Singularity Event Drives & Gates

A Singularity Event Drive is a totally non-magical alternative to a Starcaster Drive. Through the manipulation of electromagnetic, gravity, neutrino, and temporal fields such a drive can induce a fold in reality allowing them to travel to another point in space light years away. A Black Hole is a permanent, naturally occurring singularity. Though their destination is not always on the same plane as the black hole resides on, and typically is a fixed destination.

Singularity Gates can be created which are artificial mini black holes. Maintaining their stability consumes vast power resources. Singularity Gates can only be activated for specific amounts of time per day. Singularity Gates can 'reach' further than a Singularity Drive unit.

Singularity Drive

The number of drive units is directly correlated to the size of the craft intended for. Crafts of Gargantuan size are the smallest that any singularity drive can be placed in. Singularity Drives look like 5-ft. diameter spheres of liquid metal with three rings of metal surrounding the sphere in constant motion. All set within a contained magnetic field. This unit 'sits' inside a shielded box comprised of lead, mithral, and adamantine. The drive unit with shielding plate is 10ftx10ftx10ft. The larger the craft the more drive units are required.

Spacecraft Size	Maximum Length	# Of Drives*	Recharge Time	Maximum Distance Per Jump
Gargantuan	64 ft	1/1	1 hour	10 Light Years
Colossal	128 ft	4/2	2 hours	40 Light Years
Colossal II	256 ft	8/2	3 hours	80 Light Years
Colossal III	512 ft	12/3	4 hours	120 Light Years
Colossal IV	1,024 ft	16/4	5 hours	160 Light Years
Colossal V	2,048 ft	20/4	6 hours	200 Light Years
Colossal VI	4,096 ft	24/4	7 hours	240 Light Years

*The first number is the number of drives needed. The number following the slash is the number of 'drive engineering' computer stations (one crew member per station) needed to maintain the drives stability during active jump operation. The computers are sufficient on their own to maintain the drives stability at all other times. If any of the 'drive engineering' station computers go off-line for any reason, built-in safety systems will shutdown ALL the drives. Each computer station typically encompasses a 5ft square grid of space on the craft and there is enough room for a crew member of up to medium size to comfortable work at the computer station within this space.

Singularity drives can not produce a singularity within 100,000 miles of any massive object, period. A massive object in this case is any planetoid type object with a gravity well or takes up an area of space roughly 100 cubic miles or greater. 10 light years is the maximum distance per drive unit one can 'jump'. Singularity Drives produce a gravity effect of 1g within the confines of the craft they are installed within. If the drives shutdown due to malfunction they can not produce gravity and this will result in Zero-G in outer space. See the Mishaps table below for DC failures.

Singularity Drives automatically shutdown after a 'jump'. This takes the computers 10 minutes to accomplish, no matter the number of drive units installed. Once shutdown is complete the computers will automatically begin bringing the drive units back on-line and fully charged. No matter the cause of drive unit shutdown, it takes 1 computer 1 hour to bring up a single drive unit. However the listed number of computers per craft size must ALL be on-line or the built-in safety protocols will not allow the units to power up. There is no way to manually override this safety protocol. It is built into the drive units themselves and functions independently of the computers. Non-stability equals black hole, which is something not many people would like to see within an inhabited solar system. It is rumored that the Empire has used specially designed drive units without the shut-down safety protocols to rid themselves of threats to the empire, destroying more than one solar system this way. However, since it sucks everything within a few light years into the black hole and leaves no resources for the empire afterwards it has seen limited use. It is a thing even the dragons fear using as a weapon.

Singularity drives can not be built within 100,000 miles of any massive object. A massive object in this case is any planetoid type object with a gravity well or takes up an area of space roughly 100 cubic miles or greater. A typical factory consists of a heavily defended multi-billion credit space station of Colossal VI size (4,000ftx4000ftx4000ft). It takes 3 months to create 1 drive unit and a typical factory can assemble 20 units simultaneously. Market price for 1 drive unit averages 1,000,000 credits.

Listed below is the modified cost of the example spacecraft from the SFHB with singularity drives instead of Starcaster drives.

Explorer: Same price 3,000,000cr.	Free Trader: Same price 2,400,000cr.	Freighter: 8,000,000cr.
Interceptor: 13,000,000cr.	Corvette: 43,000,000cr.	Destroyer: 67,000,000cr
Cruiser: 161,000,000cr.	Carrier: 515,000,000cr.	Battleship: 365,000,000cr.

Dreadnought: 769,000,000cr.

Persons manning the 'drive engineering' computers must make a Use Device check to properly program the destination for the jump. If you have 5 or more ranks in Navigate you receive a +2 synergy bonus. If you have 5 or more ranks in Knowledge (Singularity Physics) you receive a +2 synergy bonus. These synergy bonuses stack for a total bonus of +4 if the person has 5 or more ranks in both skills. The results of each person at each 'drive engineer' computer station is totaled and compared against the tables below for successes of the jump.

Light Years	DC
Same System	15
1-10	20
11-40	30
41-80	35
81-120	45
121-160	60
161-200	70
201-240	80

Check Failed by:	Mishap				
5 or less	Same as for Teleport Mishaps on pg 168 of SFHB				
6-10	Same as for Teleport Mishaps on pg 168 of SFHB				
10-15	Same as for Teleport Mishaps on pg 168 of SFHB				
16-20	Same as for Teleport Mishaps on pg 168 of SFHB				
21-25	Your ship appears in a random system. In addition the singularity drive malfunctions and goes off-line. Roll d% and add the number of drives to the total. The result is how many hours it takes to bring the drive systems back on-line and fully recharged. Also the gravity effect of the drives fails and if in outer space this will cause Zero-G until ALL drives come back on-line and are functioning properly or you enter some other objects gravity well				
26+	Same as for Teleport Mishaps on pg 168 of SFHB. But in addition the Singularity Drives malfunction and go off- line. Roll d% and add the number of drives to the total. The result is how many hours it takes to bring the drives back on-line and fully recharged. Note that a Singularity Drive can not get you back to the plane of existence that your were 'thrown' from. Also the gravity effect of the drives fails and if in outer space this will cause Zero-G until ALL drives come back on-line and are functioning properly or you enter some other objects gravity well				

Singularity Gates

Singularity Gates are Colossal VI size structures. Outwardly they resemble multiple massive rings which once activated start to rotate around a fixed point together giving the effect of a large shimmering sphere from a distance. (The gyro-sphere from the movie Contact that jodi foster is dropped down into is the best visual I can give you for how I see this thing). There is one single outermost non-moving ring which houses the controls and the crew needed to maintain the gate.

Singularity gates must be built on site and cost in the trillions. Only the most important and heavy trade-routed systems of the dragon empire have these Gates. The gate can not be built near any massive object as per singularity drives except that instead of 100,000 miles it must be placed at least 250,000 miles from the nearest massive object that could effect its operation.

Any craft wishing to use the Gate must position themselves within the sphere of multiple rings. Colossal V size craft and smaller only can use such Gates. Only one Colossal V craft, or two Colossal IV craft, or four Colossal III craft, or eight Colossal II craft, or sixteen Colossal craft, or thirty-two Gargantuan craft can use the gate during a single jump. Use these numbers to extrapolate the numbers for multiple craft whose sizes range between Gargantuan and Colossal IV size that can jump together at once. Singularity Gates can only 'jump' craft to another Singularity Gate. The distance does not matter and there is no possibility of error unless the gate is sabotaged in some way. A gate sending craft requires 1 hour to recharge fully after 'jumping' craft, no matter how many are sent at once or of what size. A gate receiving craft takes only ½ hour to recharge fully. In either case, sending or receiving craft via the gates it take 10 minutes to get the multiple rings at full rotation speed and another 10 minutes to bring them to a full stop. These 10 minute periods do not effect the recharging times in any way.

There are rumors that groups fighting against the Dragon Empire have developed smaller versions of the Singularity Gate that can move under their own power and in effect 'jump' themselves. One report from a recent battle in a remote outworld system described a Gate capable of 'jumping' a single Colossal II size craft through it and minutes later 'jumping' four Gargantuan size craft.

A typical Singularity Gate as used by the Dragon Empire requires a standing crew of 2000 and requires 50 'drive engineering' computer stations be manned and operating to send or receive craft. Needless to say these over costly structures are heavily defended.

Singularity Gate [Dragon Empire]: Colossal VI Construct; hp 1,500; Sensor +15; Speed: 1 mile per day(attitude thrusters only); AC 29 (-256 size, -5 Dex, +100 natural, +100 armor, +90 shields); SQ Construct, hardness 100. Stations: Sensor: 15, Drive Engineer: 50, Gunner 100, Crew: 2,000. 20 Quad Ion Cannons(turret battery) +5, 20 Quad Plasma Cannons(turret battery) +5, 20 Laser Cannons(turret) +5, 20 Torpedo Bays (turret).

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