Choice Vehicles From The Net Archives

MOTORCYCLES

From Neon Twilight

Scooter	Economy

Type:	**Scooter**	**Movement:**	**45mph**
Mass:	**100kg**	**Maneuver:**	**+0**
Crew:	**1+1**	**Range:**	**200km**
Passengers:	**1**	**Armor:**	**2/4/8**
Cargo:	**0.1 m3**	**Cost:**	**~$2000**

Perks:
Passenger Seating (1), Cargo Space (0.1)
Flaws:
Exposed Crew, Poor Off-Road

The standard motor scooter is one of the least expensive motorized vehicles available. Most scooters retail for well under $5000, with most at $2000 or less! Most are designed for the short-distance commuter, as they typically don't have the speed to make highway travel convenient.
"Touring" models, such as the Honda Helix (right) are subtantially larger (75kg), have a slightly larger engine (75mph) and fuel capacity (250kms), plus an enlarged cargo compartment (0.2 m3). Touring scooters start at about $3000.

Sport Motorcycle	Standard

Type:	**Motorcycle**	**Movement:**	**170mph**
Mass:	**175kg**	**Maneuver:**	**+10**
Crew:	**1+1**	**Range:**	**300km**
Passengers:	**1**	**Armor:**	**2/4/8**
Cargo:	**None**	**Cost:**	**$6000+**

Perks:
Passenger Seating (1)
Flaws:
Exposed Crew, Poor Off-Road

The typical Sport Motorcycle is reasonably inexpensive (and stylish) transportation, especially when compared to a full-sized car. Even the highest-performance bikes (such as the Yamaha YZF-R1 at left) have an MSRP that's still much, much lower ($12,000 for the R1) than a comparable sports car. Additionally, it is the rare automobile that can even hope to match the acceleration and maneuverability of one of these bikes, and you'll rarely (if ever) run into a F1 racer while you're downtown...
Sport models are available from Honda, Suzuki, Yamaha.

Supersport Motorcycle	Standard

Type:	**Motorcycle**	**Movement:**	**200mph**
Mass:	**225kg**	**Maneuver:**	**+20**
Crew:	**1+1**	**Range:**	**300km**
Passengers:	**1**	**Armor:**	**2/4/8**
Cargo:	**None**	**Cost:**	**$8000+**

Perks:
Passenger Seating (1)
Flaws:
Exposed Crew, Poor Off-Road

The typical Supersport Motorcycle is slightly more expensive (and stylish) than the sport bikes, but look more stylish and handle better. These high-performance bikes (such as the Ducati above) have an MSRP that's still much, much lower ($12,000 for the R1) than a comparable sports car. Additionally, it is the rare automobile that can even hope to match the acceleration and maneuverability of one of these bikes, and you'll rarely (if ever) run into a F1 racer while you're downtown...
Supersport models are available from BMW and Ducati.

Dirtbike				Standard
Type:	**Motorcycle**	**Movement:**	**95mph**	
Mass:	**100kg**	**Maneuver:**	**+0**	
Crew:	**1**	**Range:**	**300km**	
Passengers:	**1**	**Armor:**	**2/4/8**	
Cargo:	**None**	**Cost:**	**$3000+**	
Perks:				
Passenger Seating (1)				
Flaws:				
Exposed Crew,				

The standard off-road dirtbike is another common and inexpensive vehicle on the market today. Usually cheaper than a sport bike, most dirtbikes trade road-speed for a much improved off-road capability (*Note -- Still not Improved Off-Road*). Higher performance motocross variants are available for an increased cost.

Touring Sport Motorcycle				Luxury
Type:	**Motorcycle**	**Movement:**	**160mph**	
Mass:	**250kg**	**Maneuver:**	**+10**	
Crew:	**1+1**	**Range:**	**300km**	
Passengers:	**1**	**Armor:**	**2/4/8**	
Cargo:	**None**	**Cost:**	**$10000+**	
Perks:				
Passenger Seating (1)				
Flaws:				
Exposed Crew, Poor Off-Road				

The typical Supersport Motorcycle is reasonably inexpensive (and stylish) transportation, especially when compared to a full-sized car. Even the highest-performance bikes (such as the Yamaha YZF-R1 at left) have an MSRP that's still much, much lower ($12,000 for the R1) than a comparable sports car. Additionally, it is the rare automobile that can even hope to match the acceleration and maneuverability of one of these bikes, and you'll rarely (if ever) run into a F1 racer while you're downtown...
Supersport models are available from Honda, Suzuki, Yamaha, as well as more "luxury" manufacturers such as BMW and Ducati.

Mitsuzuki Bakushin				Luxury
Type:	**Motorcycle**	**Top Speed:**	**185mph**	
Mass:	**180kg**	**Maneuver:**	**+10**	
Crew:	**1**	**Range:**	**300km**	
Passengers:	**None**	**Armor:**	**2/4/8**	
Cargo:	**None**	**Cost:**	**$11000**	
Perks:				
None.				
Flaws:				
Annoyance: Level 2 Drive skill Required, Exposed Crew, Poor Off-Road				

The Bakushin is an open-road sport bike that has become especially popular with Japanese bosozoku motorcycle gangs of Japan and other youngbloods around the world. The Bakushin is also one of a small number of bikes that utilizes a "internal" rear wheel drive system (hence the "hollow" rear wheel). The advanced handling and unique balance make this vehicle highly unsuitable for novices! *(Min Drive Skill 2)*

BMW K1200	Luxury

Type:	**Motorcycle**	**Movement:**	**150mph**
Mass:	**200kg**	**Maneuver:**	**+10**
Crew:	**1**	**Range:**	**500km**
Passengers:	**1**	**Armor:**	**2/4/8**
Cargo:	**0.1 m3 (x2)**	**Cost:**	**$15000**

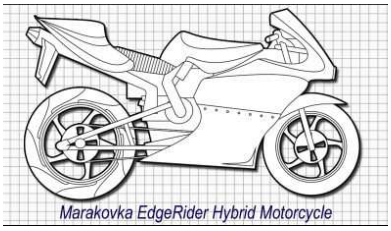
Perks:
Stereo System, Passenger Seating (1), Cargo Space (0.2 m3)
Flaws:
Exposed Crew, Poor Off-Road

The BMW K1200 is typical of many "hybrid" Sport-Touring motorcycles available today. They commonly have the sleek contoured appearance of a street bike, but with the relative comfort and range of a touring bike. "Standard" grade variants typically cost ~$8000.

From Blackhammers Cyberpunk site

A streetbike designed to look good and look fast. Sometimes these turn up with 'questionable' additional hardware installed.
The Marakovka EdgeRider is a fairly typical-looking streetbike designed to look fast and to have enough pickup to feel fast. It is also lightly armored to handle the abuses of modern urban life, but not enough to really make a difference.
The Edgerider can carry a very small amount of personal gear in the on-board cargo box behind the driver.

Top Speed	96 mph	**Acc / Dec**	25 / 30
Crew	1	**Range**	268 miles
Passengers	0	**Cargo**	27kg, 0.1 spaces
Maneuver	+0	**SDP**	20
SP	4	**Type**	Cycle
Mass	80 kg	**Cost**	2,400 eb


Marakovka EdgeRider Hybrid Motorcycle

The 0.1 space of cargo allows for some minor after-market modifications. A single-space weapon on an open mount can be mounted, or a pair of ½ space weapons. A good bodyshop can even help conceal the weapon under a housing of matching colour and style as the rest of the bike.

A fairly famous account of a customized EdgeRider involved a concealed Vehicular SAM launcher built into the back of the bike which was then used to take down a Network News 54 helicopter while filming live.

From Total System Technologies

The **SM Attack Bike**.
A Combat bike made especially for the use of Metalgear, Enhanced Mobility Armor, PowerArmor, the whispered Power 'borg, and Full Body Conversion clad troops. Specially strengthened this bike can handle even a Russian_Arms_Bombardier clad trooper using it!

Available in Bike, Bike & sidecar, Frame only and Stealthy versions.

Attack Bike	w/o sidecar		
Top Speed:	110 mph	ACC/DEC:	20/30 mph
Crew:	1	Range:	400 miles
Passengers:	0	Cargo:	45kg (external)
Maneuver:	+1	Mass:	400 kg
SDP:	45	SP:	5
Special Equipment:	Off-road capable, Military radio w/scrambler, Halogen Headlight, Cybernetic linkage		
		Cost:	15,000 eb
Weapons:	2x 5.56mm Machineguns fixed forward		

Attack Bike	with sidecar (shown above)		
Top Speed:	100 mph	ACC/DEC:	18/30 mph
Crew:	1	Range:	400 miles
Passengers:	1	Cargo:	45kg (external)
Maneuver:	+1	Mass:	400 kg
SDP:	55	SP:	5
Special Equipment:	Off-road capable, Military radio w/scrambler, Halogen Headlight, Cybernetic linkage		
		Cost:	15,000 eb
Weapons:	2x 5.56mm Machineguns fixed forward, 12.7mm Machinegun in forward mount (passenger weapon), Smoke Launcher		

TST realises that 'field modifications' are often made on many products and we would like to help those enterprising mercenaries with a range of SM Bike varients.

RPV Varient
Many remotes need a platform they can be launched from but many of these platforms are not portable. This one is, with a full RPV control station under your control.

Changes
Use bike w/sidecar
Remove 12.7mm gun, add RPV station (+600 eb to cost), Launch platform (holds 2 aerial RPVs, 2 medium wheeled and 2 micro remotes and storage space).

Anti-Armor Varient
While not the best Anti-Armor vehicle available it is the most available (which often counts in these times)

Changes
Use bike w/sidecar
Remove 12.7mm Gun
Add 37mm LATG, & 2 LATGM

CARS

From Neon Twilight

Metrocars — Economy

Type:	**Car**	**Movement:**	**40mph**
Mass:	**500kg**	**Maneuver:**	**-10**
Crew:	**1**	**Range:**	**100km**
Passengers:	**1**	**Armor:**	**3/6/9**
Cargo:	**1 m3**	**Cost:**	**$3000+**

Perks:

Passenger Seating (1), Cargo Space (1), Stereo, Reinf. Crew (R1, Airbags).

Flaws:

Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impacts.

The Metrocars are a side effect of modern 21st century urban living. With much of the population living in the major population centers, full-sized cars are often not allowed (with exceptions, of course) within the Corporate and Downtown areas to decrease congestion. These Metrocars are very small (micro-compacts, really) two-seaters typically electrically powered. They're designed to have enough juice to drive to work, plug in to the building's power grid to recharge, and get back home and recharge again. Their low speed allows for much higher-efficiency motors, as the speed limit in most downtown areas is 40kph or less. Most Metrocars are also (relatively) lightly armored. Additionally, most parking garages include recharging stations (~$5/charge). Metrocars can also be rented in most urban areas rather inexpensively (~$25/day plus deposit).

BMW EL-1 — Luxury

Type:	**Car**	**Movement:**	**95mph**
Mass:	**800kg**	**Maneuver:**	**-10**
Crew:	**1**	**Range:**	**400km**
Passengers:	**1**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$20,000**

Perks:

Passenger Seating (1), Cargo Space (1), Stereo, Reinf. Crew (R1, Airbags)

Flaws:

Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impacts.

The BMW EL-1 is the German auto-manufacturer's standard metrocar model. However, the EL-1 utilizes a gasohol/electric hybrid engine, giving it both much greater speed, but also grants a substantial increase in cruising range, as the batteries can be recharged with the fuel engine. Consider the range to be the sum of both power systems -- 100km of pure battery power, and 300km of fuel power. As the EL-1 is a BMW product, it is sold with all the standard options (anti-theft system, stereo, leather interior, etc).

COMPACT CAR — Standard/Economy

Type:	**Car**	**Movement:**	**110mph**
Mass:	**1000kg**	**Maneuver:**	**-5**
Crew:	**1**	**Range:**	**650km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$5,000**

Perks:

Passenger Seating (3), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo

Flaws:

Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

Small, fuel-efficient, and inexpensive (Economy variants can be as inexpensive as $5000), the compact car is one of the most common vehicles on the roads today. Compact cars are available with a standard trunk, as well as a hatchback variant)

Economy Sedan — Economy

Type:	**Car**	**Movement:**	**110mph**
Mass:	**1300kg**	**Maneuver:**	**-5**
Crew:	**1**	**Range:**	**500km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$10,000**

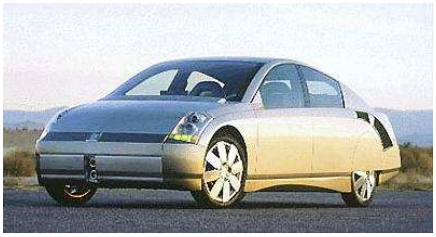
Perks:
Passenger Seating (3), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

The Toyo-Chrysler Omega and the Dodge Stratus are typical of the economy-class sedan, which also includes the Ford Escort and Honda Civic and more. As with most road vehicles today, both the Stratus and Omega utilize gasohol (CHOOH2) powerplants. 2- and 4-door variants are also available.

Standard Sedan — Standard

Type:	**Car**	**Movement:**	**120mph**
Mass:	**1400kg**	**Maneuver:**	**0**
Crew:	**1**	**Range:**	**500km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$15,000+**

Perks:
Passenger Seating (3), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact



The sedan is probably the most common vehicle seen on the roads today. Modern sedans typically have a composite shell overlaid upon an aluminum and steel alloy structural framework, designed to protect the passengers in the event of a crash or other impact. Both the Chrysler Cirrus (left) and the Dodge Intrepid (right) are typical of the standard sedan, available in both 2- and 4-door variants.

Luxury Sedan — Luxury

Type:	**Car**	**Movement:**	**120mph**
Mass:	**1500kg**	**Maneuver:**	**0**
Crew:	**1**	**Range:**	**500km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$35,000+**

Perks:
Passenger Seating (3), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

The luxury sedan is functionally identical to the standard sedan, but typically includes far more "options," such as leather interiors, a more impressive stereo system, custom wheels, and an excellent security system. Some of the more expensive luxury sedans targeted towards upper corporate clientele offer optional armor plating (up to 10 Armor @ $5000/pt) and bulletproofed windows (count as Armor Rating 30 at RPG-scale, Reinforced Crew R2 at TAC, $2000). Common luxury manufacturers are BMW, Mercedes-Benz, Acura (a Honda subsidiary) and Lexus (a Toyota subsidiary)

Standard Coupe — Standard


Type:	**Car**	**Movement:**	**130mph**
Mass:	**1200kg**	**Maneuver:**	**+5**
Crew:	**1**	**Range:**	**500km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$20,000+**

Perks:
Passenger Seating (3), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

The Coupe is the intermediary between a sedan and a sports-car. Many coupe models are based on the manufacturer's sedan frame with an uprated engine and a sleeker shell. The Dodge Avenger and the Plymouth Stratocruiser are typical of this class.

Luxury Coupe — Luxury

Type:	**Car**	**Movement:**	**150mph**
Mass:	**1200kg**	**Maneuver:**	**+5**
Crew:	**1**	**Range:**	**500km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$35,000+**

Perks:
Passenger Seating (3), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

The Luxury Coupe is roughly similar functionally to the Standard Coupe, but again, these include all of the modern 21st century luxuries such as built-in cellsystems, GPS, active handling and suspension systems, as well as a high-power gasohol engine capable of reaching upwards of 150mph! As with the luxury sedans, the manufacturers also offer composite armor and bulletproofing upgrades (same price). Models shown are the BMW-8 (left) and the Chrysler Atlantic (right).

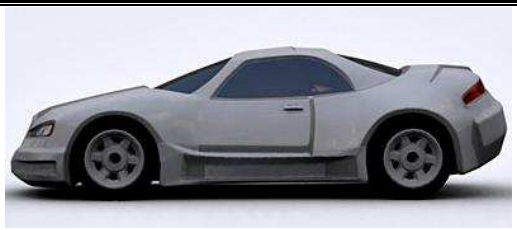
BMW 9018S — Luxury

Type:	**Car**	**Movement:**	**210mph**
Mass:	**1300kg**	**Maneuver:**	**+10**
Crew:	**1**	**Range:**	**5**
Passengers:	**5**	**Armor:**	**4/812**
Cargo:	**1 m3**	**Cost:**	**$100,000**

Perks:
Fax, Cellural phone, TV/DVD, Laptop Computer, wet bar, Snack case, SegAtari Cybergame system, Soundproofed.
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

Only the most elegant performance sedan ever engineered. Built for style, built for comfort. SPace for six, every luxury. Handmade. Nothing more need be said.

Economy Sport — Economy



Type:	**Car**	**Movement:**	**130mph**
Mass:	**1000kg**	**Maneuver:**	**+10**
Crew:	**1**	**Range:**	**500km**
Passengers:	**1**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$18,000+**

Perks:
Passenger Seating (1), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

The "Economy" sports car isn't quite the oxymoron it appears to be. The above Nissan 280, Mazda Miata-C2, and Hyundai Salsa, typical models for this class, all have a basic (read: minimal options) MSRP of $15,000. There's only really comfortable seating for 2 -- though a third (and possibly fourth) could fit into the cramped "rumble" seat.

Luxury Sport — Luxury

Type:	**Car**	**Movement:**	**225mph**
Mass:	**1500+kg**	**Maneuver:**	**+25**
Crew:	**1**	**Range:**	**500km**
Passengers:	**1**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**$60,000+**

Perks:
Passenger Seating (1), Cargo Space (1 m3), Reinforced Crew (R1, Airbags), Stereo
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew only good in crashes/impact

The Luxury Sports category is one of the broadest ranges in automobiles today. Some of the most common and "mass-produced" of them still MSRP for approximately $60,000 or more, whereas the 21st century models from Lamborghini and Ferrari sell for hundreds of thousands! These super-sports also have a fairly broad range in performance, with the high-end models (such as the Vector Slipstream, center) capable of upwards of 350kph (225mph) on the straightaway. The Acura NSX (left) and Dodge Viper (right) are no slouches, either, clocking in at over 300kph (190mph).

Limousine — Luxury

Type:	**Limo**	**Movement:**	**95mph**
Mass:	**2500kg**	**Maneuver:**	**-20**
Crew:	**1**	**Range:**	**500km**
Passengers:	**6+**	**Armor:**	**2/4/8**
Cargo:	**1 m3**	**Cost:**	**$75,000+**

Perks:
Passenger Seating (6), Cargo Bay (1 m2), Reinf. Crew Armor (R1, Airbags)
Flaws:
Poor Off-Road, Annoyance: Reinf. Crew Armor only good in crashes/impact

Limousines are the ultimate mode of transportation for the wealthy, politically important, or for anyone who wants to make their big appearance in style. One of the largest perks for limos is that their large size makes it convenient for a dignitary to have a significant security detachment travel with him. Limousines are available in a broad variety of styles, from the ultra-traditionalist Rolls-Royce to the more modern Acura Elysianne, and the Luxus-14, as well as sizes (super-stretched limos can seat upwards of 10 people in the back). Additionally, because of the value of the contents (important businessmen/politicos/etc), most manufacturers can provide more heavily armored models (up to Armor 10) to appropriately licensed buyers.

From Blackhammers Cyberpunk site

Ariante Pilgrim

A good handling, light, good-looking convertible. Popular amongst the money set and those who need more style than functionality.

TOP SPEED 120 mph ACC/DEC 21/40 mph CREW 1 RANGE 200 PASSENGERS 4 CARGO 1 spc / 350kg MANEUVER +1 SDP 50 SP 0 TYPE Car MASS 1000 kg COST 33,000eb

Special Equipment: Simple Security System, Crash Control x 2, Entertainment Center.
Notes: Not an enclosed vehicle, the crew is targettable seperately from the vehicle.

Noble Executioner

A "dangerous" alternative to the standard sportscar or sedan, the Executioner features full airbags, light bullet-proofing, good accelerations and braking and a large gas tank. And it looks deadly.

TOP SPEED 120 mph ACC/DEC 21/50 mph CREW 1 RANGE 400 PASSENGERS 3 CARGO 1 spc / 750kg MANEUVER +0 SDP 56 SP 11 TYPE Car MASS 2240 kg COST 42,000eb

Special Equipment: Simple Security System, Crash Control x 4, Entertainment Center.

Lada Luxury 6

"Bullet resistant? Whatever happened to Bullet-Proof?"

A low-end limousine, prone to breakdown, but cheap. Seats four in luxurious comfort in the back as well as one passenger in the front. The back can actually sit 6 in comfort, but not in luxury. Comes with all the amenities, and is even resistant most small arms fire short of rifle rounds.

TOP SPEED 50 mph ACC/DEC 15/40 mph CREW 1 RANGE 300 PASSENGERS 5 CARGO 1 spc / 600kg MANEUVER +2 SDP 45 SP 18 TYPE Car MASS 1800 kg COST 37,000eb

Special Equipment: Simple Security System, Crash Control x 6, Wetbar, Environmental Control, Super Entertainment Center w/ Video and Holo, Navigation System, Weak Structure.

.

TRUCKS AND VANS

From Neon Twilight

Light Truck	**Standard**

Type:	**Truck**	**Movement:**	**115mph**
Mass:	**1100+kg**	**Maneuver:**	**-5**
Crew:	**1**	**Range:**	**650km**
Passengers:	**1(2)**	**Armor:**	**4/8/12**
Cargo:	**5 m2**	**Cost:**	**$12,000+**

Perks:

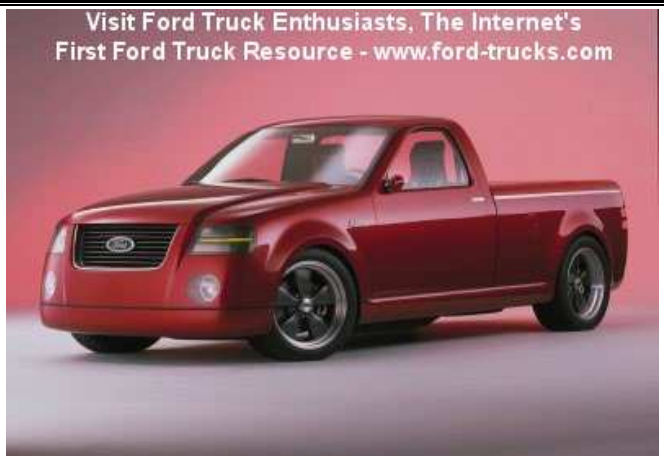
Passenger Seating (2), Cargo Bay (5 m2, open), Reinf. Crew Armor (R1, Airbags), Cargo Bay (1 m3, enclosed), Stereo

Flaws:

Poor Off-Road, Annoyance: Reinf. Crew Armor only good in crashes/impact, Annoyance: use of 2nd Passenger space reduces enclosed cargo to half (0.5 m3)

The Chevy S-15, pictured above, is typical of civilian light-duty pickup trucks. Decent cargo capacity (large flat bed), excellent fuel efficiency (low weight w/o cargo), many also feature a small fold-down seat for a third passenger behind the driver/passenger bench seat, at a sacrifice of the cargo space within the cab. Maximum (recommended) towing capacity: 600kg.

Heavy Truck	**Standard**



Type:	**Truck**	**Movement:**	**115mph**
Mass:	**2100+kg**	**Maneuver:**	**+10**
Crew:	**1**	**Range:**	**650km**
Passengers:	**1(2)**	**Armor:**	**4/8/12**
Cargo:	**5 m2**	**Cost:**	**$20,000+**

Perks:

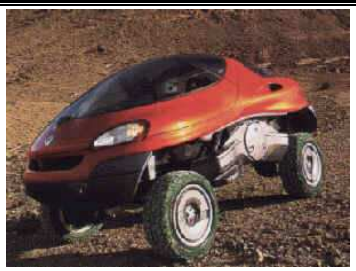
Passenger Seating (2), Cargo Bay (5 m2, open), Reinf. Crew Armor (R1, Airbags), Cargo Bay (1 m3, enclosed), Stereo

Flaws:

Poor Off-Road, Annoyance: Reinf. Crew Armor only good in crashes/impact, Annoyance: use of 2nd Passenger space reduces enclosed cargo to half (0.5 m3)

The Ford F-150, pictured above, is typical of civilian heavy-duty pickup trucks. Decent cargo capacity (large flat bed), and many also feature a small fold-down seat for a third passenger behind the driver/passenger bench seat, at a sacrifice of the cargo space within the cab. Maximum (recommended) towing capacity: 2000kg.

Compact SUV — Standard



Type:	**SUV**	**Movement:**	**115mph**
Mass:	**1000+kg**	**Maneuver:**	**-10**
Crew:	**1**	**Range:**	**640km**
Passengers:	**1**	**Armor:**	**4/8/12**
Cargo:	**2 m2**	**Cost:**	**$15,000+**

Perks:

Passenger Seating (1), Cargo Bay (2 m2, open), Reinf. Crew Armor (R1, Airbags), Stereo

Flaws:

Poor Off-Road, Annoyance: Reinf. Crew Armor only good in crashes/impact

The Sport Utility market is enormous -- economy-priced compact variants were designed in order to fill a niche for the young and physically active corporates. These compact SUVs (C-SUVs) contain many of the qualities of larger vehicles, but vehicle clearance is still too low for true off-road use (relatively easily modified by a trained mechanic/tech for ~$3000). Additionally, many of the new-era compact C-SUVs also contain power and other necessary jacks for computer and other communications equipment. (Upgrade to -2/10km Comm system, $1000), and in the Isuzu Backpack (above), the passenger seat folds down and swivels to become a workstation desk for the driver!

Standard SUV — Standard

Type:	**SUV**	**Movement:**	**115mph**
Mass:	**1500+kg**	**Maneuver:**	**-5**
Crew:	**1**	**Range:**	**600km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**2 m3**	**Cost:**	**$20,000+**

Perks:

Passenger Seating (1), Cargo Space (3 m3), Reinforced Crew (R1, Airbags), Stereo

Flaws:

Annoyance: Reinf. Crew Armor only good in crashes/impact

The Standard Sport-Ute... A vehicle class first pioneered by Land Rovers in the mid 20th century. These super-jeeps attempt to maintain off-road go-anywhere capability with all the accoutrements associated with a standard (suburban) sedan. The increased cargo and towing capacity is one large benefit, but the increased size adversely affects fuel consumption when compared to a sedan. Though these SUVs are designed for *moderate* off-road use, excessively rough terrain should be voided. Any damage caused due to off-roading in inappropriate terrain is not covered in the manufacturer's warranty. Models shown are Honda CRV and Jeep Commander.

Luxury SUV — Luxury

Type:	**SUV**	**Movement:**	**120mph**
Mass:	**2250+kg**	**Maneuver:**	**0**
Crew:	**1**	**Range:**	**640km**
Passengers:	**4**	**Armor:**	**4/8/12**
Cargo:	**2 m3**	**Cost:**	**$35,000+**

Perks:

Passenger Seating (4), Cargo Bay (2 m3), Reinf. Crew Armor (R1, Airbags), Stereo

Flaws:

Annoyance: Reinf. Crew Armor only good in crashes/impact

The Luxury SUV was first pioneered by the British Land Rover, well known for its use in African and Australian Safari. The 'Rover is highly regarded for its capacity to handle an exceptionally wide variety of terrains (though when compared to true milspec-grade vehicles such as the HMMWV, it is somewhat lacking), and not spill your martini in the process. Luxury SUVs are available with all the common options available for other Luxury vehicles, such as leather interiors, enhanced security systems, and bulletproofing. Some Super-Luxury SUVs exist, such as the Lamborghini LM (Used by the Saudi Arabian Police, MSRP ~$200,000! The LM's off-road top speed is an amazing 220kph!!)

Compact Minivan — Economy/Standard

Type: Van **Movement:** 95mph
Mass: 1200kg **Maneuver:** -10
Crew: 1 **Range:** 600km
Passengers: 4 **Armor:** 2/4/8
Cargo: 1 m3 **Cost:** $12,000+
Perks:
Passenger Seating (4), Cargo Bay (1 m3), Reinf. Crew Armor (R1, Airbags), Stereo
Flaws:
Annoyance: Reinf. Crew Armor only good in crashes/impact, Poor Off-Road

The Compact Minivan is almost a hybrid between a sedan and a true van -- the road footprint and seating of a sedan, with the headspace and increased cargo volume of a van. Additionally, in many models, the rear bench seat may be removed, doubling the available cargo space (to 2 m3).

Type: Van **Movement:** 95mph
Mass: 1500kg **Maneuver:** -10
Crew: 1 **Range:** 600km
Passengers: 7 **Armor:** 2/4/8
Cargo: 1 m3 **Cost:** $18,000+
Perks:
Passenger Seating (7), Cargo Bay (1 m3), Reinf. Crew Armor (R1, Airbags), Stereo
Flaws:
Annoyance: Reinf. Crew Armor only good in crashes/impact, Poor Off-Road

The minivan is a design that only became popular within the last 15 years of the 20th century. Minivans offer a smaller, sleeker overall package than many full-sized vans, with only slightly smaller capacity. Most models also feature dual sliding doors for easy access from either side. Additionally, in many models, either of two rear bench seats may be removed, increasing the available cargo space by 1 m3 (to a maximum of 3 m3). Model pictured is the Dodge Caravan.

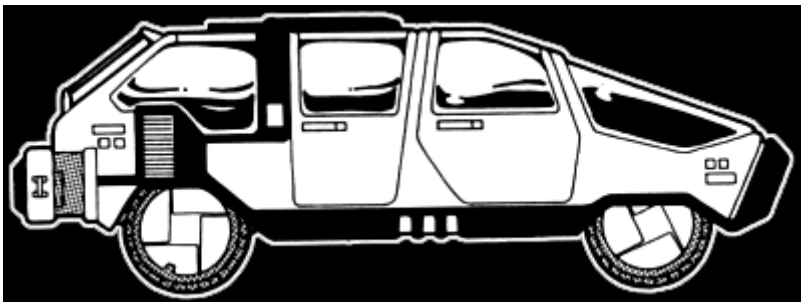
Full-Sized Van — Standard

Type: Van **Movement:** 100mph
Mass: 1800kg **Maneuver:** -15
Crew: 1 **Range:** 600km
Passengers: 10 **Armor:** 2/4/8
Cargo: 3 m3 **Cost:** $18,000+
Perks:
Passenger Seating (10), Cargo Bay (1 m3), Reinf. Crew Armor (R1, Airbags), Stereo
Flaws:
Annoyance: Reinf. Crew Armor only good in crashes/impact, Poor Off-Road

The full-sized van has the largest enclosed cargo capacity of any civilian vehicle, short of a semi... Most models seat anywhere from 1 to 10 passengers comfortably, depending on the desired amount of cargo space. Additionally, any of the three rear bench seats may be removed, increasing the available cargo space by 3 m3 each (to a maximum of 12 m3). Model pictured is the Lexus Cargo-1500. Cargo models are typically sold without the bench-seat fittings, thus using the standard 12 m3 cargo space. Cargo models typically retail for about $2500 less.

From Blackhammers Cyberpunk site

Honda Lettra



Proving to the world that they can do more than the ubiquitous MetroCar, the Lettra is a "perky" (accel 22.5, +1 handling) 4-door electric hatch-back sedan, that still boasts light armor and lots of room (6 seats total, plus a very small (1/2 space) trunk). For smaller families and those needing cargo space, the back two seats can be folded forwards to increase the trunkspace to two full spaces (a half-space is lost to the folded seats).

TOP SPEED 60 mph ACC/DEC 22.5/40 mph CREW 1 RANGE 100 miles PASSENGERS 5 CARGO 1/2spc / 500kg
MANEUVER +1 SDP 40 SP 12 TYPE Car MASS 1600 kg COST 24,000eb

Special Equipment: Crash Control x 2, AutoPilot, Simple Security, High Power Halogen Headlights, 80km Radio.

COMMERCIAL VEHICLES

From Neon Twilight

Light Cargo Truck	**Standard**

Type:	**Truck**	**Movement:**	**95mph**
Mass:	**3000kg**	**Maneuver:**	**-20**
Crew:	**1**	**Range:**	**600km**
Passengers:	**1**	**Armor:**	**2/4/8**
Cargo:	**16 m3**	**Cost:**	**$18,000+**

Perks:

Passenger Seating (1), Cargo Bay (16 m3), Reinf. Crew Armor (R1, Airbags), Stereo

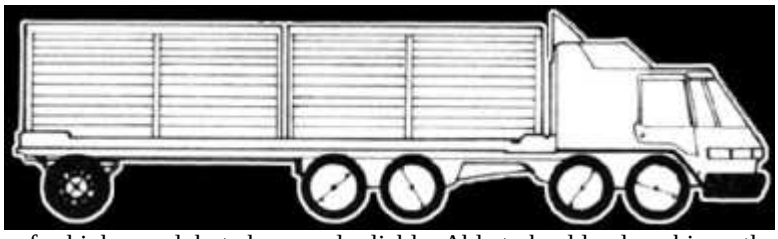
Flaws:

Annoyance: Reinf. Crew Armor only good in crashes/impact, Poor Off-Road.
Weak Point: Cargo Container (R1)

The light cargo truck occupies the functional niche between the cargo van and the full-sized semi tractor/trailer. Commonly utilized for delivery trucks for smaller loads, typically intracity or short-distance intercity goods transport. Because of the hollow nature of the cargo container, it is substantially more susceptible to damage (e.g. small arms fire), though some buyers transporting more valuable goods often armor the cargo section in addition to the remainder of the vehicle (Base Armor increased anywhere from 6-10, Weak Point flaw removed)

From Blackhammers Cyberpunk site

Houston Hauler



A long-range hauler, not known for high speed, but cheap and reliable. Able to haul loads as big as the PeterBuilt 2000, the Houston costs over 30% less. Designed for a two-person team, the Houston can stay on the road for 3 8-hour shifts before stopping to refuel (minus bathroom breaks of course). The cab is moderately armoured (at least enough to prevent damage from handguns and subguns), which often keeps it from the long-distance runs through "rough" areas, and restricts it to intra-city hauling or hauling along safe corridors.

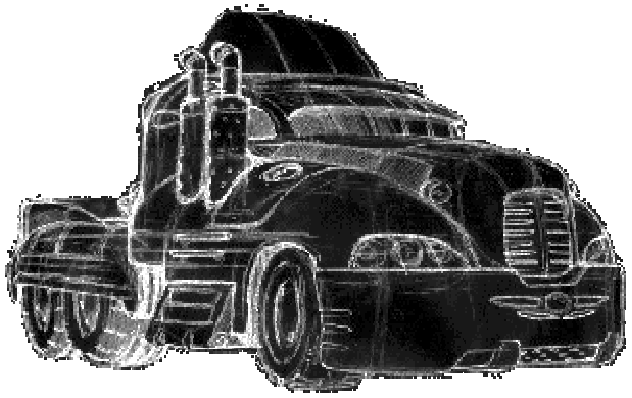
TOP SPEED 60 mph ACC/DEC 15/40 mph CREW 1 RANGE 1066 PASSENGERS 1 CARGO 0 spc / 36,000kg MANEUVER +0 SDP 60 SP 18 TYPE Truck MASS 4 Tons COST 70,000eb

Special Equipment: Fold-Down Bed, Environmental Control, Auto-Pilot, Entertainment System, Shocker Security System, High-Power Headlights. Crash Control x 2.

From Total System Technologies

Green Thunder - The SRT

Imagine a train transferred onto the road. Then you might just have an idea what on of these looks like. The truck itself is a derivative of the Mac II "Monster" (it's a derivative as it's almost totally rebuilt) and it can handle up to 12 trailers (10 purely cargo, 1 extra fuel and outrider vehicle and 1 defensive trailer). More advanced versions are to be released by the TST Corporation. Most of the really costly elements of the system have been developed by TST after they acquired the rights to manufacture of the vehicle. TST intends to sell the vehicle in a modular form.



BTW for those of you who don't know SRT stands for "Super Road Train".

The modules are:

- Primary Tractor/Rig
- Secondary Tractor/Rig
- Cargo Trailer
- Fuel Tanker
- Fuel Tanker/Cargo Trailer Combo
- Fuel Tanker/HovTank Combo
- Rear Defense Trailer (with RPV Launcher)
- AV Coupling
- HovTanks
- Outrider Cars

All Fuel Tanks are placed under a minimum of SP60. The purchase of a complete system will also make the buyer eligible to receive two cargo forklifts which can fit beneath the flatbed on the trailers. All vehicles described below also incorporate the controlling components that help the SRT to work. All section of the vehicle can have polycote added if the buyer so desires (for an extra cost).

The Maximum configuration is normally set out as:
Primary Rig, 2x Cargo Trailer (with wheels set rearward), normal Cargo Trailer (with link to SRig),

Secondary Rig, Fuel Tanker (combo or not), Cargo Trailer (WsR), Cargo Trailer (SrL),

Secondary Rig, 2x Cargo Trailer (Wsr), Cargo Trailer (SrL),

Secondary Rig, 2x Cargo Trailer, Rear Defense Trailer.

TECHNICAL DATA

Primary Tractor/Rig

Top Speed:	140 mph	Crew:	2
Passengers:	2	Maneuver:	0
SP:	60	Mass:	12 tons
ACC/DEC:	20/30	Range:	800 miles
Cargo:	36ton/trailer	SDP:	200
Type:	Truck	Cost:	202,000 eb.

Special Equipment: Military Radio w/scrambler, Shooter Security System, Weapon Hatch, Radar, Radar ID, Radar Detector, Radar Rangefinder, Sonics, Military Nav System, Bed, Mini-Galley, Environment Control, IR Baffling, Cellular Phone, Crash Control, Damage Control, RAM, Life Support (8 Man Hours), AGAMS, Smoke, Laser Communicator, Cybernetic Linkage, AP Grenade Charges, ECM, Vidcam (x3), Image Enhancement, Infrared, Thermograph, Ultraviolet, SP30 Window Armor, Puncture Proof Tyres (SP 20-military style), Off Road Capability, Auto-pilot, Halogen/Infra-Red/UltraViolet Headlights. There is a radio/CCD booster in the rear defense trailer as well as a Satellite Uplink Device which can be accessed by the driver or any another person on the SRT.

Onboard computer has INT 6, 100 MU storage bank, 48 hour backup power (recharges from rolling tyres), cyber control, powerstrip 2020, smartstrip, holovid driver, modem, chipreader, Navigation map Database. When the train is linked the `puter can be accessed by the smaller computers in the other rigs. It is also Cybermodem connectable. The Cybermodem which is available with this package has a speed of +4, DataWalls of 10 a 100 MU of memory and also comes with a Chipreader, Extra Batteries, ZetaTech Diagnet, EBM 99080 'MUSE' and is fully Cellular Capable or can be used cellularly through the Radio/Cellular Setup incorporated in the vehicle (connection stuffups reduced due to the booster).

Weapons: 2x 30mm AutoCannons in separate Turrets with 10 reloads each, LATGM - 7 missiles.

The physical layout of the main Rig has the driver in the center of the vehicle and slightly ahead of the weapons officer. The weapons officer sits to the left and slightly behind the driver. On the right is the first passenger who can also double as a net security person. The second passenger sits directly behind the driver. Directly to the left of them is the main computer and to the right is the door. The front windscreen is fully armored and the physical size of the glass is very little as most of the visual displays are on vidscreens (thats if they're needed at all). The window size is reduced to reduce the chance of projectiles punching through them. The front windows also have an armored cover (an extra SP 20)which can be placed over it for extra protection (unfortunately you have to be cyberlinked to the vehicle to see when it is place).

Secondary Tractor/Rig

Top Speed:	100 mph	Crew:	1 (becomes gunner in train mode)
Passengers:	1	Maneuver:	0
SP:	40	Mass:	9 tons
ACC/DEC:	10/30	Range:	800 miles
Cargo:	36ton/trailer	SDP:	100
Type:	Truck	Cost:	200,000 eb.

Special Equipment:

"AI" Robotic Control, Cyberlinkage, Armored Fuel Tanks, SRT Components, Crash Control, Damage Control, Armored Tyres, Off-Road Capable, Smoke Launchers, AGAMS, Bullet Proof Glass, Window Armor Screens (SP40), Laser Communicator, Shooter Security System, Weapon Hatch, Zetatech PS4040 Portstation, AP Grenade Charges.

Weapons: 2x Turrets for a 1/2 space weapon & 2 reloads for each.

The driver and passenger spaces in this vehicle are considered to be cramped by most people (people who are friends, very good friends, would call it cosy) and to cope with this the weapon turrets can be moved to accommodate a passenger (usually onto the roof).
If the weapon turret is placed on the roof the AGAMS is placed in a turret on to of tha 1/2 space turret.
When buying 3 of the vehicle is when this system becomes most economical when the turrets also give the weapons a greater firing arc. (they are usually placed ,from the front, driver door/roof, both doors, passenger door/roof).

Cargo Trailer

SDP:	100	Cargo:	34 tons
SP:	40	Cost:	1,000 eb

The cargo is either a cargo crate or on pallets with a small space below the floor where the spare wheels, extra ammo, forklifts & other junk can be stored. The rear of the trailer is reinforced to allow for the connection of further trailers. The cargo trailers used directly behind a PP are the same except that their wheels are set behind the doors to the cargo area. All tyres are Puncture Proof, OffRoad Capable and have fully independent steering and suspension. This also comes with AP Grenade Charges.

Fuel Tanker

SDP:	100	Cargo:	Fuel
SP:	60	Cost:	1,500 eb

The Fuel in the tanker is enough to extend the range on the SRT to over 8,000 miles. Armored to an SP of 60. The exterior of this trailer is designed to be inconspicuous to the rest of the vehicle. There is no cargo space below the tank as this area is used for hoses, pumps and other components for the fuel transfer system. The wheels for this tanker are set rear of the body.

The fuel tank is built to be able to withstand puncture and still not catch fire (a decision made by the original GT driver, with the benifit of experience). The way this is done is mostly by compartmentisation and other unnamed methods.

Fuel Tanker/Cargo Trailer Combo

SDP:	100	Cargo:	Fuel / 10 tons
SP:	60 / 40	Cost:	1,400 eb

The fuel tanker size is reduced to half (4,000 miles range + whatever already in the PP's tanks) and a small cargo area is places behind the tank. There is no cargo space below the tank as this area is used for hoses, pumps and other components for the fuel transfer system. AP Grenade charges are also included on this vehicle.

Fuel Tanker/HovTank Combo

SDP:	100	Cargo:	Fuel / 2 HovTanks
SP:	60 / 40	Cost:	2,000 eb

The fuel is as above except that there is an extra small seperate fuel tank for AV Fuel. The rear cargo section is redesigned to allow for the two Hovtanks and not create any extra drag or reduce performance of the SRT. It also allows

the HovTanks to leave the SRT and act as extra defensive vehicles. The Hovtanks are placed at the rear of the vehicle with one above the other. This isn't the best way to have them and will probably be changed in the final release version. It is believed that a trailer holding 4 HovTanks may become available but this is not yet confirmed (or economical). The original configuration had only one HovTank and can be made available on request.

AP Grenade Charges are to be included on all versions.

Rear Defense Trailer

SDP:	100	Cargo:	None
SP:	60	Cost:	2,500 eb

Special Equipment: AGAMS, Radio/CCD/Cellular Booster (ECCM Equivalent), Satellite Uplink, Radar (with Radar ID, Detector & Rangefinder), AP Grenade Charges, Magnetometer, Remote Store, Launch & Recovery System (holds 3 RPV-400), Laser Communicator, Chute, Vidcam, Minelayer (10 Anti-tank Mines).

Weapons: 1x 1 space weapon turret with 3 reloads, 2x 1/2 space weapon turrets with 3 reloads, 3x VSAM in verticle launch bins, 2x VSAM in retractable turret.

The remote launcher is similar to the type used on aircraft carriers but in a smaller version. It is placed on top of the trailer immediately in front of the RDT.

HovTank

Top Speed:	500 mph	Crew:	2
Passengers:	2 but usually used for storage space	Maneuver:	+3
SP:	40	Mass:	4.5 tons
ACC/DEC:	50/50	Range:	800 miles
Cargo:	300 kg	SDP:	120

Type:	AV	Cost:	550,000 eb.

Special Equipment: IR Baffling, Crash Control, Damage Control, Cybernetic Linkage, Environment Control, Life Support (8 hours), AGAMS, AP Grenade Charges, Military Radio w/Scrambler, Laser Communicator, Radar, Radar/Laser Rangefinders, Radar ID, MultiTarget, Entertainment System, Image Enhancement, LowLite, TeleOptics, RAM, Navigation System, SRT Refuel System, Basic AutoPilot, Shooter Security System, Searchlight.

Weapons: 20mm Gatling with 3 reloads, 2.75" rockets in 19 shot pod, VSAM x3, Painting Laser, Turret with 7.62mm Minigun with 2 Mags & 40mm Auto-GL with 2 Mags, 4 AAM, 6x Hellfire Missiles.

The configuration of the HovTank allows for multiple redundancy in it's engines as it is designed to be a scout/defense vehicle and therefore take more punishment than the average vehicle (the vehicle has extra engines mounted).

The crews usually stay in the vehicle while it is connected to the SRT as it is easier than transferring in and out when trouble appears.

The Hovtank is rarely seen due to the high cost (on top of the high cost of the vehicle without it) but may be considered necessary when engagements with other vehicles may be out of the range of installed weapons.

Outrider Car

Top Speed:	170 mph	Crew:	2
Passengers:	0	Maneuver:	+1
SP:	40	Mass:	4.5 tons
ACC/DEC:	25/80	Range:	400 miles
Cargo:	2 space/1330kg	SDP:	150
Type:	Car	Cost:	180,000 eb.

Special Equipment: Military Radio w/scrambler, Cellular Phone, Laser Comminicator, Comm-Suite, Nav System, Stereo Plus, Crash Control x2, Cybernetic Linkage, Armoured Spotlight, Halogen Headlights, Radar, Radar Detector, Image Enhancement, Light Amplification, Thermograph, Teleoptics, Laser Detector, Simple Security System, Off-road Capable, IR Baffling, Damage Control.

Weapons: 12.7mm Machinegun with 2 extra clips (in forward articulated mount), VSAM x2 HLAW, 3.5" rocket in 6-shot pod, 12.7mm Gatling with 2 reloads (in turret on roof).

This is the vehicle most commonly purchased with the SRT as it is cheaper (to run and initial cost) when compared to the HovTank. But personally I prefer a combination of the two. The Outrider car can link up to the rear of the vehicle and be towed (allowing the driver to rest).

History :

The original SRT wasn't anything more than a normal truck but with more trailers. The Rig had a more powerful engine and four trailers linked to it. It was considered illegal but the cops had bigger fish to fry and supplying the troops during Martial Law helped as well. The owner/driver then left the US and emigrated to Australia (taking his truck with him). There he transported goods across the Republic of Western Australia/Federal Republic of Australia border until the army caught up with him and blew it up.

Miraculously he survived the encounter (the trailers were destroyed but the rig wasn't). Six months later he was back. This time he used trailers with the wheels set back from the body and a connecting unit used on top. An engine was used on one of these units for extra acceleration. That version also had an armor of SP10. Unfortunately he forgot to armor or disguise the fuel tanks in any extra way. On his 12th trip a fuel tanker was used for extra range. And having it directly behind the cab wasn't that bright. It only took one well aimed incendiary grenade and a leaking fuel tank to start the fire. But the cargo of explosives quickly put it out. *"KA-BOOM"*

The border troops found him 500m ahead of where the truck came to a halt with almost every bone in his body broken. When he came out of the coma 7½ years later he learned of his prison sentence and when he had recovered sufficiently he was sent to jail to serve out the rest of his 8 year sentence. A week later he was out. A lawyer was waiting at the gate to hand over a substantial inheritance. This was in 2011. With the money he retired and disappeared and it was thought he was in the WA Republic. In 2018 a group of Runners, Techies and Solo's (a trans team) tracked him to the Hunter Region (Australia) and offered him a substantial amount of money to build another, more advanced, SRT. He declined the money but accepted the challenge. The product was called the Green Thunder (due to a technical fault which changed the polycote to a Dark Green colour, it's fixed in production models which have polycote) which included all of the aspects shown above (except multiple AV stuff). The whereabouts of the original is unknown but there are two copies known to be running the Fed Republic/WA border. The current location of the designer is not known but he intends to be at the TST release.

The vehicle looks rather weird if seen from the side (actually like a train) but this could be helpful.

The thing that distinguishes the original Green Thunder from the copies is a scrolling polycote bumper sticker which says:

"WIDE TURNS ARE AN UNDERSTATEMENT"

AERODYNES AND HOVERS

From Neon Twilight

Bensen Cascade — **Luxury**

Type:	**Hover Car**	**Movement:**	**260mph**
Mass:	**2000+kg**	**Maneuver:**	**+5**
Crew:	**1**	**Range:**	**500km**
Passengers:	**3**	**Armor:**	**4/8/12**
Cargo:	**1 m3**	**Cost:**	**158,000+**

Perks:

Interface Controls, Limited Autopilot

Flaws:

Racetested for optimum performance, this new model from Bensen carries the tradition of the ultra-fast sport hover into a new decade. The '90 Cascade is the epitome of new tech: its electronics, avionics, powerplant, and luxury are all tomorrow's models today. Gut wrenching acceleration on the straights, bloodcurdling handling in the turns terrifies the uninitiated; only a master can control the Cascade. Worldspanning access via cellular link keeps you in touch , and the fastest multiprocessors keeps control a thought away with the standard interface plugs.

BMW/Rolls Royce AV-7 — **Luxury**

Type:	**Aerodyne**	**Movement:**	**Flight:560mph Ground:125mph**
Mass:	**3500kg**	**Maneuver:**	**-5**
Crew:	**1**	**Range:**	**650km**
Passengers:	**3**	**Armor:**	**6/12/18**
Cargo:	**1 m3**	**Cost:**	**$300,000+**

Perks:

Autopilot, Computer (PP2, -1 CRE, +1 KNO), Passenger Seating (3), Cargo Space (1 m3), Stereo, NOE Flight, Reinf. Crew Armor (R1)

Flaws:

Annoyance: Reinf. Crew only good in crashes/impacts. Cannot Glide, Maximum Ceiling (6000m), Weak Point: Thrust Fins/Nacelles (R1).

The BMW AV-7 is a highly advanced personal aerodyne powered by a single Rolls-Royce 2280 ducted turbojet. The BMW AV-7 utilizes the state of the art in computerized fly-by-wire flight control and automated navigation systems (includes both an autopilot and dedicated GPS navigation system). Additionally, the BMW AV-7 is a hybrid -- not only can it fly (cruising at a respectable 300kph), it also has concealed set of roadwheels, allowing the AV-7 to utilize the road for fuel efficiency when needed. Unfortunately, the two control fins at the rear are relatively fragile -- a rear-end collision would severely damage their control surfaces. This AV-7 also includes passenger seating for 3 plus pilot, as well as crash webbing for safety. Additionally, the BMW AV-7 has top-of-the-line sensory and communications gear (-1/2km Sensors, -1/10km Comm) available in the civilian sector.

The Mach 2 — **Luxury**

Type:	**Aerodyne**	**Movement:**	**750mph**
Mass:	**3200kg**	**Maneuver:**	**+20**
Crew:	**1**	**Range:**	**650km**
Passengers:	**1**	**Armor:**	**6/12/18**
Cargo:	**.5 m3**	**Cost:**	**$650,000**

Perks:

Autopilot, Computer navigation.

Flaws:

Cannot Glide, Maximum Ceiling (7000m)

The AV series is popular. It's reliable. It's useful. It's everywhere. And every vehicle in the series looks like it was designed by a truck builder. An AV looks about as fast as a gum eraser, and has the same sex appeal. You can get from point A to point B in one and that's about all. Until now, From Lambo-Fait comes the fastest thing in the skies short of a jet fighter. It looksfast, it sounds fast, it *is* fast! The Mach is the answer to the professional air enthusists looking for a real challenge in aero flying. And it's the sexist vehicle in the air or on the ground. Available in black with red interior or red with black interior.

From Blackhammers Cyberpunk site

Besson B-90 AeroCab

Tired of being stuck in traffic? Not anymore! Besson's high-tech alternative to the standard taxi-cab combines some of the best features from both the Trauma Team AV-4 Tac Vehicle and a standard AV-7 Personal Aerodyne. The B90 has recently become the favorite transport of many corporates, who use it for special deliveries and a quick transport to meetings. With such a high level of quality on their first new vehicle, we can't wait to see what's next on Besson's product line.
The B90's main features are: an onboard computer w/automatic pilot, crash control, cyber-assisted, medium armor, high-speed accelerations and fast braking.

TOP SPEED 300 mph ACC/DEC 60/60 mph CREW 1 RANGE 400 miles PASSENGERS 3 CARGO 1 spc / 750kg MANEUVER +0 SDP 100 SP 20 TYPE Aerodyne MASS 3000 kg COST 500,000eb
Special Equipment: Crash Control x 4, CellPhone, Cybernetic Linkage (reduce price by 15% if not taken), Onboard computer (5 options), Automatic Pilot, EMP Shielding, Fare Tracker, License Point Monitor, Voice Capability, SmartLock Door System (cardlock),

2008 Benson Rampage

Originally introduced as an ultra-high speed racer in 2008, Benson motorworks also allowed it into the civilian market, and some paramilitary organiations picked them up as border patrol vehicles. Actually the ungainly combination of the engine and fan assembly off a soviet KvP-92 meshed to a vehicle barely a third the KvP's weight, this hover achieves speeds unmatched by other ground vehicles, if only it were matched by equal handling characteristics...
As a standard option from it's days as a racing vehicle, Rampages can be bought with full redundancy Damage Control systems and Cybernetic Uplink for an additional $280,000 (reducing cargo to 0 spaces).

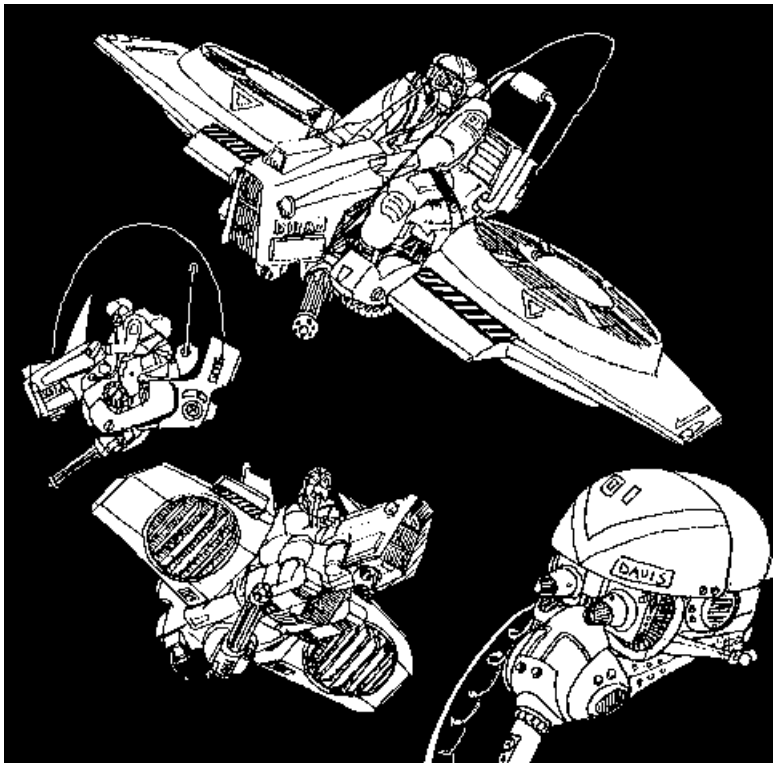
TOP SPEED 285 mph ACC/DEC 20/15 mph CREW 1 RANGE 400 PASSENGERS 1 CARGO 1 spc / 1.3 ton MANEUVER +0 SDP 40 SP 4 TYPE Hover MASS 4 tons COST 260,000eb
Special Equipment: Crash Control x2, Cell Phone, Navigation System, Shocker Security System.

Vehicle design and illustration ©1998 Jason Parent / Hound

GMI "Gram" Air Cushion Tank

Designed to compete directly with the US M-75 Light Battle Tank in an amphibious role, the GRAM hovertank is it. Not as maneuverable, but at least as versatile as the M-75, faster, better range, more accurate, slightly heavier armament and as thick of armor as the M-75, it's only disadvantage lies in rough terrain where AirCushion vehicles are always stranded. And it only costs 100k more than the M-75.

TOP SPEED 105 mph ACC/DEC 15/10 mph CREW 2 RANGE 530 PASSENGERS 0 CARGO 4 tons MANEUVER +0 SDP 125 SP 60 TYPE Hover MASS 12.5 Tons COST 1.5 Million eb
Special Equipment: Reactive Armor, Crash Control x3, Damage Control, Environmental Control, 12x IR Smoke Projectors, Laser & 500km radio communications, Scrambler, Light Amplification, Image Enhancement, Navigation System, Military Radar.
Weapons: Turret-Mounted 75mm Cannon (stabilized, +3 WA Targetting Computer, 5 Extra Magazines), Front Articulated Mount 30mm Autocannon (stabilized, +3 WA, Targetting Computer, 4 Extra Magazines), Microwave RangeFinder.



By Christian Conkle

Bell-Boeing Skyhawk

The Bell-Boeing Skyhawk is the smallest mass-produced tilt-rotor aircraft. It serves the same tactical purpose as the Bell F-152 Autogyro but by doing away with the large rotor-blades it can squeeze into tighter places and can take more damage while staying aloft. Instead of the standard open-blade rotors, it uses two Pratt-Whitney heavy lift turbofans encased in armored housings and uses vecotored control panes for enhanced maneuverability. The pilot sits atop the vehicle in an open housing much like a motorcycle or autogyro. The pilot is cyberlinked and is usually equipped with night-vision optics either in the form of bionics or goggles.

Top Speed: 400kmh ACC/DEC: 10/20
Crew:1 Passengers: 0 Maneuver: +0
SP:10 SDP: 50
Mass: 2 tons Range: 30 miles
Cargo: none Type: Tilt-rotor
Cost: 225,400 E$

Accessories: Spotlight, Cyber-Link Control, Radio, Environmental Protection.
Armament: 7.6mm minigun on an open turret with 4 magazines of ammo.
Special: The pilot sits atop the vehicle like a motorcycle in an open frame. This means that any damage taken by the vehicle from the top, front, rear or sides has a 20% chance of hitting the pilot. Attacks from below only have a 5% chance.

By Christian Conkle

Acrodyne Aeronautics AV-4 Showcase

Browse through the Largest selection of Aerodyne Vehicles on the Net!

The AV-4 is listed in the Cyperpunk 2.0.2.0. rulesbook as being ubiquitous. Ubiquitous,indeed, for what CP2020 campaign would be complete without these retro-futuristic hybrids of the Harrier and the Huey? Nearly every single sourcebook for Cyberpunk 2.0.2.0. depicts an AV of some kind, leading to a stunning variety of makes and models. Here, I'll try to separate them out and hopefully make sense of these flying workhorses of the post-industrial future.

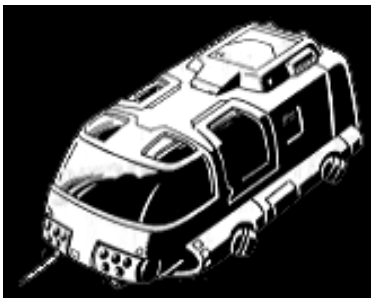
According to the Cyberpunk 2.0.2.0. sourcebook, the AV-4 and AV-6 are manufactured by McDonnell-Douglass for different retailers. I would assume that they are all assembled at the McDonnell-Douglass plants in Long Beach, SoCal or in St. Louis, Missouri. Their engines are Pegasus II Ducted Thrust Turbofans probably manufactured at Allison Aeronautics in Indianapolis, Indiana. They are terrible fuel hogs using jet exhaust alone for lift and stability.

The Aerodyne Vehicle was introduced in the Second Central American War and was used primarily by the military. After the war, many corporations purchased surplus units, creating a demand and a market for commercial AVs. The AV-3 was the first non-military Aerodyne. It is about the size of a large car and was initially sold to civilian police departments. The AV-4 is a large van-sized vehicle about the size of a small bus or helicopter. The AV-6 is an armed version of the AV-4 usually used by corporations or police departments and some corporations. It uses two Pegasus engines for added speed and lift and boasts a chin-mounted gatling gun and wing-mounted rockets. The AV-7 was the first commercial-only Aerodyne. It is a large luxury vehicle used by corporates and government officials. AV-8s and AV-9s are newer military Aerodynes. They usually fill an assault or troop deployment role, a role still filled by helicopters. .

Helicopters are more fuel efficient and have better range. Aerodynes, however, have better speed, more lift, and can operate in smaller areas. They are also more heavily armored than helicopters, and the engines are enclosed as opposed to the open rotor of a helo.

The newer Aerodynes, the UAAV and the AVX-9 Viper, are a radical depature in some ways, and in others are a step back. These new vehicles use a hybrid lifting-body design to take some load off of the thrusters which previously did all the work. The new design loses the cargo capacity of the older units in favor of speed, efficiency, and maneuverability. These designs harken back to the original Harrier Jumpjet, the grandfater of all modern Aerodynes, and look more like conventional aircraft than flying buses.

Following is a list of every illustrated AV-4 from nearly every sourcebook for Cyberpunk 2.0.2.0. and Cybergeneration. This list will soon include AV-7s AV-9s and other Aerodyne Vehicles.



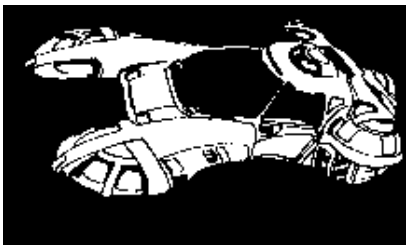
I would assume this one is an European model as it was seen flying over London in the Eursource sourcebook.

This one belongs to the Coast Guard of Night City. It is apparently an AV-6 combat model due to it's nose-mounted gatling gun and wing mounted rocket pods.

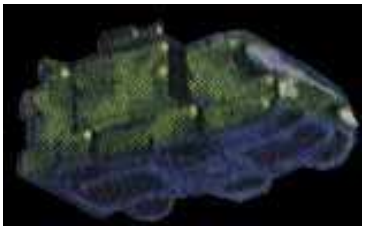
Compare the above AV-6 to the one here. This one is either corporate or military. I'd say corporate owing to it's lack of wing-mounted rocket pods.

The AV-6 from Maximum Metal. Note the rocket pods and turreted gatling gun. Compare this AV-6 with the others pictured.

A Police model AV-3 belonging to Night City, but different from the one in the Chromebook. Note the nose-mounted gatling gun.



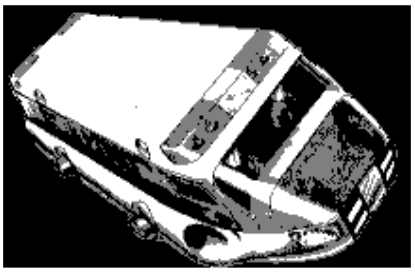
The AV-3 Aerocop from Chromebook 2. Compare this AV-3 to the one in Night City Sourcebook. The AV-3 also boasts ground wheels and can travel on the road with the rest of traffic.



This appears on the Night City Sourcebook cover. It is unarmed and unmarked and is likely a corporate AV-4 on a grey or black op.

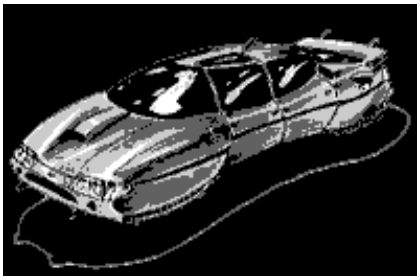
This particular AV-4 is obviously a civilian model due to it's lack of obvious weaponry. It is seen twice, once in the original publishing of the main rulesbook and again in this picture, in the background getting refueled at a CHOOH4U in the Corporate Report vol. 3.

This appears to be either a corporate or an REO Meatwagon AV-4 because the one below is specifically marked as a Trauma Team AV-4.

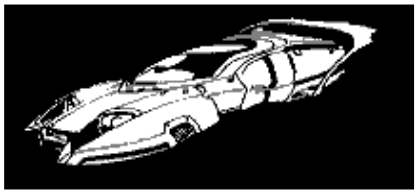


This one is labelled in the rulesbook as a Trauma Team AV-4.

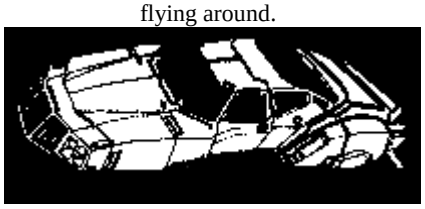
Ah, the luxury of an AV-7. Who wouldn't want to fly in style to the next corporate board meeting or that getaway in MexiCali?



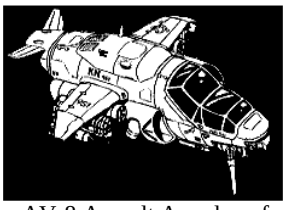
The Tetracorp Fei Lien 100 Aerodyne from Chromebook 3. It represents common AV-7 type luxury and status.



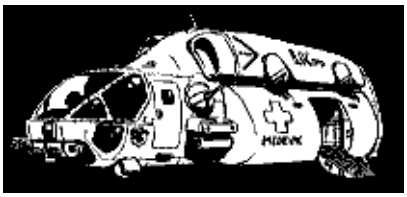
The Mach series of AV-7 from Chromebook 3 was designed to be sexy and sleek sportster alternative to the otherwise clunky-looking AV models flying around.



The Swan from Chromebook 3 is an executive AV-7 built in by the Scandinavian Bloc.

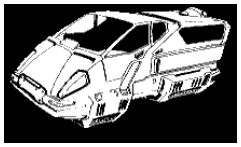


The AV-8 Assault Aerodyne from Maximum Metal. It is probably the best looking combat Aerodyne in production.

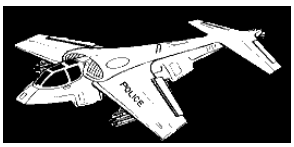


The AV-9 Multi-Role Aerodyne from Maximum Metal. It's replaceable pods can be interchanged with troop carriers, Medical pods, Weapons and Ammo pods, etc. It is large and heavy, but can fill many different roles. This is a much better depiction of an AV-9 than it's original appearance in Chromebook 1.

The EEC Airjeep from Maximum Metal. It looks a lot like the Thing from Volkswagen. Compare the military model with the aftermarket conversion Family Flier.

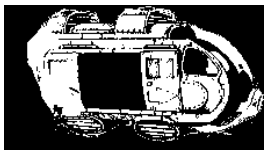


The VMW Family Flier from Chromebook 2. This was the first affordable commercial Aerodyne. It was produced by VMW on aftermarket conversions of the EEC Airjeep military Aerodyne chassis.

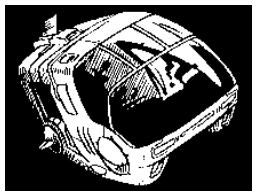


The UAAV Cityhawk from Protect and Serve. This hybrid design sacrifices the cargo capacity of the other AVs in favor of efficiency and maneuverabilty. It is a Boeing design, which probably explains it's radical departure, and is intended to be an urban ground-air assault fighter available to municipal police forces. Don't mess with any police force that has one of these.

The Militech AVX-9C Viper from Corporate Report 2020 vol.2. This bizarre design sacrifices speed for range and economy. It was designed for ground-assault and troop support. It boasts a healthy complement of advanced air avionics and target acquisition systems. The engines are IEC MVB-Sidewinder Turbofans from Germany and are more fuel effiecient than their American cousins from Allison.



This futuristic looking Aerodyne appeared in the Virtual Front sourcebook for CyberGeneration. It apparently has the ability to fly sideways, at least for short periods of time.



This equally futuristic Aerodyne was flown/crashed by the Foxfire team in 2025 and appeared in the opening pages of CyberGeneration. Note the lack of ducted thrusters on this vehicle. How does it maneuver?

By Teleran Quizari

The Aerodyne Conundrum

Probably the most noticeable vehicle in all of cyberpunk. And the least likely to ever actually be built. I know that this might annoy a number of players, and in fact the idea even to me is neat, but very impractical and unlikely. The spinners from Cybergeneration are much more believable.

Arguments against the AV

Reason 1: Safety

Safety, not something that is always mentioned in Cyberpunk. Its a concept that most Corps seem unable to grasp, let alone follow. But just try and get the CEO of a major Corp to do anything remotely unsafe and they immediately start complaining. Sure its one thing to risk a bit of cash in a Corporate Venture, but risk they're own butts? Not bloody likely.

The typical aerodyne is built on a jet engine platform, from almost the same design blueprint as has been in use for better than 4 decades. It makes use of a bulk force approach to flying. 2 to 4 thrust units are used to direct force below the vehicle to allow it to fly. The AV has no lifting surfaces so it must rely totally on engine power. If the thrust is lost the AV flies much like a brick, as in not at all, or straight down. Jet engines are notoriously picky, they use a very select type of fuel, they tend to go to pieces if something sufficient is sucked through an intake. And these things are flying over major population centers, and engaging in combat maneuvers along the grubbier streets in the combat zone?

Now consider the spinner and helicopter. They carry much more fuel, and have a variety of built in safety features. A helicopter or spinner can auto rotate, the blades turn helping to slow the helicopter if the engine dies. Spinners even have guards around the blades to make the dangers of spinning rotors less threatening. Helicopters are proven technology, they have been operational since the 50's.

Reason 2: Air Pollution

Pollution, another of the big ignored issues of the cyberpunk world. Those ecology friendly movements of the 90's sure haven't lasted long. The jet engine is designed to run at high speed and high altitudes, its loses efficiency at low speed and altitude. As a combustion engine loses efficiency it increases pollution. Just imagine the garbage coming out of an AV...unconsumed gas, a wide variety of carcinogenic combustion products, heat, force, noise? Try and imagine this thing, it weighs a few thousand pounds and has a thrust rating high enough to lift it, floating over your head. If you weren't cooked or deafened by the exhaust you'd be slammed to the ground by the thrust. And this thing is used to drop down and rescue injured patients from off city streets?

Again in comparison the spinner and the helicopter. Both are designed to function the same regardless of air speed or altitude, and where built specifically for low level flying. Advanced design and new tail construction can virtually eliminate the noise, and the down thrust is diffused over a wider area to reduce intensity.

Reason 3: Fuel Efficiency

Okay now we reach something that Cyberpunk's Corps can appreciate. The cost. In the setting described in the rules, AVgas is very rare and expensive, enough so that the U.S. Military builds high efficiency fighters that it can barely afford to fly. Then we have the AV's flying over Night City. Probably the most inefficient use of fuel known, even the Harrier Jumpjets from which the idea was taken preferred to use runways to take off, and had lifting surfaces to allow a much more efficient rear directed thrust pattern (something an AV can't do, it is stops thrusting down it falls, no lifting surfaces). VTOL take off burns fuel like nobody's business, and jets rarely have more than a few minutes air time anyway. Imagine a typical Trauma Team rescue, they fly out, fight a battle, drop for rescue and fly back. Probably takes 20 minutes or more, this means the AV probably at best has a 2 or 3 minute margin of error. Opps... air ambulance crashes midway back to hospital kills 20. Compare this to a helicopter which can fly almost as fast, is more agile, and can carry about 20 times the flight time.
The helicopter design allows for much greater fuel efficiency, it can carry more fuel thus allowing it to fly longer. The spinner is even better, the best designs make use of lifting surfaces to cut fuel costs during level flight, much like the Osprey designs.

Reason 4: Control

What do I mean by control? An AV uses thrust units to fly, it has no lifting or control surfaces. As a result it requires the pilot to fly on the thrust. The slightest mistake could send the whole thing over the edge. A very expensive fly by wire system is the only way such a system could possibly work. Can you see why such a vehicle is unlikely?
Helicopters where designed for tricky flying and have decades of refinement. Control is provided by blade speed, and angle as well as tail rotor manipulation. Spinners go even further and often have lifting and control surfaces.

Argument for the AV

Reason 1: They Look Cool

And that's it, the only reason for the AV. They look cool. Unfortunately I like a bit of realism. Sure their are aspects of the Cyberpunk game that are far fetched, but I can see the trends that lead to them, I can see the basic technologies present today that will lead there, maybe not in 21 years but eventually. In fact I tend to set my games in 2097, just to avoid that fact.
But so to do helicopters and spinners. Consider the designs of current combat helicopters, some of the most impressive looking aircraft are helicopters, and the fire power they can carry is staggering, why settle for 2 measly chainguns? A spinner combines the aspects of a plane and a helicopter, but is different in approach to the Osprey. The best examples I can think of off hand are found in the anime series **Bubblegum: Crash**, but of course you knew that right?

POWERED ARMOR

From the Blackhammer Site

Arasaka SAMAS
Elite ACPA Flight Armor

In a quest to better implement the Flying Wing design of ACPA flight units, Kei Arasaka set down design basics that required an ACPA suit to be flight-capable in a vertical (standing) position, allowing for full weapons mobility even at full thrust.

Two years later, the results could almost revolutionize ACPA design if only the current flight packs could support a greater mass in full flight. The SAMAS unit (Strategic Air-Mobile Assault Suit) can be fielded to any battlefield in 600 miles within 2 hours of scrambling.

Incorporated into the design is an absolute minimum of surplus equipment due to the rigid weight restraints of the wyrm class rocket engine used to propel the suit to nearly 600 miles an hour (1000km/hr - MA 300), the most prominent of which is the new BCL-21 Rifle system. The BCL-21 is a refit on the Long-20 ACPA rifle system, converted for three-shot burst fire and now fed from a 40-round belt instead of the standard 20 round magazine. These conversions turn the Long-20 into a much more diversified weapon system.
Several SAMAS flight units (3-man teams) are now in operation in various Arasaka headquarters and can be scrambled at a moments notice. SAMAS pilots are trained rigorously for ACPA combat (often in the Standard B suits) and are then pushed through pilot training to learn to manage their new abilities. Pilots are also made to maintain a weight under 80 kilos due to the extreme weight restrictions in this suit.

POWERED ARMOR SPECIFICATIONS			
SUIT NAME:	Arasaka SAMAS	**MANUFACTURER:**	Arasaka
TOTAL WEIGHT:	800 KG	**SIB/DFB:**	+2/+2
CHASSSIS TYPE:	Ninja, STR 20	**CHASSIS CAP./CARRY:**	1000 / 300kg
PUNCH:	2D10	**TOTAL COST:**	152,450eb
KICK:	3D10	**TROOPER SIZE:**	80 KG
CRUSH:	3D10	**TOUGHNESS MOD:**	-6

HEAD	**R & L ARMS**	**R. & L. LEGS**	**TORSO**
SP: 30	**SP:** 30	**SP:** 30	**SP:** 30
SDP: 5	**SDP:** 5	**SDP:** 10	**SDP:** 15
INTERNAL SDP	**INTERNAL SDP**	**INTERNAL SDP**	**INTERNAL SDP**
Scrambled Cell Phone (5 SDP)	Smoke Cannister (15 SDP)	Jump Jets (2 units) (30 SDP)	High Boost
ECI Wideband HUD (10 SDP)	Ribbon Cannister (20 SDP)	BCL-21 Reload (20 SDP)	Radar (15 SDP)
	BRP Pack (1@arm) (20 SDP)		Arasaka Monitor (15 SDP)
			8 Hours Life Support (20 SDP)
EXTERNAL SDP	**EXTERNAL SDP**	**EXTERNAL SDP**	**EXTERNAL SDP**
Flight Unit (60 SPD / 30 SP)	Flight Unit (60 SPD / 30 SP)	Flight Unit (60 SPD / 30 SP)	Flight Unit (60 SPD / 30 SP)

Equipment Carried

20mm BCL-21 Cannon| HVY | +1 | N | R | 8D10(4) | 40 | 2/3 | VR | 550m |
A hot innovation first pulled into service on the SAMAS is an upgrade on the Long 20 rifle. Modified to fire 3-shot bursts and feeding from a belt instead of a magazine, the Long-21 can now operate in multiple roles unlike the Long-20. (45kg, 20kg/magazine, 4000eb)

The original SAMAS illustrations are by Long and are the copyright property of Palladium games for their RIFTS RPG.
The illustration has been used here without the consent of the artist or author,
are not for commercial use and are not intended as a challenge to their copyright.

The ACPA record sheet HTML table design was modified from Datafortress 2020's.

From Paul Minor

SHINJUKU
HEAVY INDUSTRIES

HEADQUARTERS:	Tokyo, Japan
REGIONAL OFFICES:	Osaka, Nagoya, Kobe and various other Japanese cities.
NAME AND LOCATIION OF MAJOR SHAREHOLDER:	Nomo Yamazaki 27.5% Tokyo, Japan
EMPLOYEES:	World Wide: 40,000 Troops: 1000 Covert: 200

2005, Hiro Kitahara stared in disbelief at the photographs strewn before him. The room stood completely silent. Shocked board members bowed their heads and looked away, pretending not to notice the completely obvious. Nomo Yamazaki stared coldly at Kitahara as he studied the pictures. In his late 20s, Yamazaki was a handsome man. His hair was slicked back with the precision of an artist, and his flashy designer suit fit him as if it were a second skin.

"I've dealt with you *sokaiya* before and I've never come out the loser." Said Kitahara. "I don't intend to start today."

The sakaiya were a sort of spin off group from the Yakuza. Their modus operandi is to go into the boardroom, threaten to expose some sort of scandal and then collect a hefty payment. Yamazaki cracked a smile. Kitahara was famous for dodging payments to sokaiya and getting away with it.

"I'll do you a favor." Said Kitahara as he adjusted his glasses and pulled out his checkbook. "You take this ¥100,000 and we'll call it even. Deal?"

"I'm not here for your money Kitahara-san."

"Then just what is it you want?"

Yamazaki paused for a second, and then looked Kitahara right in the eye.

"I want Shinjuku Heavy Industries."

At that, the whole room looked up in shock. Kitahara was taken aback. There he sat, in disbelief at what this man was saying. He would be damned if he'd ever give up his company to some snot nosed *chimpu*!

"This is preposterous!"

Yamazaki heard the faint click of a safety as the huge bodyguard behind him readied his weapon. He decided he wasn't going to wait around for the bodyguard to make the first move, so he reached for his Arasaka WSA. With blinding speed he whipped around and pumped three shells into the unsuspecting guard. As the bodyguard slumped dead against the white marble wall, he turned his attention to Kitahara.

"I dislike violence Kitahara-san."

Kitahara was white as a ghost, and he was losing his composure quickly. Suddenly, Yamazaki lowered the gun and blasted two rounds into Kitahara's leg, shattering his kneecap. Kitahara fell to the ground screaming. The other board members sat still like statues, too paralyzed with fear to move.

"As I said, I want your company." Said Yamazaki as he through down a piece of paper and pen in front of the agonizing CEO. "By signing this, you are signing all of your stock over to me. I'll expect it on my desk in the morning. If its not there, then I come back for your other leg."

And with that, Nomo Yamazaki walked calmly out of the boardroom.

The next morning Yamazaki walked through the front door of Shinjuku Heavy Industries as the CEO.

HISTORY

When Shinjuku Heavy Industries was founded in March of 1999, it was a small firm with one modest office and one small factory in Tokyo. At the time, Shinjuku specialized in the manufacture of heavy machinery for use in the construction industry. The company took off for a while, but by early 2002 it was already facing financial difficulty. The problem was that although it's products were of high quality, Shinjuku lacked the capital to stay in a market heavily saturated by corporate giants like Mitsubishi. The previous year, Shinjuku had invested hundreds of millions of yen into a project headed by Dr. Katzu Ito called the "linear frame." The linear frame would basically be a powered exoskeleton with an advanced bio-feedback system. This would allow workers to lift and carry extremely heavy materials on their own. Unfortunately, this project was shelved when the troubles started to hit in 2002.

In early 2005 a young sokaiya (sort of like Yakuza, but specializing in extortion) named Hiro Yamazaki decided it was time for a career change. He decided that he wanted his own company, but he knew he had no capital to start a business. He'd just have to take one instead. After months of careful research he stumbled across Ito's linear frame program. He figured that if it was refined and marketed correctly, it could become one of the most important innovations the construction industry has ever seen. The following month he took Shinjuku Heavy Industries by force, and reinstated Ito's linear frame program. By early 2006 the first working model was unveiled at a Tokyo construction technology convention. It was a huge success, and in the first year of Hiro Yamazaki's leadership, the company doubled in size and it's profits grew exponentially.

Since 2005 Shinjuku has been one of the forerunners in products related to the linear frame. The most notable of these is of course the powered armor. Shinjuku was the first company to introduce the powered armor for construction use, and has a huge catalogue of suits ranging from underwater construction units to orbital construction units.

In 2017 Yamazaki started the "Special Projects Division" to handle the design of military APCA. Since this time Shinjuku has become the most respected authority on APCA for covert ops. It should be noted that Shinjuku holds all contracts for military and police APCA in the country of Japan.

MAIN PRODUCTS

Shinkuku's chief product is the powered armor (and is increasingly becoming the military covert APCA). This section will outline only APCA and APCA inovations related to military or police use. It can be assumed that Shinjuku's non-military catalogue is huge, and that a suit for any work condition is available.

NEW APCA OPTIONS:

Riot Armor

Since most of the suits that Sinjuku produces are built light for stealth and mobility purposes, they tend to be more lightly armored than most APCA suits. While this is usually ok for operations against soft targets, there are times when a trooper needs a little extra armor. This is where "riot armor" comes into play. Riot armor is basically an oversized ballistic vest fitted for APCA. It usually comes in sections, with a main vest which covers the torso and smaller pieces which are used to cover the forearms, or in some cases the legs. Riot armor is affixed with heavy-duty quick release straps, so it can be ditched in a matter of seconds. Torso armor will impose an encumbrance value, but the arm and leg pieces are generally encumbrance free. It is available in the following classes.

CLASS	SP	EV	COST
Light Riot Armor	25	-1	2000EB
Medium Riot Armor	35	-2	3500EB
Heavy Riot Armor	40	-3	5000EB

Shinjuku "Mirage" Finish - 25,000 EB

Similar to Militech's "Mirage Gear" only Shinjuku has made it into a finish for APCA and vehicles. Basically the Mirage finish utilizes liquid crystal technology to match a suit's camouflage to the environment. This system allows the suit's pilot to select from over 30 different camouflage patterns (jungle, desert, urban etc.) or just matte black. Observers are at -2 when the suit is still and -1 if its moving. There is an additional -1 for every 10 meters between the wearer and observer. Needless to say this option is quite expensive and only appears on covert suits.

Shinjuku "Ghost" Finish - 75,000 EB

This is the pricier cousin of the Mirage finish, is based on Militech's "Ghostsuit." This finish uses multi-faceted fiber-optic digitization in order to totally mimic the suit's environment (remember *Predator*?). Observers are at -4 to see the wearer if still, and -2 if moving. There is an additional -1 for every 10 meters between the wearer and observer. This finish is even more expensive than the last, and is rarely seen on anything but the most specialized covert-ops suits.

APCA HALO Parachute - 2,500 EB

This option grew out of the need for vertical insertion of covert APCA units. Each chute must be custom fited for each APCA. When using the parachute make a REF + PA Pilot > 15 to land in the target area. By each point the roll is missed by, the APCA deviates 10 meters in a random direction (use grenade table).

NEW APCA

SHINJUKU HEAVY INDUSTRIES TYPE-S

The TYPE-S, in its various forms has been the standard APCA unit for Tokyo's C-SWAT since 2018. The growing number of cyberpsychos as well as heavily armed terrorists and Yakuza has given rise to a new era of violence in the Tokyo area. The TYPE-S was introduced in order to safely combat this menace. Its light weight and high mobility makes it a perfect SWAT suit. The TYPE-S is frequently used in police sponsored anti-terrorist operations, as well as in high-risk raids. It has been instrumental in the raids on the heavily fortified drug factories of the Tokyo Bay area. The TYPE-S is easily customized, and individual police departments often do so (see right).

POWERED ARMOR SPECIFICATIONS			
SUIT NAME:	TYPE-S	**MANUFACTURER:**	Shinjuku HI
TOTAL WEIGHT:	430 KG	**SIB/DFB:**	+4/+2
CHASSSIS TYPE:	Gunslinger, STR 25	**CHASSIS CAP./CARRY:**	1250/ 375kg
PUNCH:	3D10	**TOTAL COST:**	71,260eb
KICK:	5D10	**TROOPER SIZE:**	114 KG
CRUSH:	4D10	**TOUGHNESS MOD:**	-7

HEAD	R & L ARMS	R. & L. LEGS	TORSO
SP: 30	**SP:** 30	**SP:** 30	**SP:** 30
SDP: 6	**SDP:** 6	**SDP:** 12	**SDP:** 22
INTERNAL SDP	**INTERNAL SDP**	**INTERNAL SDP**	**INTERNAL SDP**
Commo Link SDP 5	C6 Breech Spray SDP 10	Holster for 14mm	Monitor Auto-Doc SDP 15
ECI Wideband HUD SDP 10	Emp sponge SDP30	15mm SMG reload (2)	C^3 Computer
Infra Red, Anti Dazzel	Emp sponge SDP30	or	High Boost
Thermal Targeting, Image		4 gauge reload (2)	Escape Hatch
Enhance			
EXTERNAL SDP	**EXTERNAL SDP**	**EXTERNAL SDP**	**EXTERNAL SDP**
Sensory Extension	Light Bars	Smoke Cannister SDP 15	Searchlight SP 10 SDP 5
		Flash Cannister SDP 20	Light Riot Armor (optional)

Equipment Carried
14mm Autopistol Towa CLAW | *SHT* | *+1* | *N* | *R* | *9D6+2 (4 gauge slug)* | *20* | *10* | *VR*| *60m* | or Towa 15mm SMG | *HVY* | *-1* | *N* | *R* | *4D10+3 (15mm)* | *30* | *10* | *VR* | *100m* |

SHINJUKU HEAVY INDUSTRIES TYPE-31H "Tigershark"

The TYPE-31H is one of Shinjuku's newest military models. The Tigershark's role is a unique one as it is one of the few aquatic suits on the market. It can handle underwater combat, but that is not it's true forte. With the growing number of underwater facilities and the submersible craft that came with them, there was an increased need for a covert suit that could handle underwater insertion and underwater combat. The Tigershark was the answer to this call, and has become the pace-setter of underwater suits. Its most popular use by far has been in the field of submarine entry. The Tigershark is able to handle the extremes of the deep sea much longer then the human diver and can lie in wait if it knows the path the sub will take. A month after this suit was introduced, it made it's combat debut, when a Tigershark of unknown origin and a team of two divers infiltrated Petrochem's Submerged Drilling Project (SDPR) off the coast of Alaska. In a total of 10 minutes the SDPR crew was massacred and Dr. Lance Brenon, a renown scientist, was kidnapped. This event has been hailed as the world's first deep-sea extraction.

POWERED ARMOR SPECIFICATIONS			
SUIT NAME:	TYPE-31H "Tigershark"	**MANUFACTURER:**	Shinjuku HI
TOTAL WEIGHT:	628 KG	**SIB/DFB:**	+4/+3
CHASSSIS TYPE:	Highwayman, STR 35	**CHASSIS CAP./CARRY:**	1750/ 525kg
PUNCH:	4D10	**TOTAL COST:**	112,240eb
KICK:	6D10	**TROOPER SIZE:**	114 KG
CRUSH:	5D10	**TOUGHNESS MOD:**	-9

HEAD	R & L ARMS	R. & L. LEGS	TORSO
SP: 40	**SP:** 40	**SP:** 40	**SP:** 40
SDP: 9	**SDP:** 9	**SDP:** 18	**SDP:** 27
INTERNAL SDP	**INTERNAL SDP**	**INTERNAL SDP**	**INTERNAL SDP**
Military Commo Link SDP 10	C6 Breech Gel SDP 10 (left)[+]	12.7mm Reload	Bodyweight Medic SDP 15
VR Interface SDP 10	12.7mm MG (right)	Torp Reload	Sonar SP 10
A/V Recorder	30mm torp-gun (right)*	Buoyancy Comp.	Magnetometer SP 15
	Buoyancy Comp.		Self Seal Compression
			Low Boost
EXTERNAL SDP	**EXTERNAL SDP**	**EXTERNAL SDP**	**EXTERNAL SDP**
Searchlight SP 10 SDP 5	N/A	N/A	Underwater Jets SP 25 SDP 60
			4 hr Extended Life Support SP 30 SDP 20
			"Mirage" Finish

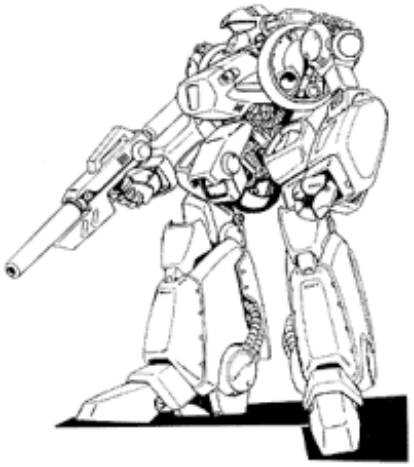
Equipment Carried
N/A

* This weapon can only be fired underwater. See *Oceanpunk* for details on torp-guns. It should also be noted that conventional weapons are less effective underwater.

[+] Same as C6 Spray, only in a waterproof gel form.

SHINJUKU HEAVY INDUSTRIES TYPE-2C "Shinobi"

The TYPE-2C is Shinjuku's premier covert-ops suit, and despite its expense, it is used extensively by the richer corporations and governments. The "Shinobi" has seen a great deal of media attention as it has been used in several high profile assassinations in Japan as of late. Public Security Section 9 is believed to be involved as it is one of the major purchasers of TYPE-2C units in Japan. The Shinobi is well suited for covert-ops in a variety of environments. Its small size and light weight come in handy in urban environments as well as jungle and desert environments. The unit can be customized in several ways, and variations range from expensive to extremely expensive. The base (*B*) model comes equipped with "Mirage" finish and a suppressed version of the Towa 15mm SMG. The intermediate (*I*) model comes with "Ghost" finish and is equipped with the 15mm SMG and an APCA Sniper System (+55,000 EB). The advanced (*A*) version comes with all of the below and an ECM suite (+500,000 EB). All versions can be fitted with Riot Armor and the APCA HALO System.



POWERED ARMOR SPECIFICATIONS			
SUIT NAME:	TYPE-2C "Shinobi"	**MANUFACTURER:**	Shinjuku HI
TOTAL WEIGHT:	445 KG (*B*) 453 KG (*I*) 460 KG (*A*)	**SIB/DFB:**	+5/+3
CHASSSIS TYPE:	Gunslinger, STR 25	**CHASSIS CAP./CARRY:**	1250/ 375kg
PUNCH:	3D10	**TOTAL COST:**	103,160eb (*B*)
KICK:	5D10	**TROOPER SIZE:**	114 KG
CRUSH:	4D10	**TOUGHNESS MOD:**	-7

HEAD	R & L ARMS	R. & L. LEGS	TORSO
SP: 30	**SP:** 30	**SP:** 30	**SP:** 30
SDP: 6	**SDP:** 6	**SDP:** 12	**SDP:** 22
INTERNAL SDP	**INTERNAL SDP**	**INTERNAL SDP**	**INTERNAL SDP**
VR Interface SDP 10	C6 Breech Spray SDP 10 (R)	15mm SMG reload (2)	Bodyweight Medic SDP 15
Military Commo Link SDP 10	Alarm Removal Kit SP 5 (L)	13.9x99 reload	C^3 Computer
Mapmaker (chrome 1)	Painting Laser (L)	Emp sponge SDP 30	High Boost
Scrambler SDP 5	Emp sponge SDP 30		Escape Hatch
	Retractable Fiber-Optic Lens		ECM (advanced model only)
EXTERNAL SDP	**EXTERNAL SDP**	**EXTERNAL SDP**	**EXTERNAL SDP**
		Smoke Cannister SDP 15 (R)	"Mirage" or "Ghost" Finish
		Flash Cannister SDP 20 (L)	L or M Riot Armor (optional)
		BCF-3 (Rear)	APCA HALO (optional)
			IR Baffling

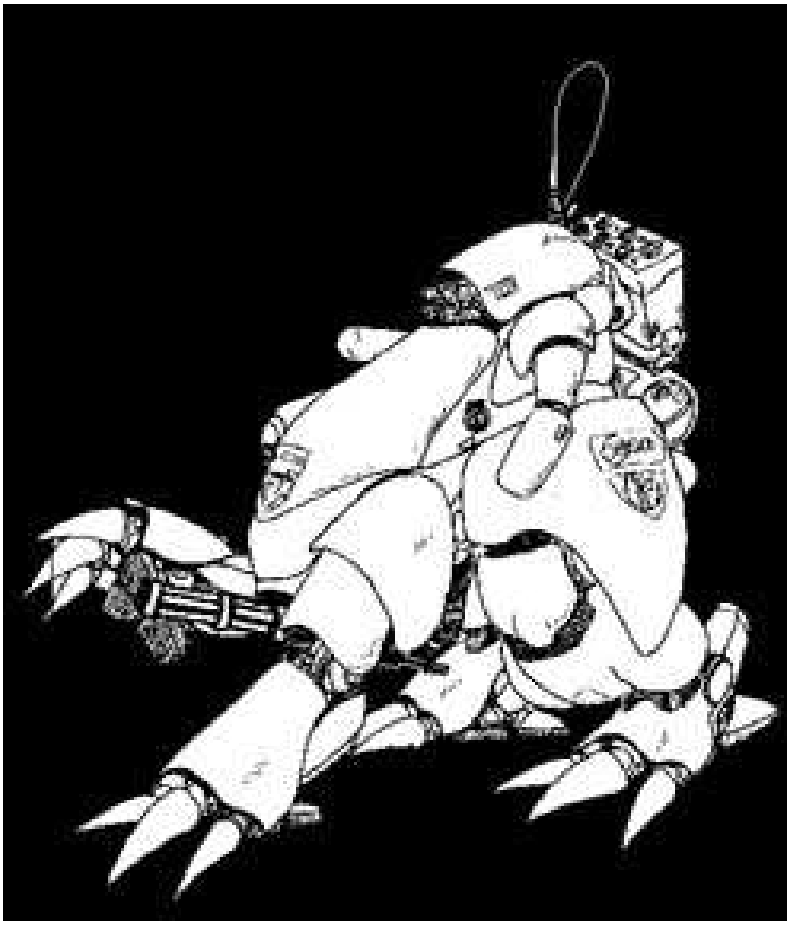
Equipment Carried
Towa 15mm SMG | *HVY* | *-1* | *N* | *R* | *4D10+3 (15mm)* | *30* | *10* | *VR* | *100m* | *Suppressed*
APCA Sniper System | *HVY* | *+1* | *N* | *R* | *6D10+5 (13.9x99mm)* | *30* | *3*| *VR* | *600m* |

Written by: pminor@pacificnet.net

Images stolen from *Megazone 23*, *Madox-01* and *Patlabor* (and yes, I do know that "labors" are supposed to bigger than what I'm making them out to be.)

From Chris Conkle

The Deutsche Moterwerk Mauser



The Maus is a special kind of ACPA called a Landmate. Landmates are characterized by their use of slave servos for the arms opposed to the direct control. Use of the slave servos enables the designer to create larger sized ACPA. The drawback is the exposure of the arms to the lighter armor of the servos (note- I have, as yet, no real rules for this, so this mech was constructed with standard rules). The Maus is also unique in that it is a quadrupedal ACPA. It's forelegs are controlled by the arm slave servos and it has the limited ability to rear up on it's hind legs like a bear. It was designed as an anti-personnell and light anti-ACPA. Against a real vehicle the Maus can do little damage but it is heavily armored so that it can make a quick retreat.

Suit name: Maus Total Weight: 806kg, 948kg loaded Chassis type: IEC Demigod Punch: Kick: Crush: Run: Leap: Jump:	Manufacturer: DMW SIB/DFB: +3/+1 Chassis Weight: 242kg Chassis Cap./Carry: 2500kg/242kg Total Cost: 623,280 E$ Trooper Size: 136kg Toughness Mod: -12

Head: SP:75 SDP: Internal: 1. Full HUD 2kg 2. IR Image Enhancement Thermal 3. Military Radio External: 1. Mini-Roc 6 171kg 2. "	R. Arm: Internal: 1. none 2. " 3. " 4. " External: 1. Climber Claws 1kg 2. " 3. "	L.Arm: Internal: 1. none 2. " 3. " 4. " External: 1. Climber Claws 1kg 2. " 3. "	R.Leg: Internal: 1. none 2. " 3. " 4. " External: 1. Climber Claws 1kg 2. " 3. "	L.Leg: Internal: 1. none 2. " 3. " 4. " External: 1. Climber Claws 1kg 2. " 3. "	Torso: Internal: 1. Bodyweight Autodoc 3kg 2. Escape Hatch 1kg EMP Sponge 2kg 3. Smoke Cannister 4kg 4. Extra Ammo 2kg 5. Extra Ammo 2kg External: 1. ECM 25kg 2. " 3. 5.56mm minigun 15kg searchlight

AIR CRAFT

From Total System Technologies

ANTIQUE AIRCRAFT IN 2020

Antonov An-2 Kolkhoznik/'Colt'

Top Speed: 163 mph
Acc/Dec: 10/25
Crew: 2
Passengers: 13 with no cargo
Range: 500 miles
Cargo: 1 ton (0) or (13) with no passengers
Maneuver: -3
SDP: 84 (Body 4)
SP: 0 (Armor 0)
Type: Light/Medium Plane
Mass: 6 tons maximum takeoff weight
Cost: 115k eb (110,700eb base cost) [Bought in 2020, this would be old surplus, worth maybe 50k eb]

Equipment: STOL, off-road capable, 500km radio, heated cabin (civilian environmental control).

Weapons: None

Notes: Capable of landing on and taking off from a 650m dirt strip (or 400m paved strip). Extremely durable, the An-2 was first built in1947, with production continuing until the late 1990's. First produced by the Soviet Union, production moved to China (as the Y-5) in1957 and Poland in 1959. Highly versatile, it has been used for everything from paratroop delivery (10 troops) to Aeroflot bush service,from crop dusting to fire fighting and from medevac to general utility. Considered the largest biplane ever produced, the An-2 has oneof the shortest takeoff/landing requirements and one of the most rugged designs, making it very popular in under-developed regions.

Douglas C-47 Skytrain/Dakota (aka DC-3)

Top Speed: 240 mph
Acc/Dec: 10/25
Crew: 3 (pilot, copilot, navigator/radio operator) [Can be flown by just one]
Passengers: 28
Range: 1667 miles
Cargo: 5 tons (0) with passengers or (28) without
Maneuver: -3
SDP: 120 (Body 6)
SP: 0 (Armor 0)
Type: Medium Plane
Mass: 13 tons maximum takeoff weight
Cost: 145k eb (181,750eb base cost) [Lowered cost due to mass production, 2020 surplus cost even lower]

Equipment: Fire extinguisher, 500km radio, auto-pilot
Weapons: None

Notes: Designed from the DC-2, the DC-3 was adopted by the U.S. military for WWII as the C-47 Skytrain (aka Dakota in Britain, akaGooneybird, aka R4D by U.S. Navy, aka Lisunov Li-2 under Soviet license, aka Showa L2D under Japanese license). Simple and rugged,the DC-3/C-47 saw service around the world as airliner, military transport, weather plane and many other tasks, even ground attack.

The AC-47D (aka Puff the Magic Dragon) was used during Vietnam with three 7.62mm minigun directed out the port side for "targetsuppression" (no passengers, 6 extra crew, 8000rnds per weapon, -1 WA, +13200eb weapons, +96,000eb ammunition).

Shorts C-23A/B/B+ Sherpa

Top Speed: 218 mph
Acc/Dec: 10/25
Crew: 3
Passengers: 30 or 18 litters with 2 medics
Range: 1000 miles
Cargo: 3.5 tons (30.5) without passengers, (5) with
Maneuver: -2
SDP: 100 (Body 5)
SP: 0 (Armor 0)
Type: Medium Plane
Mass: 12.5 tons maximum takeoff weight
Cost: 270k eb (264,250eb base cost for C-23A, 267,250eb base cost for C-23B/B+)

Equipment: STOL, heating/air conditioning (civilian environmental control, not pressurized), latrine (optional, +500eb, 1 space), autopilot, navsystem (C-23B/B+, +1000eb), long range radio, military radio (C-23B/B+, +1500eb)

Weapons: None

Notes: Needed to fudge space rules to match real life specifications. "The Sherpa is an all-freight version of the Shorts 330 regional airliner with a 5 ft-6 inch square cabin section over an unimpeded hold length of 29 ft. Through-loading is provided via a large forwardfreight door, and via a full width, hydraulically operated rear ramp door with removable roller conveyors." Capable of airborne/airdropmissions, medevac, troop and light vehicle transport and many other duties.

North American P-51D Mustang

Top Speed: 437 mph
Acc/Dec: 15/20
Crew: 1
Passengers: 0
Range: 1000 miles
Cargo: None (0)
Maneuver: +0
SDP: 100 (Body 5)
SP: 10 (Armor 1)
Type: Light Airplane
Mass: 5 tons
Cost: 650k eb (647,450eb base cost) +3600eb ammunition

Equipment: Long-range radio (500km), auto-pilot, visual rangefinder.

Weapons: Six 12.7mm machine guns (300rnds each) fixed forward, three along each wing leading edge. Two 5-space hardpoints, oneunder each wing, each carrying a 1000lb bomb (700eb each, before specialist bomb types) or five 5" rockets (350eb +5000eb ammunition each).

Notes: Space rules fudged to fit real equipment. "One of the most effective, famous and beautiful fighter aircraft of WWII," the D variant of the famous P-51 Mustang is the most common and significant. While used extensively by collectors as civilian air racers, many owners have restored these planes to historically accurate wartime condition.

Modernization package: IR baffling, ejection seat, military radio, navigation system, military radar with detector, chaff and flare launchers, +2 computer sight, radar rangefinder (55,500eb).

PZL M28 Skytruck

Top Speed: 120 mph
Acc/Dec: 10/25
Crew: 2 + 1 (pilot, copilot + flight attendent/cargo master)
Passengers: 18
Range: 1000 miles
Cargo: 2.2 tons (2.5) with passengers, (21.5) without
Maneuver: -3
SDP: 66 (Body 3)
SP: 0 (Armor 0)
Type: Medium Airplane
Mass: 8.2675 tons maximum takeoff weight
Cost: 80k eb (78,000eb base cost)

Equipment: STOL/off-road capable, fire extinguisher, heat/AC (civilian environmental control), toilet (removed for cargo operations) long range radio (500km), auto-pilot with navsystem.

Weapons: None

Notes: Military version is armored (SP 13 [Armor 1]), has a military radio, military radar, chaff and flare launchers and carries 19 troops (+51,000eb).

Douglas A-1E Skyraider

Top Speed: 320 mph
Acc/Dec: 10/25
Crew: 1
Passengers: 0
Range: 1500 miles
Cargo: None (0) [Technically, there are 5 free spaces, but fudged it forrealism]
Maneuver: -2
SDP: 100 (Body 5)
SP: 30 (Armor 1)
Type: Medium Plane
Mass: 12.5 tons maximum takeoff weight
Cost: 500k eb (492,950eb base cost) +2400eb ammunition

Equipment: Fire extinguisher, military radio, auto-pilot, flare launcher, visual rangefinder, military radar detector.

Weapons: Four 20mm cannons (300rnds each) fixed forward. Six 2-space hardpoints on each wing, allowing the Skyraider to carry upto 6000lbs of bombs, 144 3.5" rocket, 24 5" rockets or some combination thereof.

Notes:

Cessna YA-37 Dragonfly

Top Speed: 520 mph
Acc/Dec: 20/25
Crew: 1
Passengers: 1 (used only for trainer version, the T-37)
Range: 1060 miles
Cargo: None (0) [Technically, there are nearly 3 free spaces, but fudged it for realism]
Maneuver: +1
SDP: 88 (Body 4)
SP: 18 (Armor 1)
Type: Small Jet
Mass: 7 tons
Cost: 800k eb (800,650eb base price) +16,000eb ammunition
Equipment: Ejection seats, environmental control, 4 man-hours life support, fire extinguisher, military radio, auto-pilot with navsystem, military radar with detector, chaff and flare launchers, visual and radar rangefinders.
Weapons: 7.62 minigun (4000rnds) in fixed forward mount. Four 2-space hardpoints under each wing.
Notes:

Antonov An-72 Coaler

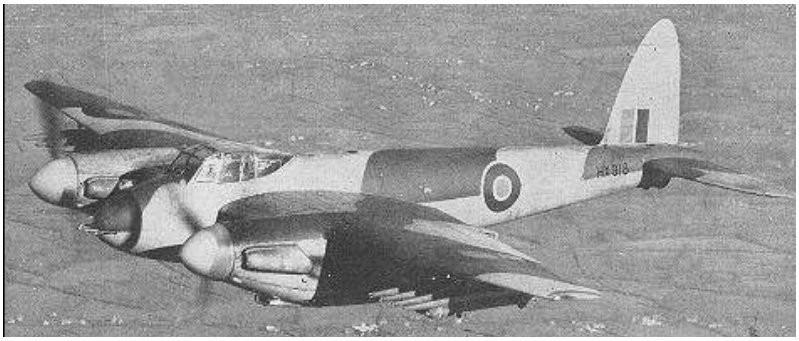
Top Speed: 450 mph
Acc/Dec: 20/25
Crew: 3
Passengers: 52
Range: 3000 miles
Cargo: 7.5 tons (52.5) without passengers or (0.5) with
Maneuver: -3
SDP: 100 (Body 5)
SP: 10 (Armor 0)
Type: Large Jet
Mass: 38 tons
Cost: 3.05M eb (3,011,500eb base cost)

Equipment: STOL/off-road capable, fire extinguisher, environmental control, military radio, auto-pilot, "civilian" radar.

Weapons: None

Notes: "The An-72 Coaler is designed as a short takeoff and landing aircraft which can operate from unprepared airfields. The An-72originated as An-32, but was later fitted with jet engines." A maritime patrol variant, the An-72P, exists with bulged observation windows, liferaft provision, cameras, under-wing 3.5" rocket pods, an undercarriage 23mm cannon and four 250lb bombs mounted inthe rear fuselage and dropped through the open rear ramp.

De Havilland Mosquito Fighter-bomber



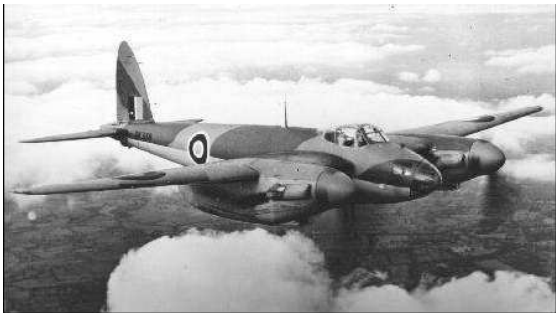
Top Speed: 380 mph
Acc/Dec: 10/25
Crew: 2
Passengers: 0
Range: 1400 miles
Cargo: 1 ton (0)
Maneuver: -2
SDP: 87 (Body 4)
SP: 17 (Armor 1)
Type: Medium Airplane
Mass: 10.875 tons max takeoff
Cost: 440k eb (440,863eb base cost) +5400eb ammunition

Equipment: Fire extinguisher, long range radio (500km), auto-pilot, visual rangefinder.

Weapons: Four 20mm cannon (300rnds each) and four 7.7mm machine guns (300rnds each) fixed forward. Five 2-space hardpoints under each wing, usually carrying two 500lb drop tanks (+1400 miles range total, 1000eb), and eight 500lb bombs (500eb each, before specialist bomb types).

Notes: 7.7mm machine guns are rarer than 7.62mm guns, and therefore slightly more expensive (1500eb each, 150eb/100rnds). Called the "Wooden Wonder" during WWII, the Mosquito fighter-bomber was uniquely constructed of all wood. Developed as a bomber by the British, the Mosquito became a potent night fighter, long range fighter, photo reconnaissance plane and even high speed military transport (no weapons, 12 spaces available). Also produced in Canada and Australia, the Mosquito was built until 1950.

De Havilland Mosquito II (2020 updated version)



Top Speed: 400 mph
Acc/Dec: 10/25
Crew: 2
Passengers: 0
Range: 1400 miles
Cargo: 1 ton (0)
Maneuver: -1
SDP: 90 (Body 5)

SP: 18 (Armor 1)
Type: Medium Airplane
Mass: 11.25 tons max takeoff
Cost: 700k eb (669,730eb base cost) +5040eb ammunition

Equipment: Fire extinguisher, ejection seats, environmental control, military radio, auto-pilot with navsystem, military radar (look down, terrain following, detector), visual and radar rangefinder, chaff and flare launchers (externally by tail), IR baffling.

Weapons: Four 20mm cannon (300rnds each, +2 computer sight) and four 7.62mm machine guns (300rnds each, +1 computer sight) fixed forward. Five 2-space hardpoints under each wing, usually carrying two 500lb drop tanks (+1400 miles range total, 1000eb), and eight 500lb bombs (500eb each, before specialist bomb types).

Notes: The "Wooden Wonder" has been brought back for the lucrative market in developing nations. Constructed from local genengineered wood and fueled with locally sourced CHOOH2, the Mosquito II is cheap and easily operated in under-developed regions. Available in the original fighter-bomber configuration, the Mosquito II can be converted to a transport aircraft (no weapons, keep radar, chaff & flare, etc, 12 spaces available) for military or domestic service, though with drop tanks it has an international range. Many users install an STOL conversion kit (34,000eb), increasing the Mosquito II's usefulness in areas with few prepared runways.

Fairchild C-119 Flying Boxcar

Top Speed: 280 mph
Acc/Dec: 10/25
Crew: 3
Passengers: 67
Range: 2200 miles
Cargo: 15 tons (0) with passengers, (67) without
Maneuver: -3
SDP: 148 (Body 7)
SP: 0 (Armor 0)
Type: Heavy Airplane
Mass: 37 tons max takeoff
Cost: 505k eb (505,450eb base cost)

Equipment: STOL/off-road capable, fire extinguisher, heat/AC (civilian environmental control), long range radio (500km), auto-pilot.

Weapons: None (See below for gunship variant)

Notes: A tactical airlift transport originally built in at the end of WWII, the C-119 saw service in the Korean and Vietnam wars. The Military Assistance Program also made the C-119 available to numerous other nations. Few of these planes are still considered airworthy in the U.S., but numerous models are still operating in the rest of the world. Gunship variants, the AC-119G Shadow and AC- 119K Stinger, were developed during Vietnam. These variants carried no passengers, between six and ten crew members, low light optics, armor plating (SP 30 [A 2]) and flare launchers, along with four port firing 7.62mm miniguns (32,000rnds each, Shadow and Stinger) and two 20mm cannons (1800rnds each, Stinger only) (200mph top speed, +49,100eb for the Shadow and +55,700eb for the Stinger, +512k eb 7.62mm ammunition, +10,800eb 20mm ammunition) .

De Havilland C-7 Caribou

Top Speed: 220 mph
Acc/Dec: 10/25
Crew: 3
Passengers: 30 (slightly cramped), 26 paratroops are standard
Range: 1300 miles
Cargo: 3 tons (0) with passengers, (30) without
Maneuver: -3
SDP: 124 (Body 6)
SP: 0 (Armor 0)
Type: Medium Airplane
Mass: 15.5 tons
Cost: 220k eb (219,250eb base cost)

Equipment: STOL/off-road capable, fire extinguisher, long range radio (500km), heat/AC (civilian environmental control), auto-pilot.

Weapons: None

Notes: A STOL transport developed for the U.S. Army in the 1950's, the C-7 Caribou was designed to operate in the most primitive andaustere conditions. Used widely in the Vietnam war, the C-7 saw service under a wide variety of conditions.

Fairchild C-123 Provider

Top Speed: 240 mph
Acc/Dec: 10/25
Crew: 3
Passengers: 62 (cramped)
Range: 1500 miles
Cargo: 12 tons (0) with passengers, (55) without
Maneuver: -3
SDP: 240 (Body 12)
SP: 0 (Armor 0)
Type: Medium Airplane
Mass: 30 tons max takeoff
Cost: 450k eb (452,250eb base cost)

Equipment: STOL/off-road capable, fire extinguisher, long range radio (500km), heat/AC (civilian environmental control), auto-pilot.

Weapons: None

Notes: The C-123 "is a short-range ... transport used to airlift troops and cargo onto short runways and unprepared airstrips." Designed in the late 1940's, the C-123 saw wide service in the Vietnam war, including being the most common "Agent Orange" defoliant sprayers in that war. By the 1990's, the C-123 was rarely seen in military service throughout the world, though numerous cargo carriers, especially in the Americas, used it.

Vehicle Name: PBM-5A

Vehicle Type: Flying Boat (Amphibian), Medium Plane
Nickname: Mariner
10 SP, 0 Armour 144
SDP, 7 Body

Weaponry: 2 x 12.7mm aero machineguns in bow turret
Weaponry: 2 x 12.7mm aero machineguns in dorsal turret
Weaponry: 2 x 12.7mm aero machineguns in aft turret
Weaponry: 1 x 12.7mm aero machineguns in side hatch, each side.
Weaponry: 15 spaces in pods, 2 x engine nacelle bomb bays carrying 4000lbs (1820kg) of ordnance.

Stock Ammo:
G,Av,Ch Fuel XXXXL (Internal) and XXXXL (External) Fuel Capacity
XXXL Fuel Consumption/Period, 3,600km Range
15,200kg Weight 4,700kg Internal Load
350 km/h Top Speed 10 Acceleration / 25 Deceleration
Manoeuvre: -3
P,CP, B, N, G, G, G, G Crew, 4 Passengers. 15 Maintenance Value
(Uncalculatable) Cost, R/R Availability.

Night Vision Gear: None
Special Gear: Added Structure, lowered speed, additional range, amphibious modification, fire extinguisher, fold-down bed x 4, radio
(civilian, long range = 500km), APS-15 military radar = 50km (obsolete), searchlight.
The hull has 8 mounting points for JATO (Jet Assisted Take Off) rocket bottles; two bottles are required for each use.

Beechcraft Model 200 King Air / C-12 Huron (Military designation)

Top Speed: 340 mph
Acc/Dec: 10/25
Crew: 2
Passengers: 13
Range: 2000 miles
Cargo: 1 tons (0) with full passenger load, (13) with no passengers
Maneuver: -3
SDP: 50 (Body 3)
SP: 0 (Armor 0)
Type: Medium Airplane
Mass: 6.25 tons
Cost: 115k eb (112,000eb base cost)

Equipment: Environmental control (military-style, for pressurization), long range radio, auto-pilot with navsystem, toilet, civilian radar (10km). Executive models carry only six passengers, an attendant, excellent audio/video equipment, a minigalley and computers (4 spaces cargo, +4150eb). The military versions are identical to the civilian versions, with the addition of military communications and radar with detector, a fire extinguisher and flare/chaff countermeasures (+18,000eb).

Weapons: None

Notes: Spaces were fudged to make it realistic.

BAC 167 Strikemaster

Top Speed: 520 mph
Acc/Dec: 20/25
Crew: 2
Passengers: 0
Range: 1400 miles
Cargo: None (0)
Maneuver: +2
SDP: 72 (Body 4)
SP: 14 (Armor 1)
Type: Small Jet
Mass: 5.75 tons maximum takeoff
Cost: 1.1M eb (1,107,890 base cost) +1320eb ammunition

Equipment: STOL/off-road capable, ejection seats, fire extinguisher, environmental control, 4 man-hours life support, auto-pilot with navsystem, military radio, flare launcher, military radar detector, visual rangefinder.

Weapons: Two 7.62mm machine guns (550rnds each) fixed forward. Two 3-space hardpoints under each wing, allowing the plane to carry 3000lbs of stores. Usually equipped with 2x18 3.5" rockets and 2x750lb bombs.

Notes: "Grandchild of the propeller-driven, taildragger Hunting Percival Provost training aircraft, and close sibling to the Jet Provost trainer, the two-seat, jet-propelled BAC 167 Strikemaster multi-role attack aircraft was deemed especially well-suited for advanced training, counterinsurgency, ground attack and reconnaissance functions."

Antonov An-14 Pchelka/'Clod'

Top Speed: 163 mph
Acc/Dec: 15/20
Crew: 1-2
Passengers: 7-9
Range: 667 miles
Cargo: 0.66 tons (0) with full passenger load, (8) with no passengers
Maneuver: +0
SDP: 80 (Body 4)
SP: 0 (Armor 0)
Type: Light Airplane
Mass: 4 tons
Cost: 130k eb (129,500eb base cost)

Equipment: STOL/off-road capable, long range radio (500km), heated cabin (civilian environmental control).

Weapons: None
Notes: Designed to be exceptionally easy to fly, even under the most austere conditions. Discontinued after poor sales versus the An-2 'Colt.'

Antonov An-28 'Cash'
Top Speed: 212 mph
Acc/Dec: 10/20
Crew: 2
Passengers: 20
Range: 800 miles
Cargo: 2.2 tons (4) with passengers, (24) without
Maneuver: -2
SDP: 98 (Body 5)
SP: 0 (Armor 0)
Type: Light/Medium Airplane
Mass: 7 tons maximum takeoff
Cost: 150k eb (146,075eb base cost)
Equipment: Long range radio (500km), heated cabin (civilian environmental control), auto-pilot with navsystem.
Weapons: None.
Notes: A development of the An-14, the An-28 is a fairly standard commuter/utility aircraft built in the mid-1990's. Doesn't have the same STOL/rough field capability as the An-14, though still considered very easy to fly.

Grumman G-21A Goose Seaplane

Top Speed: 200 mph
Acc/Dec: 15/20
Crew: 2
Passengers: 6
Range: 667 miles
Cargo: 0.8 tons (0) with passengers, (6) without
Maneuver: +0
SDP: 80 (Body 4)
SP: 0 (Armor 0)
Type: Light Airplane
Mass: 4 tons
Cost: 235k eb (234,000eb base cost)

Equipment: Amphibious hull, STOL, fire extinguisher, heated cabin (civilian environmental control), long range radio (500km).

Weapons: None built in. Could carry a pair of 250lb depth charges.

Notes: "The Goose was the first twin-engined Grumman design expressly designed for 1937 and remained in production until 1945." The Goose was used extensively in the civilian market, but also by military for "transport, photographic survey, search and rescue, and navigation.

Vehicle Name: Short S.25 Mk IV

Vehicle Type: Flying Boat (Amphibian), Medium Plane
Nickname: Sunderland
10 SP, 0 Armour
144 SDP, 7 Body

Weaponry: 2 x 7.62mm aero machineguns in bow turret
Weaponry: 2 x 7.62mm aero machineguns in dorsal turret
Weaponry: 4 x 7.62mm aero machineguns fixed in wind roots firing forward
Weaponry: 4 x 12.7mm aero machineguns in aft turret
Weaponry: 2 x 7.62mm aero machineguns in auxilliary bow turret
Weaponry: 2 x 12.7mm aero machineguns in side hatch, each side.
Weaponry: 15 spaces in pods, 4960lb ordnance in hull, cranked out under wings before attack
Stock Ammo:

G,Av,Ch Fuel 11062L (Internal) and L (External) Fuel Capacity XXXL Fuel Consumption/Period, 4828km Range
15,200kg Weight 4,700kg Internal Load
315 km/h Top Speed, 233kph Cruise Speed, 10 Acceleration / 25 Deceleration
Manoeuvre: -3
P,CP, B, N, G, G, G, G Crew, 4 Passengers. 15 Maintenance Value (Uncalculatable) Cost, R/R Availability.
Night Vision Gear: None

Special Gear: Added Structure, lowered speed, additional range, amphibious modification, fire extinguisher, fold (civilian, long range = 500km), ASV-MkIII military radar = 50km (obsolete), searchlight.

This is probably the most psychotic aircraft of WW2, mounting a nutso eighteen machine guns, they even gave the pilot four. In 1940 one was jumped by no less than eight ju-88s and it blew three out of the sky and chased the other five off from it's convoy, three of which were reported as trailing smoke by the frankly impressed convoy crews. This is just one of the many reports of these lone aircraft bashing multiple adversaries, the German aircrew respectfully called it the 'Fliegende Stachelschwein' (Flying Hedgehog) and it had the unpleasant habit of flying low over the water and throwing up the equivalent of a flak barrage before turning on it's attackers. Last used in 1959, a few of these planes exist but all are now in museums.

An-124 Ruslan (NATO: Condor)

(all measures use metric system, unless otherwise noted)
Max Speed: 865 km/h (roughly 538 mph)
Acc/dec: 32/40 km/h (roughly 20/25 mph)
Range: 4 500 km (full cargo) to 16 500km (no cargo, full fuel only) (2795 and 10248 miles, respectively)
Crew: 6-7 (2 pilots, 2 filght engineers, 1 navigator, 1-2 cargo masters)
Passengers: 130*
Maneuverability: -4
Type: heavy jet (definitely!)
Mass: 195t empty, 405t max takeoff weight
Cargo: 120 tons / 207 spaces**
SP: 0
SDP: 481 (Body: 24)
Cost: 14'500'000e$ (new)

* passenger capacity based on MaxMetal rules, various real-life sources rate it's passenger capacity from 88 to 451 passengers. The fact is that Ruslan's cargo hold is double - decked, the upper deck being fully pressurized and able to accomodate 88 troops (or passengers). The lower deck is pressurized to a much lesser degree, thus making it not advisable to carry anyone there (however, it can be done on low altitude quite safely).

** again, according to MaxMetal rules. Ruslan's cargo hold is 36,5x6,4x4,4 meters (or 1027,8 m3), making it capable of immense cargo transporting feats. The hold is accesible by rear ramp and front (after folding the plane's nose up). Rear ramp can be opened in flight to airdrop cargo via parachute.

Equipment: military radar, military long-range radio, fire-extinguisher, autopilot & nav systems, miniature kitchen and toilet (for the crew), automatic fire extinguisher system, pressurized (but no extended life-support). Structure is, of course, reinforced (extra SDP)

Armament: none.

Notes: currently (AD 2004) the biggest cargo airscraft in production, and second only to it's offspring (An-225 Mirya / Cossack) in size. In 2020, one of the most popular heavy lifters, used both by governments and corporations. An-124 maiden flight: 1984, still in production

An-225 Mirya (Russian: "Dream", NATO: Cossack)

(all measures use metric system, unless otherwise noted)
Max Speed: 800 km/h (roughly 437 mph)
Acc/dec: 32/40 km/h (roughly 20/25 mph)
Range: 4 500 km (full cargo) to 14 500km (no cargo, full fuel only) (2795 and 9006 miles, respectively)
Crew: 6-7 (2 pilots, 2 filght engineers, 1 navigator, 1-2 cargo masters)
Passengers: 208*
Maneuverability: -4
Type: heavy jet (definitely!)
Mass: 250t empty, 405t max takeoff weight
Cargo: 275 tons / 208 spaces**
SP: 0
SDP: 627 (Body: 31)
Cost: 42'800'000e$ (new)

* passenger capacity based on MaxMetal rules, there is no real-life data. See An-124, however.

** again, according to MaxMetal rules. Mirya'scargo hold is 43,32x6,4x4,4 meters (or 1220 m3), making it capable of immense cargo transporting feats. The hold is accesible by rear ramp and front (after folding the plane's nose up). Rear ramp can be opened in flight to airdrop cargo via parachute. Mirya is also capable of carrying it's cargo piggy-back (see photos)

Equipment: military radar, military long-range radio, fire-extinguisher, autopilot & nav systems, miniature kitchen and toilet (for the crew), automatic fire extinguisher system, pressurized (but no extended life-support). Structure is, of course, reinforced (extra SDP)

Armamaent: none.

Notes: currently (AD 2004) the biggest cargo airscraft existing, althoygh there's only one at the moment (rumours are that the second is being built). In 2020, it is less popular than An-124 - it is used only by few specialised freight companies who make use of it as a highpriority, oversized-cargo transporter. Nost space shuttle - owning organisations (both governmental and private) own or rent Mirias on regular basis, as it is able of hauling all types shuttles worldwide (modified Boeing 747's can't carry big cargo shuttles), when this is needed, eg. for maintenance purposes. Sometimes, Mirias are used also for quick deployment of heavy military hardware., as their cargo capacity surpasses those of c-5 Galaxys, but no military company (or army) owns An-225 for such purposes (they rent them if they need them) An-225 maiden flight: 1988 (only one exists so far)

Mi-26 (NATO code: Halo)

Max speed: 295km (183mph)
Acc/Decc (warning, my MaxMetal lacks this value for heavy 'copters)
Crew: 5 (2 pilots, flight engineer, navigator, cargo master)
Passengers: 99* or cargo
Cargo: 20 t**, 99 spaces
SDP: 703 (Body 35)
SP: 0
Maneuverabuility: -2
Mass: empty 28,2 t, max takeoff weight 56t
Max range: 800km (496miles) (loaded). Up to 4 external fuel tanks, boosting range up to 1920 km (1192 miles)
Type: heavy helicopter.
Cost: 9 600 000 e$ (new)
* again, according to MaxMetal only. Regular personnel capacity is 80 troops or 60 patients on litters. Over 100 soldiers are known tosqueeze inside.
** cargo hold, loadable by rear ramp, is 12x3,3x3,2meters. It can accept 2x BRDM-2 scout cars, or 2x BMD IFV, or 1x BMP IFV or 1x BTR-60/70/80 APC or 1x MT-LB APC internally, alternatively it can carry up to 20t underslung.
Armament: usually none.
Equipment: air conditioning, civilian radar, IR baffling, flare launcher (often ripped away on civilian-sold ones), navigation and autopilot. The craft is capable of instrumental flight onder harsh conditions. Automatic fire extinguisher (Mi-6 has self-sealing fuel tanks, but they're practically identical in effect to extinguishers) Mi-26 Maiden flight: 1983, still in production

Mi-2 (Nato: "Hoplite")

Maiden flight: 1965 In
production: to 1985
Max speed: 220km/h (137 mph)
Acc/dec: 24/24km (15/15 mph)
Crew: 1*
Passengers: 6-8**
Maneuverability: -2
Range: 580km (360 miles)
Cargo: 800kg, 4 spaces (instead of passengers)
type: medium helicopter
SP: 0
SDP: 24 (Body 1)
Mass: 2'372 kg (empty), maxt akeoff weight: 3'550kg
Cost: 60'000e$ (new - no longer avaible)

* pilot stations are usually doubled, but one person is enough to fly it safely.
** Max Metal rules call for 4-space hold, but RL specifications for Mi-2 state it as up to 8 passengers (plus a single pilot). Cargo can be underslung, or carried on pod wings if present.

Equipment: long-range radio. A pair of 2x238 littres fuel tanks on both sides of the fuselage are a common sight (with these, max range is 790km / 490 miles)

Armament: none (in standard version).

Versions:
Mi-2R - ambulance variant. Takes 2 stretchers and 2 medical personnel, plus medical gear. No extra cost (apart from what medical gear you install).

Mi-2T - standard transport version, it carries 8 personnel. No extra cost.

Mi-2 URN / URP / US - armed military versions. They differ mostly by weapons used (and avionics needed for this, what isn't noticeable under MaxMetal rules). All have a visual rangefinder (for targeting) and pod wings (with 4 x 1 space hardpoints) and seat one extra crewman (copilot/gunner). Due to weapons and ammo weight, they are unable to perform transport duties.

URN: armed recon variant, carries 4 pods of 10x 57mm rockets (Soviet equivalent to 2"). Cost: +7600e$ w/o weapons (2000e$ per pod + 1000e$ ammo for it)

URP: antitank helicopter, armed with 4 AT-3 Sagger LATGMS*** and carrying 4 more as spare ammo in cargo compartment. Cost +16'000e$ (+9'000e$ ammo)

US: cannon-armed gunship. Has a Gsh-23 gun (light autocannon) on immobile external mount (port fuselage, front-facing), 2 pintlemounted 12-7mm machineguns firing to port and starboard side (with a gunner for each of them) and 2 gun pods with 7,62mm MG on hardpoints (due to limited engine power it cannot carry any more armament). Cost: +19200e$ (and 940e$ ammo)

*** Spaces fudged for realism. AT-3 are outdated LATGM< optically traced and wire-controlled by operator. There are 4 of them on hardpints, total. In 2020 these missiles would be obsolete and hard to find.

Notes: this is roughly an equivalent to Uh-1 Huey, a "good for everything" helicopter from the Soviet Block. Originally constructed by Mil bureau, it was soon produced only by PZL Swidnik factory under license (Thus, PZL Mi-2 is just the same aircraft). One of the most widely byilt helicopters, over 5'450 have been built. Used in various military and civilian duties.

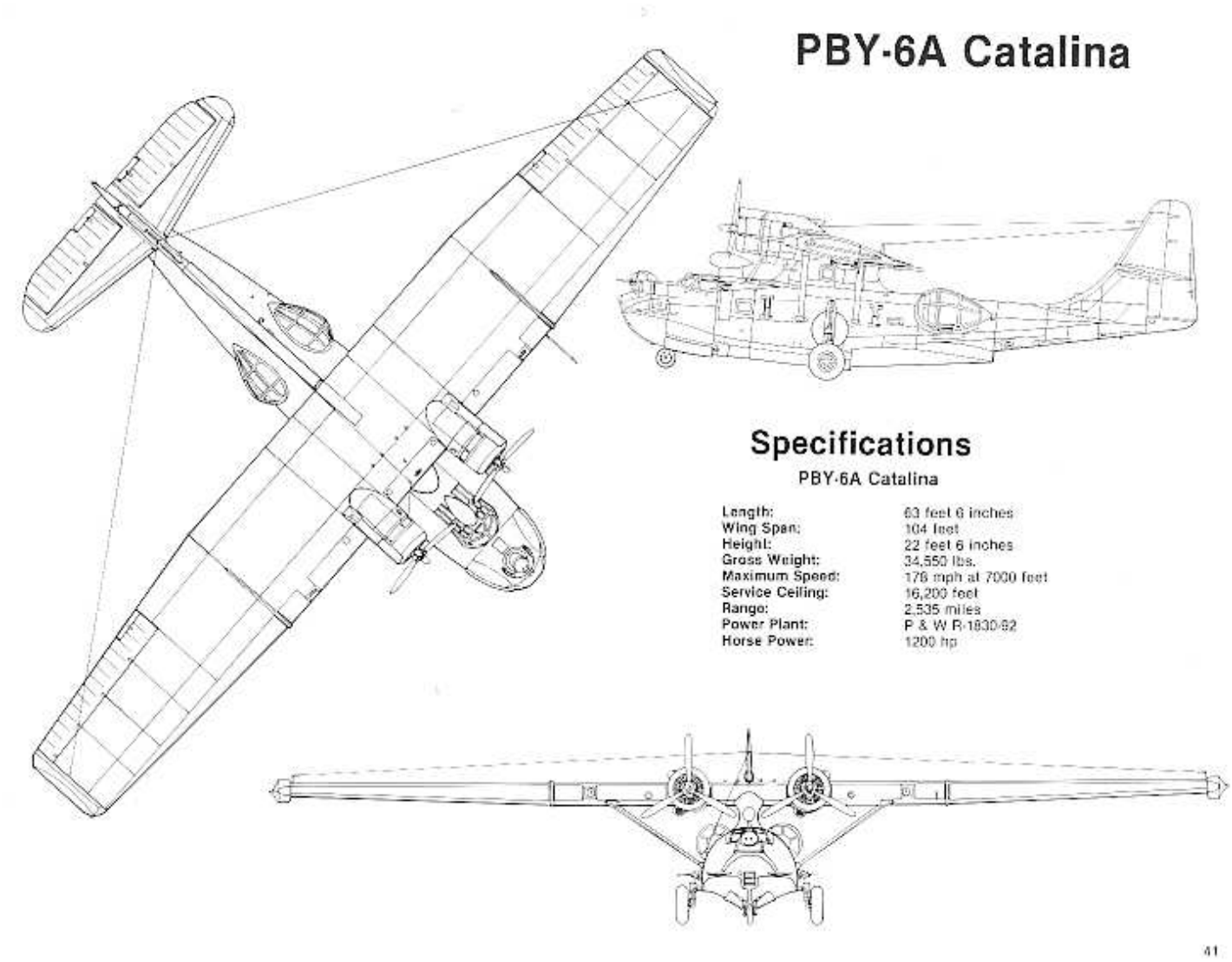
In 2020, all these aircraft are long obsolete and avaible dirt cheap. However, most of them are in poor condition. PZL Swidnik offers "Mi-2 Plus" upgrade/maintenance program (20k e$, including a pair of brand new GTD turbofans that boost acc/dec by 8 kmh / 5mph). This is strongly recommended. On customers option, various new equipment can be added. Mi-2 is generally a daylight-only aircraft. PZL Swidnik had produced an upgraded version of Mi-2, PZL Kania / Kitty Hawk, but it hadn'yt gained popularity and was discontinued. Cargo compartmentis 2,27m (7,5') long (4,05m w/flight deck included), 1,2m (4') wide and 1,4m (a bit less than 5') high

Thankyou to

- gomiville
  - o Antonov An-2 Kolkhoznik/'Colt'
  - o Douglas C-47 Skytrain/Dakota (aka DC-3)
  - o Shorts C-23A/B/B+ Sherpa
  - o North American P-51D Mustang
  - o PZL M28 Skytruck
  - o Douglas A-1E Skyraider
  - o Antonov An-72 Coaler
  - o De Havilland Mosquito Fighter-bomber
  - o De Havilland Mosquito II (2020 updated version)
  - o Fairchild C-119 Flying Boxcar
  - o De Havilland C-7 Caribou
  - o Fairchild C-123 Provider
  - o Beechcraft Model 200 King Air / C-12 Huron (Military designation)
  - o BAC 167 Strikemaster
  - o Antonov An-14 Pchelka/'Clod'
  - o Antonov An-28 'Cash'
  - o Grumman G-21A Goose Seaplane
- ChalkLine
  - o PBM-5A Mariner
  - o Short S.25 Mk IV Sunderland
- Mikael van Atta
  - o AN-124P
  - o AN-225
  - o MI-26
  - o MI-2

from the Cyberpunk Message Board, Views From the Edge http://vfte.cyberpunk.co.uk/ I do not wish to take any credit for the above creations. I am just a compiler

From Jim And Peta Lawrie



CHINA GIRL

A PBY-6A Flying Boat

A descriptive walk-through of the aircraft

In the darkened hangar, the flying boat's chipped paint and grease stains still manage to shine in the overhead floodlights. The overall colour scheme is a light grey on top with a dark smoke grey along the spine, the underneath is a dirty white to match the underneath of the clouds, the paint was originally applied over seventy years ago and has only been touched up occasionally since then. The quality of the paint job is thus not high.

The design of the plane is 'a twin engined monoplane', the long straight wing sits atop a slender hollow pylon and has a forward facing propeller engine on either side, the wing tips have retractable floats and underneath the wing are the bulbous shapes of the ordnance pylons. The long slim shape of the fuselage depends from underneath the main wing pylon, two large fuselage observation blisters mushroom out from behind the pylon and are the main entrance into the hull, otherwise only the forward nose turret and the cockpit are immediately obvious.

Climbing up one of the ladders and in through the observation blisters brings one into the Waist Gunner's Compartment, which is only slightly longer than the blisters themselves and half again as deep. The two huge blisters and their single armoured .50" calibre machine gun mounts dominates this area, the massive 40kg weapons have a butt stock and 'fore and aft' sidegrips rather than the usual spadegrips, a large armoured gunshield protects the gunner, the powered ammunition feed and the reflector sight atop the weapon. The 'link train' for the weapons feeds into a huge ammo box set into the middle of the compartment floor, this holds 956 rounds of .50" caliber rounds for the two guns, every third bullet is usually a phosphorus round. At the rear of the compartment is the watertight door to the Tail Gunner's Compartment, and a watertight door in the front leads to the Bunk Compartment. The interior is a dark shiny green, much chipped and probably the original paint job, the gunmounts and other equipment are painted an equally ancient gloss back, between the two blisters are the intercom boards with their long leads running two ancient 1980's helicopter helmets slung over the butt of each gun and ready for the gunner.

Going aft from the Waist Gunner's Compartment enters the Tunnel Gunner's Compartment, a low area near the very tail of the plane. A long low compartment, uninteresting except for the tunnel hatch at the rear at the compartment, here the tunnel gunner knelt on a pad and fired a standard .50"cal machine gun through the water proof hatch in the floor. A dangerous position in combat, the tunnel gunner had no restraint system and could possibly fall out through the tunnel hatch and out of the aircraft in combat if wounded or dislodged by an unexpected manoeuvre. The rear of the compartment is a thick armoured plate decorated by an old cartoon of a lemming in a flak jacket dodging bullets appearing through a hatch in the floor, a small window is on the left side of
the compartment and a light and intercom unit is mounted in the roof, a large ammo box holding 500 rounds is on the right of the position and conected by a powered ammo feed. On the walls of this compartment are stored the work stands that can be hung from under the wings to load ordnance or beside the engines for maintenance.

Forward of the Waist Gunner's Compartment is the Bunk Compartment, two fold down bunks are set on each wall, the lower of which has a small window and is fixed permanently 'down', underneath these are the storage areas for the blister ladders. A chipbox is fixed by a bungee cord to a rear wall bracket and the grotty green walls are covered in pin ups dating from the '50's to the present day, another watertight door in the forward bulkhead leads to the Mechanic's Compartment. The Mechanic's Compartment is short and tall, extending right up into the wing pylon and has a seat for the in flight engineer to sit between the engines and control their
functions, a long obsolete arrangement although the position is still in place. On the left an on one side of the passageway is a twin burner electric stove underneath two water breaker tanks, on the other side of the passage is the $CHOOH^2$ all purpose Auxiliary Power Unit and the hand crank used for the engine starter, anchor reel, wing tip floats and so on in emergencies. The mechanic's pylon seat position area has a one foot square window that slides to the rear on either side, the position's control board is directly in front of the seat and the mechanic's legs hang down into the passage resting on the rear wheel housings (there are emergency crank holes) under small windows in the side wheel wells so the wheels can be checked for correct deployment. The forward bulkhead
has the watertight door to the Navigator's, Radioman's and Radarman's Compartment, this entire passage way area is a bit of a squeeze and may be something of a problem for large people.

The Navigator's, Radioman's and Radarman's Compartment is the longest compartment in the boat, and is treated as a sort of unofficial lounge room now that all its functions are obsolete. The right side has a table originally used for navigation with map drawers and a light overhead, this is now used for playing cards and drinking games, in fact anything but navigation. On the other side of this was the old radio station, now set up for countermeasure netrunning, the comfortable chair (looted from a crashed executive jet in Jakarta) is surrounded by monitors stripped from various locations, these are used so that non runners can monitor a Decker's progress and yank the plug if they consider the runner in lethal danger. The entire set-up is totally divorced from the rest of the aircraft's electrical system, and anything that intrudes into the Decker's system cannot effect the aircraft's systems. The old radar system is long gone, and a series of cabinets have been welded into a mass for storage (one is an old refrigerator). Two easy chairs have been shoehorned in here as well, on either side of the compartment is a small fixed window, while above the rear seat of the nav table is the Navigator's Roof Hatch, this emerges onto the upper surface of the fuselage and is used to access the top of the wing by a step in the front of the pylon. A metre off the floor in the front bulkhead is the watertight door to the Flight Deck, on the back wall are many of the control panels for the planes in-engine generators.

The Flight Deck is set above the nose wheel compartment, a large hump in the deck covers the actual nose wheel this also has a heavily-armoured deployment checking window), the rear wall, the roof and the control panel are covered in new and old instruments, ranging from antique LORAN receivers to the latest GPS systems. The left seat is the pilot's, and over both pilot's and co-pilot's seats are hatches in the roof that slide to the rear, also allowing access to the upper surface of the fuselage, the side windows slide back and the pilots often tool along in the aircraft equivalent of a roofless coupe. Behind each seat is a parachute and life jacket rack, the instruments have been sporadically upgraded, but are still an even mix of systems dating back to the 1940's. There is an open passage between the control seats (also stolen from a crashed jet, not ejection seats though) leading into the
Nose Gunner's/Bombardier's Compartment. Nose Gunner's/Bombardier's Compartment is somewhat heavily changed, the old nose turret still mounts it's twin .30" calibre Browning machine guns, now rebored to 7.62mm Nato calibre disintegrating link rounds and is slaved to either the pilot's or co-pilot's helmet's targeting link, although the original weapon controls are still in place and the weapons can be fired from inside the turret. There is 2,100 rounds of 7.62Nato ammuntion available for the two machine guns. The very front of the aircraft is sealed by an armoured door, behind this is a thick window and in front of *that* is a retractable armoured crank-down roller shutter. All this is to cover the bombardier's window and the mount for bombsight is currently empty, this position could conceivably be used for laser guided weapons as well as bomb release. It is not high enough to stand in this
compartment unless one is standing in the nose turret, the rear of the nose turret is a roof hatch that is used to deploy the anchor during aquatic operations, the anchor is stored in a compartment on the left side of the fuselage and only accesible from the outside of the hull and a boat hook is stored on the right side of the compartment. A 'chine rail' is on either side of the outside of the hull, the crewmember stands on this when anchoring.

PBY6A 'Catalina' Flying Boat.
Base statistics for original vehicle:
Length: 63' 6" (19.35m) **Wing Span:** 104' (31.7m)

Height: 22’ 6” (6.85m)
Gross Weight: 34,550lbs (15704kg)
Maximum Speed: 178mph at 7,000’ (284.8km/h at 2133m)
Cruise Speed: 100mph (160 km/h)
Stall Speed: 58 mph (93 km/h)
Service Ceiling: 16,200’ (4937m) **Range:** 2,535 miles (4056km)
Power plants: P&W R-1830-92 Horsepower: 1200hp
Cyberpunk statistics:
Top Speed: 178mph
Crew: 10 (Can be flown with two crew)
Passengers: 0 (9 possible)
Manoeuvre: - 3
SP: 10 (15 from rear) (Armour 0/1)
Mass: 15704kg
Acc/Dec: 10/25mph
Range: 2,535 miles
Cargo: 5000kg (9.5 spaces)
SDP: 156 (Body: 7)
Type: Medium Aircraft
Cost: 591,275eb (obsolete)

Special Equipment:
Added Structure, lowered speed, additional range, amphibious modification, fire extinguisher, fold-down bed x 4, radio (civilian, long range = 500km), military radar = 50km (obsolete), searchlight. The hull has 8 mounting points for JATO (Jet Assisted Take Off) rocket bottles; two bottles are required for each use.

Weapons:
3 x M2HB 50. Cal HMG in pintle mounts, 1 in each blister and 1 in ‘tunnel’ hatch. 2 x .30 cal MMG in pintle mount, forward turret in twin mount. Mounting points for 4 x 500lb bombs outboard of the wing struts, 2 x 1,000lb bombs inboard of the wing struts, 2 x aerial torpedos between 500lb bomb mounts and wing strut. 500lb bomb mounts can be changed to mount 12 shot 2.75” rocket pods (for anti-submarine use). 30 underwing spaces are available. Those are the stats for a standard PBY6A at the end of WW2 and the early 50’s in military service. The plane is very roomy, and most of the crew positions are obsolete so even more stuff can be sandwiched in. The crew positions are: pilot, co-pilot, bombardier/forward gunner, navigator, radioman, radar-man, flight engineer, waist-gunner x 2, tunnel-gunner.

ERRATA AND ADDENDA FOR MAXIMUM METAL

PAGE 10, Sample Awareness/Notice Modifiers:
The listing "Spotter doing something besides spotting: has a modifier of minus 10 (-10), not plus 10. The plus is a typo; trying to spot while doing something else is harder, not easier.

Page 11, Crashes, first column, last paragraph:
Change the sentence :...to determine collision Penetration (3.5 points per d10..." to "15.5 points per d10..."

Page 12, Constructing Vehicles:
Each crewmember takes one space. Each passenger takes one space.

Page 29, Arasaka Combat 10:
The armament was ommitted. It is: Turreted 7.62 mm Minigun with 2 magazines and 40mm cannon with 30 rounds. Reduce cargo to 0 spaces and raise the cost to 100,000 eb. The 40mm is a special gun made for the vehicle - HVY 0 N R 8D6(40mm) 10 1 ST 10,000 euro.

Page 31, Arasaka Riot 8:
This carries 8 passengers.

Page 41, AV-9 and UAAV:
These vehicles mass 3,400 kg, not 3,400 tons!

Page 48: The M-75 LBT
is built on an APC chassis, not an MBT chassis.

Page 49, U.S. M-50 Tank Hunter:
The armament was ommitted. It is: Turreted 25mm autocannon, painting laser and 5 Hellfire missles, HATGM with 19 teleguided/thermal semi-active missiles.

Page 76, Rockets and Missiles, first paragraph:
Change the sentence "All of the weapons require the targeting capabilities of at least a HUD-using Reality Interface" to "The following weapons require the targeting capabilities of at least a HUD-using Reality Interface: Light ATGM, Spectre ATGM, Scorpion SAM, Red Knight SAM."

What is the Acc/Dec for Heavy Helicopters?
Mega-oops! It was left out of the book by mistake!! Acc 10 mph, Dec 15 mph.

How much armor can an airship's gondola carry?
According to the rules, up to 1500 SP! Uh, this is screwy. Let's say up to 1/5 (20%) of the airship's SDP.

Can airplanes and Ospreys be fitted with amphibious modifications?

Sure. So can Helicopters and AV's (!). They're called Pontoons. Installing pontoons on an aircraft costs 250 eb. per vehicle ton (or part thereof) and reduces vehicle top speed by 5% per 5 tons (or part thereof) of vehicle mass. These allow vehicles to float and even move on water surfaces. For instance, installing pontoons on a Bell 152 would cost 500 euro and reduce its topspeed to 185 mph. On a Falcon-B Osprey, it would cost 4,750 eb. and reduce top speed to 360 mph.

Can AI Robotic control be placed inside a bomb or missile?
Yes, but the price would be considerably less steep!! Call it 250,000 euro and no spaces. This modification can only be made to Active missiles and bombs (the AI has to have sensors, don't you know). Obviously, this "genius bomb" would be able to function quite comfortably on it own, seeking out targets without human direction.

How do Drop Tanks work?
Like an externally-carried bomb. A gallon of fuel weighs 7 lbs. in a tank (including tank mass). Simply strap them on like external bombs (same weight and spaces) and use their fuel first - when hit (NEW RULE - Externally-carried weapons are hit when Cargo or Equipment hits are rolled, and there are external pods/bombs in the area) they have SP 5, SDP 10, and are damaged like fuel tanks!

So how far can you go on a drop tank?
Well, each vehicle type uses fuel at a different rate:

Cycle	50 mpg
Car	30 mpg
Pickup	25 mpg
Truck	15 mpg
Wheeled Hover	4 mpg
APC	3 mpg
IFV	2 mpg
APC	. 75 mpg
IFV	.5 mpg
MBT	.25 mpg
Light Helicopter	5 mpg
Med. Helicopter	2 mpg
Heavy Helicopter	1mpg
AV	1 mpg
Osprey	1 mpg
Lt. Plane	20 mpg
Med. Plane	10 mpg
Heavy Plane	5 mpg
Small Jet	1 mpg
Large Jet	.5 mpg

Cars and other ground vehicles can carry 1/5 of their spaces in external tanks per side used (front, left, right, back), for a maximum of 80% of internal spaces carried in external fuel. This is dangerous, dangerous, dangerous.!!

Are there larger hovercraft than those allowed?
Yes. Here are the stats for the constructing massive cargo hovers, like the English Channel types and the truly huge KvP-121:

Cargo Hover	
SDP Range	200-1000
SDP limits	2 SDP per space
SDP Cost (per SDP)	3000 eb
Spaces	100-500
Top Speed	60 mph
Range	1000 miles
Mass	1 ton/10 SDP
Mass Rating*	3 x cargo hover mass

That's right, these have a mass rating like trucks. And they can haul immense cargo masses (the KvP-121 weighs 86 tons, and can haul 225 tons of cargo!!). However, because of this, cargo capacity can't be improved, and cargo hovers suffer speed reduction due to armor like helicopters and Ospreys (-20% top speed for each 10% of SDP in SP). In addition, mass rating suffers equally (-20% mass rating for each 10% of SDP in SP).

How are Punknaughts constructed? +3 hovers smashed together?

Yup. Treat a Punknaught scratch-built vehicle as having the mass of the appropriate number of vehicles, with 75% of the totaled SDP, range, Top Speed, and spaces of those vehicles, and capable of being armored to 33% of its SDP.

Can rockets use warhead fillers used in artillery rounds?
Yes, but only the following: Chemical, HEAT, White Phosphorus.

How much space do ACPA suits take up in cargo/passenger space?
2 spaces per 1,000 kg, rounded off.

Can AT Walkers "duck walk" by squatting, thereby lowering their signature? Do they use the ACPA rules for cornering?
Yes, but they only shuffle along at 5 mph while "duck-walking", and yes, they corner like ACPA suits. Clumsy ACPA suits....

Why does the 30mm Gatling do only 6D10 damage when the normal 30mm does 9D10 damage?

For the same reason the Barret-Arasaka 20mm only does 4D10AP damage while the normal 20mm does 8D10. That's the high density AP...NEW RULE: High-density AP rounds (the Barret-Arasaka 20mm and the 30mm Gatling) do full damage through armor, like HEAT rounds. I meant to put this into the book, and forgot...

OPTIONAL MORALE RULE
Most vehicles lost in combat, particularly armored vehicles, are not destroyed outright. In fact, most of them are still operable with marginal repairs; some of them sustain only minimal damage, and the vehicle is still combat-capable! It takes an insanely brave vehicle crew to man a damaged vehicle - the vase majority of them bail out once the vehicle's armor has been penetrated.

If a combat vehicle sustains a penetrating his (Minor Damage or greater), have the crew make a morale check. The vehicle commander amkes a Leadership Diffculty +15 roll, modified for the damage (+5 for Major Damage, +15 for Catastrophic Damage). If the roll fails, the crew deserts the vehicle, bugging out through escape hatches on the side of the vehicle away from the combat. If the crew is under fire from small arms from all sides, or knows that they are covered and likely to die if they bail out, the difficulty of the test is +10, not +15.

This rule makes for a bit less heroism on the part of most NPC's (and some PC's), but Game Masters interested in more realistic tank battles might like to use this rule.

NEW VEHICLE - Bell UH-10 PAPC
With the recent advent of powered armor as a viable battlefield weapon, a problem has appeared: no AV or helicopter is really powerful enough to haul a full squad of PA suits! Even the monster DM Dragon only carries 4 tons, barely enough for 5 Arasasa Standard-B suits (or 3 Boris suits), and the AV-9 can fit in 2 Militech Commandos. Since the normal U.S. Army PA squad is four 800kg suits and a 1,500kg "Pigman," the Army commissioned Bell to make the new UH-10 Powered Armor Personnal Carrier. Mitsubishi/Arasaka is also selling this carrier under the commercial license.

In tight spots where the helicopter cannot land to deploy the suits, the PAs either jump, using their jets or parafoils to slow them, or are lowered by a winch.

Top Speed: 135 mph
Acc/Dec: 15/15
Range: 1000 miles
Crew: 2
Passengers: 0
Cargo: 5 tons, 12 spaces
Maneuver: -2
SDP: 250 (Body 12)
SP: 40 (AV 2)
Type: Heavy Helicopter
Mass: 10 tons
Cost: 1.85 million euro

Special Equipment: Auto-pilot and Navigation system, chaff dispenser, ejection seats, flare dispenser, image enhancement,

IR baffling, laser detector, light amplification, military radar, military radio, radar detector, telescopic optics, thermograph.

The following are some rules clarifications and additions prompted by some very intelligent questions from Tim Villadmoros of Jacksonville, FL. Thanks, Tim!

How do vehicle spaces relate to cargo capacity, and vice versa?

As stated on page 14, most vehicles (except AFV's) have a weight capacity of 1/3 their mass. If the vehicle doesn't have any spaces left inside of it, then it can't carry internal cargo, period. A vehicle may strap cargo to the outside of the hull. but this is limited to a percentage of the vehicle's internal spaces, as noted on the chart below. In addition, any externally-mounted devices (like jury-rigged or open weaon mounts) or weapons that have to traverse across the vehicle's top (like tank turret weapons) subtract their spaces from this available space.

Vehicle Type	External Cargo %
Cycle	100*
Car, Pickup, Truck	25
APC, IFV, MBT	5**
Hover	10
Helicopter, AV, Osprey	0***
Airship	0***
Plane, Jet	0****

*Cycles can carry up to 1 space of cargo on the rear of the seat. This includes another person! (People take one space apiece.)

** These vehicles do have some "cargo capacity"of weight, equal to 10% of their mass. This is usually used for crew cargo, extra fuel/ammunition, etc.

***Helicopters, AVs, Ospreys and Airships can lift and carry items of any amount of spaces, so long as they do not exceed the vehicle's maximum cargo weight (remember to add in the weight of any internal cargo). These are items loaded onto a pallet and hung beneath the flying vehicle.

For example, take a cargo carrier mounted a top a Hummer. A Hummer has 10 spaces, so 2.5 spaces are available to stash cargo on and around the top. The Hummer has an external weapon, though, taking up 1/2 space. 2.5 minus 0.5 equals 2 spaces available for carrying external cargo.

The cargo pod of the AV-9 takes up the entire internal capacity of the vehicle?

Oops! You're right. The cargo pod is 25 spaces, not 45 spaces.

Articulated mount weapons take "no spaces." How many articulated mounts can be put on a vehicle?

A maximum of 25% of the vehicle's spaces may be used for articulated mounts; no more than 10% of a vehicle's spaces per side. For instance, a 20-space vehicle could mount up to 5 articulate mounts, up to two of which could be mounted per side.

How do you calculate the monetary and space costs for smaller turrets mounted atop larger turrets?

This is no extra monetary cost; they're turret weapons already, and you are paying for it. If the smaller weapon is a high-angle-traverse weapon, pay double again for the appropriate weapon only. Turret-top weapons on any sort of mount are limited to a number of spaces equal to 1/4 of the turret size! So, a 12-space turret could have 3 spaces of weapons and equipment mounted atop the turret.

And from a comment made at GENCON:
Cycle Sidecars: A cycle may have a sidecar mounted to it. This costs 25% of the cycle's SDP cost. The sidecar have 1/2 the cycle's SDP; it may be armored separately. The cycle's top speed is reduced by 10%. A sidecar has 1 space for cargo, passengers, or equipment.

How many spaces are required to carry another vehicle internally?

The vehicle's amount of spaces, plus 10. Vehicles with wings take up the square of the wing spaces, too, unless the wings are dismantled (in which case the wing spaces are not squared). For instance, at 15 spaces, an M-75 LBT takes up 25 spaces of cargo, so a C-200 Universe could fit 6 of them (but only carry 3, at 42 tons apiece).

Do weapons cease to have weight counted against them if they are on weapon mounts, instead of being carried at cargo? For instance, the A-01 Blitz has spaces for 8.62 tons of bombs (maxed out with 6 3000-lb and 1 1000lb bombs.), while its cargo capacity is only 6.6 tons.

Yes. Do not count weapons loads against cargo capacity. (You will note that the A-01 Blitz has no internal cargo capacity.) Vehicles with external weapons loads are made to carry the load without impeding cargo capacity (which makes some vehicles real workhorses.)

What are the monetary, weight, and space costs of converting a vehicle to a medevac/ambulance?

The medevac package includes a cryotank, portable diagnostic and emergency grear, supplies, and one stretcher. The cost is 200,000 euro, the mass is 250 kg of cargo weight capacity, and it takes up 3 spaces, +1 for each patient.

How much does the E-Harpoon cost?
It costs 10,000 eb, 2 sp for weapons and 2 sp for batteries.

Thank you, Tim, and all the people who asked not-so-silly questions at GENCON.

Did you know that, according to the U.S. military, about 1/2 the land surface of the Earth is inaccessible to wheeled, tracked, and hovercraft vehicles?

Only air vehicles and things with legs can go there.
The army's been trying to build viable legged vehicles for decades. They finally succeeded....

ARMOR DAMAGE VIA PENETRATION

Players have realized that it's very hard to knock down a powered armor suit's SP, especially with the "1SP per successful penetration" rule for small arms. So, we've written a new rule and a list of armor damages. The major change is that for rounds >20mm, the weapon doesn't have to successfully penetrate in order to damage SP. The amount of SP removed is based on the Penetration rating of the round:

HE	0.50 x Pen
DPU/AP	0.60 x Pen
HEAT	0.75 x Pen
HESH/HEP	1.00 x Pen
Railgun	0.20 x Pen

GUN	Normal/HE	Heat	HESH/HEP	DPU/AP
5mm-20mm	1	2	2	1
25mm grenade	1	-	2	-
25mm-40mm	3	-	-	2
40mm grenade	2	3	-	-
Rifle grenade	2	3	-	-
37mm	-	-	-	4
75mm Recoilless	2	6	8	-
75mm gun	2	6	-	5
90mm Recoilless	3	8	-	5
105mmRecoilless	3	8	11	-
105mm gun	3	8	-	6
120mm gun	4	9	13	8
140mm gun	4	13	-	10
4mm railgun	-	-	-	1
1cm railgun	-	-	-	2
2cm railgun	-	-	-	3
3cm railgun	-	-	-	4
15cm artillery	4	1	4	-
20cm artillery	8	15	-	-

Here is a table for most standard weapons: SP REMOVED BY ROUND

Weapon	SP removed
LAW	3
HLAW	9
Lt. ATGM	9
HATGM	13
Hellfire	15
RPG-A	5
RPG-B	8
2" rocket	2
2.75" rocket	2
3.5" rocket	3
5" rocket	4
230mm rocket	3
SAM	2
AAM	4

MORE MAXIMUM METAL

By Craig Sheeley

Maximum Metal is R. Talsorian's military hardware upgrade for Cyberpunk 2.0.2.0. Author Craig Sheeley describes it as, "all those guns your mother warned you about."

"How should powered armor be deployed/used? The 'two-legged IFV' school says right out there with the tanks, mixing it up, depending on their size and maneuverability to avoid the heavy guns, while shrugging off small-arms fire from 'soft' infantry. The 'pinnacle of body armor/linear frame tech' school puts them in the streets where tanks can't go; doing the strength-and-firepower jobs combat borgs do, but better, relying on their superior protection to handle the close-range punishment that would pulverize anyone else."

So says editor Derek Quintanar, the arbiter of the powered armor rules in ***Cyberpunk 2.0.2.0.*** There are arguments for both schools of thought. This article is not intended to add fuel to either argument, but to provide some handy tactical tips for using both regular armor and powered armor in any situation, as a sort of supplement to the dry design and combat information in the book.

Actually, we ran out of space.

The Wide Open Spaces

Open terrain is defined as a place where cover is scarce. This can range from salt flats (flat as a pool table) to plains, deserts and fields, all the way to western Kansas (again, flat as a pool table).

If you're in a vehicle, you have to keep moving. This is imperative, whether you are on the offensive or the defensive. Whenever you can, find a good hull-down position and use it - not the best idea in the world, but at least it can be done.

Who to shoot? The largest threats are your first priority. You're not much good dead, no matter how cost-effective you were, so there's no profit in shooting a more expensive but less powerful target when there's a real threat in sight. After you've smoked the threats, then you can concentrate on the gravy targets.

And, above all, *keep moving!*

Powered armor suits are in a lot of trouble in the open. They're too big to hide like a regular infantryman, their weapons are usually too small to take on tanks, and they're just expensive enough to be worth shooting! About the only chance powered armor has is to head for cover, quick, and hope that any infantry that might be hiding in that cover can be dealt with. PA suits in open warfare do best as anti-tank snipers, lying in cover with Light ATGMs and bugging out as soon as the single attack is over.

Working In Close

Dense terrain can be heavily wooded areas, the dreaded hedge-rows of France, canyons, culverts and even urban blight. The single deciding factor is the ready availability of cover, restricting line of sight, range and movement.

Vehicles should, for the most part, avoid these places. With the vehicular advantages of speed and range nullified, all that's left is armor, and the range is so close that an infantryman can step around a corner and nail your rear without you ever seeing him. If you have to go in, then by all means operate with an infantry screen. Vehicles in close terrain without infantry are dead. Even if you do have infantry along with you, keep your eyes and sensors open! If you see a threat, blast it! Don't be afraid to waste an entire building to smoke out one ground-pounder, 'cause there are probably more of them in the same building. This is what your light autocannons and machine guns are for.

Powered armor has an easier time in close terrain. Finally, the range is down to their level, and their high mobility and reflexes are useful. Let's face it, a legged vehicle can go places where no other land vehicle can go. (Long ago, the U.S. Army determined that over 50% of the land surface of the Earth is inaccessible by wheeled, tracked and hover vehicles.)

Of course, a PA suit has the same problems that an AFV does: it's an inviting target for a light anti-tank weapon, and it's the perfect range, too-short. The answer is to watch your back, move from cover to cover with your mates providing fire support, and generally act like a normal ground-pounder, even though you are much bigger. This includes working as a team. A lone PA suit in close terrain is begging for an ambush by enemy infantry. Just because you can run through MG fire doesn't mean you should do it - that MG might just be a spotting rifle for something bigger, like an Auto-GL.

Urban landscapes are the ultimate in close-terrain nightmares, but cover is ready availabile and you have a high level of mobility. A good stout building becomes a fortress, where you can fire from one position and bug out to another position without ever being exposed. A tall building provides high-angle shots at the vulnerable top armor of ground vehicles, and the city infrastructure - sewers to the layman - has always been a wonderful way to get around undetected. You can go all the way across a city without ever coming up, and when you do come up, practically no area of the city is inaccessible. Ask the Germans at Stalingrad.

Infantry

Don't let anyone fool you. No matter how big you are, how many weapons you haul, or how much armor you have, any time you meet infantry is not a good time. The average infantryman of ***2.0.2.0.*** carries at least one anti-light-armor weapon (HEAT grenades, LAWs, etc.) While these weapons may not seem all that frightening, infantry in close can manage to find any vehicle's weak spots and worm a round in. Furthermore, you never meet just one infantryman.

Where there's one, there are his mates, and with all that firepower around, a lone tank or PA suit is going to be fatally hit at some time or another.

The best cure for enemy infantry is, of course, infantry of your own.

Optional Morale Rule

Most vehicles lost in combat, particularly armored vehicles, are not destroyed outright. In fact, most of them are operable with marginal repairs: some of them sustain only minimal damage, and the vehicle is still combat-capable! It takes an insanely brave vehicle crew to man a damaged vehicle - the vast majority of them bail out once the vehicle's armor has been penetrated.

If a combat vehicle sustains a penetrating hit (Minor Damage or greater), have the crew make a morale check. The vehicle commander makes a Leadership Difficulty +15 roll, modified for the damage (+5 for Major Damage, +15 for Catastrophic Damage). If the roll fails, then the crew deserts the vehicle, bugging out through escape hatches on the side of the vehicle away from combat. If the crew is under fire from small arms from all sides, or knows that they are covered and likely to die if they bail out, the difficulty of the test is 2d10.

This rule makes for a bit less heroism on the part of most NPCs (and some PCs), but Game Masters interested in more realistic tank battles might like to use this rule.

The Bell UH-10 PAPC

Top Speed: 135 MPH	**Maneuver:** 2
ACC/DEC: 15/15 MPH	**SDP:** 250 (Body 12)
Crew: 2	**SP:** 40 (AV 2)
Range: 1,000 miles	**Type:** Heavy Helicopter
Passengers: None	**Mass:** 10 Tons
Cargo: 5 Tons, 12 spaces	**Cost:** 1.85 Million Euro
Special Equipment: Auto-pilot and Navigation System, Chaff Dispenser, Ejection Seats, Flare Dispenser, Image Enhancement, IR Baffling, Laser Detector, Light Amplification, Military Radar, Military Radio, Radar Detector, Telescopic Optics, Thermograph.	
Weapons: None.	

With the recent advent of powered armor as a viable battlefield weapon, a problem has appeared: no AV or helicopter is really powerful enough to haul a full squad of PA suits! Even the monster S-M Dragon only carries 4 tons, barely enough for 5 Arasaka Standard-B suits (or 3 Boris suits), and the AV-9 can fit in 2 Militech Commandos. Since the normal U.S. Army PA squad is four 800kg suits and a 1,500kg "Pigman," the Army commissioned Bell to make the new UH-10 Powered Armor Personnel Carrier. Mitsubishi/Arasaka is also selling this carrier under commercial license.

In tight spots where the helicopter cannot land to deploy the suits, the PAs either jump, using their jets or parafoils to slow them, or are lowered by a winch.

Maximum Metal Errata

No product is perfect; ***Maximum Metal*** is no exception. It doesn't have many mistakes, though. These corrections will be included in the text when ***Maximum Metal*** goes into its second printing.

Page 10, Sample Notice/Awareness Modifiers: The listing "Spotter doing something else besides spotting" has a modifier of *minus* 10 (-10), not plus 10 (+10). The "+" is a typo; trying to spot a threat while doing something else is difficult, not easy.

Page 11, Crashes, first column, last paragraph: Change the sentence " to determine collision Penetration [3.5 points per d10 " to " 15.5 points per d10 "

Page 12, Constructing Vehicles: Each crewmember takes 1 space. Each passenger takes 1 space.

Page 29, Arasaka Combat 10: The armament was omitted. This is purely the fault of the author (me). Turrented 7.62mm Minigun with 2 magazines and 40mm cannon with 30 rounds. Reduce cargo to 0 spaces and boost the cost to 100,000 eb. The 40mm cannon is a special light cannon developed for the Combat 10. HVY; 0; NR 8d6 (40mm); 10; 1; ST; 10,000 euro.

Page 31, Arasaka Riot 8: This vehicle carries 8 passengers.
Page 41, AV-9 & UAAV: These vehicles mass 3,400 kg, not 3,400 tons.

Page 49, U.S. M-50 Tank Hunter: The armament was left out of the book. It is: **Weapons:** Turreted 25mm autocannon, painting laser and 5 Hellfires. HATGM with 19 teleguided/thermal semi-active missiles.

Page 76, Rockets and Missiles, first paragraph: Change the sentence "All of the weapons require the targeting capabilities of at least a HUD-using Reality Interface" to "The following weapons require the targeting capabilities of at least a HUD-using Reality Interface: Light ATGM, Spectre ATGM, Scorpion SAM, Red Knight SA

Crash Dive

Version 0.1 Beta

By Stephen Esdale

Welcome Gato to the Beta version of Crash Dive, the underwater supplemental material for Maximum Metal. These rules are _extremely_ rough. These will be expanded and improved in a future edition of the Wavebook, whenever Morninman and I decide to work on it.

Vehicle Stats

Boats

Jet-Ski

SDP Range: 15-30
SDP Limits: 15 SDP Minimum
SDP Cost (per SDP): 100eb
Spaces: 1
Top Speed: 42mph
Range: 450 mi
Mass: 4 kg/SDP

Light Boat

SDP Range: 40 - 80
SDP Limits: 8 SDP per Space
SDP Cost (per SDP) 1000eb
Spaces: 5-10
Top Speed: 35 mph
Range: 1400 mi
Mass: 2 tons per SDP

Med Boat

SDP Range: 120 - 600
SDP Limits: 6 SDP per Space
SDP Cost (per SDP) 2000eb
Spaces: 20 - 100
Top Speed: 35 mph
Range: 1400 mi
Mass: 2 tons per SDP

Hvy Boat

SDP Range: 1200 - 4000
SDP Limits: 4 SDP per Space
SDP Cost (per SDP): 3000eb
Spaces: 300 - 1000
Top Speed: 35 mph
Range: 3700 mi
Mass: 2 tons per SDP

Ship of the Line

SDP Range: 4000 - 40 000
SDP Limits: 2 SDP Space
SDP Cost (per SDP): 4000eb
Spaces: 2000 - 20,000
Top Speed: 30 mi
Range: 5600 mi
Mass: 2 tons per SDP

Examples of Ships of the Line

Kirov Class Cruiser: 2725 Spaces
Iowa Class Battleship: 11,125 Spaces
Enterprise Class Aircraft Carrier: 18 825 Spaces

Submersibles

Submersible Sled

SDP Range: 15-30
SDP Limits: 15 SDP Minimum
SDP Cost (per SDP): 200eb
Spaces: 1
Top Speed: 30 mph
Range: 350 mi
Mass: 4 kg/SDP

Light Submersible

SDP Range: 400 - 700
SDP Limits: 20 SDP/Space
SDP Cost (per SDP): 3000eb
Spaces: 20 - 35
Top Speed: 25 mph
Range: 1100 mi
Mass: 2 tons per SDP

Heavy Submersible

SDP Range: 750 - 3000
SDP Limits: 10 SDP/Space
SDP Cost (per SDP): 4000eb
Spaces: 75 - 300
Top Speed: 25 mph
Range: 2900 mi
Mass: 2 tons per SDP

Submarines of the Line

SDP Range: 3000 - 32,500
SDP Limits: 5 SDP/Space
SDP Cost (per SDP): 5000eb
Spaces: 600 - 6500
Top Speed: 20 mph
Range: 4400 mi
Mass: 2 tons per SDP

Examples of Submarines of the Line

Los Angeles Class (90 ft): 3500 spaces

IEC Cargo Sub (125 - 155 ft): 5500-6000 spaces

Note about Speed: This is submerged speed - Increase speed on surface by 20%

Weapons

Light Torpedo

HVY -3 N P 12D10AP 1 1 UR 15 km 1/3 space

Light Torpedo is designed for small vessels or minisubs for defense. Moving at speeds up to 130 km/h, the Light Torpedo is inaccurate (unless guided; +150% cost and give Skill +15) but powerful. Launch Tube costs 3250eb, while Torpedo co st 1500eb.

Medium Torpedo

HVY -3 N P 18D10AP 1 1 UR 20 km 1 Space

The Medium (or Standard) Torpedo is of the type most commonly used in submarine and Torpedo Boat warfare. Can travel up to 140 km/h, but is still unreliable unless guided (+150% cost; Skill +15). Torpedo Tube costs 13000eb, while the Torpedos cost 3500eb

Heavy Torpedo

HVY -3 N P 24D10AP 1 1 UR 25 km 3 Spaces

Rare except for the huge submarine missile platforms, the Heavy Torpedo is designed solely to damage ships of the line. Able to move at 160 km/h, the most common Heavy Torpedo is the American Sea Viper, which is exclusively used on the USS Reagan, the one-of-a-kind Super Sub built during the Gang of Four's infamous reign. Again guidance (+150% cost; Skill +20) is necessary. Torpedo Tubes cost 52000eb while each Torpedo costs 7750eb.

Harpoon II Anti-Ship Missile

HVY N P 20D10AP 1 1 VR 112 km 2 Spaces

A popular anti-ship missile, the Harpoon II is second-generation active homing (Skill +15) missile with IR guidance. Available in Ground/Ship, Air and Sub-launched versions. Costs 21 000eb

Cruise Missile

Special Special N R 80D10 (?) 1 1 VR 3000km 6 Spaces

Though no longer nuclear-armed (due the Massdrivers of the ESA), Cruise Missiles are still valuable weapons in warfare. Able to carry extremely heavy payloads over huge distances at speeds near Mach 1, the Cruise Missile has replaced Naval Guns are the weapon of choice of shore bombardment and precision strikes. The system is controlled by a complex on-board system (Skill +25) and needs precise co-ordinates of the strike zone (meaning you need to have someone near the site to give co-ordinates. Spy Satilites are mostly used for this). Made my most nations of the world (Especially the USA, EEC, and USSR), Cruise Missiles come in Ground/Ship, Air, and Sub-launched variants. Launcher costs 150,000eb, while a Cruise Missile can cost over 1.5 Million euro.

16-inch Naval Guns

HVY -2 N R 800D10AP (Pen 80) 1 1 VR 1000 Spaces 6250m

The Iowa-Class vessels used this terrible guns for maximum effect during both WWII and Vietnam. Since all large ships are little more than missile carriers these days, the Naval Gun is included here only to demonstrate the destructive power of the old style weapons. There are rumours about an Iowa-class vessel still operating in the pacific, though no one knows for sure if this is true...or why? To use a 16 inch gun, your vehicle must be on ground (tracked and stabilized chassis) or sea and weigh at least 2500 tons! But then again, who can beat the damage (Though I can't see someone rolling EIGHT-HUNDRED 10-siders). Cost is upwards of 5 000 000eb.

Blue-Green Lasers

Light Blue-Green Laser

HVY +1 N R 1-10D6AP (special) 30 2 150m UR 2 Spaces

104,000eb

Equivalent to the "Photon" laser system of ACPA fame, the Light BG Laser to provide close-up firepower that Torpedoes cannot provide. See CP2020 rulebooks on the effects of lasers against targets.

Medium Blue-Green Laser

HVY +1 N R 1-15D6AP (special) 60 2 300m UR 3 Spaces

256,000eb

A heavier version of Blue-Green Laser, designed for heavy submersibles. Pretty Rare.

Heavy Blue-Green Laser

HVY +1 N R 1-20D6AP (special) 100 2 450m UR 5 Spaces

512,000eb

Currently the most heavy BG Laser system known to exist and is limited to American and Euro-arsenals (built into in their largest submersibles). Note: Vessels have Nuclear Powerplants could be able to shunt some power in a direct feed to the Submersible, effectively giving the weapons unlimited shots. GM's call whether this can be done and the effects on the ship.

Other Weapons

Dual Stage Missiles This modification is designed to operate in both water and air. If guided, the user must designate in which mode the guidance system is for. A Sub launched SAM would have its guidance in air only, while an air launched torpedo would have its guidance in the water. Note that by sending continuous feed from your vessels sensors, you can have the vessel guided in both modes (missile guidance for air and sub-transmitted guidance for the water). This can make for some nasty pop-up attacks. Cost for such a modification is x5 cost of the missile.

Depth Charge Bomb Option This modification makes the bomb detonate when a certain depth is reached. Advanced version of the Depth charge have built-in sonar and discharge when either close to a sub or at the same depth. Normal versions have a cost multiplier of x2, while the advanced version have cost multiplier of x5.

Accessories

Pressure Windows These windows are mainly for non-combat vessels and allow the those inside the sub to see the outside. Pressure doors automatically close when the sub dives below 200m, to prevent the pressure breaking the glass and flooding the ship. Each man-sized window takes up 0.5 spaces and costs 1000eb

Nuclear Power By replacing the old gas or diesel turbines of submarines and water vehicles with steam-generating nuclear reactors, the subs can literally traverse the world and survive for months without docking in port. Nuclear power is still quite expensive and getting a reactor raises the SDP cost of your ship twenty times (basically SDP of ship x [20 x base SDP cost]) and reduces total spaces on ship by half. However, with this modification, your ship has basically an unlimited range (or around 2 years of active service) before refuelling with Uranium is ready. Note the Uranium fuel rods can really cost!

MSD Turbines These turbines electrically accelerate salt-water though a tunnel and force it out the other end, propelling the sub. While this means the vessel is incapable of moving in fresh water, it also mean that vessels engines are almost completely silent to Sonar. Increase base SDP cost of vessel by 25% while reducing spaces by 25%

Enhanced Compartmentalisation System Though most ships are compartmentalised, these enhancements add quick-sealing doors and complex water sensory equipment to prevent the spread of water to other compartments. It also leaves the crews hands free for other duties. Doubles base SDP cost of the Vessel.

Sonar Sonar acts in two modes: Active mode sends out sound "pings" to get a reading of distance and is used mainly for targeting of weapons, since it immediately gives position to any passive sonar in the area. The other mode is Passive, which listens for noise in the water like those generated by propellers, boats on the water, or active sonar pings. Normal sonar models have ranges of up to 100km (2000eb, 1 space) while Military version are known to have models with a 500km range (20000eb 2 spaces). Such models now have computers to identify noises and display them graphically on a screen (like radar does) with speed, range, and possible identification.

Decompression Chamber Allows people to slowly decompress after a deep excursion in the ocean and avoid the "bends". Costs 250eb and 1.5 spaces per man (six-man and 12-man capsules are common)

Dual Environment System An enhanced version of the Amphibious Modification, it allows ground and air vehicles not only float but be submersible as well. Note that speed underwater is a tenth of above water speeds and other underwater accessories will have to be bought. Doubles SDP cost of the vehicle and reduces spaces by 20%.

Periscope A 50-75 foot visual device which allows subs to peer above the surface of the water without having to surface. It can be set up with up to 5 cyberoptic options (as per CP2020 rulebook and chromebooks). Note that some ships have more than one periscope (with more than one set of cyberoptic options). Costs 1000eb, 1 space retracted.

Sensor Buoy/Drogue A floating buoy has two models. The first model is a helicopter or ship towed device that has built in military sonar and a military hydrophone. Its used to communicate with friendly subs or locate enemy subs (30 000eb, 4 spaces stored). The other version has military radar, a military radio and sat uplink (20 000eb, 2 spaces stored)

Hydrofoils These blades all the vessel to move smoother and more quickly on the water while making it difficult for Torpedoes to hit them (-6 modifier to torpedoes). Vessel top speed also increases by 20% Only Small to Large Boats can have Hydrofoils (no Hydrofoil Battleships :). Cost 50% of SDP cost of the ship.

Carrier Deck A flattened top designed to handle aircraft and other flying vehicles. Costs 10eb per space of the vehicle but does not take any spaces. Only large "ships of the line" can have carrier decks (and jets must be V/STOL for all but the largest carriers). Can hold a number of "spaces" worth of planes on the deck equal to its size in spaces divided by 10. Note that though the spaces for planes is only internal room

left for accessories (not the actual size of the plane), that has been taken into account in the calucations.

Hanger A enclosed area to hold vehicles. To calculate the number of spaces need for the vehicle, take its size in spaces and multiply it by three (four if underwater). That is the number of spaces need to hold the vessel in the hold. Costs 3000eb per space used (for airlocks, elevators, hatches, other necessities for boarding and securing the vessel, etc.).

Hydrophone A underwater radio used by subs to contact each other underwater. Note that this is not usually done during wartime, since using a hydrophone will alert passive sonar. Available in civilian (800km; 400eb 1 space) or military (5000km; 5000eb 2 spaces)

Some rules: These are abstract rules - future versions (if any) will improve on them.

Armor: Maximum 500 SP
Silent Running: 60% top speed (submerged) max.
Max Depth: 10 x SP in meters
Countermeasures (Noisemakers): +10 Diff. hit with accoustic torpedos.
Detection: INT + Sonar Systems + 1D10 vs difficulty number
EASY if making noise/tight turn
AVE if normal
DIFF if silent running
Increase on level if MHD turbine.
Interception Missiles: Torpedo's Skill + 1D10 vs. Intercept + 1D10

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Maximum Wake

Your vehicle guide for design, use and combat resolution based off of the Maximum Metal vehicle creation system.

Although many larger naval ships exist across the world ships larger than a destroyer have no real place in a Cyberpunk game and even they should be relegated to something only the opposing forces have access to or otherwise be under GM control.
A vehicle creation system for boats and ships loosely based off of the Maximum Metal vehicle creation system.

Base Vehicle Creation Chart

Name	Inflatable Rafts	Rigid Inflatable Boats	Patrol Boat/Speed Boat	Coastal/Yacht	Corvette	Frigate & Destroyer
SDP Range	'5 - 30'	9 - 75	75 - 450	500 - 800	850 - 4000	4000 - 23000
SDP Limits	2.5 SDP per space	3 SDP per space	12 SDP per Space	16 SDP per Space	21 SDP per Space	30 SDP per Space
SDP Cost	75 per SDP	535 per SDP	700 per SDP	1200 per SDP	2500 per SDP	6000 per SDP
Spaces	'2 - 12'	'3 - 25'	'4 - 30'	8 - 50	16 - 180	120 – 1100
Top Speed	25mph/40kmh	40mph/64kmh	45mph/72kmh	45mph/72kmh	40mph/64kmh	35mph/56kmh
Range	62miles/100km	186miles/300km	500miles/805km	800miles/1287km	1800miles/2897km	2000miles/3218km
Mass	4.5 kg per SDP	35 kg per SDP	12 SDP per ton	8 SDP per ton	5 SDP per ton	3 SDP per ton
Radar Ranges	NA	10miles/16km	18miles/29km	20miles/32km	25miles/40km	30miles/48km

Name	Fire/Rescue Tug/Fishing Trawler	Small Cargo Ship	Light Fleet Oiler	Large Fleet Oiler	Large Cargo Ship
SDP Range	100-4200	200-1450	500-1650	1650-2300	1450-2000
SDP Limits	21 SDP per Space	11 SDP per Space	18 SDP per Space	8 SDP per Space	5 SDP per Space
SDP Cost	900 per SDP	800 per SDP	1100 per SDP	1400 per SDP	1600 per SDP
Spaces	60 - 200	60 - 135	60 - 95	80 - 300	100 - 450
Top Speed	18mph	20mph	20mph	23mph	23mph
Range	800miles	1500miles	1500miles	12000miles	14000miles
Mass	2 SDP per ton	5 SDP per ton	4 SDP per ton	1 SDP per 20 tons	1 SDP per 20 tons
Radar Ranges	18miles/29km	20miles/32km	20miles/32km	25miles/40km	25miles/40km

Although the basic ship classes denote basic sizes and variety of warship classes civilian ships can also be designed with the same basic specifications, allowing a wide variety of military and civilian ships.

Options:

Weapons: Machine-guns & light vehicle weapons

Weapon Name	5.56 Machine-gun	7.62 Machine-gun	5.56 mini Gun	7.62 Minion	10mm Machine-gun	12.7mm Machine-gun
Weapon Accuracy	1	0	0	0	1	0
Damage	5d6	7d6+2	5d6	7d6+2	8d6	6d10
Ammo	100	100	1000	1000	250	100
Rate of Fire	10	10	100	100	35	10
Penetration	2	2	2	2	3	'3/4'
Range Short	450	500	450	500	600	600
Burst Radius	NA	NA	NA	NA	NA	NA
Spaces	'1/2'	'1/2'	1	1	1	1

Weapon Name	12.7mm Mini Gun	14.5mm Machine-gun	40mm Grenade Launcher	40mm Auto Grenade Launcher
Weapon Accuracy	0	0	1	0
Damage	6d10	7d10	Varies	Varies
Ammo	1000	100	8	50
Rate of Fire	100	10	1	20
Penetration	3	4	'2/4'	'2/4'
Range Short	500 meters	550 meters	250	1600
Burst Radius	NA	NA	5m/1m	5m/1m
Spaces	1	1	'1/2'	1

Weapons: AutoCannon

Weapon Name	20 – 25mm Autocannon	27 – 30mm Autocannon	20mm Gatling	30mm Gatling
Weapon Accuracy	0	0	0	0
Damage	8d10	9d10	4D10 or 8d10 ammo type	6d10 or 9d10 ammo type
Ammo	100	100	1000	1200
Rate of Fire	10	10	100	100
Penetration	4	5	4	6
Range Short	500 meters	600 meters	500 meters	600 meters
Burst Radius	NA	NA	NA	NA
Spaces	1	1	2	4

Weapons: Deck Guns

Weapon Name	57 mm Cannon	Dual 57 mm Cannon	76 mm Cannon	Dual 76 mm Cannon
Weapon Accuracy	0	0	0	0
Damage	70 + (5d10)	70 + (5d10)	85 + (6d10)	85 + (6d10)
Ammo	80	120	50	80
Rate of Fire	6	10	2	4
Penetration	6	6	7	7
Range Extreme	6 miles	6 miles	11 miles/18km	11 miles/18km
Burst Radius	3 meters	3 meters	5 meters	5 meters
Spaces	5	12	7	15
Weapon Cost	60000	140000	80000	200000
Ammo Cost per round	3000	3000	4000	4000

Weapon Name	100 mm Cannon	130 mm Cannon	Dual 130 mm Cannon	155 mm Cannon
Weapon Accuracy	0	0	0	0
Damage	90 + (8d10)	150 + (8d10)	150 + (8d10)	180 + (7d10)
Ammo	40	30	50	35
Rate of Fire	1	1	2	1
Penetration	8	12	12	15
Range Extreme	17 km	36 km	36km	48km or 112 miles (14.9)miles
Burst Radius	5 meters	6 meters	6 meters	8 meters
Spaces	9	18	40	30
Weapon Cost	110000	145000	335000	160000
Ammo Cost per round	5500	7250	7250	8000

Weapons: Missile Systems, Surface to Surface & Anti Submarine

Denotes that the Missile is capable of attacking land targets.

ASM: Anti Ship Missile

ASW: Anti Submarine Warfare rocket boosted torpedo

VSAM: Vehicle Surface to Air Missile

Weapon Name	Penguin ASM	Harpoon ASM ##	Cruise & SSN: ASM ##	Asroc: ASW
Weapon Accuracy	15 skill	Skill 17	Skill 16	Skill 15
Damage	95 + (6d10)	190 + (8d10)	350 + (10d10)	120 + (8d10)
Ammo	1	1	1	1
Rate of Fire	1	1	1	1
Penetration	8	16	30	12
Range Max.	25 miles/35km	75 miles	1500 miles	17 miles
Burst Radius	12 meters	48 meters	72 meters	24 meters
Spaces	3	8	15	5
Cost per Missile reload	75000 Eb	185000 Eb	265000 Eb	90000 Eb

Missile Systems: Surface to Air

Weapon Name	VSAM	VSAM II	VSAM III
Weapon Accuracy	Skill 15	Skill 18	Skill 20
Damage	110 + (6D10)	150 + (6D10)	210 + (8D10)
Ammo	1	1	1
Rate of Fire	1	1	1
Penetration	8	10	12
Range Max.	12km	35 miles	70 miles
Burst Radius	10 meters	12 meters	18 meters
Spaces	1	3	5
Cost per Missile reload	10000 Eb	45000 Eb	98000 Eb

Railguns:

Weapon Name	4mm	1cm	2cm	3cm	5cm
Weapon Accuracy	1	2	1	0	0
Damage (ignores armor)	10 + (5d10)	30 + (4d10)	45 + (6d10)	60 + (6d10)	90 + (8d10)
Ammo	500	50	50	50	30
Rate of Fire	10	2	1	'1/2'	'1/4'
Penetration	7	10	17	22	30
Range Extreme	2km	15km	18km	24km	42km
Burst Radius	NA	NA	NA	NA	NA
Spaces	2	5	9	15	35
Weapon Cost	25000	750000	1.5 million	3 million	7 million
Ammo Cost per round	250	7500	15000	30000	70000

Other Weapon Systems:

Weapon Name	Torpedoes 12.75 "	Torpedoes 21"	120mm Mortar	80mm Mortar	Mine Small	Mine Large
Weapon Accuracy	Skill 15	Skill 17	0	0	2	2
Damage	60 + (4d10)	230 + (8d10)	80 + (6d10)	50 + (6d10)	75 + (6d10)	185 + (6d10)
Ammo	1	1	1		NA	NA
Rate of Fire	1	1	1	2	NA	NA
Penetration	5	9	7	5	8	10
Range Extreme	5 miles	13 miles	6000 meters	3500	NA	NA
Burst Radius	10 meters	24	6 meters	5 meters	48	72
Spaces	2	5	3	1	2	4
Weapon Cost	45000	85000	5000	1500	NA	NA
Ammo Cost per round	NA	NA	250	150	1000	1400

Construction Options: Primary Design Options

Option	Cost	Space	Ship Size	Bonus
Helio & VTOL Launch Pad	NA	30 Spaces per Launch Pad	Patrol or Larger	Ability to Launch & refuel
Trimaran Hull	SDP Cost * 200%	Adds 15% more Spaces	Any	Better Maneuvering +3 +20% more SDP
Hydrofoil Propulsion	SDP Cost * 175%	20% of total Spaces	Corvette or Smaller	Speed Increased by 100% Maneuvering -1
Archaic Sailing Propulsion	NA	25% of total spaces	Patrol or larger	Unlimited range, reduce top speed to 8mph. Speed is based on wind strength see table below
Oars/Rowing	Requires minimum of average crews size no cybernetic controls to provide propulsion.	NA	Coastal or Smaller	Unlimited range,reduce top speed to 4 mph up to 6mph for 30 minutes maximum time
Hoverlift Propulsion Assist	SDP Cost * 125%	5% of total Spaces	Corvette or Smaller	Speed increased by 10%
Turbo Diesel Engine	SDP Cost * 150%	10% of total Spaces	Any	Speed increased by 20%
Nuclear Propulsion	200 million	NA	Corvette or Larger	Unlimited Range
Increased Range (Fuel)	10% of Spaces per additional 33% range increase	10% of Spaces for 33% more range	Any	Increased range
Decreased Range (Fuel)	Add 10% more spaces per 33% range decrease	Add 10% more spaces per 33% range decrease	Any	Decrease in range
Cybernetic Controls	SDP Cost * 140%	NA	Patrol or Larger	Reduces Crew needed
RPV Drone System	280,000 Eb Basic System	3 Spaces	Coastal or Larger	Long range target acquisition

RPV Drone System: a system such as this includes one Remotely Piloted Vehicle or Drone and a small control console aboard the ship for command and control. The primary usage for such a system is for detecting enemy targets at ranges further than ship based radar and the ability to transmit the coordinates back to the ship for missile guidance. A second use is for gathering information on other types of targets on the water or on land with a variety of sensors including Radar, Passive IR and a laser range finder/targeting system.

A standard Drone type is the Predator II system:

Range	Wing span	length	Top Speed	Endurance	Weight Empty	Weapon Payload
454 miles	48.7 ft / 14.8 meters	27 ft / 8.22 meters	140 mph	40 hours	950 lb./431 kg	4 spaces of weapons

Basic Facts: Standard Armor by Type

Ship Type	Standard Armor (SP)	Maximum Armor (SP)	Cost per SP over Standard	Speed Reduction per extra armor
Inflatable Raft	0	18	60 Eb	7% speed reduction per 5 SP
Rigid Inflatable Boat	0	20	450 Eb	5% speed reduction per 10 SP
Patrol Ship/Speed Boat	10	40	500 Eb	5% speed reduction per 10 SP
Coastal Ship/Yacht	20	60	1200 Eb	5% speed reduction per 20 SP
Corvette Class/Fishing Trawler	40	80	6000 Eb	2% speed reduction per 20 SP
Frigate & Destroyer Class	80	180	25000 Eb	2% speed reduction per 40 SP
Fire Tug/ Fishing Trawler	20	80	800 Eb	5% speed reduction per 10 SP
Oil Tanker	40	200	9000 Eb	2% speed reduction per 20 SP
Cargo Ship	20	160	9000 Eb	2% speed reduction per 20 SP

Basic Facts: Crew Size by Type

Ship Type	Minimum Standard Controls	Cybernetic Controls	Average Standard Controls	Average Cybernetic Controls
Patrol	1	1	3	1
Coastal	3	1	15	3
Corvette	12	3	35	12
Frigate & Destroyer	21	7	200	65
Cargo Ship/Oil Tanker	15	3	50	25

Combat: Rules on Sinking a Watercraft

When a watercraft has taken 10% or more damage they begin to take on water and slow to a maximum speed of 75% of their maximum capability.

When a watercraft has taken 25% or more damage they receive more damage to the ship and slow to 75% of max. speed and will need to make dry-dock repairs. Secondly, 50 SDP damage is taken every hour due to water damage unless 25% or more of the crew works bilge pumps and such to drain the water.

When a watercraft has taken 50% or more damage they are slowed to a max. of 50% of full speed. They will need dry-dock repairs and will take on 200 SDP of water damage per hour unless 25% or more of the crew is put to draining out the water.

When a Watercraft has taken 75% or more damage they are slowed to 25% of full speed. The ship will need extensive dry-dock repair and will sink to the bottom within one hour time unless 50% of the crew works to keep her afloat. Every hour the ship will take 50 SDP of damage from water even with water drainage from half of the crew. The ship must seek a port quickly to avoid sinking.

When a Watercraft has 100% damage the ship will break in half and sinks to the bottom of the river or Ocean within 1d6 minutes. Many times a vast majority of the crew will end up on the ocean floor with their ship at this point.

Combat: Watercraft Hit Location Chart

01-06: Fuel Storage hit multiply SDP damage by 150% except for damage done by Railguns
07-16: Crew compartment hit 15% of total crew take 6d6 damage minus armor worn, if general quarters had previously been sounded. 40% of crew takes 6d6 damage if not on alert status.
17-24: Engine compartment hit: Ship drops to 25% of full speed if underway due to engine damage.
25-31: Helio/VTOL Launchpad hit, unable to launch or recover aircraft, if aircraft aboard it is damaged as if it took a direct hit by the weapon.
32-67: Cargo/Hull hit Reduce ships SDP value only or optionally destroy some cargo.
68-83: Weapon System Hit, See Weapons Sub-table below.
84-94: Bridge hit, 5% of crew takes 6d6 damage minus armor worn plus all weapons and controls are at -4
95-100: Ammunition Storage/Powder Magazine hit multiply SDP damage by 200%

Weapons Hit Sub-table: 1d10

If the weapon hit on the chart does not exist on the vessel in question ignore the result and take SDP damage only.

1: Anti Missile System or VSAM system destroyed
2-3: Anti Submarine Warfare System destroyed
4-6: Primary Deck Gun destroyed
7-8: Anti Ship Missile System destroyed
9: Secondary Deck-gun or Autocannon destroyed
10: Tertiary or machine-gun mounts destroyed

Construction: Optional Extras

Name	Avail	Cost	Spaces	Description
Composite Armor	R	400% of base SDP	NA	Adds 25% more SP and halves penetration of HE rounds
IR Baffling	P	10% of base SDP	NA	Reduces effectiveness of IR missile and detection by 2
Stealth Construction	R	500% of base SDP	1/8 of total spaces	Reduces signature of vehicle decreases detection ability of radar by 5 miles and other detection & missiles by 5 points.
Crash Control Systems	E	250 Eb per person	NA	Provides SP40 protection Vs collision or crash damage usable only by Patrol ships or in the Bridge area for larger ships.
Environmental Control	E	2500 Euro	1 space	Air tight filtration system for pollution or biological weapons
Chaff	P	1000 Euro	1 space	Chaff Launcher holds 20 bundles, reloads cost 250 Euro. Fills air with reflective metal strips that confuse radar and radar guided missiles 70% chance.
Flares	P	1000 Euro	1 space	Launches flares into sky to help defeat heat seeking missiles. Cause use of Thermograph awareness rolls at -5 and reduces attack ability of heat seeking missiles. Reloads of the 20 shot capacity cluster is 100 Euro.
Smoke Launchers	C	250 Euro	1 space	Launches either normal or IR smoke 50 to 100 meters from boat reloads cost 25 Euro for standard 300 for IR.
Phalanx Radar system	R	30000 Eb	2	Used to track and destroy missiles with a 20mm or 30mm Gatling cannon system. 90% effective. Each additional missile reduces effective chance of stopping each successive missile by 10%.
Laser Comm. link	P	7000 Eb	NA	Line of sight encrypted communication cannot be jammed.
Radio	E/C/P	200/1000/2500 Euro	NA	Allows radio Communication over 80km for short range radio, 500km for long range radio, and military radio which is jam resistant 40% of the time.
Satellite Uplink	C	5000 Euro	1 space	Allows direct connection to satellite communication
Scrambler	C	500 Euro	NA	An addition for Radio systems allows coded communication between two like encoded communication systems.
Computer sights	C/C/P/P/P	2500/5000/10000/15000 25000 Euro	NA	Computer aided targeting systems, each level provides +1 extra to hit. Maximum of +5.
Weapon Stabilization	P	50% of weapons cost	½ space of weapon	Provides stabilization for weapons while moving, eliminates negative modifiers for firing while in motion.
Rangefinders	C/P	3000/10000/12000/15000	NA	Assists to aim weapons accurately. Visual rangefinders give a +1 bonus, Radar, laser and Microwave rangefinders give a +2 bonus but can be blocked either by smoke for lasers or Chaff for radar and microwave rangefinders.
Multi-target	P	50000	NA	Allows the tracking of up to 100 targets and allows weapons systems to fire on as many as 10 targets per turn with a dedicated weapons designator/operator.
Remote Targeting	P	1200 Euro	NA	Allows a forward observer to remotely target weapons beyond the horizon or to target indirect fire.
Robotic Weapons Control	P	25000 per weapon	NA	Robotic Weapons control can be linked to a remote targeting system and can be ordered by voice or cybernetic link to fire, once per turn. A (10) weapons skill base is used plus Weapons accuracy for to hit purposes.
Auto Pilot	C	250 Euro	NA	Vehicle does the driving along a preset programmed route, may need minor directions from operator due to unknown obstacles.
Cybernetic Linkage	C	40% of total SDP Cost	NA	Allows control of a major system onboard via cybernetic links and reduces the crew size needed to operate the vessel.
ECM	P	500 000 Euro	1 space	Electronic Counter Measures is a sophisticated electronics system that is used to baffle, jam and mask electronics emissions and operation. The effects are the jamming of radio and radar, while military radio and radar are only jammed 60% of the time. Radar guided missiles subtract -15 from their ability to hit the target.
ECCM	P	100 000 Euro	1 space	Counter measures for ECM attempts to punch through jamming and negate the effects 40% reliable.
Image Enhancement	C	2500 Euro	NA	Allows the crew to have their full visual awareness bonus up to an extended range.
IR Sensors	C	1000/1500 Euro	NA	Either passive or active sensors, passive sensors detect heat emissions, active sensors adds in an IR active spotlight system getting rid of the need to illuminate your target or travel destination with visible light.
Light Amplification	C	500 Euro	NA	Negates modifiers due to darkness for awareness/notice, includes a dampening system to compensate for extreme light sources.
Navigation System	C	1000 Euro	NA	Uses a GPS system and can be coupled with radar for advanced object avoidance.
Radar	C/P			Radar comes standard on many ships as stated in the charts but may outfitted with the next strongest variety by expending several spaces onboard the ship.
Radar-ID	R	100 000 Euro	NA	Added to Military radar systems only. After two turns of scanning the computer matches the target with a known vehicle database.
Radar Detector				Detects radar frequencies and radar homing missiles.
Searchlight	C	300 euro	NA	External searchlight on flexible mount may be used to blind opponents WA +5 range 200 meters.
Hull Mounted Sonar	P	50 000 Euro	3	Basic Submarine Detection system 8 km range.
Advanced Dipping Sonar	R	380 000 Euro	7	Sonar available to lower on control cable 250 meters into water to pierce thermal layers. 32 km range.

Basic Facts: Standard Ship Sizes by Type

Ship Type	Length	Width (beam)	Draft
Patrol Ship/Speed Boat	3 - 36 meters	1 – 9 meters	1 meter
Coastal Ship/Yacht	30 – 40 meters	6 – 12 meters	1.5 meters
Corvette Class	38 – 70 meters	7 – 11 meters	2.5 meters
Frigate & Destroyer Class	100 – 180 meters	12 – 20 meters	3 meters
Light Fleet Oiler	105	14.8	3.5 meters
Small Cargo Ship	105	14.8	2+ meters
Large Fleet Oiler	206	30	5 meters
Large Cargo Ship	210	32.3	4 meters
Fire/Rescue Tug/Fishing Trawler	60 – 80 meters	8 – 16 meters	1.5 meters

Weather Effects:

Wind Direction:

Dice Roll (d10)	Direction
1	Insufficient or Calm subtract 50 from die roll for wind force table and then re-roll for direction here.
2	North
3	South
4	East
5	West
6	Northeast
7	Northwest
8	Southeast
9	Southwest
10	Excessive wind Add 80 to die roll for wind force table and then re-roll for direction here.

Wind Speed:

Percentage Die Roll	Wind Force	Speed in Mph/Kmh	Top Sail Speed	Damage
'(-49)-14'	Calm	0-1 mph	1mph	NA
'15-50'	Light Breeze	2-7 mph	4 mph	NA
'51-75'	Moderate breeze	8-18 mph	6 mph	NA
'75-90'	Strong breeze	19-31 mph	8 mph	1d6/3 per hour 40% chance
'91-96'	Strong Gail	32-54 mph	6 mph	1d6 SDP per hour 80% chance
'97-99'	Storm	55-72 mph	3 mph	1d6 SDP per hour
100 or more	Hurricane	73+ mph	NA	3d6 SDP per hour

Example Ship Constructions:

Brasilia industries Bravada Class Corvette:

Chaff, Flares, radar rangefinder

Top Speed	64kmh	Acc/Dec	15/20
Crew	35	Range	2897 km
Passengers	0	Cargo	NA
Maneuver	0	SDP	1365
SP	40	Type	Corvette
Mass	273 tons	Cost	4.2 million
length	40 meters	beam	7 meters

Weapon	57 mm Cannon	VSAM	4 : Penguin ASM	2: Asroc: ASW
Weapon Accuracy	2	Skill 15	15 skill	Skill 15
Damage	70 + (5d10)	110 + (6D10)	95 + (6d10)	120 + (8d10)
Ammo	80	1	1	1
Rate of Fire	6	1	1	1
Penetration	6	8	8	12
Range	6 miles	12km	25 miles/35km	17 miles
Burst Radius	3 meters	10 meters	12 meters	24 meters

Building the Corvette Starts with the basic weapons systems you want an idea of a ship size and range. The combined weapons for the Bravada takes 28 spaces plus the 35 spaces taken up by crew members at one space per person also add in any space taken up by optional systems 2 total. Total spaces equals 65, multiply this by 21 SDP per space to get total SDP of 1365 SDP. We can find our mass by dividing total SDP by 5 based on the Corvette creation chart for 273 tons of displacement. Since the ship is in the lower range of tonnage and SDP we chose a lower number value for it's length and beam.

Weapons Cost: this is calculated starting with the total SDP times 2500 equaling 3307500 for a base price before weapon systems. A total for all the weapons systems and ammo comes to 790000 for a standard ammo load shown above without any extra missile for the VSAM, Penguin, or ASROC launchers.

Optional Equipment: add up the costs for all optional equipment: Total 12000

Total Cost with standard weapons load: 4 million 109 thousand 500 EB

Militech Valkarie Class Trimaran Corvette:

Trimaran Hull, Helio Launch Pad, Turbo Diesel Engine, Cybernetic Controls, RPV Drove, chaff, flares

Top Speed	**46mph**	**Acc/Dec**	**15/20**
Crew	12	Range	1800 miles
Passengers	0	Cargo	NA
Maneuver	3	SDP	2604
SP	100	Type	Corvette
Mass	521 tons	Cost	583.5 million
length	60 meters	beam	10.5 meters

Weapon	**Dual 76 mm Cannon**	**2cm**	**VSAM**	**6: Harpoon ASM ##**	**2: Asroc: ASW**	**20mm Gatling**
Weapon Accuracy	0	1	Skill 15	Skill 17	Skill 15	0
Damage	85 + (6d10)	45 + (6d10)	110 + (6D10)	190 + (8d10)	120 + (8d10)	4D10 or 8d10 ammo type
Ammo	80	50	1	1	1	1000
Rate of Fire	4	1	1	1	1	100
Penetration	7	17	8	16	12	4
Range	11 miles/18km	18km	12km	75 miles	17 miles	500 meters
Burst Radius	5 meters	NA	10 meters	48 meters	24 meters	NA

Submarines unlike any other type of vehicle has always been immersed not only in water but in secrecy. All the information presented here is from public sources and some facts and factors involving the statistics given are my best guesses at what the ability and performance of these vehicles are.

Some Basic Submarine facts:

All submarines have some basic equipment on board.

Snort pipe: every once in a while submarine will have to come near the surface to 'snort' in more breathable air through a extendable tube similar to the periscope. The modern submarines have in most cases replaced this with a breathable gill system placed near the front of the boat. The snort pipes extend to about 18 meters allowing the submarines to remain underwater even when replenishing oxygen. One problem with this is that snort pipes along with the traditional periscope are subject to detection by radar which will give the submarines postion away to any ASW ships in the area.

Submarine Detection:

Submarines by their nature are designed not to be detected by surface warships and tactical stratigies can be employed to make detection by hunters even tougher.

Locating a submarine that is submerged can be difficult for surface ship two main factors influence difficulty levels, thermal layers and submarine noise factors. As can be seen in the chart below when a submarine dives below 600 meters surface vessels have almost no chance to detect an enemy submarine, this is where advanced dipping sonar and other sub hunting submarines come into play. Advanced dipping sonar is a type of sonar extended on a control wire up to 250 meters allowing surface ships to better detect deep diving submarines.

Depth in meters	Base Difficulty to detect at 75% of Max Speed	50% Max Speed	25% Max Speed	Full Stop
50 - 99 meters	Difficulty (5) Very Easy	(10) Easy	(15) Average	(20) Difficult
100 – 199 meters	Difficulty (10) Easy	(15) Average	(20) Difficult	(25) Very Difficult
200 – 299 meters	Difficulty (15) Average	(20) Difficult	(25) Very Difficult	(30) Near Impossible
300 – 399 meters	Difficulty (20) Difficulty	(25) Very Difficult	(30) Near Impossible	(35) Unthinkable
400 – 499 meters	Difficulty (25) Very Difficult	(30) Near Impossible	(35) Unthinkable	(40) Unattainable
500 + meters **	Difficulty (30) Near Impossible	(35) Unthinkable	(40) Unattainable	(45) Impossible

** Below 500 meters from the surface water temperature equalizes at 34 f with no more successive thermal layers.

A detection example: an older surface ship with basic hull mounted sonar attempts to detect and track a suspected submarine, a German 214 class which is currently at 415 meters depth a standard difficulty (25) but due to it's noise modifier of -4 the actually detection difficulty is (29). A newer and better equiped surface ship comes along with dipping sonar and attempts to locate this deep intruder, lower its sonar to it's maximum depth giving the newer ship a difficulty of (12) with noise reduction, since the submarine now is only 165 meters from the sonar.

Building Submarines: Maximum Cavitation

Name	Patrol/Coastal	Diesel Electric	Nuclear Attack	Nuclear Balistic Missile	Mini Subs	Deep Sea Divers
SDP Range	350-650	600-1200	1000-2500	2500-7000	25-150	150-400
SDP Limits	6.25 SDP per Space	6 SDP per Space	4 SDP per Space	7.75 SDP per Space	7 SDP per Space	6.25 SDP per Space
SDP Cost	96 000 per SDP	155 000 per SDP	522 000 per SDP	750 million used	75 000 per SDP	375 000 per SDP
Spaces	80 - 105	110 - 200	225 - 625	650 - 900	3 - 50	45 - 80
Top Speed	17 knots	20 knots	28 knots	25 knots	17	12
Range Submerged	32 hrs	6000km	3 months	3 months	12 hrs	48 hrs
Mass	1.25 tons per SDP	3 tons per SDP	3 tons per SDP	5 tons per SDP	.25 tons per SDP	2.25 tons per SDP
Sonar Ranges	4km	6km	6km	5km	2km	2km
Hull Type Standard	HY 50	HY 50	HY 80	HY 80	HY 30	Titanium
Standard Crew Size	20-25	27-55	45-140	25-165	'1-5'	10-55
Crew Size With Cybernetic Controls	5	7	12	9	'1-5'	'2-7'
Average Length by Class	48.5 meters	100 meters	102 meters	171 meters	15 meters	50 meters
Average Width (beam)	4.7 meters	8 meters	10 meters	18 meters	2.4 meters	5.5 meters

Submarine Hull Compostion	Crush Depth feet/meters	Operational Depth feet/meters	Upgrade Cost	Added SDP points
HY 30: Steel	675/206	506/155	NA	NA
HY 40: Steel	900/275	675/206	125.00%	+ 10% more
HY 50 Steel	1125/343	844/257	140.00%	+ 15% more
HY 80 Steel	1800/550	1350/412	200.00%	+ 25% more
HY 100 Steel	2250/685	1688/514	275.00%	+30% more
HY 120 Steel	2700/823	2025/617	400.00%	+40% more
Titanium Welded Hull	4000/1219	3000/914	650.00%	+50% more

Propulsion:

Submarines have traditionally used one of two methods of underwater movement.

The first and classical form of underwater propulsion has been in the form of a large bank of batteries recharged by an air breathing diesel engine. Starting from the submarines of World War One subs have used this form of movement. The man disadvantage has always been the need for the submarines to come close to the surface after several hours of movement while submerged to turn on it's diesel engine to recharge the batteries and therefore making themselves very vunreable from sonar, visual detection and later on detection from sensitive radar.

Many submarines now still in service has partially overcome this problem by adding on an additional diesel engine nicknamed AIP for Air Independent Propulsion. In actuallality this is nothing but a diesel engine conversion modified to run off of liquid oxygen. The AIP engines allowed submarines a 400% increase in time spent submerged without having to come up to snorkle depth and run the loud diesel engines to recharge the batteries.

The Swedish Navy became the first to put AIP systems into its fleet operating units. The Kockums-built AIP system was first tested on the refurbished submarine Näcken in 1989. Today, almost all submarine that are not nuclear powered use the new AIP Stirling engine supplementing the conventional diesel-electric system. The Stirling engine turns a generator that produces electricity for propulsion and/or to charge the vessel's batteries.

The Second primary type of propulsion method employed by submarines is nuclear reactor driven propellors. There are several variations of this concept but most subs use a pressurized water coolant system with one or two reactors. Fuel cores must normally be replaced every five years.

Torpedoes and Anti Submarine Weapons:

Weapon Name	Torpedoes 12.75 "	Torpedoes 21"	Depth Charge 120mm	Depth Charge 80mm
Weapon Accuracy	Skill 15	Skill 17	0	0
Damage	60 + (4d10)	230 + (8d10)	80 + (6d10)	50 + (6d10)
Ammo	1	1	1	1
Rate of Fire	1	1	1	2
Penetration	5	9	7	5
Range Extreme	5 miles	13 miles	6000 meters	3500
Burst Radius	10 meters	24	6 meters	5 meters
Spaces	2	5	3	1
Weapon Cost	45000	85000	5000	1500
Ammo Cost per round	NA	NA	250	150

Torpedoes 12.75" are a standard surface ship variety of torpedo while 21" torpedoes are the standard for other submarines. Depth Charges come in two varieties based on anti submarine mortars aboard a surface ship. The main drawback to depth charges is their inability to attack submarines below 400 meters in depth, plus a surface ship must have successfully located the submarine by sonar each turn before an attack may begin. A successful hit with a depth charge is based off of range of the submarine from the firing ship and skill in heavy weapons of the crew member firing the weapon. Torpedoes, start with a base skill like missiles and need a (20) to hit it's target without any modifiers like defensive tactics on the part of the submarine.

Anti Torpedo Tactics:

All the tactics below except for changing thermal layers assumes that the submarine has already has been successfully detected by the adversary, if not further attempts at detection are automatic.

1 Dropping a noisemaker to cause cavitation in the water, creating the noise and sound of a large proppelor blade, that looks like a submarine to a sonar guided torpedo. Homing torpedos must make a difficulty 20+ roll to keep tracking the original target, when combined with a knuckle the difficulty increases by 2.

2 Knuckles: making a tight right or left degree turn causing a turbulance in the water similar to a noisemaker but with less effectiveness. Homing torpedos must make a roll of difficulty 20 to keep tracking the original target. This tactic can be combined with dropping a noise maker or with a decoy torpedo increasing tracking difficulty by 2

3 Decoy Torpedos: These are specially designed torpedos that are programmed to give off a decoy signature almost identicle to your submarines providing a second target for any homing enemy torpedos. These work as effectively as dropping a noise maker but reduce your combat load of torpedos on a 1 for 1 basis.

4 Thermal Layers: a natural ally of any sub-mariner, a layer of water which differs slighly in temperature from the layers above and below. Thermal layers effectively reduce the ability of sonar to track targets and get precise bearings. Thermal layers occur approximately every 100 meters or so of depth below the vehicle launching the weapon, this give subs that hunt other submarines the decisive advantage. Each layer reduces sonar effectiveness by one point of difficulty for targeting and acquisition.

Example Submarine Anti Torpedo Tactics:

A German 214 Class submarine is trying to avoid being hit by a 12.75" torpedo launched by a surface vessel homing in on it. The submarine is at 415 meters depth drops a noisemaker and makes a knuckle turn, this increases the difficulty of the homing torpedo attack to (24) which will in most cases divert the torpedo from hitting the submarine.

Sinking a submarine:

The rules for sinking a submarine are almost identical to those for sink a surface ship with the exceptions listed below:

1 Submarine follow exactly the same rules as surface ship for damage and sinking while not submerged.

2 While submerged a submarine taking over 50% damage will begin to sink 3 meters per round in addition to all other problems until it reaches the bottom.

3 Once a submarine has reached 75% damage a major rupture has breached the outer pressure hull and 25% of the crew is sucked out or drowns in the next round, plus the submarin sinks 10 meters per round. At this point the only way to make this situation survivable is for the captain to make an emergency blow manuever bringing the submarine quickly to the surface difficulty 25 in this damaged state. If the difficult rool is not made another rupture occurs in the pressure hull completely breaking the ship in two.

Diving Deep or exceeding depth limits:

Submarine may attemot to exceed their maximum depth limits and dive deeper than stated in their statistics. Submarine captains that attempt this manuever will need to make a difficulty 20 luck roll, every round, to avoid taking any pressure damage beyond 30 meters below their boats maxium depth.

At 50 meters a difficulty 25 luck roll will need to be made every round to avoid taking damage

At 75 meters a near impossible luck roll will need to be made every round to aviod damage.

On any failed luck roll damage equal to 10 sdp * meters will occur to the submarine per round of submersion. Otherwise you can exceed your operation depth of your submarine but sooner or later your luck will run out

Submarine Weapons:

Weapon Name	Torpedoes 12.75 "	Torpedoes 21"	Harpoon ASM ##	Cruise & SSN: ASM ##	Mine Small	Mine Large
Weapon Accuracy	Skill 15	Skill 17	Skill 17	Skill 16	2	2
Damage	60 + (4d10)	230 + (8d10)	190 + (8d10)	350 + (10d10)	75 + (6d10)	185 + (6d10)
Ammo	1	1	1	1	NA	NA
Rate of Fire	1	1	1	1	NA	NA
Penetration	5	9	16	30	8	10
Range Extreme	5 miles	13 miles	75 miles	1500 miles	NA	NA
Burst Radius	10 meters	24	48 meters	72 meters	48	72
Spaces	2	5	8	15	2	4
Weapon Cost	45000	85000	185000 Eb	265000 Eb	NA	NA
Ammo Cost per round	NA	NA	NA	NA	1000	1400

These are the standard weapons that would normally be mounted on a military class vehicle that would in no way effect the operation of the ship. The 21 inch torpedoes are standard armament for most of the larger classes while Harpoon missiles can be launched from either a 21 inch torpedoe tube or from a verticle launch tube, as in the Los Angeles and Seawolf class submarines. Cruise missile have been adapted to be launched in any of three ways, via torpedoe tube, out of a verticle launch tube or in balistic missile submarines as a replacement for long range tacticle missiles.

Mines can be either dropped off from a rack attached to small Coastal class submarines and take up a stationary position or launched out of a torpedo tube and lie near the floor of the ocean waiting until a target approaches and then attacks as a torpedo.

Other Possible Submarine Weapons:

The weapons below all will reduce the effective ability of a submarine to remain quiet and undetected unless a mechanism is used to lower the weapon down into the hull of the submarine when submerged. The cost to hide the weapon inside the hull of the submarine will be double the normal cost and spaces needed.

Lighter deck weapons such as small autocannons under 25mm and machineguns may have removeable mounting points that can be carryed into a normal or cargo hatch. Listed below are common deck guns from ancient submarines and certain missile launching systems common to older class of soviet ships.

Weapon Name	57 mm Cannon	76 mm Cannon	VSAM	
Weapon Accuracy	0	0	Skill 15	
Damage	70 + (5d10)	85 + (6d10)	110 + (6D10)	
Ammo	80	50	1	
Rate of Fire	6	2	1	
Penetration	6	7	8	
Range Extreme	6 miles	11 miles/18km	12km	
Burst Radius	3 meters	5 meters	10 meters	
Spaces	5	7	1	
Weapon Cost	60000	80000	10000 Eb	
Ammo Cost per round	3000	4000		