Space Combat

Sensors and communication

1. Realistic (Andromeda/Firefly) - slower than light.
2. FTL (Startrek/Starwars
3. Other

BC: Sensors and Communications: Realistic (more Gap series than any of the series you've mentioned)

AG: Limited sensors. Make someone sit scan at all times. Lag due to finite speed of light.

Weapons

1. Realistic (Andromeda/Firefly) - near light speed missiles.
2. Beams (Babylon5, Blake's 7)
3. Beams and Fields (Startrek)
4. All sorts (Farscape)
5. Other

BC: Weapons: Beams and slow missiles. Missiles. Slugs for very close range. For beams, I like a combination between the Gap series (again) and the Mote in God's Eye. Lasers have huge range. Particle beams offer short range punch.

AG: I like to go for option 4, but mainly because this leaves it open for many different kinds of alien weapons and devices.

Combat distance

1. Realistic (Andromeda, Blake's 7) - light seconds apart
2. Naval broadsides (Startrek, Babylon5, Farscape, Starwars)
3. Other

TV: I like realistic combat better - makes my piloting danger sense much more useful, given it isn't much use Detecting danger" if" you can see it coming a million miles away...:)

BC: Combat distance: All ranges should be possible. Weapon choices would affect how close you want to get. With lasers, you could afford to be light seconds apart. With other stuff, you'd have to get closer. Incidentally, I thought the Blakes 7 plasma bolts were travelling at considerably less than light speed. How else could they know they were coming? Besides, they're plasma bolts, which are essentially a particle weapon. However, I'm not keen on naval broadsides. I think the writers of Star Trek should have been told it's not possible to surround" a vessel capable of 3D" movement with fewer than 4 vessels.

AG: Both! Some long-range, but I love the broadsides as well.

Combat speed

1. Sublight combats only (All)

2. Translight combats as well (Blake's 7)
3. Other

BC: Combat Speed: Sublight please.

AG: Sublight only.

ECM/ECCM

1. Realistic (Andromeda)
2. Semirealistic (Babylon5, Startrek)
3. Non Existant (Starwars)
4. Other

BC: ECCCCCCCCCCCM: Realistic. It was one of my favourite things about early B5. Minbari ECM was so good the Terrans couldn't get a lock. I still don't know what happened to sighting up the barrel and letting rip though.

AG: ECM, ECCM, ECCCM, jamming, spoofing, tapping, encrypting, the lot.

Damage

1. Hull only (Babylon5, Andromeda)
2. Fields and possibly explosive controls (Startrek)
3. Fields and ship explosions (Starwars)
4. Other

TV: I vote for fuses in our controls!

BC: Damage: Don't mind. Presumably all vessels would have automatic damage control, repair systems, etc.. In a system I've been developing, different kinds of defence are better against different attacks. I'll see what state it's in and send it to Peter.

AG: Oh come on! In a REAL space opera, the consoles ALWAYS explode! But they're pretty easy to repair.

Warp Engines

1. Explosive (Starwars)
2. Nuclear (Startrek, Andromeda)
3. Not explosive (Babylon 5)
4. Other

BC: Warp Engines: I don't understand the question really. I don't think they'd be prone to blow up unless you were about to use them.

PC: The question is - what happens if they take damage in combat. Sorry for the ambiguity there. The main point being the Trek 'quick lets dump the warp core before it explodes'.

AG: There has to be some volatile part of the ship, whether it's reactors, engines, fuel...

Any other ideas or comments?

Defaults until players come to a majority agreement-

For the most part make the following assumptions (unless you guys strenuously object)-

AG: I have a strenuous objection! :)

Centrifugal force is cheaper and requires less energy than artificial gravity.

AG: but it means that your ships have to be *much* larger and more complex. For centrifugal force to be effective it must be large enough to counter the coriolis force which tends to pull one sideways. The physics of a centrifuge in motion are pretty damn complex, and when you approach c they get truly remarkable.

AG: Anyway, if we have the technology to control FTL travel, we would *have* to have an understanding of the gravitational force as well, because it is fundamentally linked through General Relativity (I can elaborate on this if you'd like me to). I would suggest that artificial gravity would therefore be *both* considerably cheaper *and* more energy efficient than making a whole section of the spaceship rotate, which requires a lot of mechanical systems to work together. It is also much harder to seal a ship with a huge rotating bearing like this. Nothing that Athrak couldn't manage, mind you...

AG: The only solution I can see if you really want rotating ships is like that of the Earth ships in B5 - we didn't *create* the technology because we understand it. We use the technology because it was given to us, or we found it. The Mimbari had artificial gravity, the Earth ships had rotating sections.

Sublight engines require volatile fuel - but not much. A full 'tank' will do for several lightyears. Possibly there will be an interstellar law concerning fuel such that a ship should be able to make it to a habitable planet at sublight speeds and be equiped with some form of stasis chamber if FTL drives fail.

AG: Interstellar travel at sublight speeds is effectively impossible. Even the closest star to Earth is 4ly away, which means that even at light speed it would take 4 years to get there. Most ships would travel considerably below light speed (say 2-4% of light speed - which is still pretty fast), because of the relativistic effects such as time dilation, Lorentz contraction and the sudden increase in mass. This means to get to the closest star at sublight speeds would take something like 200 years! FTL is the *only* way to get from star to star in a human lifetime. Sublight is only useful for intra-system travel. In a nutshell, if you're stuck in interstellar space with no FTL drive, you're dead. After a *long* wait.

FTL engines require extremely volatile fuel and generate hostile radiations (hence should be put as far from crew areas as possible). Such as the nacelles for trek engines.

There are two types of FTL engines - LEH and HEH. LEH is a military class and enables ships to travel much like warp engines in Trek, or hyperdrive in Starwars - the create an area around the ship of Low Energy Hyperspace. HEH engines move the ship into High Energy Hyperspace - in the manner of Babylon 5. HEH is faster and requires less energy (compared to distance travelled) than LEH engines. However - LEH engines enable combat at translight speeds and HEH doesn't. Military ships often have both engines (the larger ships anyway).

Ships must be of cruiser size or larger in order to generate enough energy for a HEH engine (unless they have better than commercial level power generation - such as deep space exploration ships). So

by and large smaller ships use external HEH engines (Jump Gates).

Materials are relatively cheap and size is not a factor for craft not meant to enter atmospheres. However a measure of 'easy to clean' should be employed (ie no Event Horizon).

Normal beam weapons will most likely be handled realistically - so they'll be used for point blank encounters, space debris destruction and anti-missile systems only. Never for ship-to-ship combat.

AG: Sounds reasonable enough. Any coherent beam of light is likely to dissipate too soon to be useful at the distances ships should encounter each other. But any space opera has to sacrifice some realism in favour of drama. A neutronic polarisation array should do the trick, so long as it is aligned perpendicular to the positronic matrix.

There won't be any spinal mount weapons - even capitol ships can out manouver any projectile weapon. Unless you are planning on bombarding a planet. Although you could use one to launch probes.

AG: A spinal mount does not have to be a projectile weapon. Anyone remember: Prepare to fire the Wave Motion Gun!!"

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We will most likely go with the Andromeda model I think for sublight combat- Commercial ships travel 20-60 PSL. Military ships at 40-80 PSL and missiles travel 70-95 PSL.

Missiles are unfortunately the only weapon useful in space combat. Baring FTL beam weapons (which require enourmous energy and you can't have).

AG: Here's a nasty idea for you: Engage LEH drives in a debris field or asteroid belt. Some of the debris gets accelerated into hyperspace and travels with you until you emerge back into real space. You use sublight drives to decelerate, the debris continues moving at a substantial fraction of c to the target. Big bada boom.

Military ships using LEH engines can basically outmaneuver any commercial ship (don't even think about taking one on unless you plan on being damn ingenious - at least Miles Vorkosigan level).