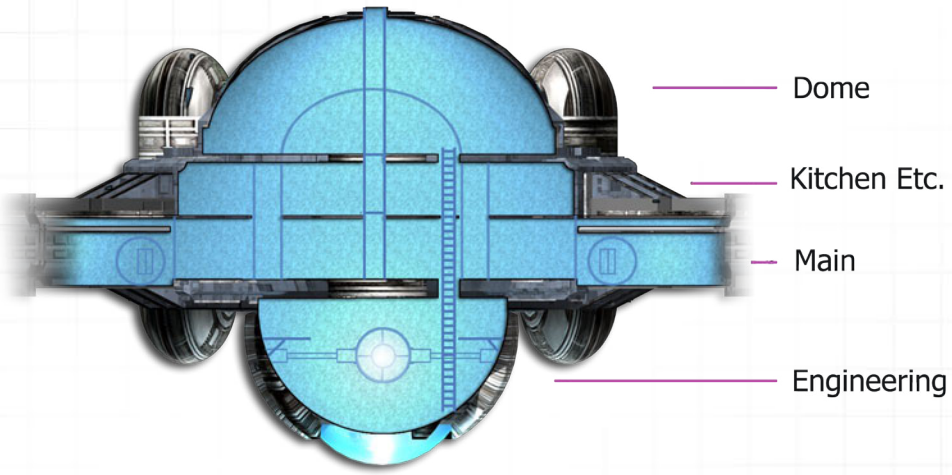
11. Foyer
This high ceilinged area is the center of the station. It is where guests are welcomed and tours begin. The transit stop here leads to Sector 1. The walls on either side are decorated with artistic renderings of station schematics and notable events. Directly opposite is the bridge. When facing the bridge, stairs on the left lead up to the surgery bay and identical stairs on the right lead up to the administration area above the restroom hall.

12. Surgery Bay
The upper half of the medical complex is a single-patient surgery bay. Patients are brought here via a lift from the lower floor. The lift and the wide doors are designed for gurneys. There is a second entrance to the surgery bay at the far end. From there, stairs curve down to the foyer. When not being used for surgery, the room doubles as a basic science lab.

13. Station Operations
The personnel in this room are tasked with handing the administrative duties associated with the station itself as opposed to whatever corporation or academy is in residence. They handle duty rosters and payroll for station crew, as well as cargo, fuel, and maintenance records. There are two dedicated workstations for administration plus a desk reserved for the station's Executive Officer.

14. Kitchen
Sandwiched between the bridge and the café is a large, low-ceilinged kitchen. It contains a traditional stove and oven setup as well as modern rehydration and heating units. An automated dish sterilization and storage units makes cleaning up a breeze. Place settings, cooking supplies, and food stores are kept in the nearby pantry with new goods brought up from the cargo bay as needed.

There are two additional rooms adjacent to the kitchen, accessible across a short catwalk. On the left is an open office space used by the station's quartermaster. It is also accessible via stairs from the main level and is often packed with cargo crates and other excess inventory. The chamber on the right is the aforementioned pantry. It is filled with foodstuffs and cooking supplies. It is also accessible from the mid level of the hub by a small lift (to facilitate moving food crates) and also contains a pair of refrigerated food storage areas.

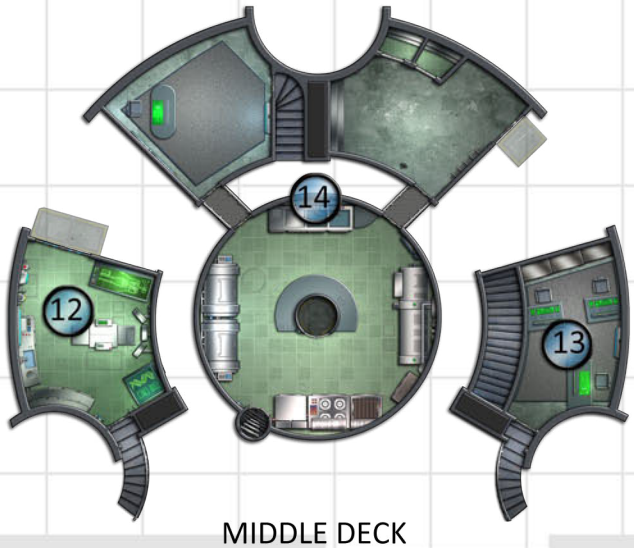


Hub: Lower Level

15. Engineering
The lowest section of the hub is an inverted dome-shaped structure housing the station's fusion reactor. Gravity is light in this area, though still oriented to match the hub levels above. The reactor is a blindingly bright blue-white sphere suspended in the center of the chamber, connected by spoke-like conduits to the surrounding walls.

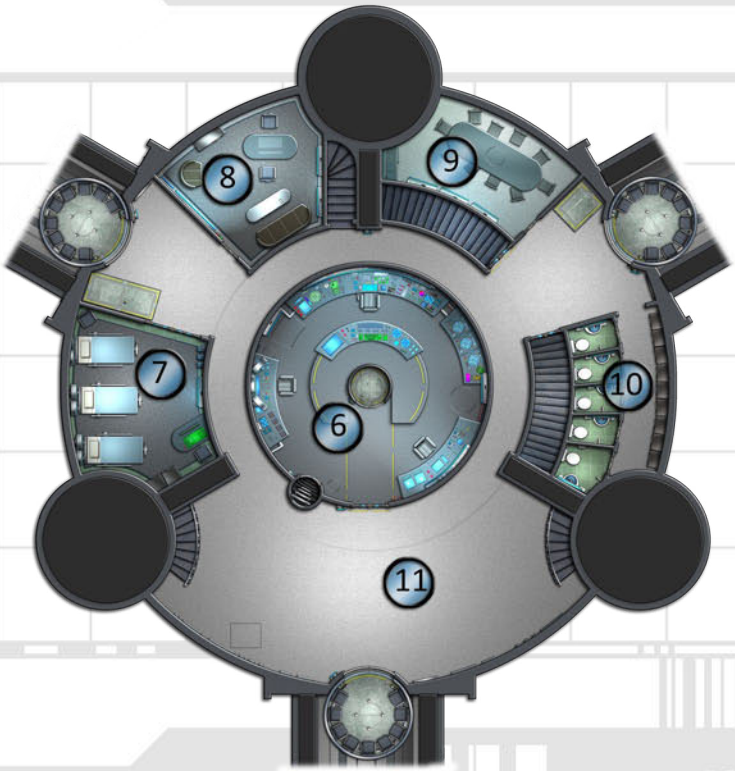
A circular balcony runs along the circumference of the chamber, providing access to various control surfaces and diagnostic equipment. Both stairs and a ladder provide access from the middle level, and a second ladder extends down into the dome for easier maintenance.

UPPER DECK



MIDDLE DECK

LOWER DECK



HUB

1. Grand Dome
2. Outside Cafe
3. Inside Cafe
4. Lyceum
5. Park
6. Bridge
7. Medical - Recovery
8. Captain's Office
9. Ready Room
10. Restroom Hall
11. Foyer
12. Surgery Bay
13. Station Operations
14. Kitchen
15. Engineering

Ring: Sector 1

Sector 1 contains crew cabins and a large cargo bay. The specific areas are detailed below.

16. Transit Tube 1
The set of large elevator-like doors set into the wide column at the center of this circular area allows access to the station's Transit Tube system. The spherical chamber inside has seating for nine people and standing room for several more. Every half minute or so the doors close and the transit sphere whisks silently along its tube to arrive at the station's hub. There is only one destination: the hub foyer area.

The tube houses a pair of active transit spheres which run in a simple circuit back and forth between the hub and this stop. An additional pair is kept off line for use in emergencies. Note that is it not possible to take a sphere from one sector to another as the transit tubes do not run around the circumference of the ring or meet up in the hub.

It also possible to traverse the spoke via a series of narrow service crawlways that run along side the transit tubes. These are generally kept at zero G for easier use but are off limits except to maintenance personnel. The crawlways are entered by opening designated wall panels adjacent to the transit stop.

17. Testing Center
Separated from the transit stop by a curved glass wall is a quiet waiting area. A large receptionist desk is flanked by impressive wall screens which display various schedules, curriculum, and testing results. This is a center for computerized evaluation and training. To either side are isolated rooms with individual testing stations. The workstations have configurable control surfaces and pseudo 3D displays to facilitate the simulation of various subjects and situations. Beneath the workstations VR gear is available for more immersive sessions.

When at battlestations, this area converts into a strategic command center. The wall screens become tactical displays and the workstations gunnery controls for the remote turrets.

18. Pump Room
This dank chamber provides access to, and control of, the industrial equipment associated with the large storage tanks on either side of the transit stop and testing areas. There are three pump rooms, one in each sector. All three perform a similar function for their respective storage tanks.

A small storage room adjacent to each pump room holds the tools and equipment necessary to keep everything in working order. On the other side of the Sector 1 pump room is a closet containing HazMat suits and another storage room – this one with shelves and cabinets filled with cleaning supplies and other sundries.

19. Individual Cabins
The staterooms in this section of the station are reserved for high ranking officers and administrators as well as important guests. Each cabin has a private restroom designed with a built in shower. This is generally a low traffic area as one end abuts the cargo bay, which has restricted access.

There are eight cabins on this side of the cargo bay - four on the lower level and four above, with spiral staircase between. There is also a laundry room on each level. Each of these chambers holds a large laundry processing machine and is typically hot and humid. Shelves and lockers store extra bedding and supplies.

Across from the laundry on the lower level is a conference room containing a holo projection table with seating for eight and a wall sized video display. The matching room on the upper level has an additional couch instead of the conference table and is used as a lounge.

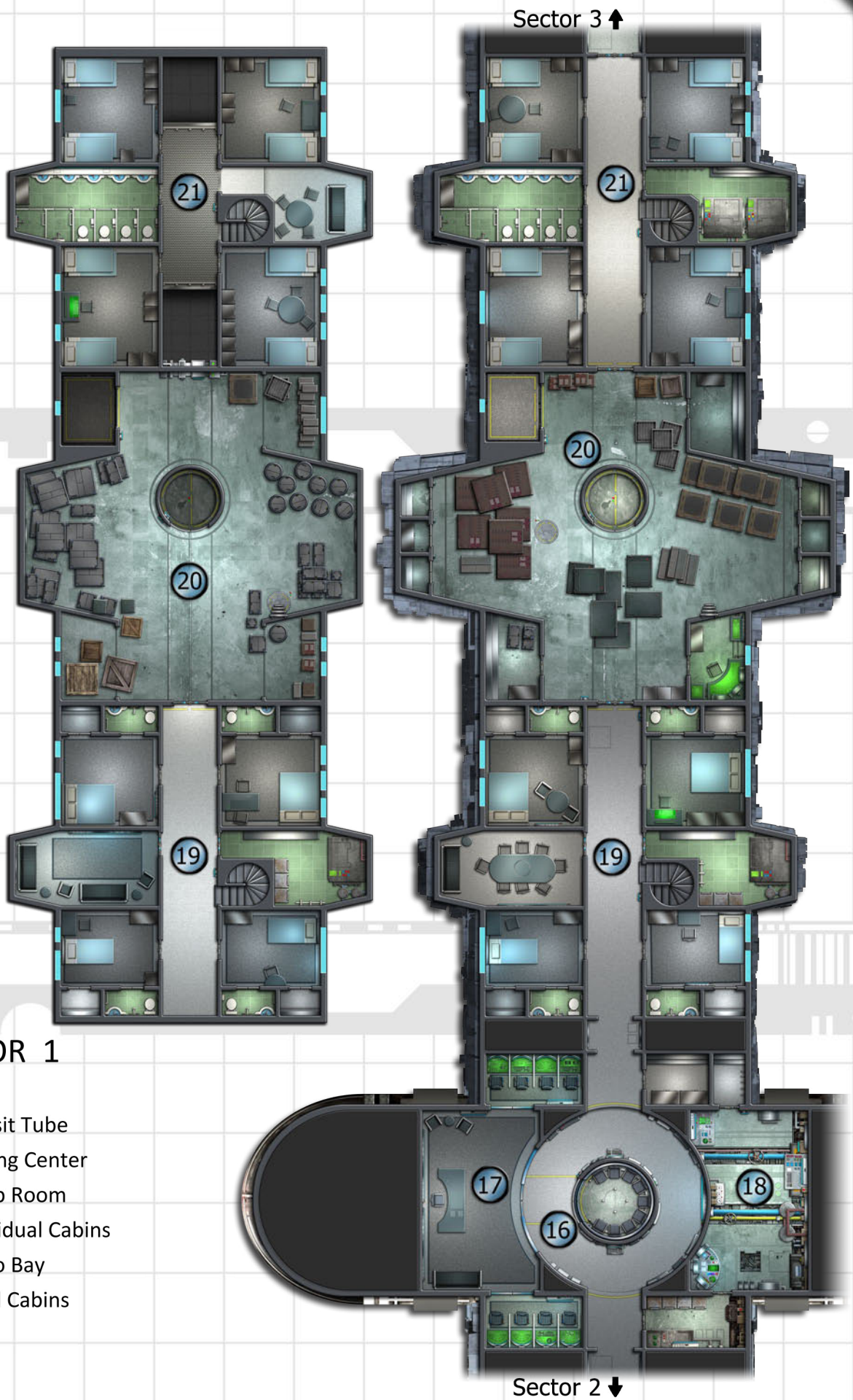
20. Cargo Bay
Though small amounts of cargo is stored in various places throughout the station, this is the only dedicated bay. It is a two level affair with additional storage vaults on the lower level. A pair of storage rooms and an inventory control center / office can also be found on that level. In contrast, the upper level is a single large chamber. The ceiling height in both levels is approximately 12 feet as most of the intervening systems have been rerouted to maximize storage space.

A circular column runs through both levels of the cargo bay. This tube is an air lock which can open to space on the exterior side of the ring. This is to facilitate loading cargo directly from docked ships (though docking with a rotating ring can be tricky). The tube is not a lift but is instead generally kept a zero G. This makes it easy to move cargo from one level to the next and also avoids potential problems with orientation mismatch with respect to docked vessels.

A second, smaller hatch is set into the floor near the column. This pressure hatch opens directly to space and so is only usable if a ship or shuttle is docked on the far side. There is a standard rectangular cargo lift in one corner of the bay and a ladder between the levels of the cargo bay as well.

21. Quad Cabins
On the far side of the cargo bay is another set of cabins. These are designed to house four crew members in each room. The occupants are typically mid-level personnel who do not belong in the dormitories but do not rate a private cabin. There are four cabins on each level as well as a shared bathroom with showers. Some stations gender segregate these facilities and some do not.

The lower level has a laundry facility similar to the one on the far side of the sector but with two cleaning machines wedged into the space. On the upper level is a lounge with a table, couch, and wall screen. The floor of the upper hallway is a steel mesh with a balcony overlooking the lower passage at each end. This opens the space up somewhat, making it less claustrophobic than similar areas elsewhere. Beyond this area is the transit stop for Sector 3 and then the rec center.



SECTOR 1

16. Transit Tube
17. Testing Center
18. Pump Room
19. Individual Cabins
20. Cargo Bay
21. Quad Cabins

Ring: Sector 2

This third of the ring holds high density quarters and the primary industrial apparatus of the station.

22. Transit Tube 2
This circular chamber is very similar in form and function to the transit stops found in Sectors 1 and 3. It is a larger, though noisier, space than the other stops because it is open to the nearby lounge.

On the hub side, this transit sphere arrives next to the medical complex. Off the bottom of the map is the business and administration area at the top of Sector 3.

23. Pump Room
The Sector 3 pump room is the same as the other two in the ring though slightly shabbier. The floor is stained due to intermittent drips from the overhead pipes and there is a persistent rattle from an indeterminate location beneath the floors.

The storage room is also very similar to the others, containing lockers filled with tools and parts, plus some extra diagnostic equipment

24. Lounge
The area opposite the transit tube doors is a large lounge area provided for the general population. There are several couches, a wall screen, a pair of vending machines, and a self-serve beverage station. An alcove to one side holds a trio of public terminals and a few lockers filled with games and entertainment gear. As with many of the shared public resources on the station, time on the terminals is reserved and rationed using an automated scheduling system.

25. Armory
The station armory is split into two small storage rooms – one on either side of the main hallway – situated close to the dormitories to allow for easy access in the event of an emergency. Inside each room are racks of rifles, cabinets holding small arms and ammo, and a computerized inventory system. The armory is kept locked when not in use and is closely monitored by a pair of officers when open.

26. Dormitories
The bulk of station personnel, whether they be students or low grade workers, live in these crowded rooms. Each cabin holds eight beds and lockers with barely enough room to walk between. There are four such cabins on each of the two levels, yielding a total population of sixty four in this half of the sector.

Each level has a shared restroom on one side and showers on the other. The restrooms and cabins will generally be gender segregated unless the station population is heavily skewed one way or the other.

The floor of the upper level hallway is a metal grate, allowing a restricted view of the hallway below. Unfortunately it also allows noise, both from the dense population and the adjacent industrial section, to easily spread through the shared space.

27. Control Room
The purpose of this chamber is to monitor and control the various processes of the industrial sector. The computers here provide a high level overview of the goings but there are many more diagnostic centers and controls scattered throughout the subsector. A single engineer is stationed here at all times.

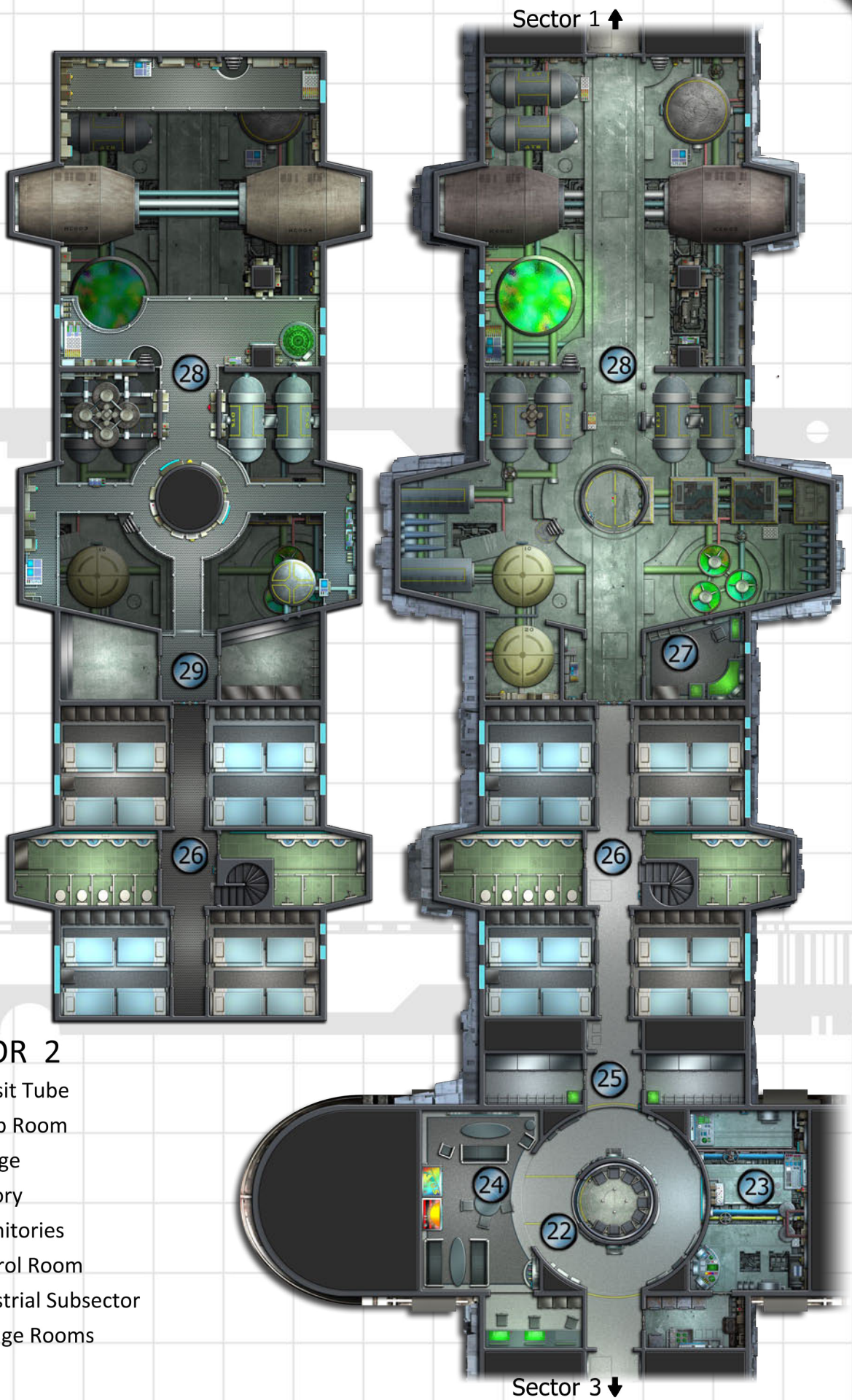
28. Industrial Subsector
Half of Sector 2 is taken up by massive processing facilities. These can either be the main focus of the station or a minor secondary function. Whatever the case, the facilities here are installed at construction time so changing from one purpose to another (for example, from ore processing to gas mining) requires a major refit.

Whatever the specific transformation, the facility is designed to take materials from outside the station, run them through several processing stages, and store the resulting products for export or expulsion. Material can be input from cargo shuttles or larger ships using either of the external hatches in this section. Alternatively, there are external vents and collectors situated around the ring which can route materials to this subsector. Waste materials can be expelled in a similar manner while refined materials are off-loaded or sent to the large tanks between each sector.

A thick column runs floor to ceiling near the center of this area. It contains a circular air lock and a large pressure hatch designed to connect to cargo delivery vessels. A smaller hatch also provides exterior access, though only when a shuttle or similar ship is mated to the far side. Note that this tube is not a lift, the upper section is filled with automated loading and unloaded machinery.

The upper level of the industrial zone is a series of catwalks and balconies that provide access to monitoring and control stations specific to the nearby equipment. The balcony is only accessible via ladders or from the dormitory area. The door at the “top” of the map leads to the transit stop for Sector 1 .

29. Storage Rooms
On the upper level near the dormitories are a pair of storage rooms. The one on the left (if exiting the dorms) is dedicated to bedding and supplies needed for the residences. The other contains tools and gear needed for the maintenance and repair of the industrial equipment. It also contains hazmat suits and other safety gear.



SECTOR 2

22. Transit Tube
23. Pump Room
24. Lounge
25. Armory
26. Dormitories
27. Control Room
28. Industrial Subsector
29. Storage Rooms

Ring: Sector 3

This section does not have any housing facilities; instead it is dedicated fully to the "work" and "play" aspects of station life.

30. Transit Tube 3
The transit stop in Sector 3 is identical to the ones in Sectors 1 and 2. The hub side of the tube arrives next to the ready room and restroom hall. Sector 1 lies directly off the "bottom" of the map.

31. Pump Room
The equipment in this room is almost identical to that found in the other pump rooms, though it is kept in noticeably better shape. The storage room holds extra lockers with the chief engineer's personal tools.

32. Machine Shop
A worn but well cared for workshop holds a variety of tools and modern equipment. This includes a battered but serviceable fabrication unit capable of machining small and medium sized mechanical and electronic parts. Much of the modular equipment can be removed or stored beneath the floor when not in use – providing additional space for larger projects.

33. Chief Engineer
Though a Chief Engineer could command living quarters in the VIP section, they may prefer to keep their accommodations near the machine shop and master pump room. With this in mind, one of the storage rooms here has been converted into a small, spartan cabin. If the C.E. on this particular station does not choose to live near his or her work then this room can be used for a guest – or even function as an additional holding cell.

The storage room across from the Chief Engineer's room is filled with sports equipment, uniforms, and other recreational gear for use in the adjacent sports arena.

34. Sports Arena
A cube of thick plexiglass encloses the station's only sports arena – designed to support both Z-ball* and Team Zed* play. A metal catwalk, accessible via ladder or from inside the arena, encircles the upper half of the cube. On either side of the court at "ground level" are drinking fountains and benches for the players. Individual personal lockers line the walls of the chamber on both levels. These are assigned to personnel based on rank and seniority.

The double layered walls of the cube are composed of a selectively-transparent polymer that is clear, strong, and embedded with a micro-fiber grid. This is designed to cleanly divide the normal gravity area outside the arena and the zero gravity area inside. The floor and ceiling are opaque and also conceal the grav plating dedicated to keeping the interior of the cube at zero G. All of the surfaces are capable of displaying the markings needed for the various games. Certain sections of the inner layer of the cube can slide inward to create a set of four Z-ball courts or a single small, medium, or large Team Zed arena.

To accommodate the height of the arena, the floor here is a couple meters lower than the standard station floor and the ceiling extends beyond the typical height as well. This means that two of the entrances onto the court are well above the competition floor and only usable when the interior of the cube is at Zero G.

** Z-ball is a two or four player game much like zero gravity racquetball without so much ceiling height. Team Zed is somewhat like zero gravity basketball, though with a flat or recessed target for a goal. It can be played with as many as seven people on a team, in which case the full cube is used.*

35. Rec Center
Like many of the facilities on the station, the Recreation Center is split between the lower and upper levels. On the lower level is a large, octagonal exercise mat. This open space is used for activities like yoga and martial arts training. The vending machines placed in this area offer healthier fare than that found elsewhere in the station – at least according to the advertising.

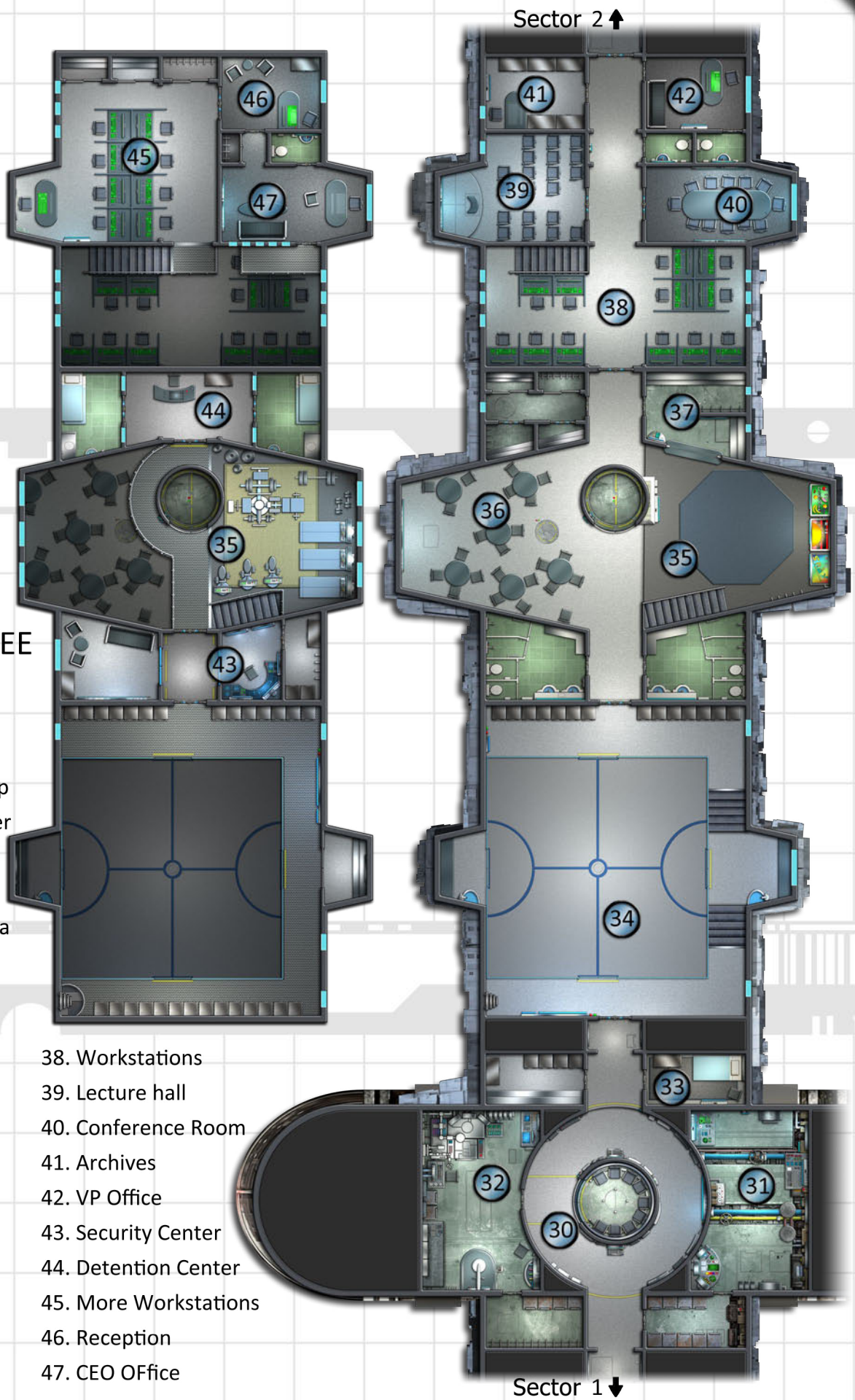
Between the Rec Room and the sports arena lie a pair of restrooms with showers. These can also serve as changing rooms, though the lockers are outside in order to save space.

Upstairs is a selection of weight training equipment as well as a trio of treadmills and exercise bikes. The upper level can be reached via stairs. There is a lift but it is rarely used – being a result of architectural requirements rather than functional necessity. The tube is also an airlock and allows access to the exterior of the station, or docked space craft.

36. Common Area
Across from the lower recreation area is a space filled with round tables. At the front of the room is a retractable podium (shown retracted on the map) and a wall screen. The area is designed to serve as a class room, training lab, or general lounge area. It is also used as an ad-hoc café given the food available from the nearby commissary and vending machines.

When the room is utilized as a classroom it is not uncommon for the balcony to be lined with standing students as well. Noise from the Rec Center can be problem during lectures, but is not usually an issue for lab-based classes.

37. Commissary
The commissary is a small store which can provide snacks, games, and other basic or luxury items to station residents for a small cost. When the store is open a single employee stays inside and dispenses merchandise over the counter. The store is kept locked and shuttered when not open for business.



SECTOR THREE

30. Transit Tube
31 Pump Room
32. Machine Shop
33. Chief Engineer
34. Sports Arena
35. Rec Center
36. Common Area
37. Commissary
38. Workstations
39. Lecture hall
40. Conference Room
41. Archives
42. VP Office
43. Security Center
44. Detention Center
45. More Workstations
46. Reception
47. CEO OFfice

Across the hall from the commissary is a storage room holding supplies for the shop. The secured closets can also be used to store lab equipment for the nearby classroom.

38. Workstations
This is where the bulk the work on the station gets done. If this particular outpost is a business, then these cubicles are used for accounting, sales, inventory, human resources, and other corporate processes. If this is an academy, then these workstations will be configured for teaching, research, and other academic pursuits. In the latter case, an automated system is used to schedule and reserve workstations as there will be far more students than seats available.

39. Lecture Hall
Whether the station is configured as an academy or not this room serves as a lecture hall and video room. It has seating for a score of students or employees and the usual retractable podium and wall screen at the front of the chamber.

40. Conference Room
Across from the lecture hall is a conference room. It holds a large table with seating for twelve and a built-in holographic projection ring. A pair of traditional 2D video screens flank the table and a window at the far end provides a slowly rotating view of the starfield outside.

41. Archives
No matter the use to which a particular Crucible-class station is put, careful record keeping and data storage will be needed. This office is in charge of gathering and archiving important data in solid-state wafers. These are stored in the heavy duty, magnetically shielded cabinets that line both walls. Periodically, copies are sent off site for additional security.

42. VP Office
This office is for the second-in-command administrator on board the station; not to be confused with the executive officer who serves under the station captain. The modestly appointed room holds a desk for the vice president in charge of operations and a couch for visitors. A private restroom adjoins the office.

An identical restroom in the hall outside is for public use. At the end of the hall are the usual set of pressure doors between sectors. Beyond this, off the "top" of the map, is the transit stop for Sector 1.

43. Security Center
Each Crucible-class station has a small but dedicated security center. The monitoring and command room has a customized workstation that allows a single operator to monitor station-wide security and coordinate related activities. The small chamber next to the monitoring room is an arms locker. Across the hall is a lounge for the on duty officers to use when they are not on patrol.

44. Detention Center
Because of the odd station architecture, the brig is separated from the security center by a balcony and the Rec Center weight lifting area. Within the detention center are two cells, each with a set of bunk beds. In the room between is a desk for the guard on duty. The cabinet holds bedding and other harmless items. Needless to say, this room is off limits to unauthorized personnel.

45. More Workstations
The workstations in this room are identical to those on the lower level. This area serves the same purpose, with the added bonus of a supervisory station at the front of the room. This could be used for proctored exams or a manager in charge of operations. One wall of the room hosts a trio of closets. These are filled with various office supplies and similar equipment.

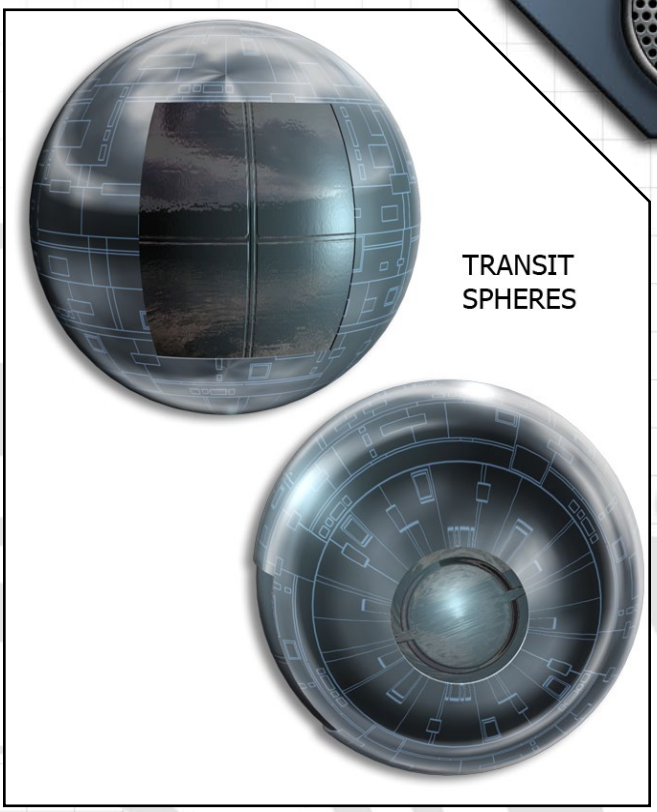
46. Reception
This room is the reception area and waiting room for the adjoining CEO's office. In addition to the desk for the receptionist are a couple of comfortable chairs and a storage cabinet.

47. CEO Office
The Chief Executive Officer (or Superintendent, Dean, President, etc.) is given a luxurious office with a private restroom and receptionist. Note that this is the person in charge of the bureaucracy, corporation, or school. It is not the captain of the station (who oversees the functioning of the vessel itself). Who has the final say in station-wide matters will vary from station to station. A balcony just outside of the office allows the boss to overlook the cubicles below. A wall screen, couch, and coat closet round out the amenities.

Additional Information

Transit Spheres

As mentioned in the Components section, the Crucible-class design uses the sphere within a sphere (within a tube) transit system developed by Sendai Corporaton for their Argos line of deep space ports. In the event of an emergency the transit spheres can be ejected into space and serve as makeshift lifeboats. Below are the details from the Argos technical specifications:



Each transit sphere can serve as a temporary shelter in the void. Beneath the seats and floor are atmosphere scrubbers, ration bars, and water tanks, as well as a distress beacon and simple toilet (which vents outside with no loss of atmosphere). When in good working order, a sphere can keep 10 people alive for 50 hours. These facilities can also be used if a sphere becomes stuck inside a malfunctioning tube or stranded due to a station-wide power failure. The emergency kit also contains a lantern, communication unit, and small blowtorch (to create a doorway in the event that the inner cabin and outer skin are not properly aligned).

During an emergency evacuation, the loaded T2 spheres are just launched out of the bottom of the Transportation Tube and into space. Each sphere has a one-shot thruster in the bottom which can bring it to a near stop once well clear of the station (overrides can be entered from the control panel inside the sphere). The spheres are otherwise without propulsion – meant to simply float in place and await rescue

The Excel-class Station

By reusing the sectors a larger station can be constructed. Dubbed the Crucible "Excel" class (for "XL"), this extra large version is exactly like the standard Crucible except that it has two copies of each sector making up its larger ring. One side of the ring has Sectors designated 1A, 2A, and 3A. The opposite side holds 1B, 2B, and 3B. The top of Sector 1A leads into 3B and the top of Sector 1B connects to 3A. The diagram on the right depicts this layout.

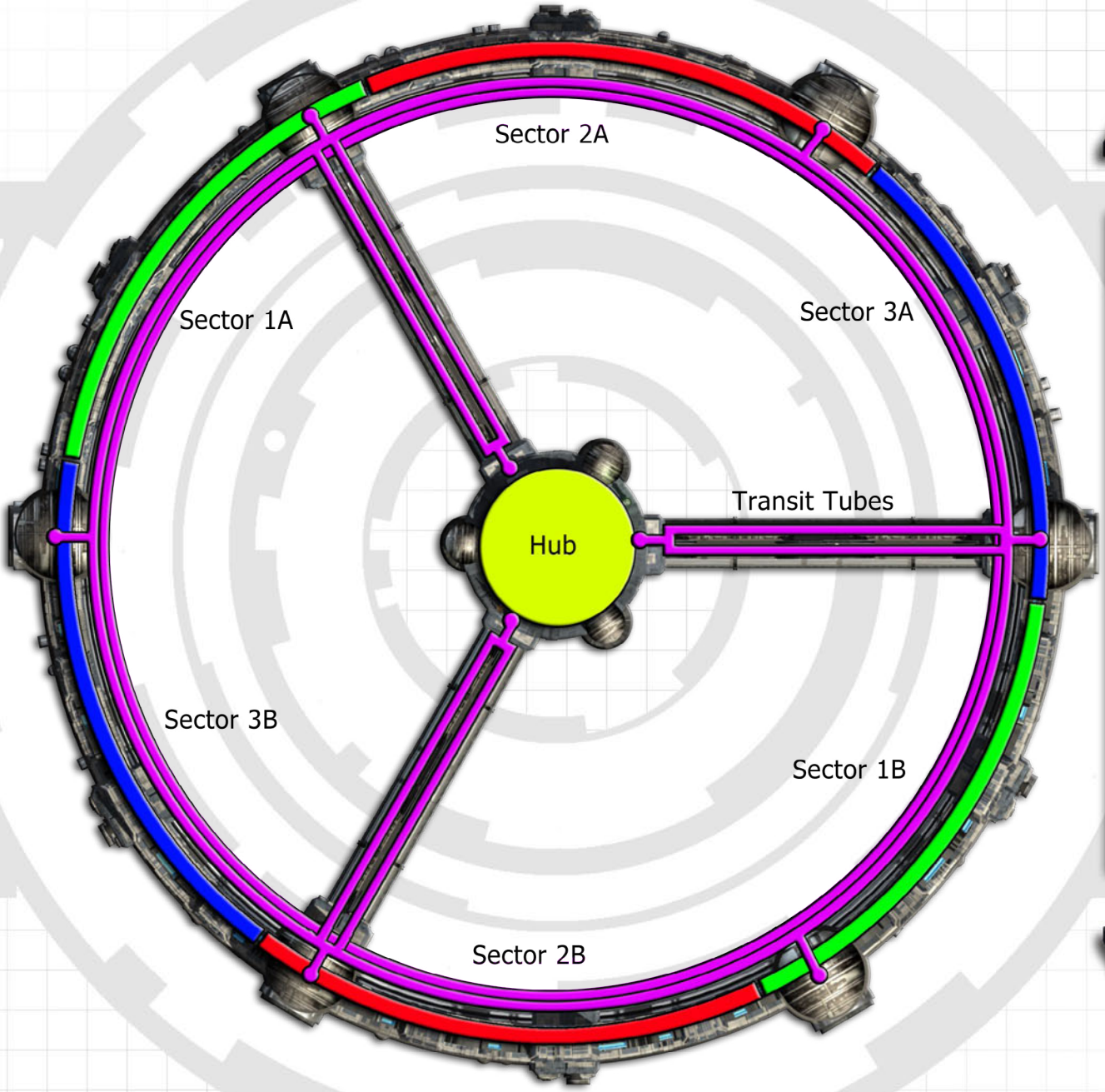
Because there are still only three spokes, the Transit Tube system has to be modified slightly. In the Excel-class a pair of tubes now run around the circumference of the ring. This allows any transit stop to reach any other, whether on the ring or in the hub. One could even take a sphere from one hub stop to another hub stop, though it would probably take longer than just walking across the hub itself.

Though the ring area is doubled, the hub remains unchanged. This means that the hub facilities (like the dining area and the medical center) may be hard pressed to support the increased population. Longer wait times should be expected.

The crew, passenger capacity, and cargo space are all doubled. As far as statistics go the price increases to cover the additional building materials, but the other blocks remain the same. The additional mass would add durability but the extended structure is also more fragile. Maneuverability and acceleration were already as low as possible without being immobile. The tech level and built in systems are the same as the small version. Adding an FTL system would increase the cost even further.

As with any Crucible design, there could be Excel versions of processing stations, training facilities, or corporate headquarters.

[End of Chapter]


Sector 2A
Sector 1A
Sector 3A
Transit Tubes
Hub
Sector 3B
Sector 1B
Sector 2B

CRUCIBLE - EXCEL

Classification	space station
Origin	Confederation of Terra
Registration	commercial or military
Dimensions	422 x 422 x 108 ft. (LWH)

Register Tonnage	26,135
Cargo Capacity	2000 register tons
Standard Crew	48
Passenger Capacity	160

Notes

- Configured at construction for specific processing duties
- Extended mission profile
- Cannot land
- No vehicles carried

Technology Level	
Relative Cost	
F.T.L. System	
Acceleration & Maximum Speed	
Maneuverability	
Atmospheric Performance	

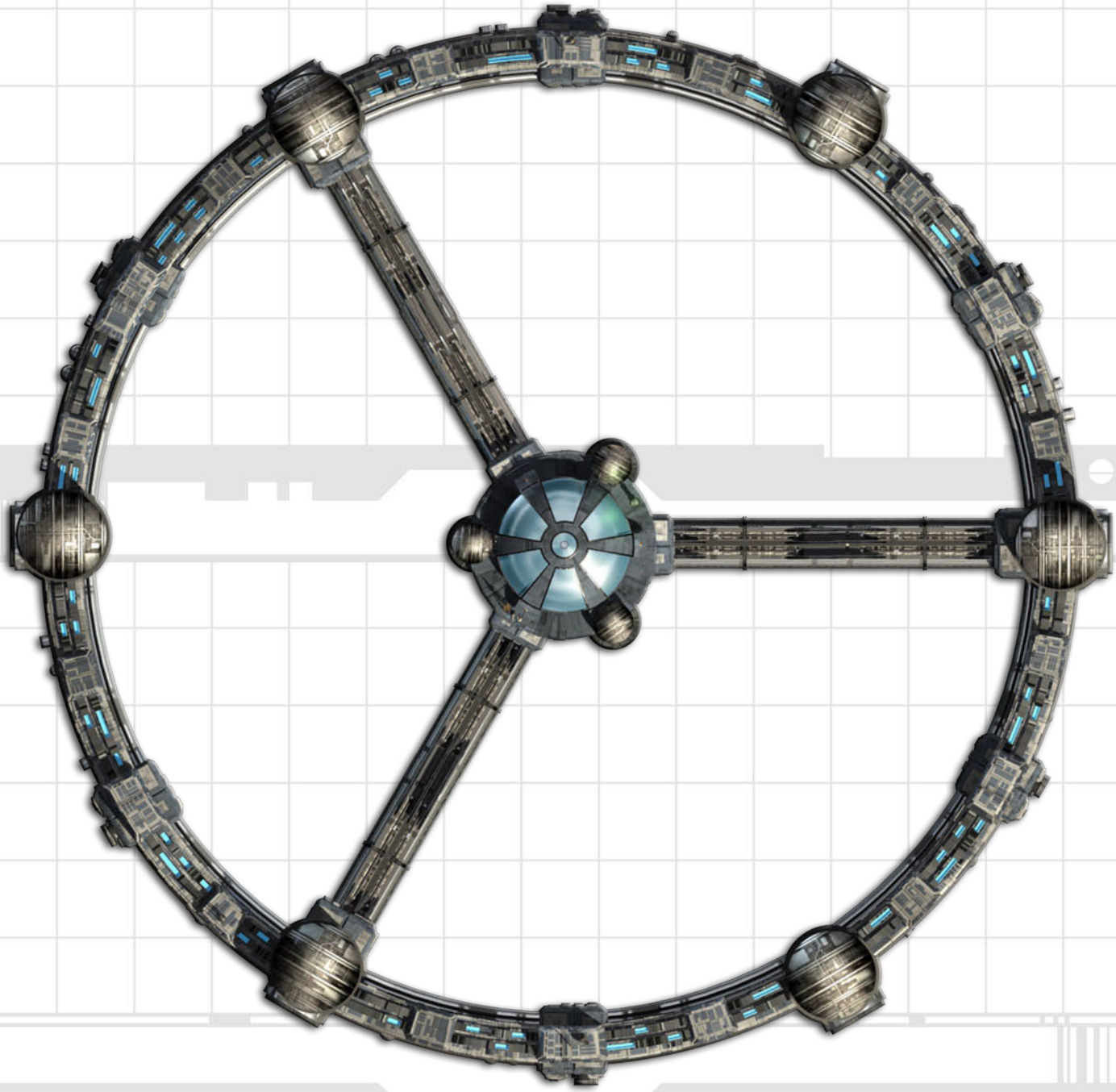
Default Armament

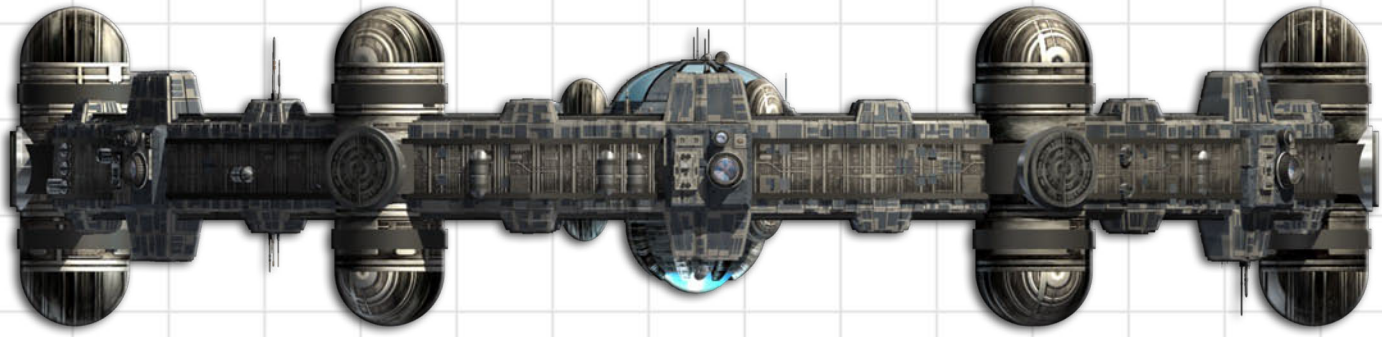
- Six internal missile tubes
  12 missiles total
  mix of explosive, drones, and ECM

Common Options

- Plasma gun turrets
- External missile emplacements
- FTL jump drive

Durability	
Offensive Capbaility	
Defensive Capbaility	
Computer System	
Sensors & Communications	





60 ft