

Cloaking Suite (TL10+)

This system renders the ship nearly invisible to visual detection, however without the use of a stealth suite it can still easily be picked up by sensors. Combined with a good stealth suite it can render a ship undetectable.

At TL10, the system is similar to that used for the intruder suit (Ultra-Tech page 86), a network of fiber-optic light guides covers the surface of the ship so that light waves pass through the guides and are bent around until they emerge on the corresponding spot on the other side of the ship. In theory the ship is invisible, in practice the system distorts light waves enough that anyone looking directly through the ship will notice something is wrong. Objects on the other side seem blurred or out of focus. A vision roll, with an appropriate penalty for the circumstances, is required to spot the ship and locate it.

This system costs \$6,000 and adds 0.002 tons per cy of the ship. However like armor, the cost is reduced for larger ships because they have proportionately smaller surface area for their volume (see page 78 of GURPS Space). If the ship is not detected by sensors it is effectively invisible and when combined with an active stealth suite adds a +1 to DF.

At TL11, the system uses an advanced holographic deflector field to bend light waves around the ship. This system is more effective and distorts the light waves less so that objects seen through the ship are only slightly smudged (vision roll-4 required to notice that something is wrong and vision roll-8 to spot it). In deep space it is nearly impossible to locate the ship visually unless it is practically on top of you, and even then it is difficult. The cost, mass, and volume are determined by the force field table on page 79.

Cost, mass, and volume for the field are the same as those listed. Power requirements are half, and the ship also requires a special program to be run in order to control the field. The Cloaking program is Complexity 6, costs \$100,000 and must be running in order for the field to be effective. If the ship is not detected by sensors it is effectively invisible and when combined with an active stealth suite adds a +2 to DF.

At TL13, the system uses a distortion field to warp the fabric of space around the ship so that light waves emerge on the other side of it with no resistance. Unlike the above systems there is no distortion and no chance to spot the ship once cloaked. Like the TL11 system it requires that the computer be running a special Cloaking program that is Complexity 8, has a skill of 14, and costs \$200,000. Each time the price is doubled raise the effective skill of the program and the complexity by one.

This system can be operated without a stealth suite because the field can also distort sensor probes of its TL or lower, roll a contest of skills between the program and the sensor operator. If the program wins the ship is undetected; if there is a tie the operator knows that there is something out there, roll again; if the operator wins he has locked onto the ship, he must roll each round to retain a lock. Against higher tech sensors the system is useless. If the system is combined with a stealth suite, minus the rating of the stealth suite from the sensor operators roll before the contest of skills is rolled.

The system costs \$1,000, weighs 0.01 tons, takes up 0.005 cy, and requires 0.01 MW of power for every cy of the craft. If the ship is not detected by sensors it is invisible and cannot be hit except by massive explosions covering the entire area, even then it has a +6 to DF. If the attacking ship has a lock-on there is a +2 DF bonus.

At TL14+, the same system as TL13 is used but it is greatly improved. Halve the cost, mass, and volume of the system. The system distorts the space-time occupied by the ship and makes it more difficult to detect or hit. If the ship is not detected by sensors it is completely invisible and cannot be hit except by massive explosions covering the entire area, even then it has a +10 to DF.

Miniaturized Sensor Suite

A miniaturized Sensor Suite is available at TL10+. Cost is five times that of a normal suite, mass and volume are $\frac{1}{5}$ that of normal, and power consumption is half.

Slow FTL Radio (TL10+)

Available at TL10+, using hyper-space technology the signal can be beamed to the destination with a slight lag-time. FTL radio will only work if both sender and receiver are in normal space and neither are using force shields. The signal travels at 15 parsec per day, maximum range is 10 parsecs +10 for each TL above 10. Relay stations can be used to infinitely increase the range.

Costs \$200,000, 5 tons, 5 cy, and 25 MW to operate. Cost, mass, size, and power requirements of a slow FTL radio are halved at TL11, divided by 5 at TL12, and divided by 10 at TL13+.

Fast FTL Radio (TL11+)

Available at TL11+, basically the same as above system except that the signal travels at 2 parsecs per second. The maximum range is 50 parsecs +10 for each TL above 11. As above, relay stations can be used to increase range.

Costs \$200,000, 5 tons, 5 cy, and 50 MW to operate. Cost, mass, size, and power requirements of a slow FTL radio are halved at TL12, divided by 5 at TL13, and divided by 10 at TL14+.

At TL 12, miniaturized FTL radios are available, they cost 10 times as much but take up half the space and mass, power remains the same.

Comm Suite

A comm suite is used to communicate with other ships and installations, it is also used for internal communication. Each tech level will show more improvements in range through the use of more advanced systems, see each TL description for a specific definition of the distance of a range rating.

A standard suite costs a base of \$6,000, weights 0.25 tons, and takes up 1 cy, *plus* \$200, 0.05 tons, 0.05 cy, and 0.02 MW per range rating.

A miniaturized suite costs a base of \$30,000, weights 0.05 tons, and takes up 0.2 cy, *plus* \$1,000, 0.01 tons, 0.01 cy, and 0.01 MW per range rating.

Tech Level Progression

- At TL7 it uses radio for wide-band communications and laser for tight-band long-range communications. Range ratings are each 1,000 miles for radio and 10,000 for laser.
- At TL8 it uses same as TL7 but longer range ratings are increased by 10 times.
- At TL9 still uses same as TL7 but range is increased by 100 times.
- At TL10 radio is still used for wide-band but neutrino is used for tight-band long-range communications. Range ratings are each 500,000 miles for radio and 2,000,000 miles for neutrino.
- At TL11 the system is the same as TL10 but double ranges.
- At TL12 radio is replaced by gravity ripple, long-range is still neutrino. Range ratings are 5,000,000 miles for gravity ripple and 10,000,000 miles for neutrino.
- At TL13 the system is the same as TL12 but ranges are doubled.

Near Instantaneous FTL Transmitter (TL 12+)

Available at TL12+, near-instantaneous FTL radio is possible by warping the fabric of space to punch a signal through to its destination. The only disadvantage to this system is that the targets location must be known to within one light year.

The system still requires a normal FTL radio to receive the communications, but the transmissions can be accomplished without lag-times. The system is near instantaneous because if the target is not at the exact coordinates or reasonably close the signal lag-time will be at maximum about five seconds.

Costs \$800,000, weights 8 tons, and takes up 5 cy *plus* \$5,000, 0.2 tons, and 0.1 cy for every 10 parsecs of range.

Power consumption is based on the distance the signal has to travel. For every parsec that the signal travels the transmitter requires 2 MW of power.

At TL13, the cost of the transmitter is halved; at TL14 the mass and volume are halved; at TL15 the power requirements are halved.