SHADOWRUN™ 7108

RIGGER™ BLACK BOOK

FASA CORPORATION

PHILLIP McGREGOR

RIGGER

BLACK BOOK

FASA CORPORATION 1991

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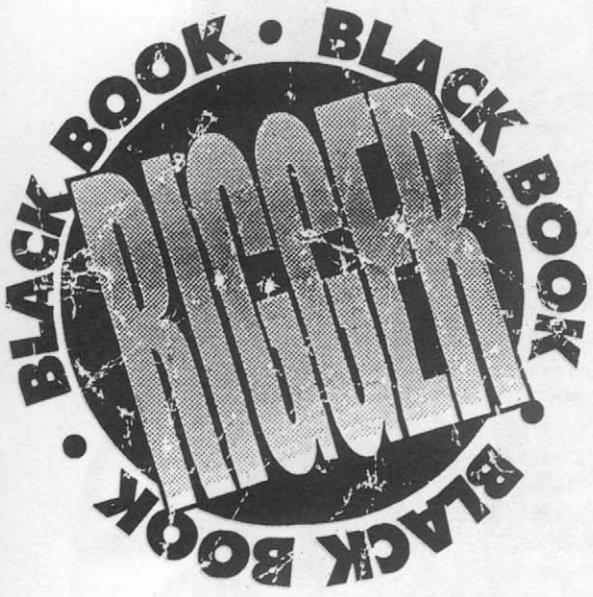

RIGGER BLACK BOOK

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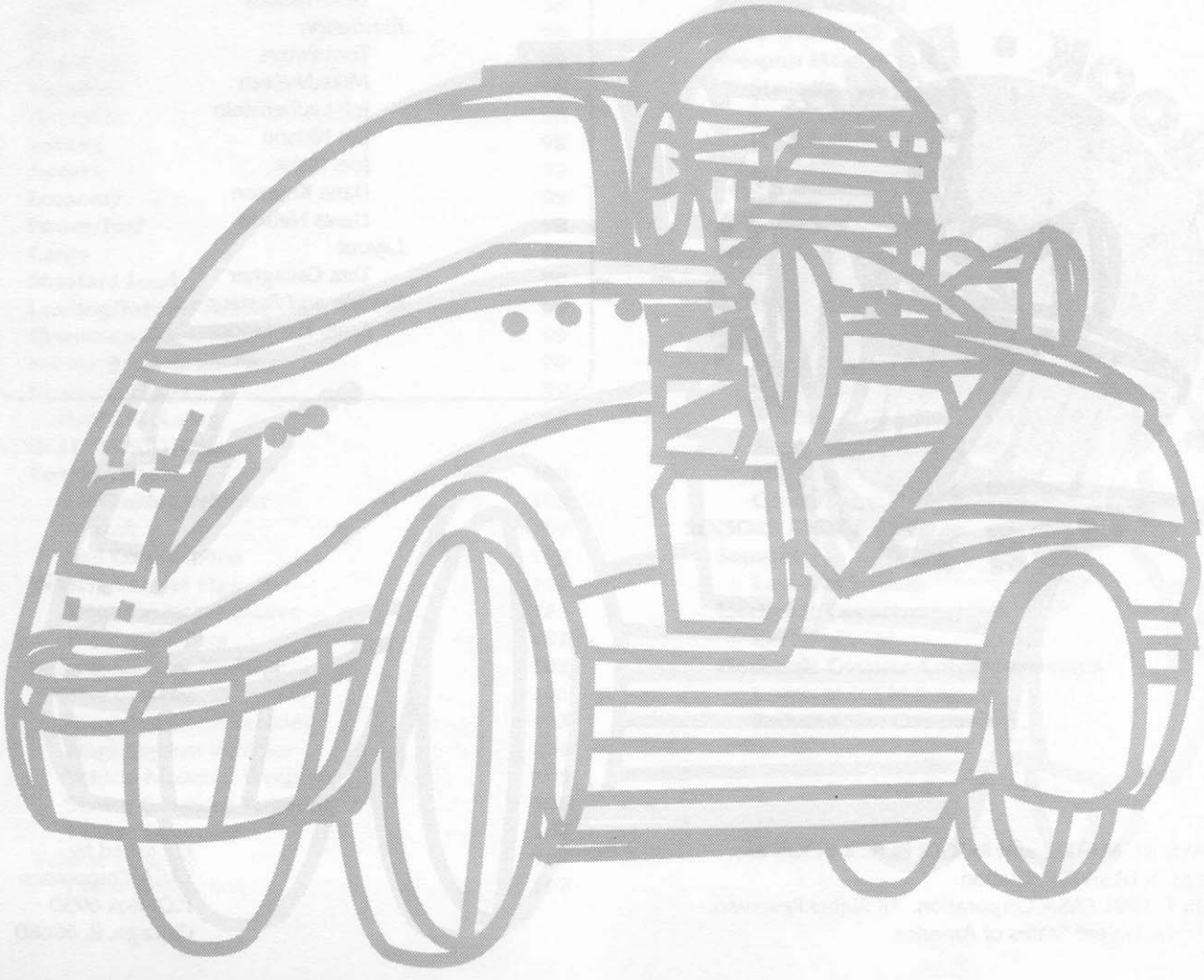
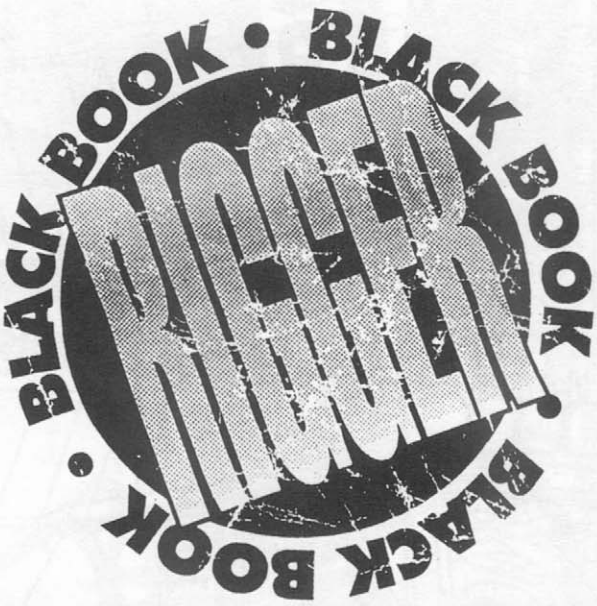
INTRODUCTION

The **Rigger Black Book** is a vehicle sourcebook for the **Shadowrun** game system. It features descriptions and game statistics for ninety vehicles ranging from passenger cars and air cushion vehicles to lighter-than-air vehicles and drones. The **Rigger Black Book** collects into one volume and updates all the vehicles presented in the **Shadowrun** rule book and the **Street Samurai Catalog**, and adds new civilian vehicles, security vehicles, drones, and military vehicles. It also features new, revised, and expanded rules for vehicles, vehicle weapons, sensor/ECM systems, drones, and other rigger equipment. A new pursuit combat system replaces the old vehicle combat system, and revisions to the regular combat system are also included.

The rules expansions contain some contradictions to the basic **Shadowrun** rules. For all intents and purposes, the new rules in the **Rigger Black Book** supersede previous rules covering the same topic. The gamemaster and players should, however, choose the rules they prefer. If an earlier version or a completely different variation of a rule suits a particular group's style of play, the gamemaster should adapt the rules as desired.

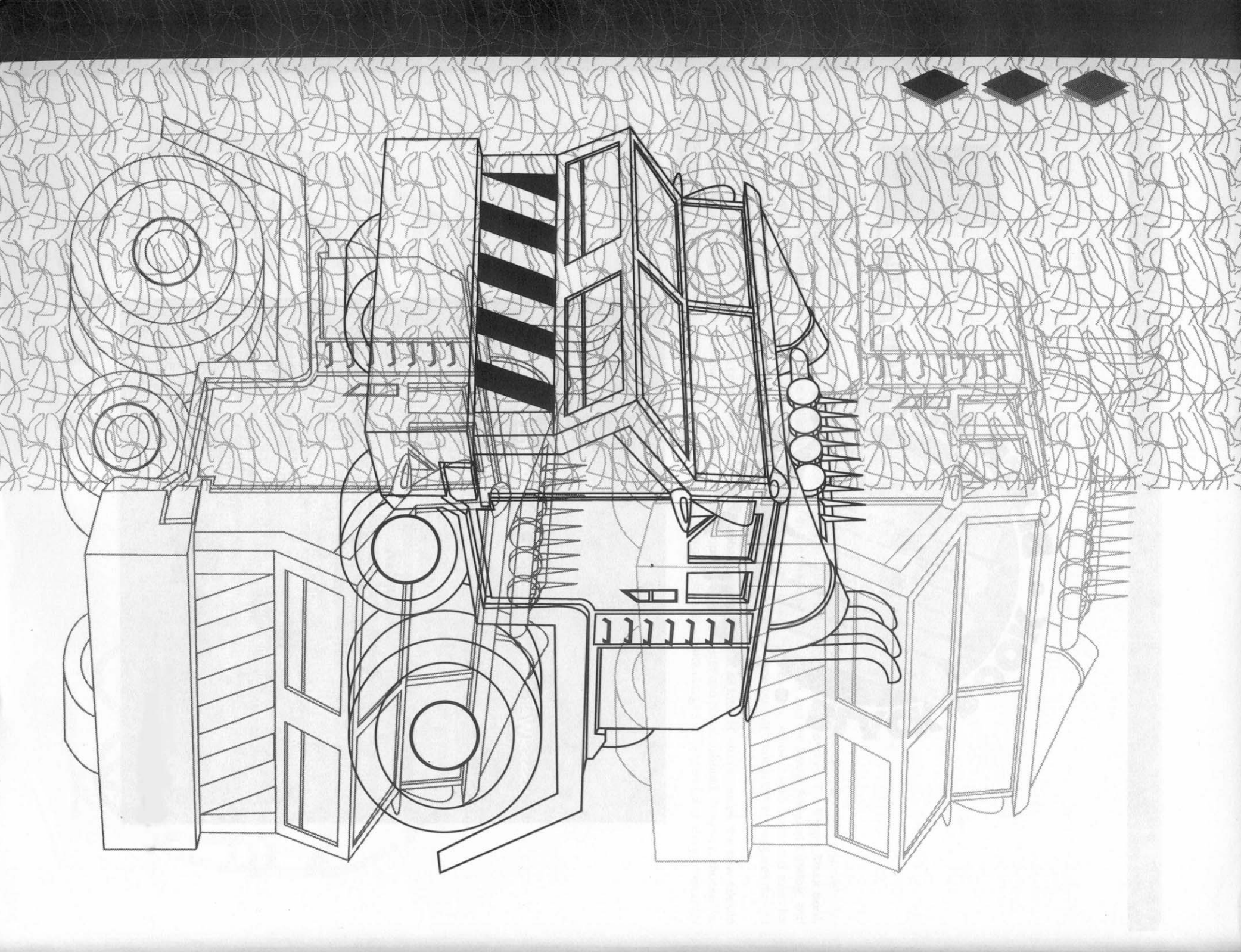




>>>>>[Well, here we are again, cowboys and cowgirls. . . the highly unofficial Summer 2052 edition of the console-cowfolks' bible, the Rigger Black Book! As in past issues, we offer you the latest lowdown on vehicular and rigger technology—domestic and imported—ripped straight from the manufacturer's most secure databases. (Pried from the grips of the blackest of black IC, courtesy of our demon deckers, chum-pals). While we've made every effort to ensure that the data presented in this file is as accurate as possible, and have included outside comment from well-known riggers to cut down on gross errors, we do not guarantee the data presented, especially where independent confirmation proved impossible. Additional, in-depth iƤformation on high-security material is available for a modest fee through our consulting service. Simply leave a message at NA/CFS/SF (2110) 798-084, A/c No 9821,iu0921, including a secure LinkCode through which we can contact you, and our local fixer will be in touch with a free consultation and quote.

The "official" information we offer here is copyrighted, of course, but it sure isn't protected. Feel free to add your comments to ours!]<<<<<

—Nightmare, Wheelie„ and the gang (16:15:03/04-29-52)



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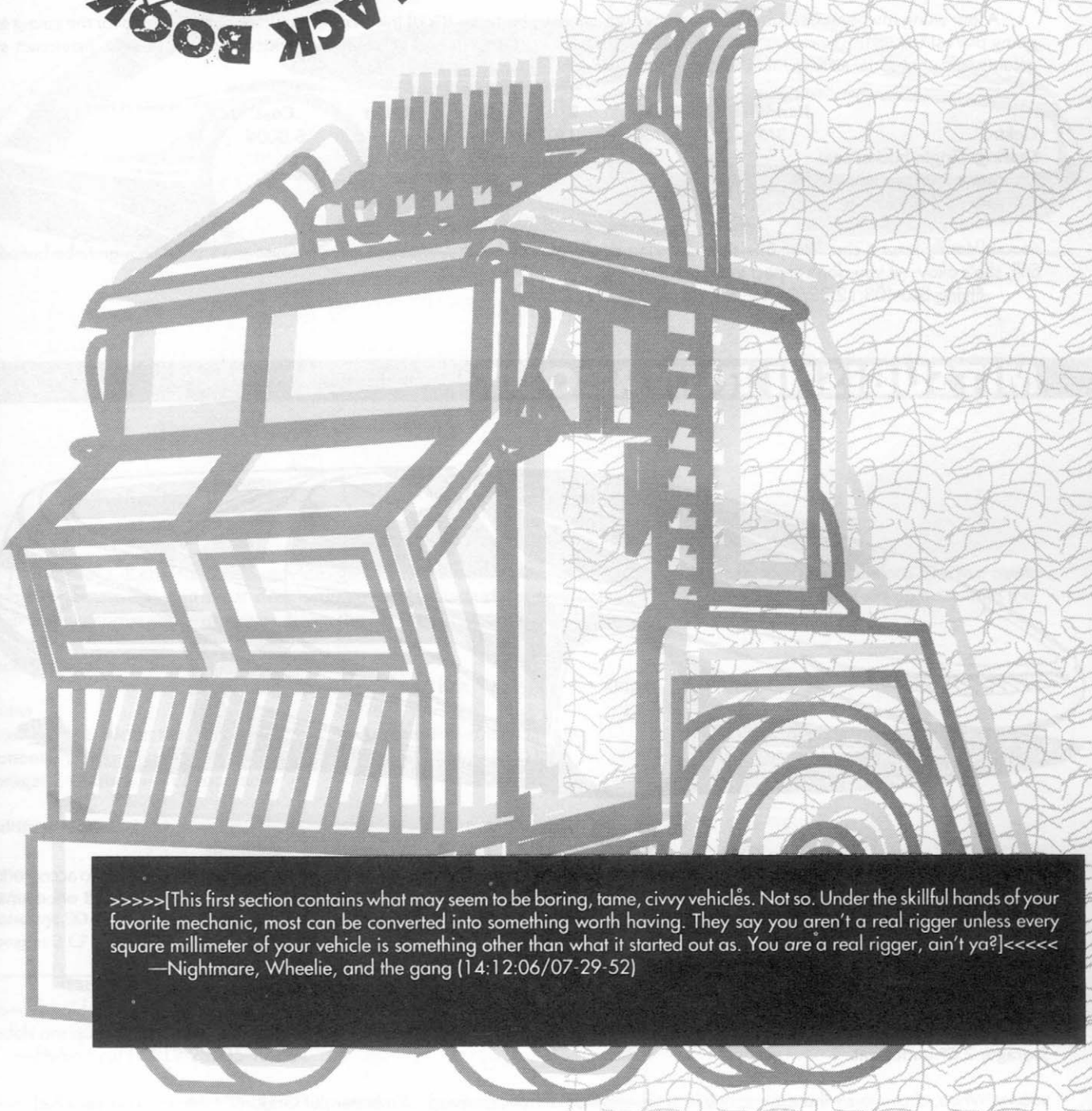
RIGGER

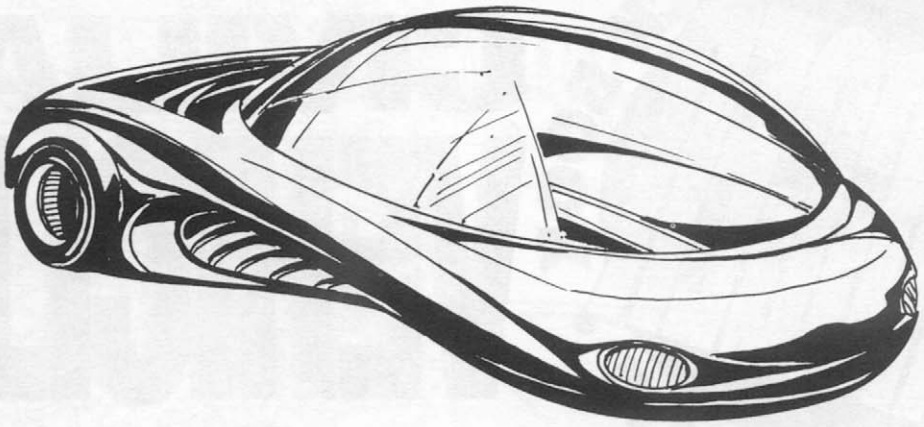
CIVILIAN VEHICLES



>>>>>[This first section contains what may seem to be boring, tame, civvy vehicles. Not so. Under the skillful hands of your favorite mechanic, most can be converted into something worth having. They say you aren't a real rigger unless every square millimeter of your vehicle is something other than what it started out as. You *are* a real rigger, ain't ya?]<<<<<

—Nightmare, Wheelie, and the gang (14:12:06/07-29-52)

VOLKSWAGEN ELEKTRO



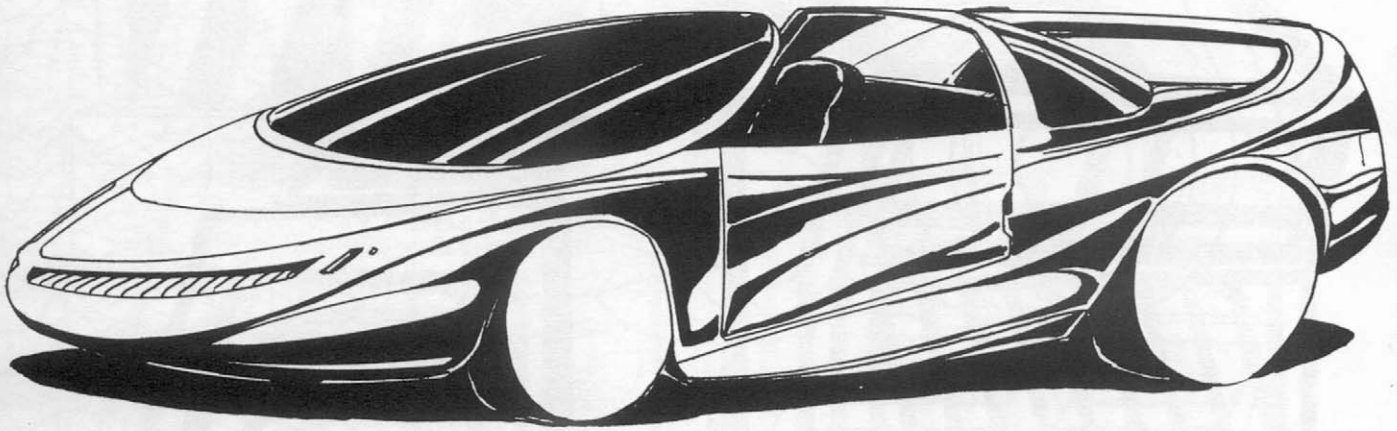
A low-slung triwheel commuter powered by high-capacity batteries (GridLink™ or SunCell™ optional)—great for the young exec going places! The stylish Kevlarplex™ canopy slides forward, and ample luggage space is provided beneath the seat. An aircraft-style column-and-footpedal arrangement replaces standard controls.

	Handling	Speed	B/A	Sig	APilot	Cost
Elektro	3/6	20/60	1/0	5	0	8,000¥

Seating: Single bucket seat
Access: Full canopy
Economy: 2 PF per km
Power: 200 PF
Storage: 1 CF underseat

>>>>>[Hardly luxury, chum-pal. She's too drekking small. We call her the "Mobile Coffin," 'cause she's small enough to be buried in! Still, she's okay—if you don't expect too much.]<<<<<
—Flying Scot (03:12:28/05-12-52)

MITSUBISHI RUNABOUT

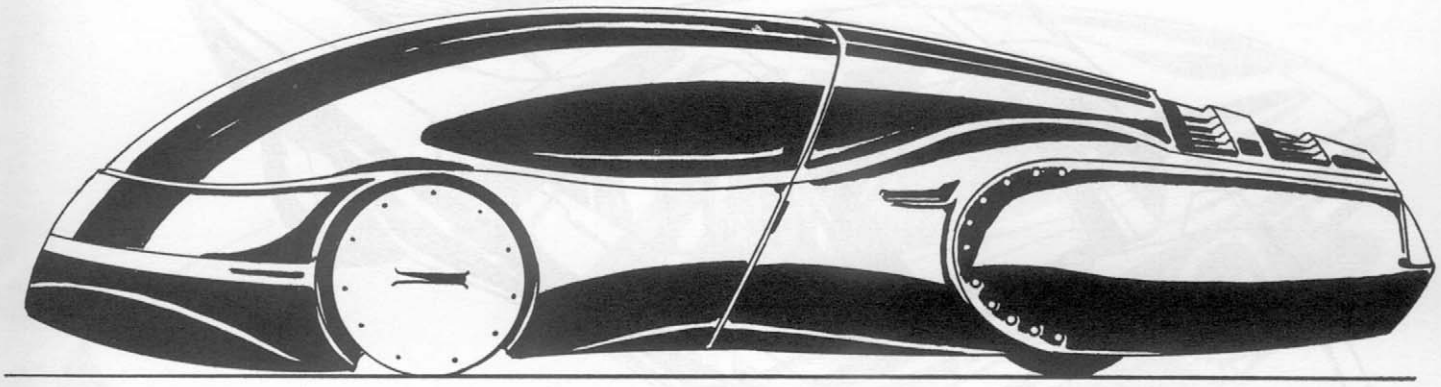


Sleek, but functional, the revised seating arrangement carries two in a pinch, and luggage space has been doubled to accomodate the equivilant of two small suitcases underseat. Microscribe's AutoNav™ system uses street-proven technology and offers uplink compatability with the local Urban Guidance Control system.

	Handling	Speed	B/A	Sig	APilot	Cost
Runabout	4/8	25/75	1/0	5	1	10,000¥

Seating: Single/split bucket seats
Access: Full canopy
Economy: 2 PF per km
Power: ImpElec/150 PF
Storage: 2 CF underseat

>>>>>[Whoa, chummers—the extra space is at the expense of battery storage. Ya better put GridLink™ into this one!]<<<<<
—Nightmare (19:21:13/01-04-52)



The special L-Z chassis design provides greater useable interior space in both the electric and multifuel versions. The rear trunk can hold two suitcases, and a rear-deck luggage rack is standard. The unusual seating design—the passenger sits up front, with the driver slightly above and to the rear—gives the car an unmistakable profile.

Electric Model

	Handling	Speed	B/A	Sig	APilot	Cost
Tsarina	4/8	25/75	1/0	5	1	10,000¥

Seating: 1 + 1 bucket seats
Access: Front/rear canopy
Economy: 2 PF per hour
Power: ImpElec/200 PF
Storage: 2 CF truck + 3 CF roof rack

Multifuel Model

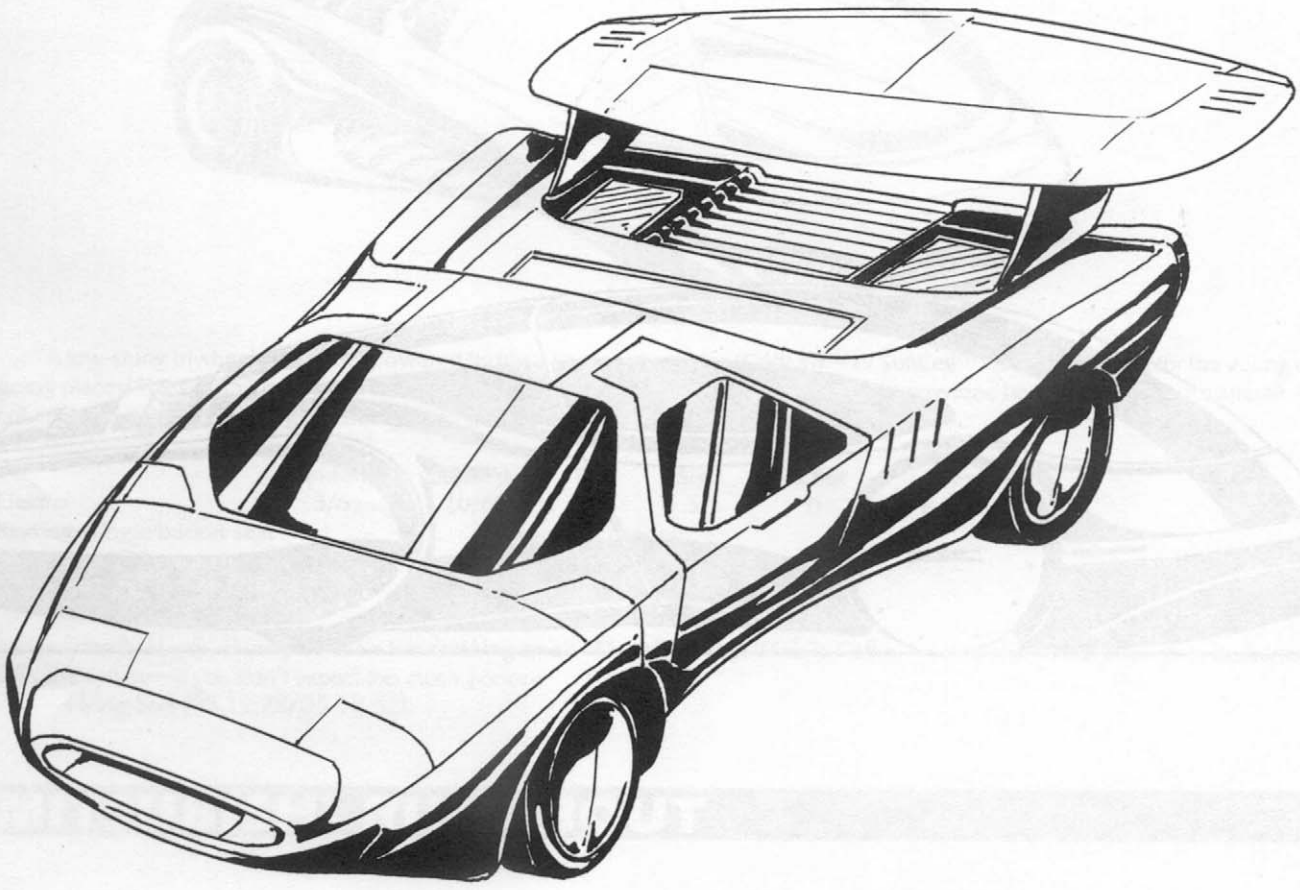
	Handling	Speed	B/A	Sig	APilot	Cost
Tsarina	4/8	30/90	1/0	2	1	12,000¥

Seating: 1 + 1 bucket seats
Access: Front/rear canopy
Economy: 90 km per liter
Fuel: MultiF/25 liters
Storage: 2 CF truck + 3 CF roof rack

>>>>>[Avoid Zil-built imports. They seem to have been built by clumsy trolls, and quality control was by drunken ones! Leyland-built models are quite serviceable, though.]<<<<<
—Flying Scot (13:12:28/05-12-52)

>>>>>[Who ya callin' names, chummer? Ya better watch yer joyboy elf looks, we know where ya squat.]<<<<<
—Toothgnasher (05:09:56/05-15-52)

CHRYSLER-NISSAN JACKRABBIT



One of the most common cars on the road today, the Jackrabbit comes in a variety of models ranging from the functional three-door model, to the sleek, sporty, two-seater EXX model shown above. All models are aerodynamically styled and have improved suspensions, offering a choice of improved electric (three-door) or multifuel IC (EXX) engines.

Electric Model

	Handling	Speed	B/A	Sig	APilot	Cost
Jackrabbit	3/8	25/75	1/0	5	1	15,000¥

Seating: Twin bucket + single bench
Access: 2 standard + hatchback
Economy: 2 PF km
Power: ImpElec/200 PF
Storage: 4 CF trunk

Multifuel Model

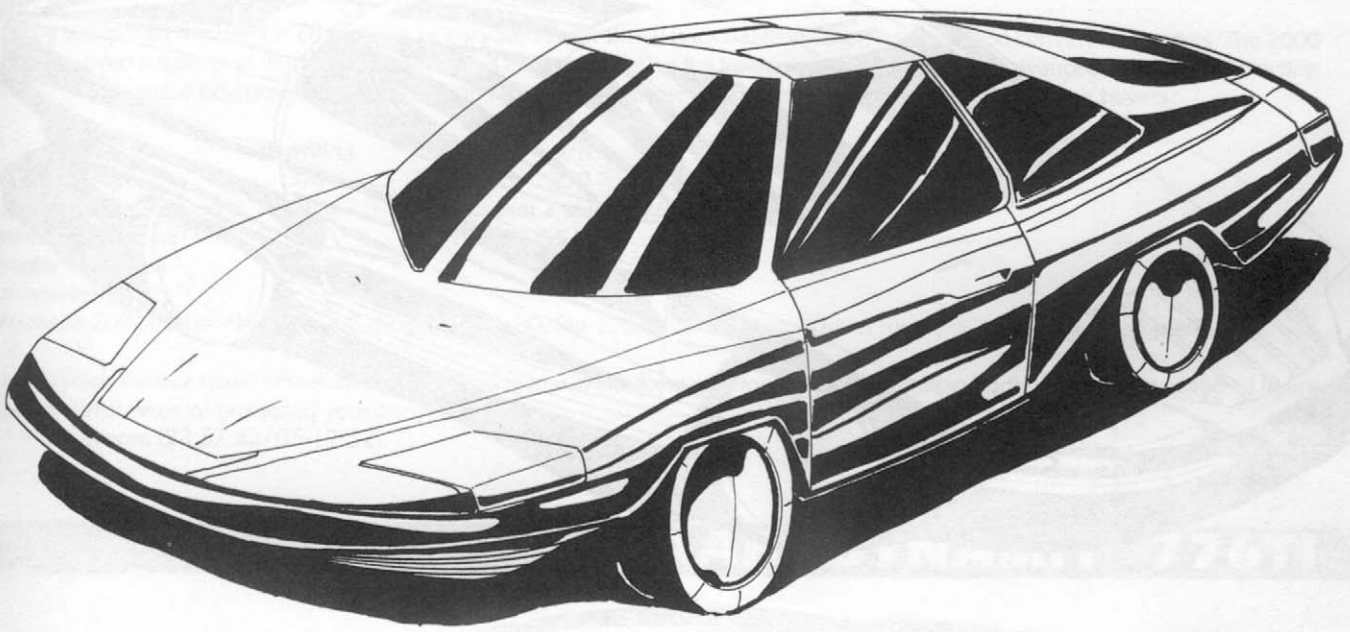
	Handling	Speed	B/A	Sig	APilot	Cost
Jackrabbit	3/8	30/90	1/0	3	1	18,000¥

Seating: Twin bucket seats
Access: 2 standard
Economy: 90 km per liter
Fuel: MultiF/25 liters
Storage: 2 CF trunk

>>>>>[Any extra seats take up most of the luggage space.]<<<<<
—MiTee Man (11:37:21/07-15-52)

>>>>>[My pal Joe swears the rumble seat is too small for anyone except a kid or maybe a dwarf to fit into.]<<<<<
—Nightmare (19:41:58/07-21-52)

>>>>>[Come on, chummers. Is this the Rigger Black Book or the Humanis Joke Book?]<<<<<
—El Durango (13:17:41/07-27-52)



Still Ford's best-selling sub-midsize car, manufactured only in IC engine variants. Two- and four-door sedans and three- and five-door hatchback models are available. The wide variety of models and options makes the Americar a great bargain.

	Handling	Speed	B/A	Sig	APilot	Cost
Americar	4/8	35/105	2/0	2	2	20,000¥

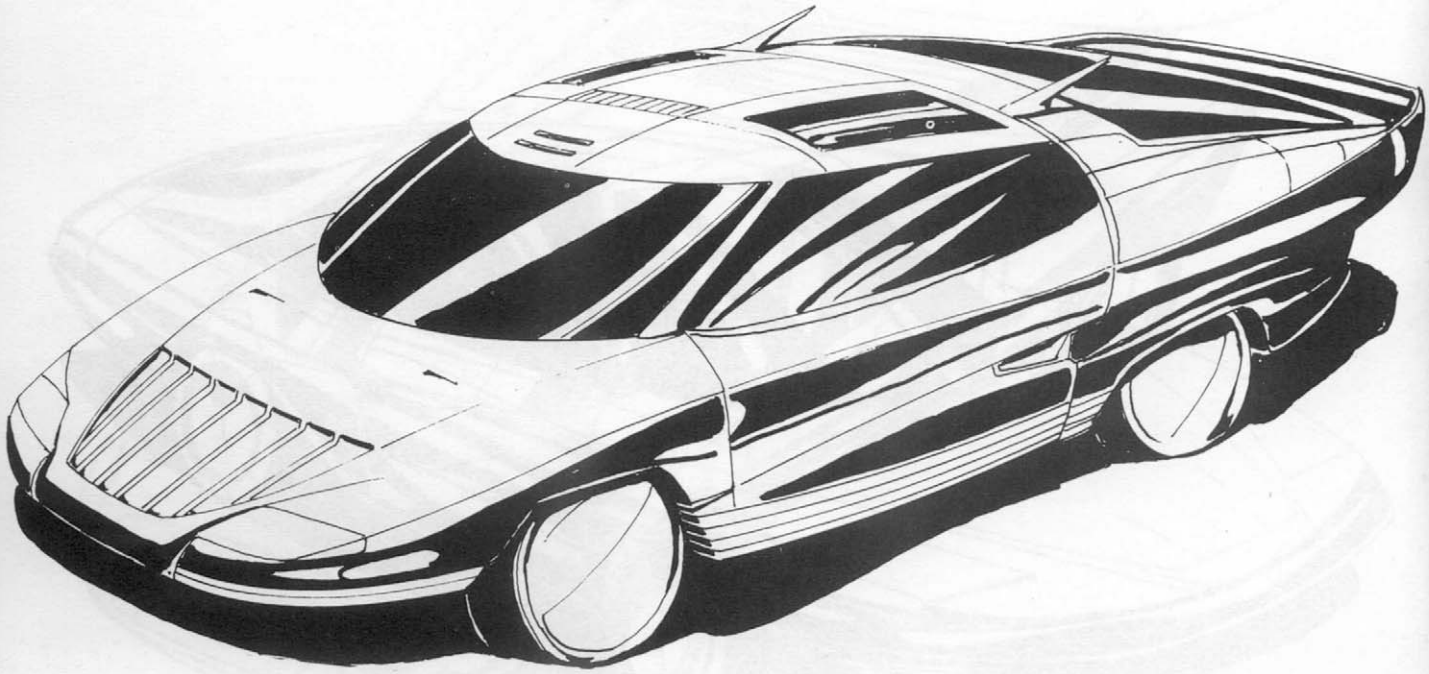
Seating: Twin front/back bucket seats **Access:** 2 standard*
Economy: 50 km per liter **Fuel:** IC/30 liters
Storage: 5 CF trunk
*Three-door hatchback has 2 standard + 1 hatchback (22.5K¥); four-door sedan has 4 standard (25K¥); five-door hatchback has 4 standard + 1 hatchback (27.5K¥).

>>>>>[Watch the three-door. I've seen too many crash 'n' burn, and so have my buddies. I hear persistent rumors of a design fault in the gas-tank placement.]<<<<<
—Wheelie (13:47:20/06-15-52)

>>>>>[Yeah. My tech, Billy, says he knows what the problem is, and there's a quick fix available. He can't understand why Ford hasn't recalled the '51 model by now.]<<<<<
—Blue Rider (18:20:21/08-13-52)

>>>>>[Y'all know that the Ford name's just a moniker these days, right? They're actually owned by some offshore Carib League holding company. Cryin' shame.]<<<<<
—Quil (21:13:41/08-14-52)

HONDA-GM 3220 ZX AND 3220 ZX TURBO



The cheapest sports car on the road in North America today. Targa top (hardtop inserts clip to rear luggage tray), bucket seats, mag wheels, high-speed suspension, and exceptional road-holding make the 3220 ZX a great value for the money. The 3220 ZX Turbo is the budget sports-car freak's dream—all the above, plus a turbo-boosted engine to boot. This is the engine that won the NorAm Sports Car Circuit Gold Cup for Honda in 2047 and 2048!

3220 ZX

	Handling	Speed	B/A	Sig	APilot	Cost
3220 ZX	4/8	40/120	2/0	2	1	30,000¥

Seating: Front/rear twin bucket seats* **Access:** 2 standard/open top + rear hatch
Economy: 50 km per liter **Fuel:** IC/30 liters
Storage: 4 CF trunk

3220 ZX Turbo

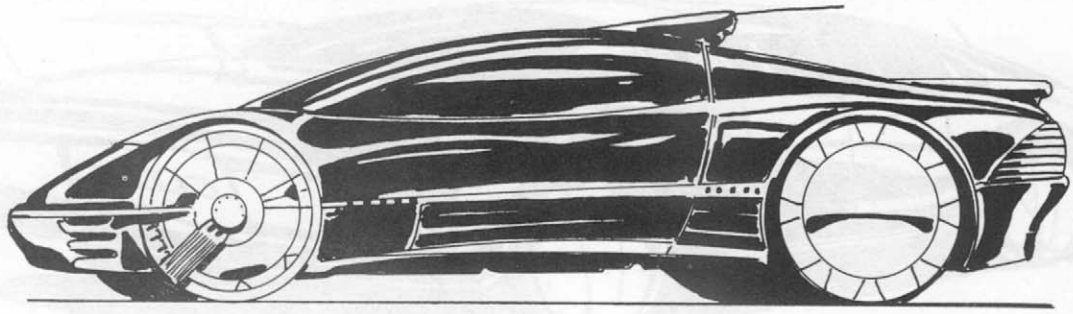
	Handling	Speed	B/A	Sig	APilot	Cost
3220 ZX Turbo	4/8	50/150	2/0	1	2	45,000¥

Seating: Front/rear twin bucket seats* **Access:** 2 standard/open top + rear hatch
Economy: 45 km per liter **Fuel:** IC/30 liters
Storage: 4 CF trunk
*Rear bucket seats are undersized.

>>>>>[The basic model's overpriced, and the engine requires extra, extra attention to keep it performing. The damn fuel tank's too small for anything but inner-city wannabees, chummers.]<<<<<
—Wheelie (16:56:47/07-12-52)

>>>>>[Any wannabees drivin' this baby better be damn good drivers, 'cause she's one mean mother to handle at top speed.]<<<<<
—MiTee Man (21:18:30/07-17-52)

EUROCAR WESTWIND 2000



The latest from the Eurocar consortium of Porsche-Ferrari-BMW is available in targa, hardtop, and convertible models. The 2000 offers improved suspension, high performance, and luxury, including full leather upholstery and the Advanced Passenger Protection System™ as standard equipment. A special turbo model* is available for the first time this year to discerning buyers.

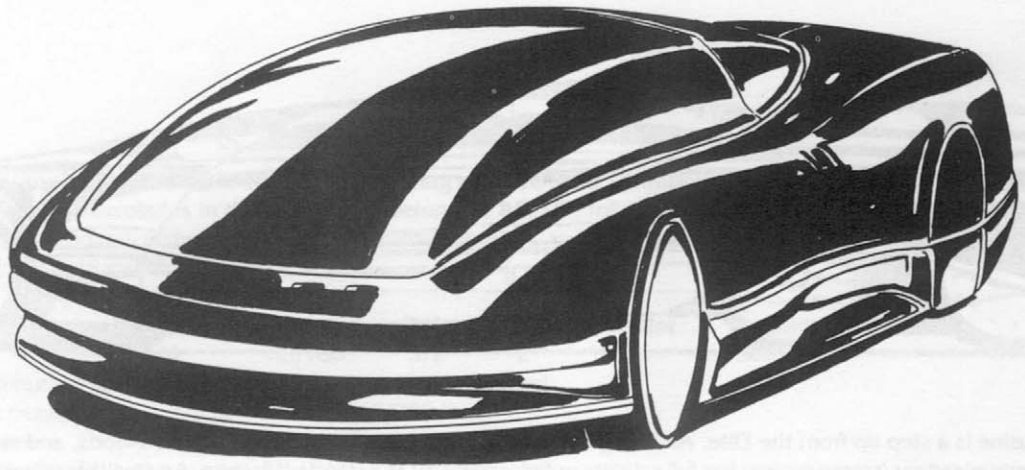
	Handling	Speed	B/A	Sig	APilot	Cost
Westwind 2000	3/8	70/210	2/0	2	3	100,000¥

Seating: Twin bucket seats + bench
Access: 2 standard/open top
Economy: 20 km per liter
Fuel: IC/55 liters
Storage: 5 CF trunk
Accessories: APPS™

*Westwind 2000-Turbo: Handling 3/8, Speed +10/+30, Sig 1, Fuel 20 km/liter, 80-liter fuel tank. Cost 125K¥ complete.

>>>>>[Watch the lock-down wheel covers. They tend to jam in the down position, reducing handling badly. I had 'em removed—I figure there are better ways of protecting your car.]<<<<<
—Nightmare (23:57:43/05-12-52)

SAAB "DYNAMIT" 776TI



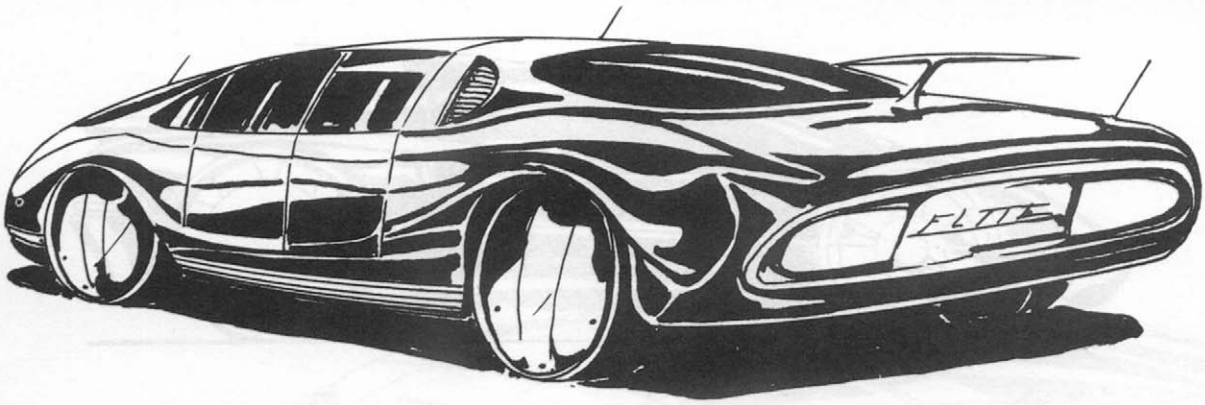
A state-of-the-art turbocharged sports car for the serious speedfreak. Roll bars, improved suspension, APPS™, and a convertible top are standard features, connected to the most powerful production engine on the market today. A complete mobile communications suite (satellite uplink optional) and stereo system are also standard. Winner of the famous Euro-Rally Production Sports Circuit in 2045–49.

	Handling	Speed	B/A	Sig	APilot	Cost
Dynamit 776Ti	4/8	80/250	2/1	1	3	250,000¥

Seating: Twin bucket seats + bench
Access: 2 standard/open top
Economy: 40 km per liter
Fuel: IC/150 liters
Storage: 4 CF trunk
Accessories: APPS™, rollbars

>>>>>[Couple waggers of mine have theirs rigged for quiet night running. You can't see it or hear it until it's right next to you.]<<<<<
—Liquid Louis (05:12:12/06-13-52)

TOYOTA "ELITE" LIMOUSINE



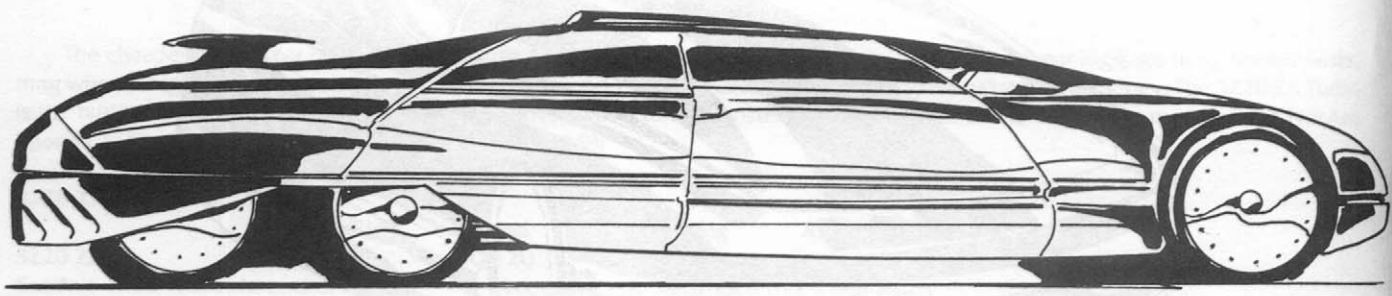
In this medium-size limo, the driver and passenger compartments are separated by a Kevlarplex™ screen controlled from the rear compartment. The luxuriously appointed rear section has a vidphone/trideo/stereo, refrigerated wet bar, full climate control with EnviroSeal™, and spacious seating. The Elite is so popular with corp execs that it has been dubbed the "Hollywood Ford."

	Handling	Speed	B/A	Sig	APilot	Cost
Elite	4/8	40/120	4/0	2	4	125,000¥

Seating: Twin + quad rear bucket seats
Access: 2 standard + 2 double-sized
Economy: 18 km per liter
Fuel: IC/300 liters
Storage: 8 CF trunk
Accessories: EnviroSeal™
Options: Full-spectrum entertainment center, mobile telecomm system, rear-compartment climate control, refrigerated wet bar.

>>>>>[The perfect camouflage for a night of urban mayhem, I must say.]<<<<<
—Tish Tosh (14:32:32/08-05-52)

MITSUBISHI "NIGHTSKY" LIMOUSINE



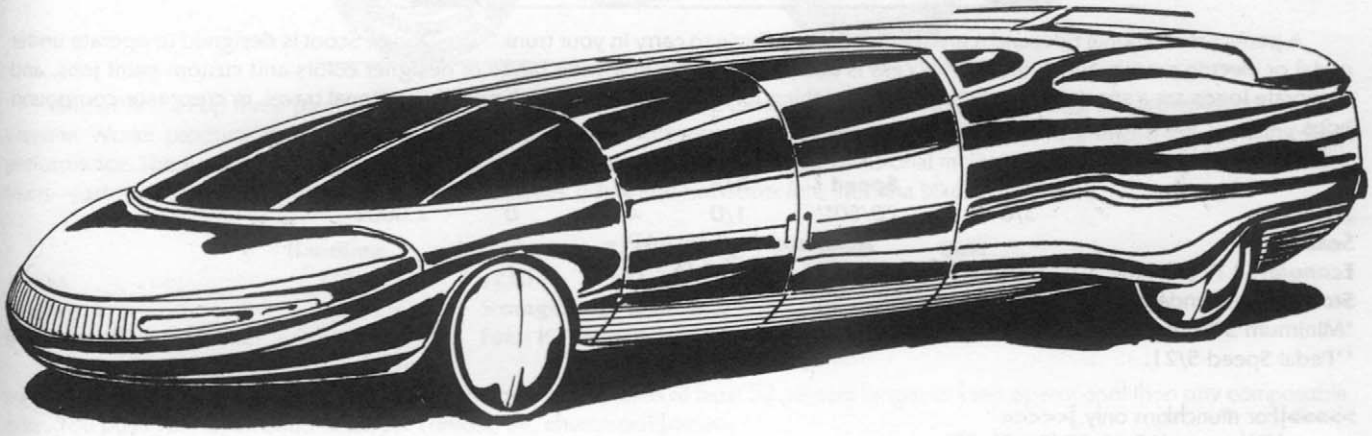
This limousine is a step up from the Elite. All fittings are of the finest materials: leather, natural woods, and sterling silver (gold extra). The communications/stereo system has full satellite uplink capability as a standard feature. An auxiliary power supply providing 60 man-hours worth of power backs up the wet bar, air conditioning, APPS™, and EnviroSeal™ systems, and both front and rear compartments have underseat storage for "survival equipment." The Nightsky is used exclusively by Lone Star's elite "Exec Protection" corps.

	Handling	Speed	B/A	Sig	APilot	Cost
Nightsky	4/8	45/120	5/1	4	4	250,000¥

Seating: Twin + six rear bucket seats
Access: 2 standard + 2 double-sized
Economy: 12 km per liter
Fuel: IC/200 liters
Storage: 8 CF trunk + 4 CF underseat
Accessories: APPS™, EnviroSeal™
Options: Full-spectrum entertainment system, wet bar, rear-compartment climate control, satt-linked telecomm system.

>>>>>[A bit old-fashioned, and underpowered compared to the Elite, but there's nothing to beat it for luxury inner-city work.]<<<<<
—Brass Lady (12:59:18/08-01-52)

ROLLS ROYCE "PHAETON" LIMOUSINE



The Phaeton is the luxury vehicle for the 2050s, featuring armored seats up front that provide spacious seating for six, and three foldaway seats for aides/secretaries in the rear. The Phaeton has APPS™, roll bars, full comm/stereo with satellite uplink, wet bar, EnviroSeal™ (110 man-hours), active suspension for off-road comfort, and the largest luggage space you've ever seen, all powered by the latest technology in multifuel RR engines.

	Handling	Speed	B/A	Sig	APilot	Cost
Phaeton	4/4	60/180	5/2	2	4	500,000¥

Seating: Twin + 6 bucket seats + 3 folding **Access:** 2 + 4 standard
Economy: 12 km per liter **Fuel:** IC/300 liters
Storage: 15 CF trunk
Accessories: EnviroSeal™, active suspension

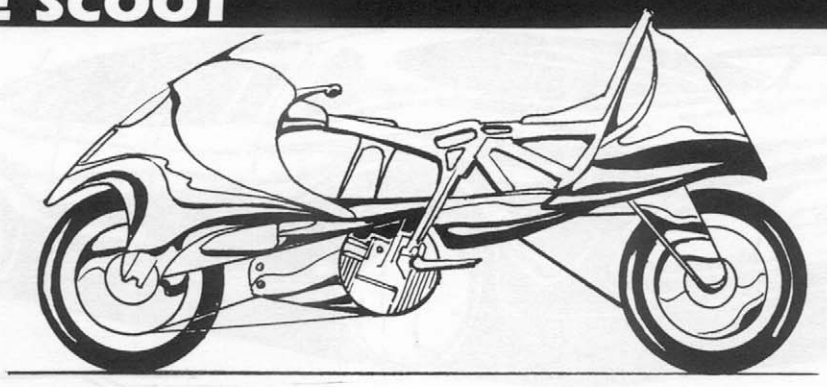
>>>>>[Wow!]<<<<<
—Nightmare (13:13:13/07-19-52)

>>>>>[A turbo option is now available.]<<<<<
—Rollin' Stone, VP RR-US (10:12:34/08-23-52)

>>>>>[Mommy, I want one!]<<<<<
—Nightmare (17:27:28/08-24-52)

>>>>>[Was working a conversion one night, you know, an "unwilling extraction" against a megacorp. The target was riding in a Phaeton that deployed a pair of twin-pack HEM launchers at a most inopportune time. Trust me, you can put more than luggage in that trunk.]<<<<<
—Nick Styx (22:14:52/08-24-52)

DODGE SCOOT



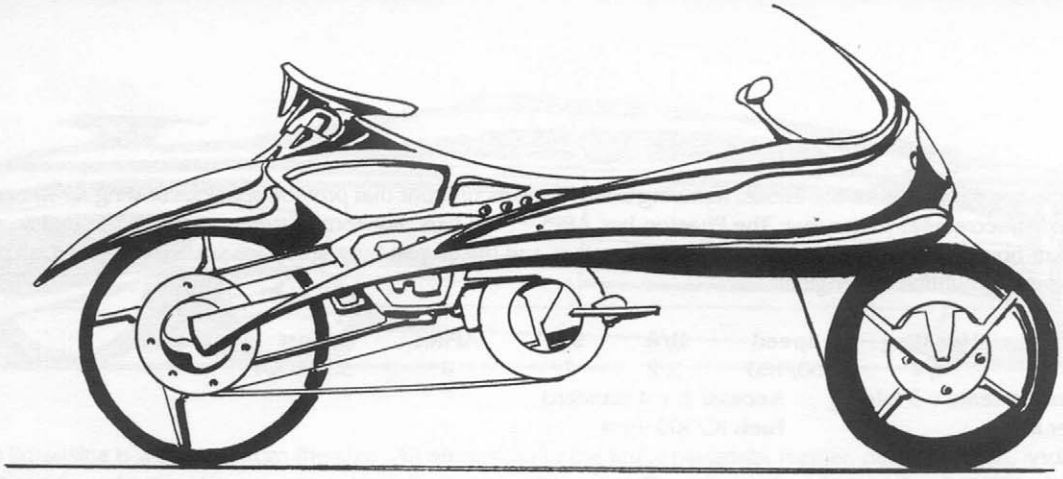
A perfect recreational ride, and a great emergency vehicle to carry in your trunk*. The Dodge Scoot is designed to operate under pedal or electric power, and GridLink™ access is built in. Available in a wide range of designer colors and custom paint jobs, and corporate logos are a specialty. The Scoot is just the thing for short-distance suburban or recreational travel, or corporate-compound hops.

	Handling	Speed	B/A	Sig	APilot	Cost
Scoot	3/6	20/60**	1/0	4	0	2,000¥

Seating: 1
Economy: 1 PF per km
Storage: 1 CF underseat
Accessories: GridLink™
Power: Elec/200 PF
*Minimum 3 CF required for trunk storage.
**Pedal Speed 5/21.

>>>>>[For munchkins only.]<<<<<
—Nightmare (18:11:32/06-21-52)

ENTERTAINMENT SYSTEMS PAPOOSE



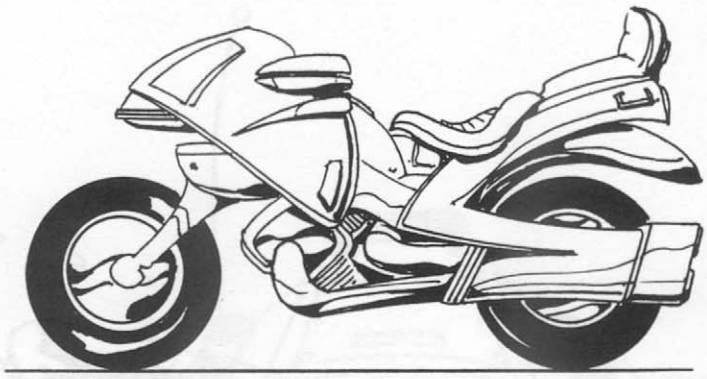
A new entry into the recreational market from Entertainment Systems, better known for their "Euro2" series of racing bicycles, the Papoose mates decades of cycling know-how with the latest and best electric power systems. Special quick-release catches allow the Papoose to be folded into a compact bundle for storage in a standard-size trunk or on a roof rack. The larger Papoose Maximus* seats two and offers an extended range of operation.

	Handling	Speed	B/A	Sig	APilot	Cost
Papoose	3/6	30/90**	1/0	5	0	6,000¥

Seating: 1
Economy: 2 PF per km
Storage: 1 CF underseat
Power: Elec/320 PF
*Papoose Maximus: Sig 5, APilot 0, B/A 2/0, Base Cost 12K¥, Seating 1+1, Fuel 400 PF.
**Pedal Speed 7/21.

>>>>>[Well, if y'all's desperate.]<<<<<
—Cruncher (19:03:31/08-21-52)

SUZUKI "AURORA" RACING BIKE



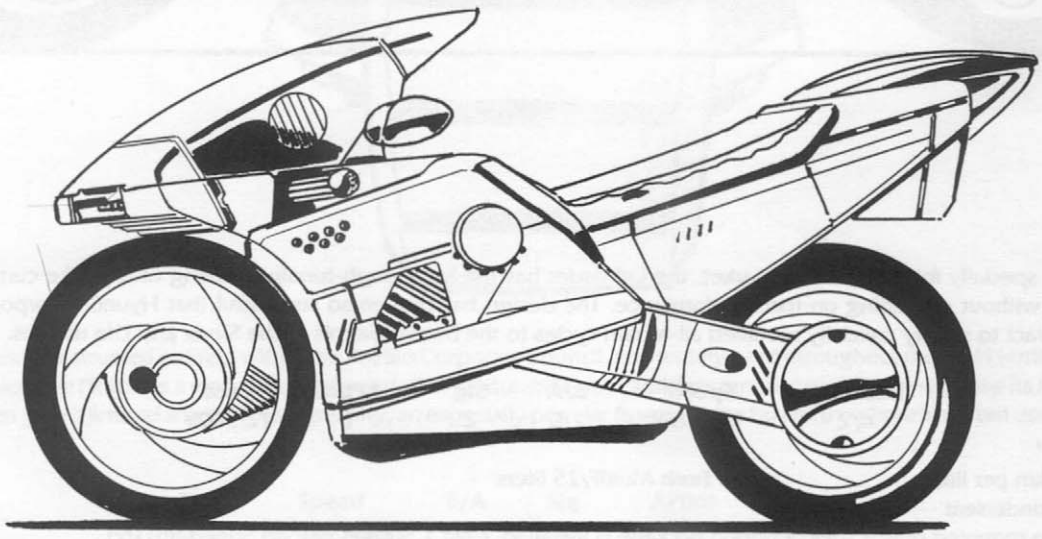
Winner of the top three places in the 2050 Pan-Pacific Motorcycle Circuit, and completely outclassing the previously dominant Yamaha Works product, the Aurora incorporates the latest ComputaGlide™ technology for massively improved handling and performance. The Aurora production model is substantially unchanged from the professional racing models used by the Suzuki Works team—just the thing to burn those pathetic wannabees riding the now-obsolete Yamaha bikes!

	Handling	Speed	B/A	Sig	APilot	Cost
Aurora	2/4	70/210	1/0	1	1	15,000¥

Seating: 1 **Storage:** 1 CF underseat
Economy: 80 km per liter **Fuel:** IC/15 liters

>>>>>[Top performance, but a sweet spirit to maintain—she takes at least 50 percent longer to keep operational than any comparable bike. You pays yer nuyen and makes yer choices, eh, chummers?]<<<<<
—Joe the Gadget Man (17:26:53/08-21-52)

YAMAHA RAPIER



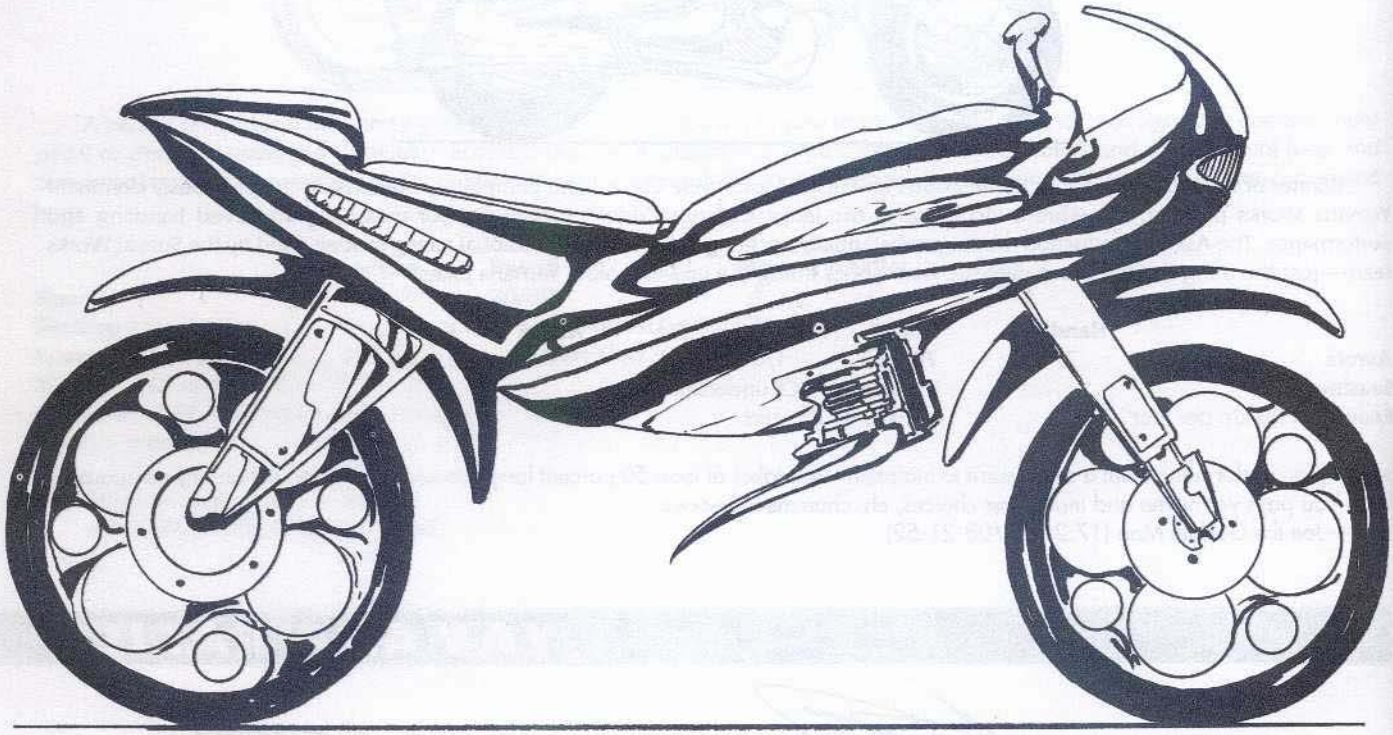
A fast, lightweight street bike for intracity work. High speed and slick styling make the Rapier a favorite with the hottest bikers around! The all-new 2051-model design incorporates upgraded controls and suspension that make it the handiest bike on the market.

	Handling	Speed	B/A	Sig	APilot	Cost
Rapier	3/6	65/195	1/0	1	1	10,000¥

Seating: 1 **Storage:** 1 CF underseat
Economy: 120 km per liter **Fuel:** IC/10 liters

>>>>>[Just a smidgin slower than the Aurora, and harder to handle, but she's easier to maintain, and has a helluva improved fuel consumption!]<<<<<
—Joe the Gadget Man (18:01:23/08-21-52)

HYUNDAI OFFROADER



Designed specially for the off-road market, the Offroader has the best rough-terrain handling of any bike currently available, accomplished without degrading on-road performance. The design has proven so successful that Hyundai Corporation holds an exclusive contract to supply specially modified all-terrain cycles to the border patrols of the Sioux and Ute nations.

	Handling	Speed	B/A	Sig	APilot	Cost
Offroader	4/2	60/180*	2/0	2	1	12,500¥

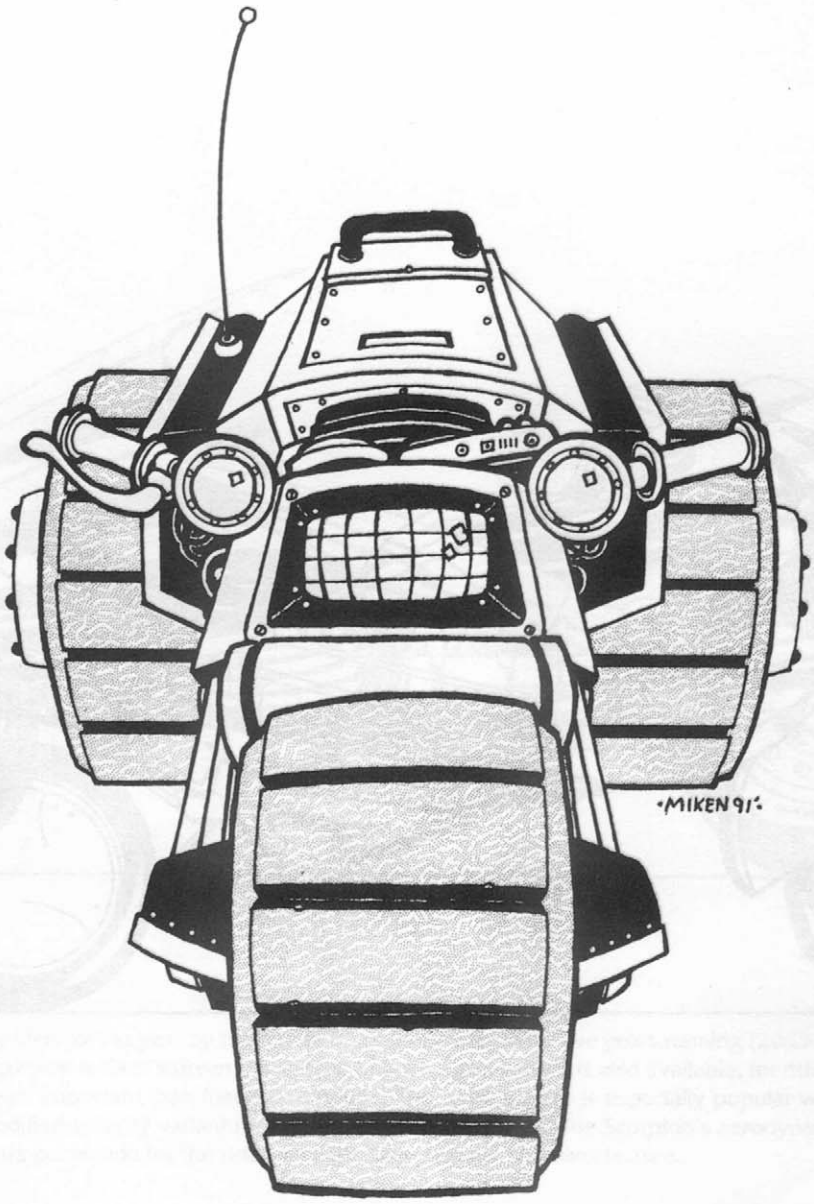
Seating: 1 + 1*
Economy: 90 km per liter **Fuel:** MultiF/25 liters
Storage: 2 CF underseat
*Sidecar can be mounted only if special option package is installed. Cost 1,500¥. Off-road Speed 55/165.

>>>>>[Yeah, and the Border Patrol Offroaders are armed to the blinkin' teeth! The last bunch I ran across was packin' a mix of Valiant LMGs and grenade launchers—not a nice experience, chummers! If I hadn't hit some level ground, the little buggers would've had me, too.]<<<<<
—Flying Scot (23:43:59/07-05-52)

>>>>>[You the scuzz in the tan and green Dynamit? You're lucky, snot, we almost scragged ya!]<<<<<
—Sergeant Grinning Wolf (12:29:29/07-09-52)

>>>>>[Yeah, well, that'n five nuyen'll get ya a soy-burger, chummer!]<<<<<
—Flying Scot (05:41:39/07-17-52)

THUNDERCLOUD "PINTO" ALL-TERRAIN TRIKE



Designed and constructed entirely within the Pueblo Corporate Council, and widely used throughout the NAN territories in official and unofficial roles, the Pinto has a well-deserved reputation for durability and limitless terrain capabilities—just like its namesake. The balloon tires even give it limited amphibious capability, an especially popular feature in the Far North, where it is often used for traveling on ice.

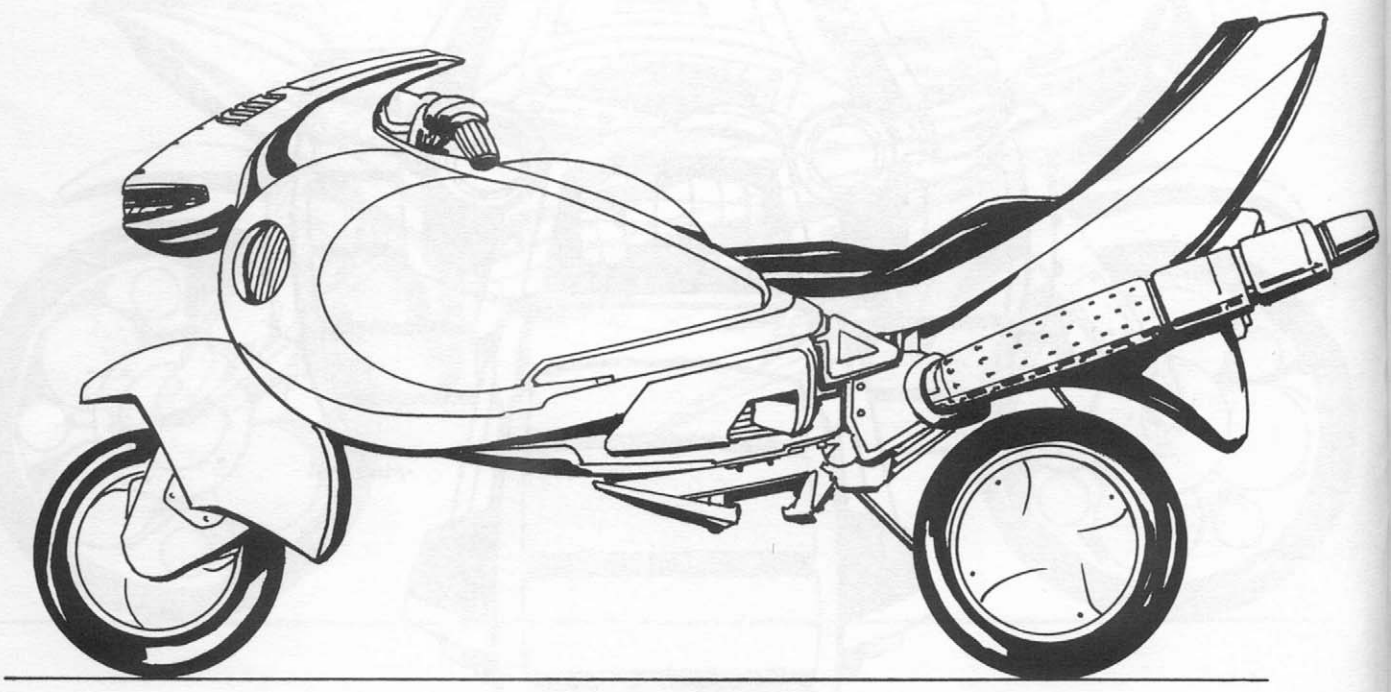
	Handling	Speed	B/A	Sig	APilot	Cost
Pinto	4/2	20/60*	3/0	2	0	35,000¥

Seating: Single bucket seat + 2 rear **Storage:** 15 CF storage
Economy: 50 km per liter **Fuel:** IC/50 liters
Options: The optional enclosed canopy is especially popular in the Far North, as it offers complete protection equivalent to Armor 1 and allows the interior to be heated. Cost (includes heater system) 5,000¥.
*Off-road Speed 35/105, Amphibious Speed 5/15.

>>>>>[Wallows like a pig on the hardtop—those balloon tires are just too damn big!]<<<<<
—Wi-lee-Coyote (12:05:03/08-17-52)

>>>>>[Uh, chummer, you do know she isn't designed for use on roads?]<<<<<
—Climbing Bear (17:32:28/08-17-52)

GAZ-NIKI WHITE EAGLE



Developed from the standard scout bike of the Polish Armed Forces, the White Eagle was designed with ease of maintenance and durability in mind, and can mount an optimum number of light weapons. A number of interesting option packages are also available, including a bike trailer, the multifuel pack (the only such conversion available for a motorcycle on the market today), and the SnowMaster.

	Handling	Speed	B/A	Sig	APilot	Cost
White Eagle	3/3	60/180	3/0	1	0	15,000¥

Seating: 1 front + 1 rear*
Economy: 6 km per liter **Fuel:** MultiF/35 liters
Options:

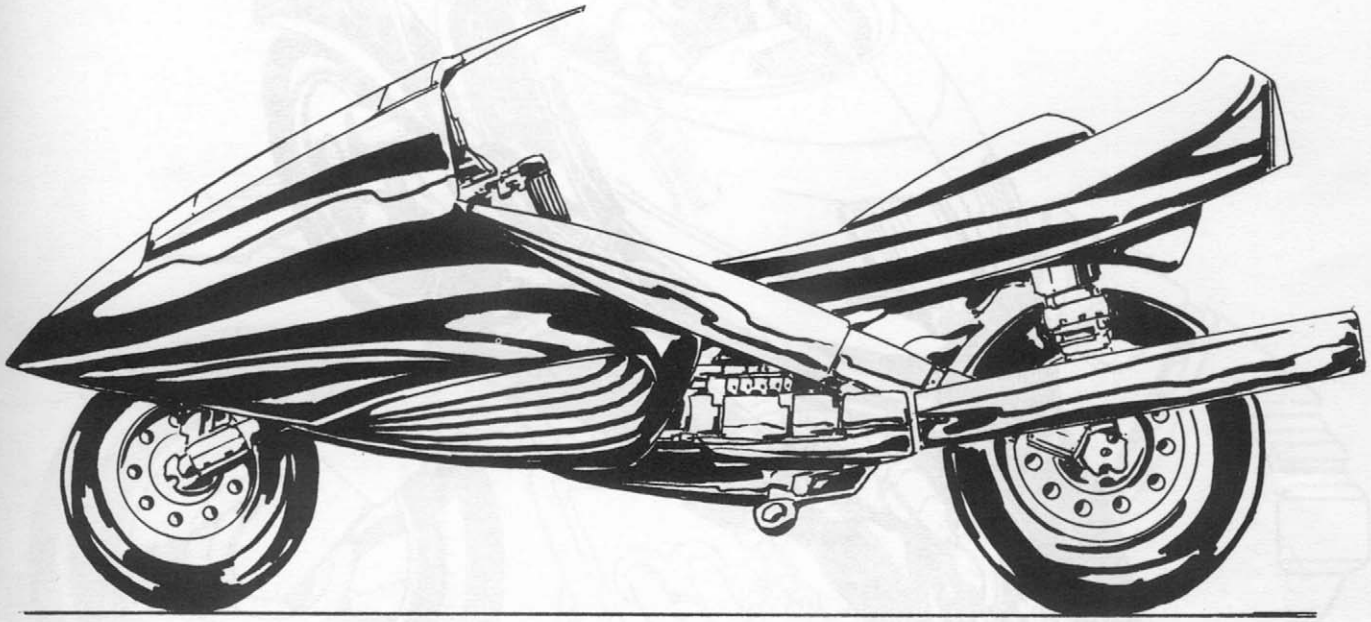
Bike Trailer: Fits White Eagle only. Speed –10/30, Handling 4/5, B/A 1/0, Cargo 10 CF, Cost 2,500¥.

Multifuel Package: Fits White Eagle only. A mechanic will need one hour to modify the engine. The operator must allow 30 minutes to swap between fuel options because the modification is not switch selectable, and burns liquid fuels only. Economy 40 km/liter, Speed 50/150, Cost 5000¥.

SnowMaster: Fits White Eagle only. Snowmobile-style running gear (forward and rear) replaces the standard wheels, enhancing the vehicle's performance on snow. Handling 4/5, Speed 35/105, Economy 30 km/liter.

*Sidecar available. See **Vehicle Modifications**, p. 118.

HARLEY-DAVIDSON SCORPION



Rated the "best highway bike" of the year by readers of *Bikes 'R' Us* magazine five years running (2043–48), classic styling and superb handling make the Scorpion a biker's dream. A special turbocharged variant is also available, for riders who may encounter situations where speed is more important than fuel consumption. The turbo variant is especially popular with bonded couriers on intracity runs. A specially modified security variant mounts up to three firmpoints. The Scorpion's aerodynamic panels are made of NeoKevlar™ and provide extra protection for the rider, an especially popular standard feature.

Standard Model

	Handling	Speed	B/A	Sig	APilot	Cost
Scorpion	4/5	50/150	3/1	2	2	15,000¥

Seating: 1 front + 1 rear*
Economy: 50 km per liter **Fuel:** IC/20 liters
Storage: 2 CF underseat + 2 CF per sidebox
Options:

Turbocharged Model: Handling 4/6, Speed 70/210, Signature 1, Base Cost 18K¥, Economy 40 km/liter, Fuel 30 liters.

Security Model: Adds up to three firmpoints (2 facing forward, one facing rearward) at 1,000¥ each, and armored side boxes (2/2) with 4 CF capacity at 500¥ each (to either the standard or turbocharged model). May also mount one hardpoint as a Fixed Mount or External Rack.

*Sidecar available only if special Optionware package is mounted. Cost 2,500¥, 1 CF.

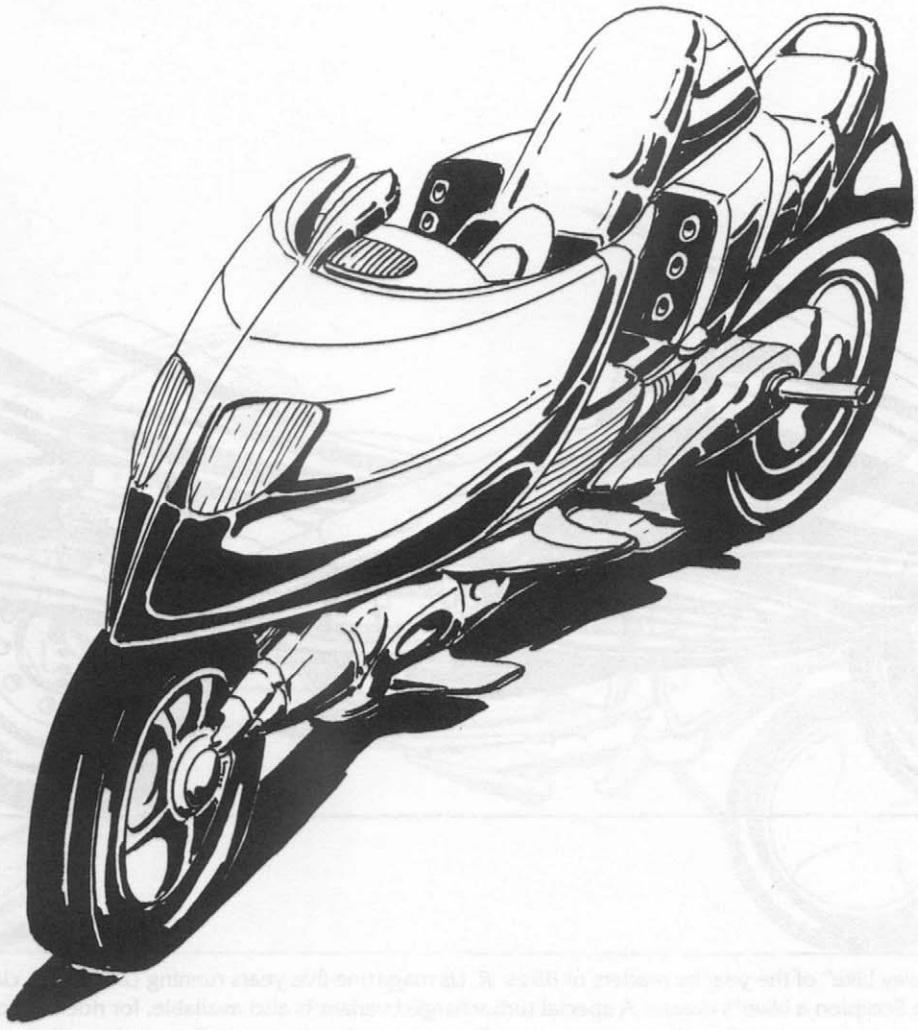
>>>>>["Bonded couriers" my butt. The Scorpion is a favorite of so-called "free-traders," chummers, and I keep tally of the scuzzbags I've scragged. The total's up to 21 now! Hear that, dirt?]<<<<<

—Sergeant Grinning Wolf (09:11:21/08-27-52)

>>>>>[Hey-o, chummers, howzabout we do some "scragging" ourselves? Interested? Contact me at CAS-TX (Houston) 971-2286 A/c 18721jh,3737.]<<<<<

—Loderunner (17:01:02/08-27-52)

BMW BLITZEN 2050



This is the latest version of the classic Blitzen 2000 series high-performance combat bike. Incorporating all the latest engine and control technology, it achieves maximum speed with minimum fuss, and is armored with the latest metallo-ceramic alloys for lightweight protection. It can be fitted with up to three firmpoints, or two firmpoints and one hardpoint, making it *the* bike for heavy-duty security work.

	Handling	Speed	B/A	Sig	APilot	Cost
Blitzen 2050	3/4*	95/285*	3/2	1	2	25,000¥

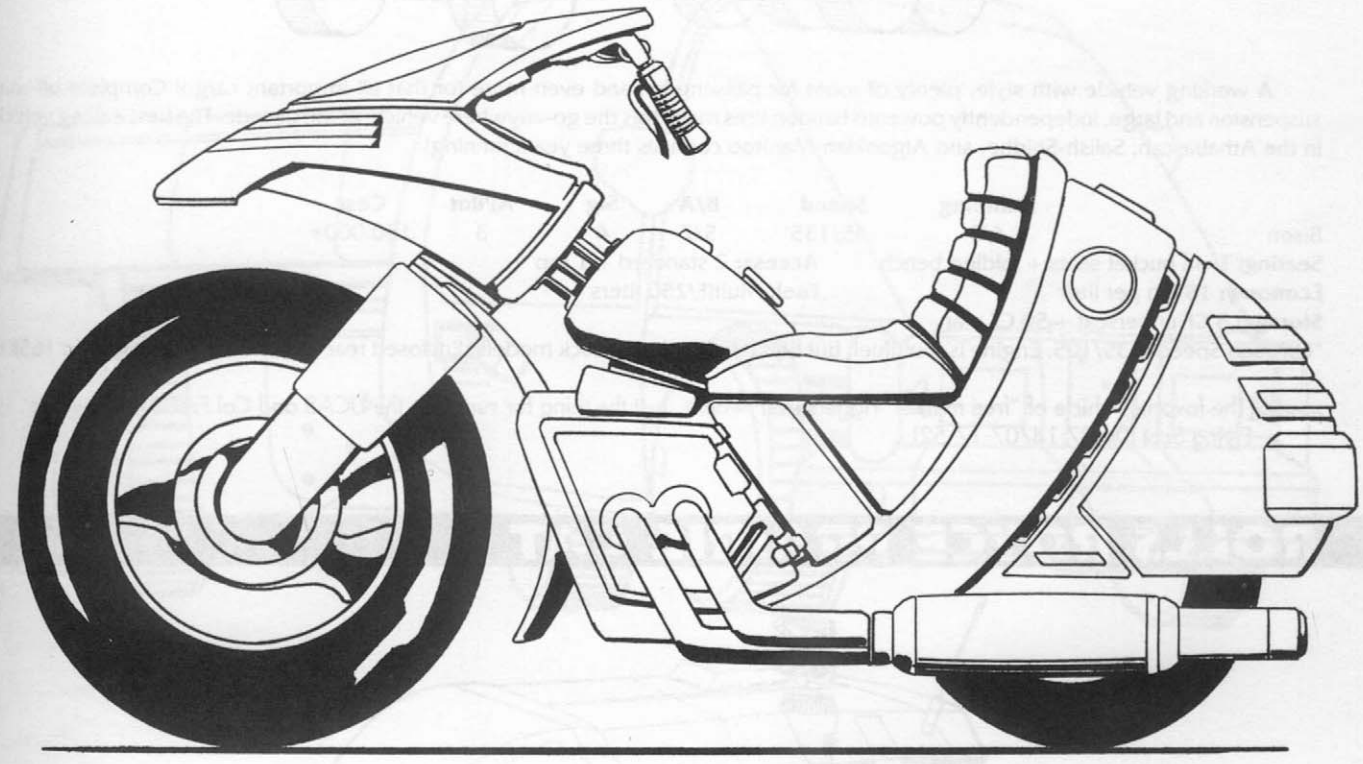
Seating: 1 front + 1 rear**
Economy: 35 km per liter **Fuel:** IC/35 liters
Storage: 2 CF underseat and 2 CF side boxes
*At speeds in excess of 210 kph, Handling becomes 4/5. Some older models, mainly Blitzen 2025s, are still available and in good condition. Speed 70/210, Economy 35 km/liter, Fuel 25 liters, Cost 15–20K¥.
Sidecar available. See **Vehicle Modifications, p. 118.

>>>>>[Great hog, chum-pals. I mount a forward-firing Panther assault cannon—just the thing for geeking pesky revenuers! Hear that Choking Jackal? Wanna come and play with the big boys?]<<<<<
—Death's Head (10:19:03/06-29-52)

>>>>>[An assault cannon. What's the fraggin' recoil do to the handling?]<<<<<
—Nightmare (19:08:31/06-29-52)

>>>>>[Well, keep it at cruise, or you'll have real problems.]<<<<<
—Death's Head (23:21:10/08-03-52)

HONDA "VIKING" SUPERCYCLE



The only cycle on the market today able to incorporate reinforced seating for troll-sized riders as standard and still take on the standard Harley Scorpions on an equal footing. The Viking's extra-heavy construction also increases protection for the riders as well as increasing the bike's overall durability. When other bikes are giving up, the Viking's superchassis keeps on going!

	Handling	Speed	B/A	Sig	APilot	Cost
Viking	3/5	50/150	4/1	1	2	17,000¥

Seating: 1 front + 1 rear
Economy: 30 km per liter **Fuel:** IC/35 liters
Storage: 2 CF underseat + 2 CF sideboxes

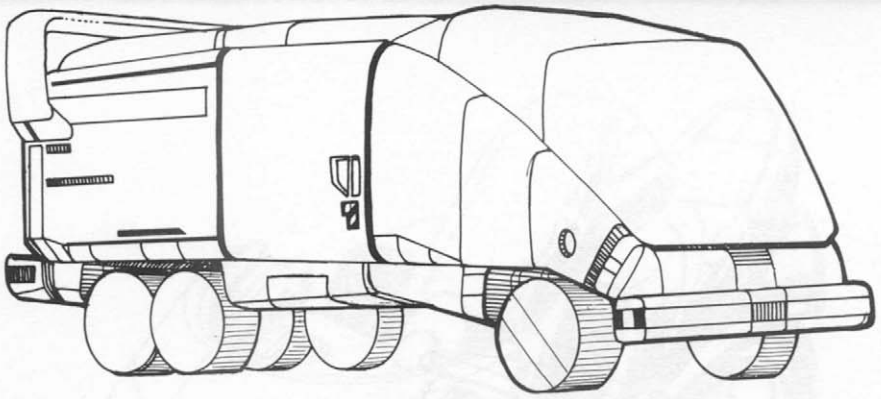
>>>>>[Great Spirit, what a load of hype! What they don't tell you is that the reinforced frame reduces performance, degrades handling, and increases maintenance requirements, the latter by some 50 percent, according to my mechanic. Go with the Harley—it's cheaper, too!]<<<<<

—Wheelie (05:04:54/05-08-52)

>>>>>[Sure it's cheaper—less'n y'all's a troll!]<<<<<

—Cruncher (18:27:16/08-21-52)

FORD-CANADA BISON



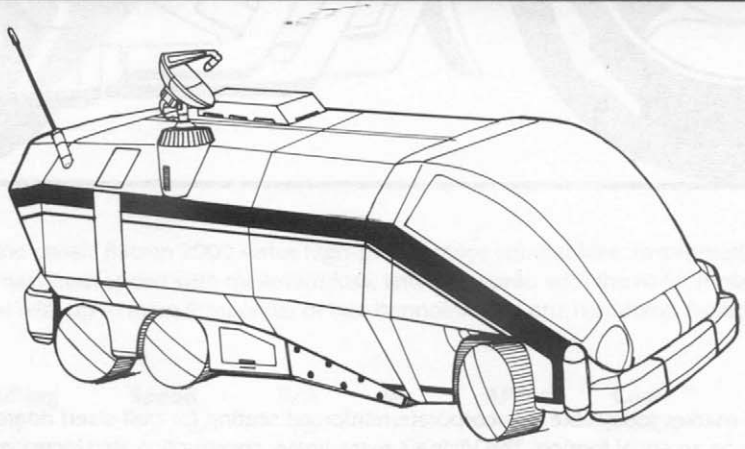
A working vehicle with style, plenty of room for passengers, and even more for that all-important cargo! Complete off-road suspension and large, independently powered balloon tires make this the go-anywhere vehicle of the decade. The best-selling vehicle in the Athabascan, Salish-Shidhe, and Algonkian-Manitoo councils three years running!

	Handling	Speed	B/A	Sig	APilot	Cost
Bison	4/3	45/135*	5/2	4	3	150,000¥

Seating: Twin bucket seats + folding bench **Access:** 2 standard + 1 top
Economy: 18 km per liter **Fuel:** MultiF/250 liters
Storage: 5 CF underseat + 50 CF rear
*Off-road Speed is 35/105. Engine is multifuel, but liquid fuel only on stock models. Enclosed rear-tray model is available for 165K¥.

>>>>>[The favorite vehicle of "free market" riggers everywhere. Just the thing for runs into the UCAS and Cal Free State.]<<<<<
—Flying Scot (06:37:14/07-17-52)

ROLLS ROYCE PRAIRIE CAT



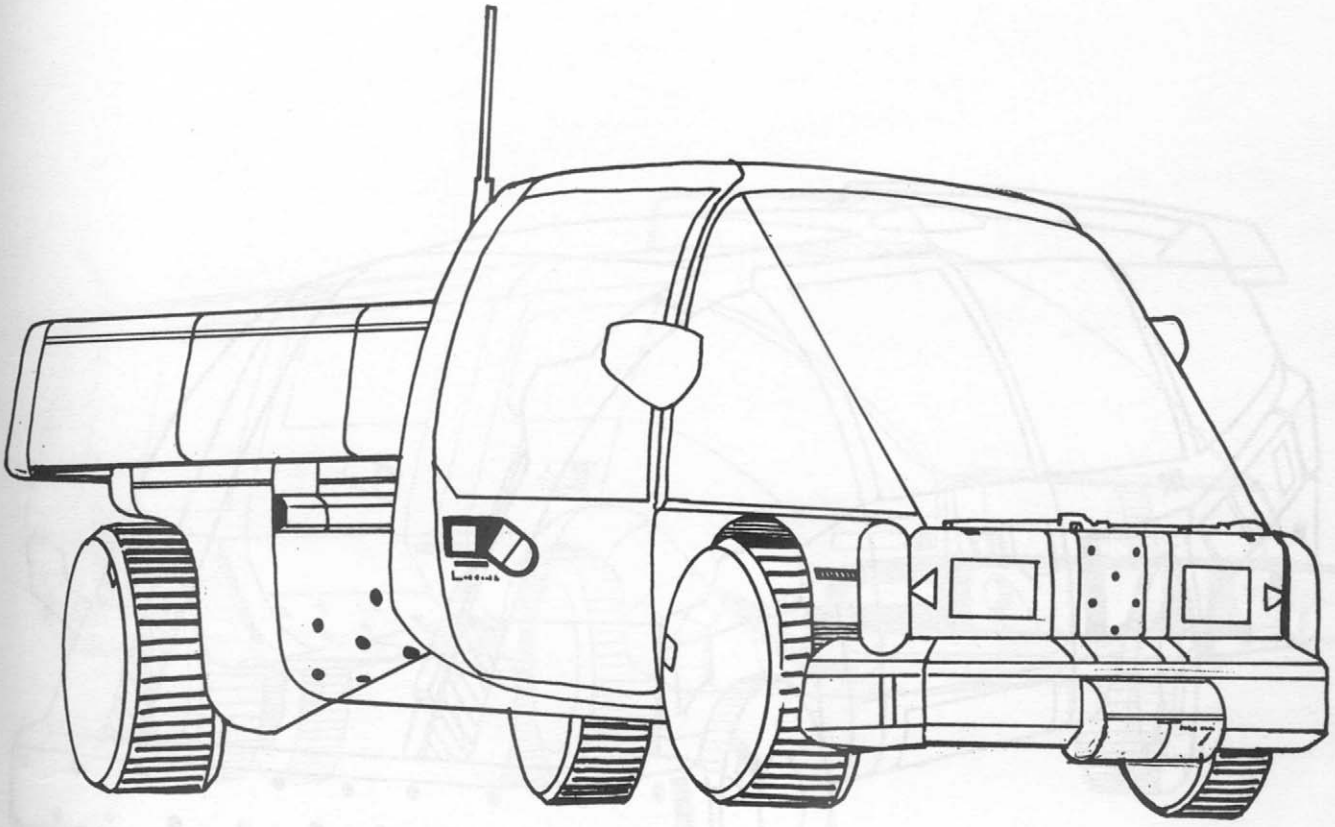
Critics said that creating a luxury 4WD vehicle was impossible, but that was before RR designed and produced the Prairie Cat. Unusual for an RR vehicle, this is a "sporty" design, featuring a special high-power/high-torque off-road multifuel engine—the same engine used in the Eurocommunity's "Chevalier" Hi-Speed Scout Vehicle. Roll bars, APPS™, heavy-duty leather upholstery, full comm/stereo suite with satellite uplink, and mini-bar are standard, as is an amphibious propulsion system.

	Handling	Speed	B/A	Sig	APilot	Cost
Prairie Cat	2/3	40/120*	3/1	2	3	275,000¥

Seating: 2 + 2 bucket seats **Access:** 4 standard + open top
Economy: 30 km per liter **Fuel:** MultiF/75 liters
Storage: 10 CF rear
Accessories: APPS™, holophonic audio system, mini-bar, roll bars, and satt-uplink telecomm system.
*Off-road Speed 35/105.

>>>>>[A free-trader's dream, specially since she's fully amphibious, water jets and all. Pity about the cargo space, though.]<<<<<
—Harold (03:17:21/07-10-52)

GAZ-WILLYS NOMAD



The Nomad is the most popular of the mid-size four-wheel drive vehicles on the North American scene, successfully combining comfort with all-terrain capability. The Nomad is available in several different versions for different user requirements, including Rear Tray, King Cab + Tray, and General Purpose. Improved and active suspension is standard, as are roll bars and a front-mounted power winch.

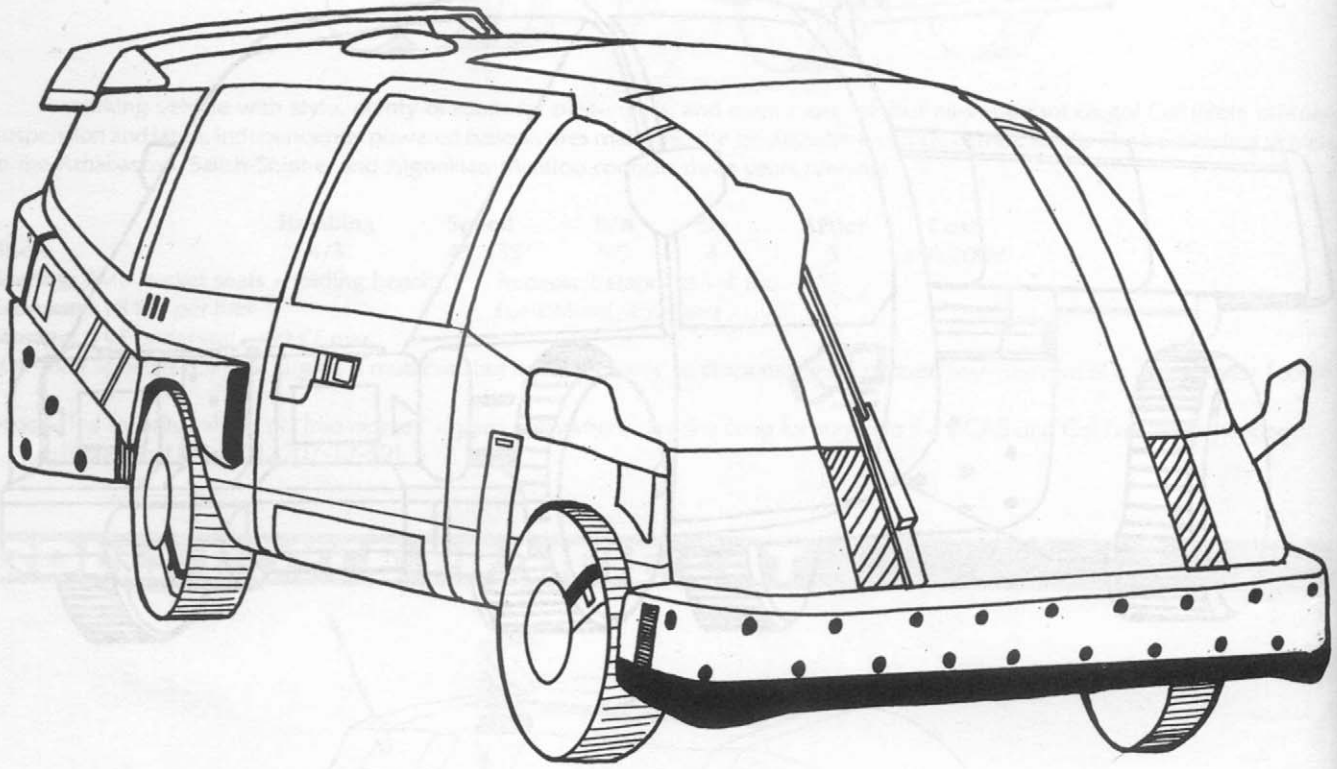
General Purpose Model

	Handling	Speed	B/A	Sig	APilot	Cost
Nomad	3/3	30/90*	3/0	2	2	50,000¥

Seating: Twin bucket seats + 2 x 2 folding bench **Access:** 2 standard + 1 hatchback
Economy: 45 km per liter **Fuel:** MultiF/90 liters
Storage: 10 CF cab + 20 CF storage
Accessories: Active suspension, rollbars
Options: Rear Tray model has two bucket seats and a trunk with 10(+60) CF. Cost 35,000¥. King Cab model has two bucket seats plus two bench seats and trunk capacity of 5(+40) CF. Cost 40,000¥.
*Off-road Speed is 35/105 for all models.

>>>>>[Russian design simplicity with Western reliability, and one of the few good things to come out of the Euro Wars.]<<<<<
—Wheelie (11:27:32/05-19-52)

NISSAN-HOLDEN BRUMBY



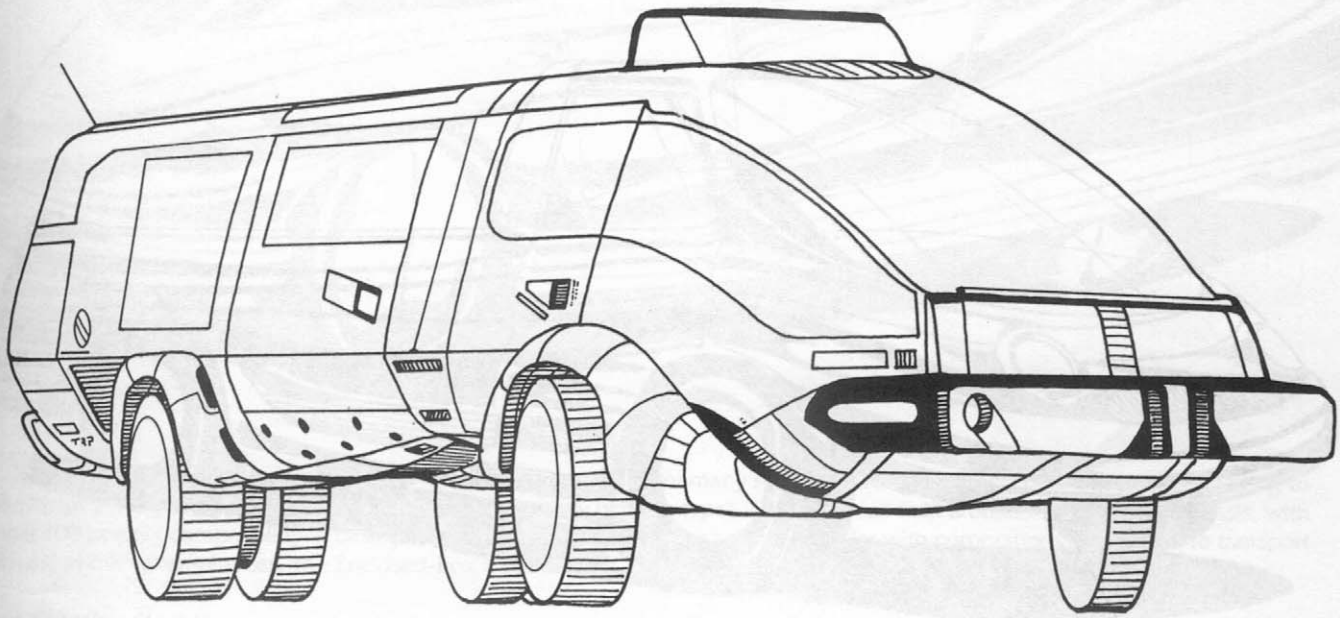
This Australian import is just the thing for personal transport in the backwoods (or, as the Aussies would style it, outback). Smaller than the usual 4WD, but still packing off-road suspension, the Brumby is great in wooded terrain, where size can mean the difference between getting through or getting stuck.

	Handling	Speed	B/A	Sig	APilot	Cost
Brumby	4/3	30/90*	2/0	2	2	25,000¥

Seating: 2 bucket seats + 2 folding bench
Access: 2 standard + 1 hatchback
Economy: 75 km per liter
Fuel: MultiF/50 liters
Storage: 5 CF underseat + 5 CF storage
*Off-road Speed 25/75.

>>>>>[Some people I know swear by it. Me, I just swear at it—she's too cramped to maintain easily, and so it takes half again as long to do a job on her as it should.]<<<<<
—Grease Monkey (14:25:09/06-29-52)

LANDROVER MODEL 2046



The Model 2046 follows in the tradition of excellence that Landrover has established during more than a century of producing general-purpose 4WD vehicles. Long a common sight in the rough and hilly regions of Europe, the Middle East, and Africa, Landrover's North American franchises have vowed to make them an equally familiar sight here. Landrover's renowned durability and standard-installed improved and active suspension are sure to make this an easy task!

Short Wheelbase Model

	Handling	Speed	B/A	Sig	APilot	Cost
Model 2046	3/3	30/90*	2/0	2	1	35,000¥

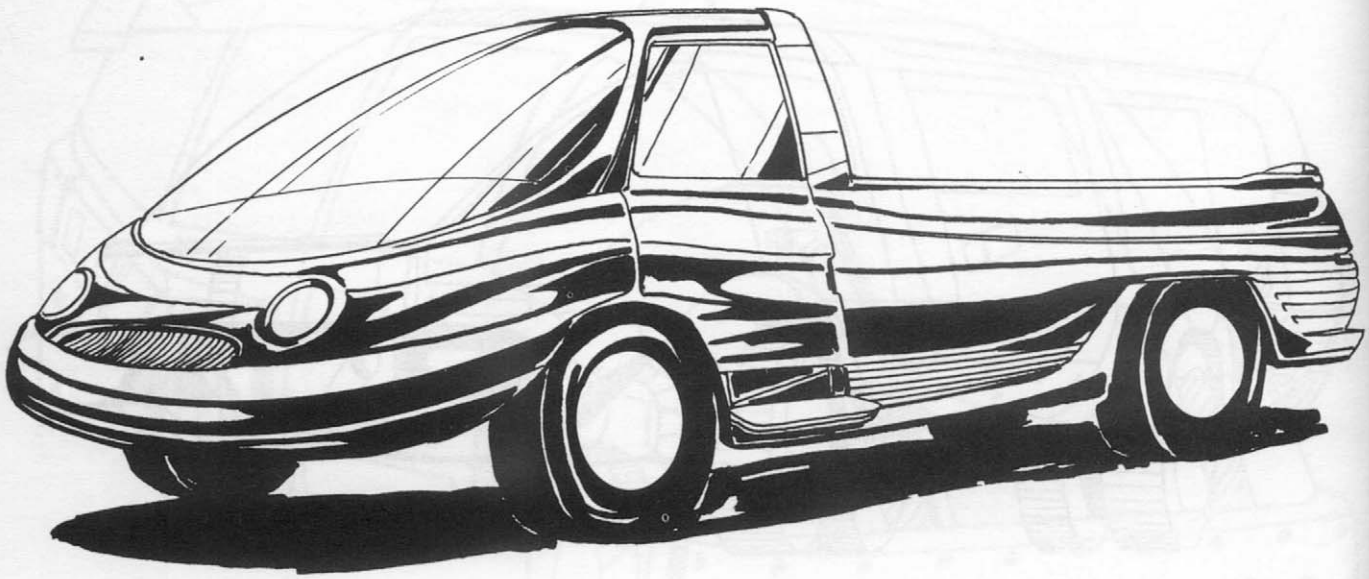
Seating: Twin bucket seats + 4 folding bench **Access:** 2 standard + open top
Economy: 75 km per liter **Fuel:** MultiF/50 liters
Storage: 5 CF underseat + 20 CF storage
Accessories: Active suspension

Long Wheelbase Model

	Handling	Speed	B/A	Sig	APilot	Cost
Model 2046	3/3	30/90	3/0	2	2	45,000¥

Seating: Twin bucket seats + 6 folding bench **Access:** 2 standard + open top
Economy: 80 km per liter **Fuel:** MultiF/75 liters
Storage: 5 CF underseat + 40 CF storage
Accessories: Active suspension
*Off-road Speed is 25/75 for both models.

TOYOTACORP GOPHER PICKUP



Classic pickup styling from the name you can trust—with a host of new features for the '51 model! The new-model Gopher has integral roll bars in the cab, provision for a power take-off winch in front (an optional extra), built-in gun safe (for those times you just have to go into town), and off-road suspension.

	Handling	Speed	B/A	Sig	APilot	Cost
Gopher	4/4	35/105*	2/0	2	2	25,000¥

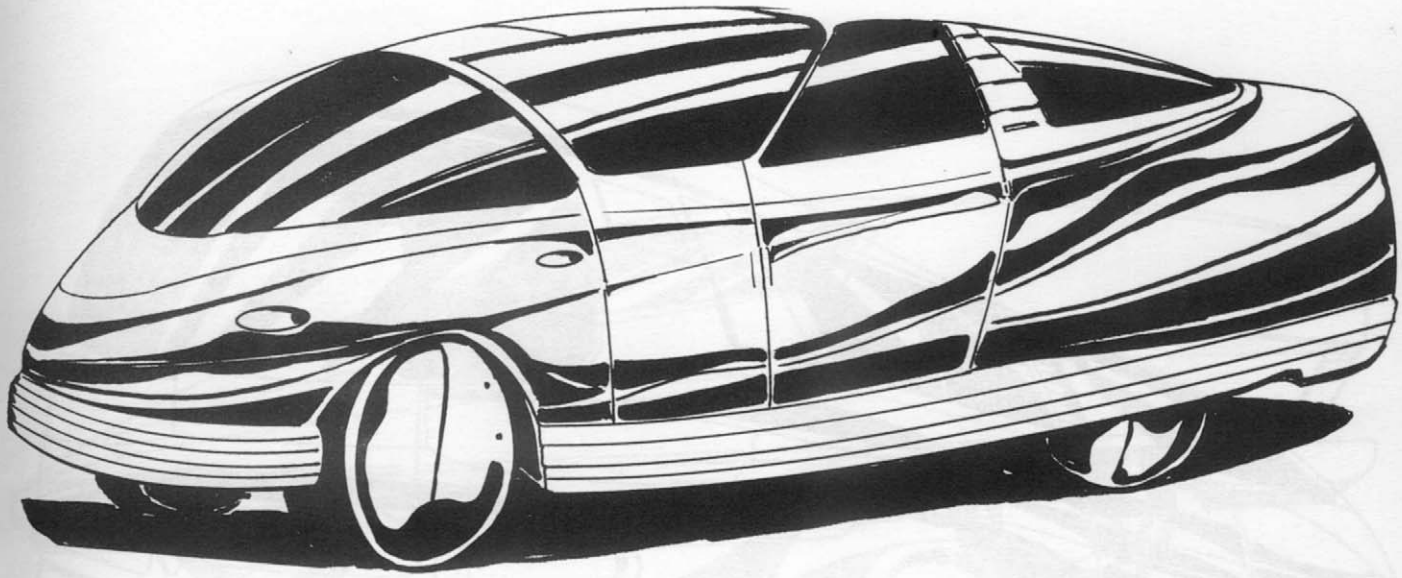
Seating: Twin bucket seats
Access: 2 standard
Economy: 40 km per liter
Fuel: IC/60 liters
Cargo: 60 CF rear
Accessories: Active suspension, roll bars
*Off-road Speed is 30/90.

>>>>>[What a joke! The one I owned was a real lemon—road speed just wouldn't edge past ninety percent on- or off-road.]<<<<<
—Toothgnasher (19:21:45/07-23-52)

>>>>>[With the weight penalty from carrying a tub of lard like you, it's no wonder!]<<<<<
—Flying Scot (23:12:10/07-23-52)

>>>>>[Hey, chummers, lighten up. Toothgnasher, you're right—the Gopher's load capability *is* a little too sensitive at the lower end of its capacity.]<<<<<
—MiTee Man (01:11:35/07-24-52)

LEYLAND-ROVER TRANSPORT SERIES



This medium-sized van series is a common sight on the streets of many seaboard UCAS, CFS, and CAS cities, and is starting to make inroads into the central-eastern regions. A wide variety of body types is available, all built around the same base chassis, with almost 100 percent compatibility in basic parts. The Minibus variant is especially popular with corporations, who use it to transport low- and mid-level employees. The Enclosed-Box Cab model is also popular with many delivery services.

Basic Chassis—Electric

	Handling	Speed	B/A	Sig	APilot	Cost
LR Transport	4/8	25/75	3/0	5	2	25,000¥

Economy: 2 PF per km **Fuel:** ImpElec/200 PF

Basic Chassis—Internal Combustion

	Handling	Speed	B/A	Sig	APilot	Cost
LR Transport	4/8	35/105	3/0	2	2	30,000¥

Economy: 25 km per liter **Fuel:** IC/120 liters

Options:

Minibus Cab
Seating: Twin bucket seats + 9 folding bench
Cargo: 4(+20) CF with seats folded
Access: 2 standard + 1 double-sized + 1 hatch
Cab Cost: +20,000¥

Enclosed-Box Cab
Seating: Single bucket seat + 2 folding bench
Cargo: 90 CF
Access: 2 standard + 1 double-sized + 1 hatch
Cab Cost: +15,000¥

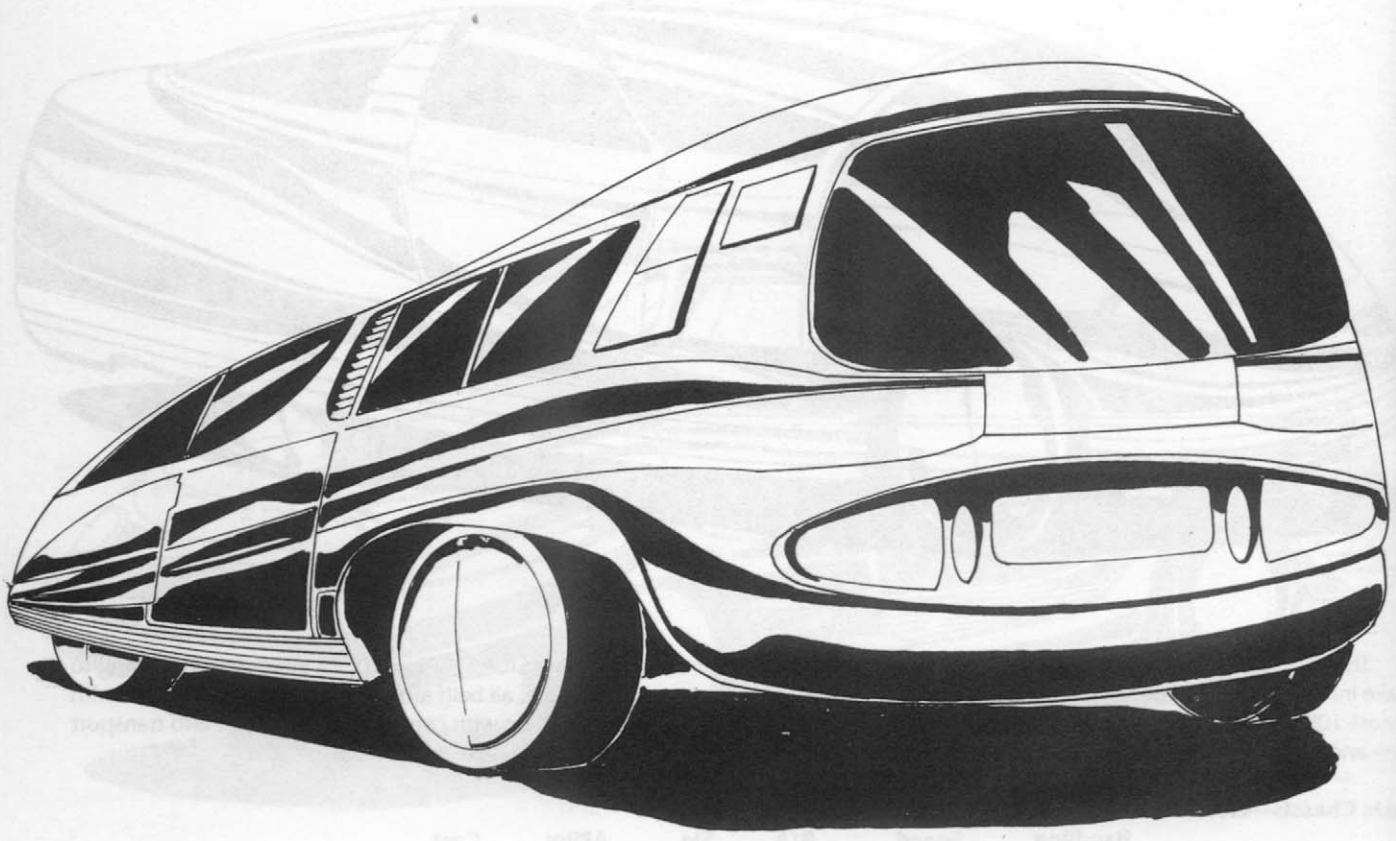
Cab + Open Tray
Seating: Twin bucket seats + 1 folding bench
Cargo: 4(+120) CF
Access: 2 standard
Cab Cost: +10,000¥

>>>>>[I know of at least one corpcop outfit that uses the enclosed-box cab as a personnel carrier by adding armor inserts.]<<<<<
—Red Hellion (15:21:32/05-21-52)

>>>>>[Yeah, and the damn things look just like delivery vans on the outside!]<<<<<
—Wheelie (23:58:29/07-22-52)

>>>>>[Some franchisees have been using "low bid" power cells in maintenance on these vans—reliability is awful, and power consumption is about 50 percent higher than average when you really need it, or else the whole thing shorts out completely!]<<<<<
—Joe (00:01:32/08-12-52)

RENAULT-FIAT EUROVAN



The Eurovan is the latest offering from Renault-Fiat's new automated plant on the outskirts of Jersey City. This innovation combines classic European styling with North American automobile know-how. The basic chassis has an independent cab and a wide range of rear-chassis options available for the end user, including the popular Camper-van and Enclosed-Cargo units.

	Handling	Speed	B/A	Sig	APilot	Cost
Eurovan	4/10	35/105	3/0	2	1	25,000¥

Seating: Twin bucket seats
Access: 2 standard
Economy: 25 km per liter
Fuel: IC/50 liters
Cargo: 20 CF storage
Options:

Camper-van Body: This body style accommodates four passengers with two built-in bench seats that can fold out into two single beds. The camper-van body also features a mini-kitchen (including microwave and mini-fridge), and the body top can be raised to allow just over two meters of clearance in the rear section. Cargo is 6 CF in assorted stowage lockers. Cost +25,000¥.

Enclosed-Cargo Body: This body style features a single rear door and stowage for 100 CF of cargo. The body cannot be accessed from the cab. Cost +18,000¥.

Rear-Tray Body: The Rear-Tray body provides 150 CF cargo space, usually unenclosed. Cost +15,000¥.

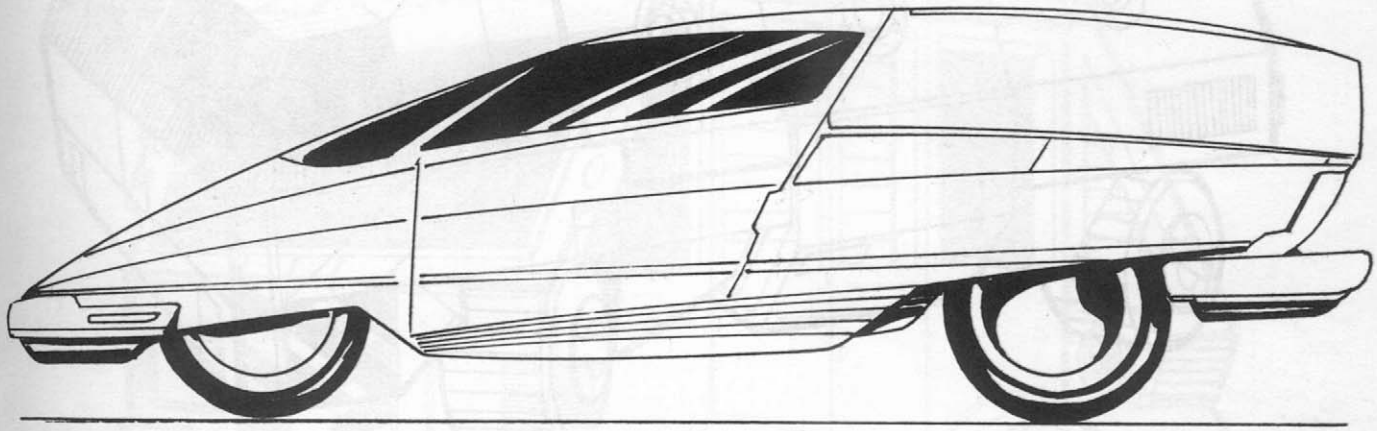
>>>>>[Drek! "Classic European styling" really means that this lemon is underpowered. On anything but city streets speed is reduced by half!]<<<<<

—Rubber Duckie (12:45:23/08-29-52)

>>>>>[Hey, chummer, what the drek did you expect—she's not an off-road combat vehicle! (Come on, brainpower! We know you're in there!)]<<<<<

—Nightmare (15:17:35/08-29-52)

VOLKSWAGEN SUPERKOMBI III



The latest in a successful and popular line of imported vans available with a wide range of options, including new pickup models. Other models include the Commuter, RV, Flatbed, and Enclosed-Van. All models are reliable and ruggedly built, and far more stylish than many of their competitors, to boot.

	Handling	Speed	B/A	Sig	APilot	Cost
Superkombi III	4/8	35/105	4/1	2	3	see below

Economy: 18 km per liter **Fuel:** IC/120 liters

Options:

Commuter Model
Seating: 2 x 2 twin bucket seats + 10 folding bench
Access: 2 standard + 1 double-sized + 1 rear
Cargo: 5 CF underseat + 30 CF storage **Cost:** 55,000¥

RV Model
Seating: 2 x 2 twin bucket seats **Access:** 2 + 1 + 1 standard
Accessories: Internal space for 10 CF of cargo. Roof racks are standard. Kitchenette (microwave, mini-fridge), shower/toilet recess, stereo/comm center, two single and one double fold-away bed.
Off-road Speed: 15/45 **Cost:** 90,000¥

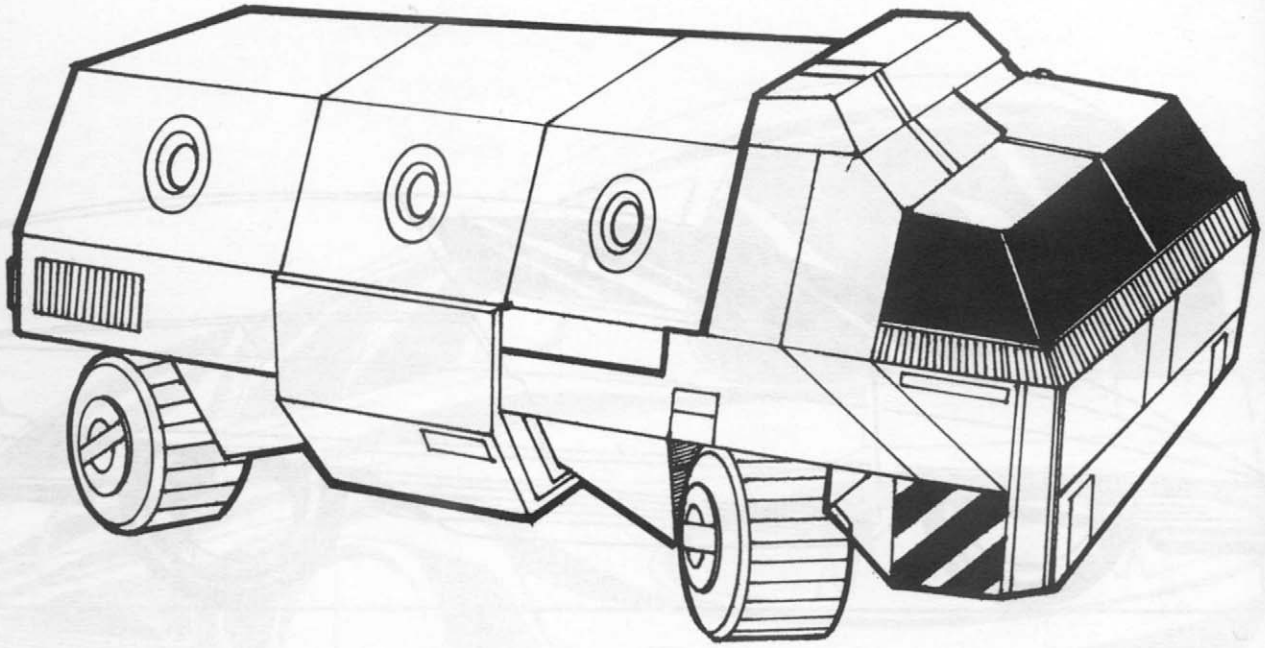
Flatbed Model
Seating: Twin bucket seats **Cost:** 37,000¥
Cargo: 200 CF rear

Enclosed-Van Model
Seating: Single bucket + 2 folding bench **Cost:** 45,000¥
Cargo: 150 CF rear

Pickup Model
Seating: 2 + 2 bucket seats **Access:** 2 standard
Cargo: 120 CF rear **Cost:** 40,000¥

>>>>>[Neato! The RV is just the thing for extended forays into the countryside, chummers, and with off-road suspension and up-rated engine, we find it not too shabby performance-wise.]<<<<<
—Nightmare, Wheelie, and the gang (01:48:39/07-01-52)

ARES MASTER™ SERIES



This series has the most popular range of medium commercial vehicles available in North America and is exported widely throughout the rest of the world. The Master™ series chassis has been adapted to such a wide variety of uses that an exhaustive list is nearly impossible to provide. Rest assured, however, that almost all passenger/cargo requirements can be met by one of the Master™ series variants. Some of the more popular models are listed below as a sample of the variants available.

>>>>>[This section used to begin with the Citymaster™ and the Mobmaster™, but because they are essentially security vehicles, we moved 'em to that section. Who're they tryin' to kid?]<<<<<
—Nightmare and Wheelie (11:25:15/05-15-52)

Roadmaster™ Medium Cargo Vehicle

A popular cargo variant based on the Master™ series chassis, the Roadmaster™ has a number of optional body types. The parts are interchangeable with the security variants, making the Roadmaster™ an especially sensible purchase for corporations or government departments trying to reduce overhead costs.

	Handling	Speed	B/A	Sig	APilot	Cost
Roadmaster™	4/10	30/90	4/0	2	2	45,000¥

Seating: Twin bucket seats + 1 folding bench
Access: 2 standard
Economy: 15 km per liter
Fuel: IC/500 liters
Storage: see below
Standard Load: 500 CF
Options:

Rear-Tray Body: Storage 1,000 CF. Cost +25,000¥.

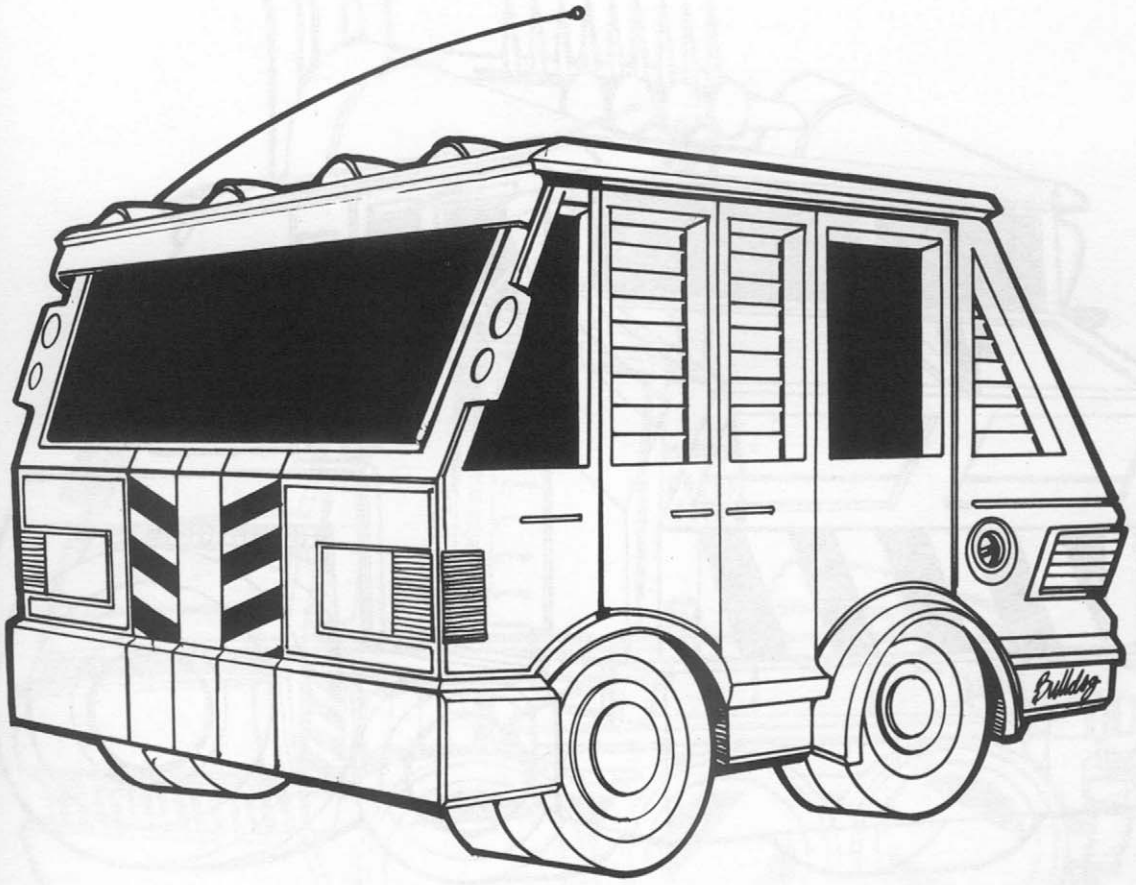
Van Body: Storage 1,000 CF. Cost +80,000¥.

Tanker Body: Storage 25 kiloliters (special-purpose bodies available on request). Cost +80,000¥ (standard liquids only, other tank types on request).

>>>>>[It's amazing, innit, chummers, the kinda markup you get for the "security" label, eh? Only 125K¥ for a Roadmaster™ van, but 500K¥ for a Citymaster™ "security vehicle."]<<<<<
—Bowbells (18:34:31/08-18-52)

>>>>>[Thank you for recognizing our trademark.]<<<<<
—Nightfire (22:15:07/08-2152)

GMC BULLDOG STEP-VAN



A standard, reliable delivery truck, the Bulldog is found in most major North American sprawls. All the major delivery services, including UCAS Express and UCAS Parcel Service, use them, and the Bonded-Courier variant is popular among independent couriers. The Bulldog effectively combines the road handling of a light truck with the carrying capacity of a medium truck.

Multifuel Model

	Handling	Speed	B/A	Sig	APilot	Cost
Bulldog Step-Van	4/8	35/85	4/1	2	2	35,000¥

Seating: Single bucket + 1 folding bench
Access: 2 + double-sized rear
Economy: 16 km per liter
Fuel: MultiF/150 liters
Storage: 200 CF

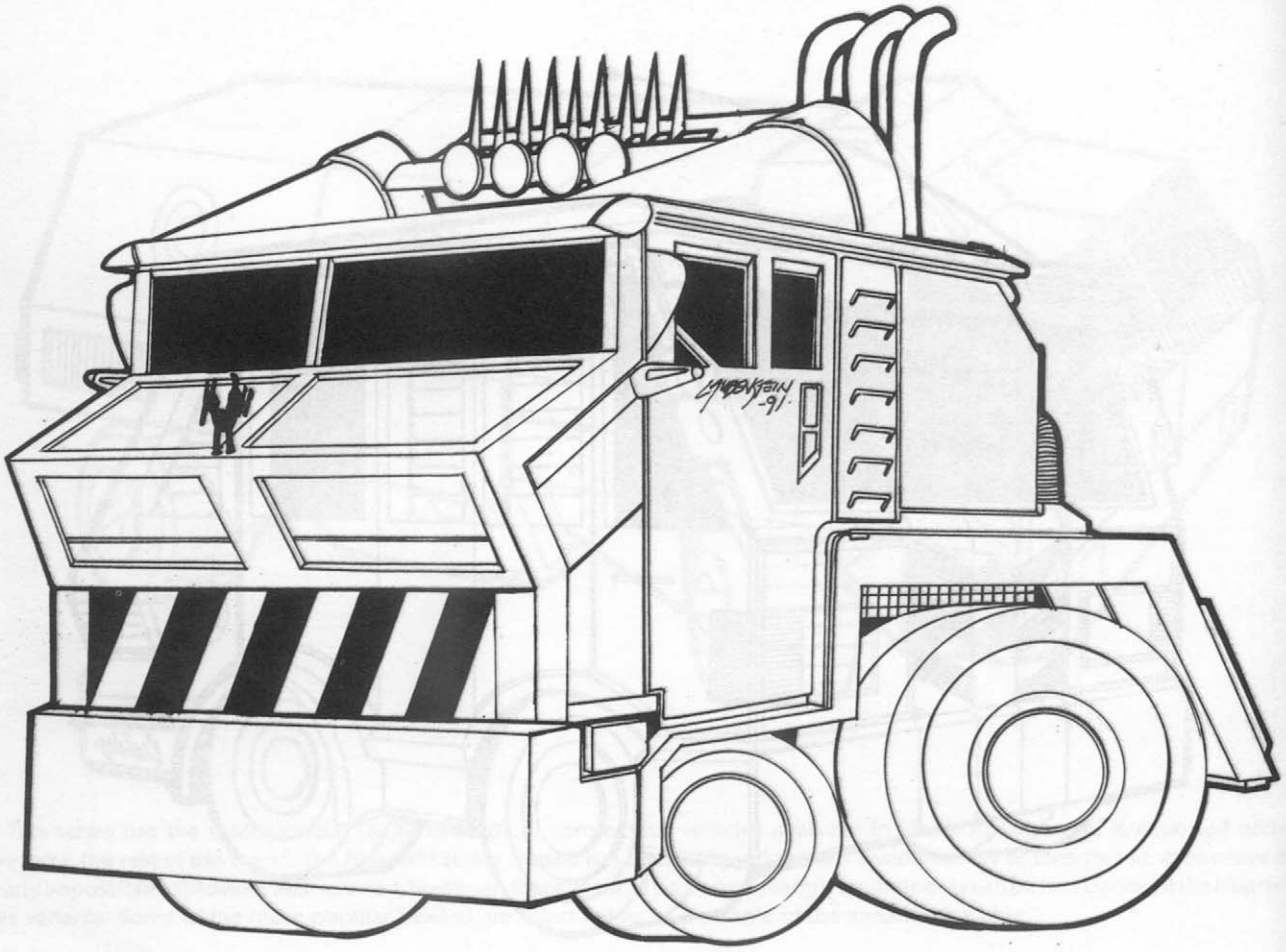
Bonded-Courier Variant

	Handling	Speed	B/A	Sig	APilot	Cost
Bulldog Step-Van	4/6	35/85*	4/2	1	2	60,000¥

Seating: Single bucket + 1 folding bench
Access: 2 + double-sized rear
Economy: 14 km per liter
Fuel: MultiF/150 liters
Storage: 200 CF
Additional Features: The Bonded Courier variant offers off-road suspension, runflat dual-purpose tires, and turbo-charging as standard options.
*Off-road Speed is 30/80

>>>>>[This is a big one, chummers. Lotsa room in the back for all the wonderful toys you want to pack. Enjoy!]<<<<<
—The Unknown Rigger (15:51:25/05-14-52)

GMC 4201 SERIES



A classic design from GMC. The first 4201 rolled off the Detroit production line in 2029, and the twenty-millionth domestic model was completed at GMC's DeeCee plant in late 2050. Some 37 million others have been produced under GMC license throughout the world. The "Mechanical Mule" (so-called in honor of the hood ornament) has proved to be even more ubiquitous than World War II's famous "jeep," soldiering on through civil war and revolution, keeping industry and commerce supplied, and providing a sense of continuity in an ever-changing world.

Multifuel Model

	Handling	Speed	B/A	Sig	APilot	Cost
GMC 4201	3/6	35/85	5/1	2	2	75,000¥

Seating: Twin bucket seats + 1 folding bench
Access: 2 standard
Economy: 12 km per liter
Fuel: MultiF/750 liters
Storage: see below
Standard Load: 750 CF
Options:

Rear-Tray Model: Storage 1,000 CF. Cost +38,000¥.

Van Body: Storage 1,000-CF. Cost +120,000¥.

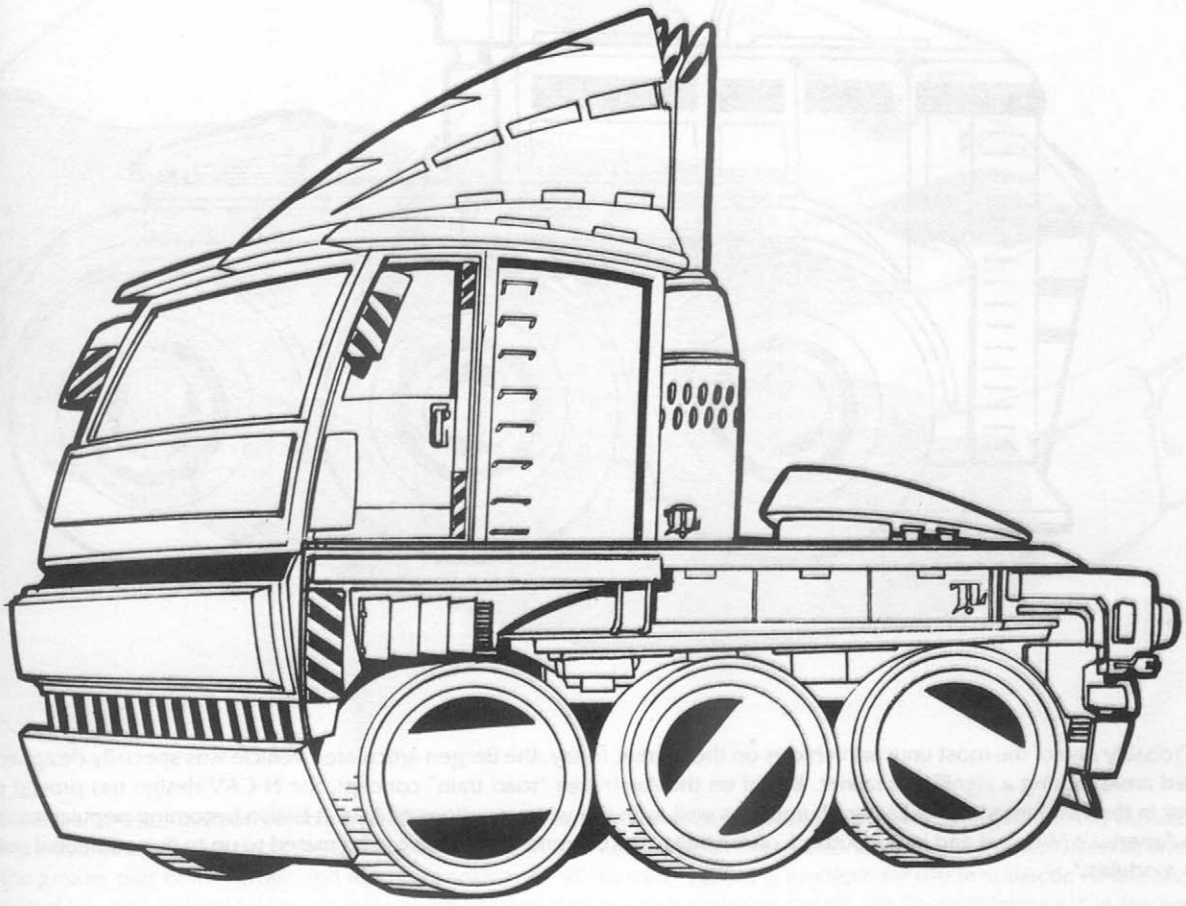
Tanker Body: Storage 37.5 kiloliters of standard liquids. Cost +100,000¥. (For other tank types, see your authorized GMC dealer.)

Bus Transport: The standard Seattle Urban Transit (SURT) Citycoach uses a 4201 chassis. Seating 1 bucket + 38 bench + 12 standing. Cost 125,000¥.

>>>>>[Yeah, the model's getting long in the tooth, chummers, but there's no better deal available in her class. And with the availability of third-party and second-hand spares, you can cut standard maintenance costs by as much as 50 percent!]<<<<<

—Pumper (21:15:46/06-21-52)

CONESTOGA TRAILBLAZER PRIME MOVER



The Trailblazer Prime Mover is the most reliable tractor on the market today. Built to a price, but not neglecting reliability, the Trailblazer Prime Mover is the vehicle of choice for many independent truckers. Standard equipment includes a twin-bunk sleeper minicab behind the spacious driver's compartment, making her a perfect companion for those long hauls.

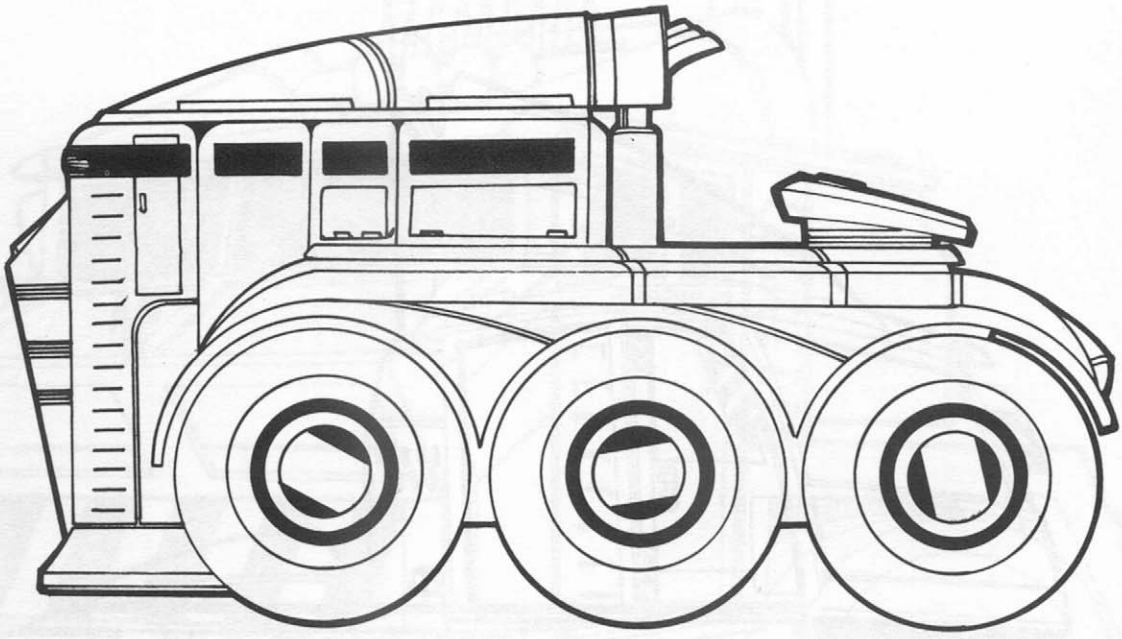
	Handling	Speed	B/A	Sig	APilot	Cost
Trailblazer Prime Mover	4/8	30/90	5/0	2	2	150,000¥

Seating: Twin bucket seats + 1 folding bench
Access: 2 + 1 standard
Economy: 8 km per liter
Fuel: IC/750 liters
Storage: 5 CF storage
Standard Load: 1,000 CF

>>>>>[Some truckers swap one of the bunks in the minicab for a rigger tank and run the rig from back there. I tell you, it gave me quite a shock the first time I saw one of those monsters bearing down on me with no driver!]<<<<<

—Road Tramp (05:23:19/07-04-52)

NORDKAPP-CONESTOGA "BERGEN"



Probably one of the most unusual vehicles on the market today, the Bergen articulated vehicle was specially designed for use in isolated areas lacking a significant railnet. Based on the Australian "road train" concept, the N-CAV design has proved enduringly popular in the vast hinterland of Eastern Europe, as well as in the various nations of Asia. It is also becoming popular on the roads of North America's Midwest and in the outback of Australia. The Command module can be mated to up to five additional self-powered cargo modules.*

Command Module (Multifuel)

	Handling	Speed	B/A	Sig	APilot	Cost
Bergen	3/6	30/90	6/2	2	4	600,000¥

Seating: 2 x 2 twin bucket seats **Access:** 2 standard + 1 cupola
Economy: 4 km per liter **Fuel:** MultiF/2,000 liters
Storage: 5 CF storage

Cargo Module (Multifuel)

	Handling	Speed	B/A	Sig	APilot	Cost
Bergen	3/6	30/90	5/1	2	200,000¥	

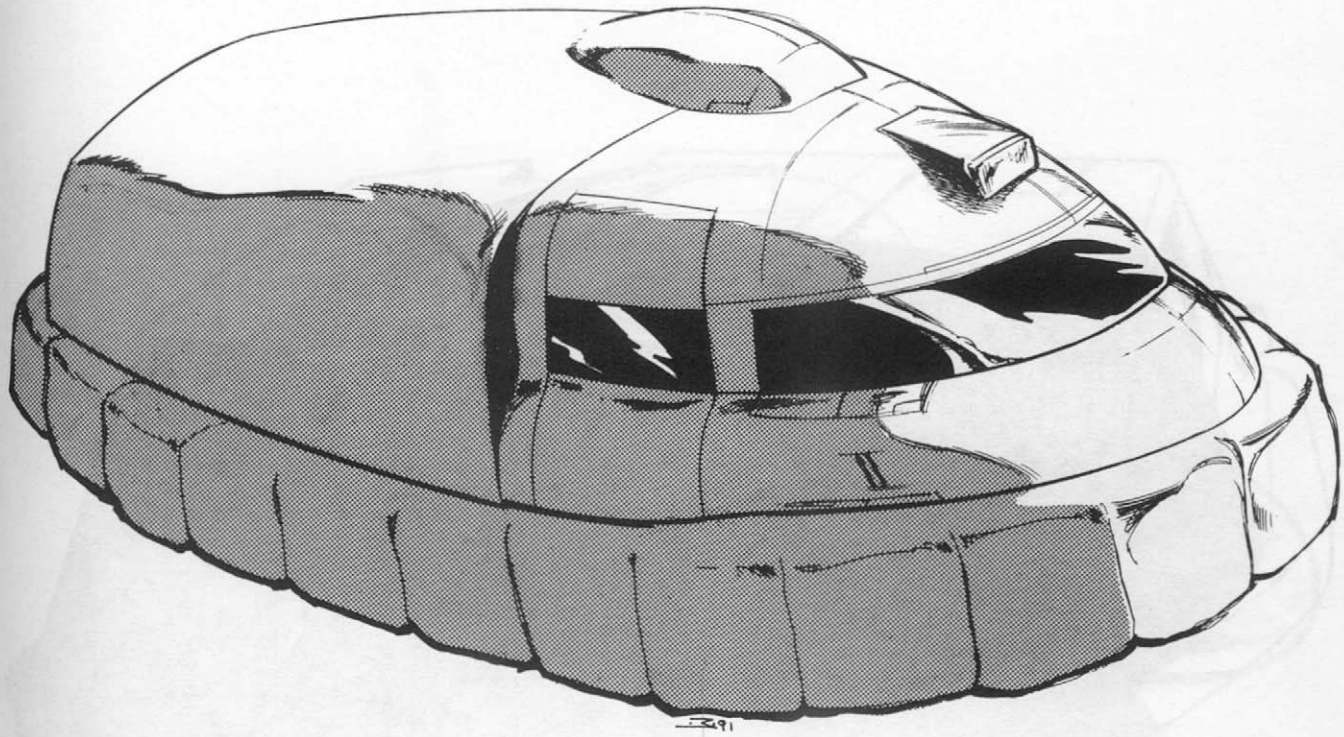
Seating: 2 bucket seats **Access:** 2 standard + 1 cupola
Economy: 4 km per liter **Fuel:** MultiF/1,000 liters
Storage: 5 CF storage + 1,000 CF cargo

*The Bergen does not suffer from the usual +1 to Handling for each extra trailer attached. Both the command and cargo modules are normally set up as a mini-cabin with two folding bunks, a mini-kitchen, and toilet/fresher, with 10 CF allocated for a turret and weapons. It is possible to move from module to module through the articulated joints, even while the vehicle is in motion.

The Speed rating for the cargo module is not inherent, but enables the whole train unit to maintain the standard speeds of 30/90. The cargo module moves at 5/10 under local control when not linked to the command module. The Bergen command module is designed to control one seven-meter (1,000 CF) container module or two four-meter, 500 CF modules. The cargo module is fitted out the same way. The vehicle is also capable of greater speeds than the maximum listed, but for every additional 10 kph over the maximum speed, add +1 to Handling, to a maximum of +60 kph (+6 to Handling). Success tests against Handling are not required, as long as the vehicle is traveling on good roads and/or in a straight line or around a gentle curve.

The Bergen articulated vehicle is completely nonstandard. It may be modified within the parameters given, but it may not be built from the chassis up, as it utilizes a great deal of unique, proprietary technology that is not available on the open market.

CHRYSLER-NISSAN G12A ACV



A general-purpose air-cushion vehicle that offers quick conversion between cargo and passenger configurations by replacing the modular unit attached to the rear deck, the G12A ACV is a hot seller in areas where rivers, lakes, swamps, and other water/land features make up the greater part of the terrain and roads are scarce. A "winterized" variant is available for use in subarctic tundra and taiga or on snow and ice, and this model has almost universally replaced the popular Snow Cats™ and Snow Skimmers™ in the northern regions of the Athabascan, Algonkian-Manitoo, and Trans-Polar Aleut councils.

	Handling	Speed	B/A	Sig	APilot	Cost
G12A	4	40/120	4/0	5	2	500,000¥

Seating: Twin bucket seats + 1 folding bench
Access: 2 gull wing + 1 standard
Economy: 1.5 km per liter
Fuel: IC/500 liters
Storage: 2 CF storage in cab
Options:

Passenger Module: This module has seating for 30 in a 2-aisle-1 configuration. Access is 1 + 2 standard doors, plus a large rear door. Cost 50,000¥ (winterized version 65,000¥). Cargo 100 CF.

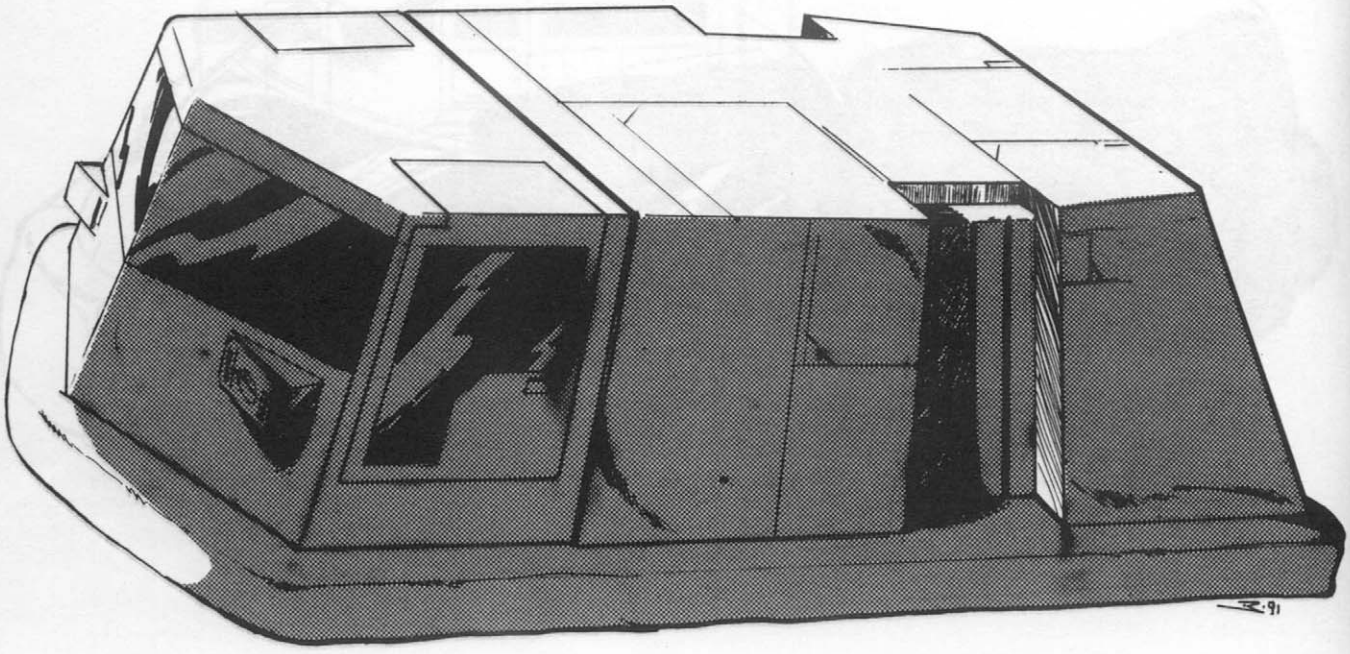
Cargo Module: This is the standard seven-meter cargo module carried by tractor trucks (see description of Bergen, p. 36). Cost standard.

>>>>>[When she's carrying a full load of cargo, speed drops way down—barely half what is listed.]<<<<<
—Red Beaver (15:23:41/08-27-52)

>>>>>[Something they don't tell you, chummers, is that the damn hull ain't watertight. So take the hype about "land/water terrain" with a grain of salt, or you'll sink.]<<<<<
—Bush Basha (07:34:12/08-29-52)

>>>>>[Some merc units mount a micro or mini-turret at the rear of the driver's cab, usually with an autocannon plus one other heavy weapon, and use her as an assault ACV.]<<<<<
—Sarge (11:56:34/08-29-52)

MOSTRANS "IVAN THE TERRIBLE" KVP-14T



A light utility ACV produced by MosTrans of Moscow, "Ivan" is popular throughout Eastern Europe, and has recently appeared in North America through a distribution deal with GMC. Specially designed for use in severe winter weather, the KvP-14T is widely used throughout the higher latitudes in both hemispheres. A temperate-climate model is also available. Heavy consumer demand has added to the latest models a watertight boat hull for safer use in land/water terrain, though long overwater journeys are still not recommended.

	Handling	Speed	B/A	Sig	APilot	Cost
KvP-14T Ivan	4	60/180	4/0	3	1	250,000¥

Seating: Twin bucket seats
Economy: 2 km per liter
Storage: 3 CF in cab
Options:

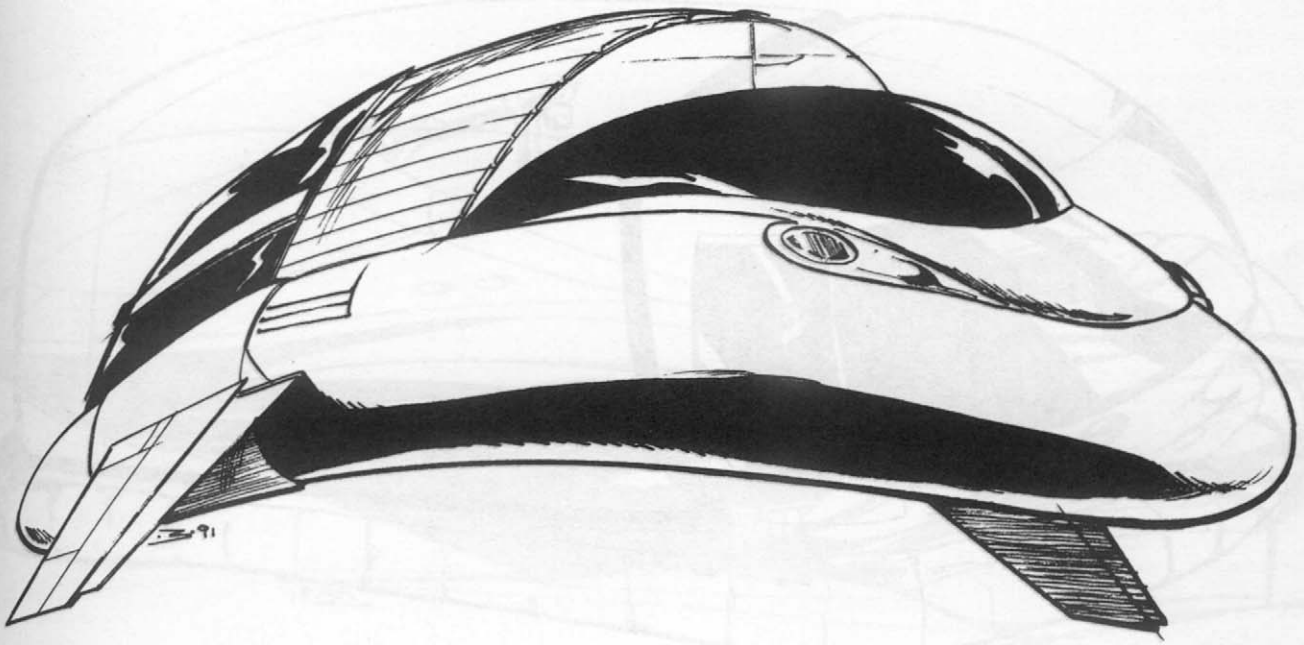
Passenger Module
Seating: 9 bucket seats
Cost: 20,000¥ (15K¥ for temperate-weather version)
Cargo Module: Standard four-meter, 500 CF container. Cost standard.

Access: 2 gull wing + 1 standard
Fuel: MultiF/250 liters

Cargo: 20 CF
Access: 3 standard doors + 1 large rear door

>>>>>[Basically a good design, chumski, but watch the boat hull; it may be watertight, but the vehicle's superstructure isn't. In rough weather, a downed Ivan will rapidly take on water and sink. I know, I only just got out of one in time.]<<<<<
—Katya Ivanovna (21:13:57/08-18-52)

GMC-BEACHCRAFT "VACATIONER" ACV



The most popular civilian ACV in North America, the Vacationer is available through recreational-vehicle rental companies and is a "must buy" for the world-weary exec who wants to get away from it all, but has to be able to get back to it all in double-quick time! Available in four- or six-seat variants, both with extensive built-in camping gear. Winterized variants are also available. The Vacationer's boat hull is designed for stability in open water, allowing the pilot and passengers to sit and fish in reasonable weather.

	Handling	Speed	B/A	Sig	APilot	Cost
Vacationer	4	35/105	4/0	3	3	100,000¥

Seating: 2 + 4–6 bucket seats*
Access: 2 gull wing + 2 standard + 1 double-sized
Economy: 2 km per liter
Fuel: IC/250 liters
Storage: 2 CF in cab

*The rear cabin features four to six fold-away bucket seats plus 30 CF of built-ins, including four bunk beds, a mini-kitchen, a shower/toilet, and a built-in entertainment center.

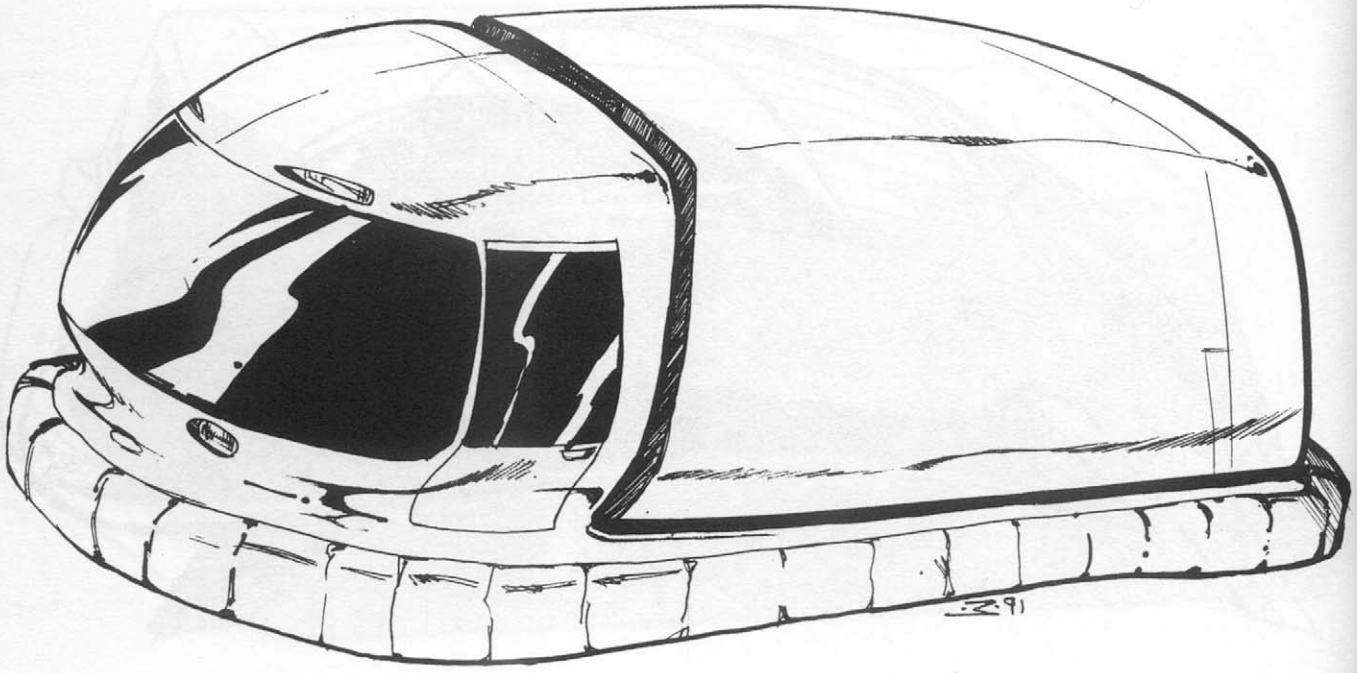
>>>>>[Watch it, chum-pals, the Vacationer's based on the GMC-Beachcraft Patroller security chassis, and "wary" (read trigger-happy) corpcops have been known to shoot first and question any survivors later. Personally, I didn't hang around for them to see the unusual mods I've made!]<<<<<

—Ridgy-Didge (04:56:02/05-12-52)

>>>>>[Yeah, Ridge, twin pop-up remote turrets with HMG and assault cannon plus satellite commlinks for "covert ops" sure would've been a "minor embarrassment"!]<<<<<

—Wheelie and MiTee Man (15:35:12/05-12-52)

GMC-NISSAN HOVERTRUCK



This has been *the* cargo hauler for roadless terrain for the past decade. Its specially fitted water-planing boat hull for those long overwater (or upriver) trips makes it an especially popular choice in Africa and South America, where the rivers still are, more often than not, the only "highways" available. A tried and true, mechanically reliable, and simple-to-maintain ACV—simply the best available!

	Handling	Speed	B/A	Sig	APilot	Cost
Hovertruck	4*	40/120	4/0	5	1	100,000¥

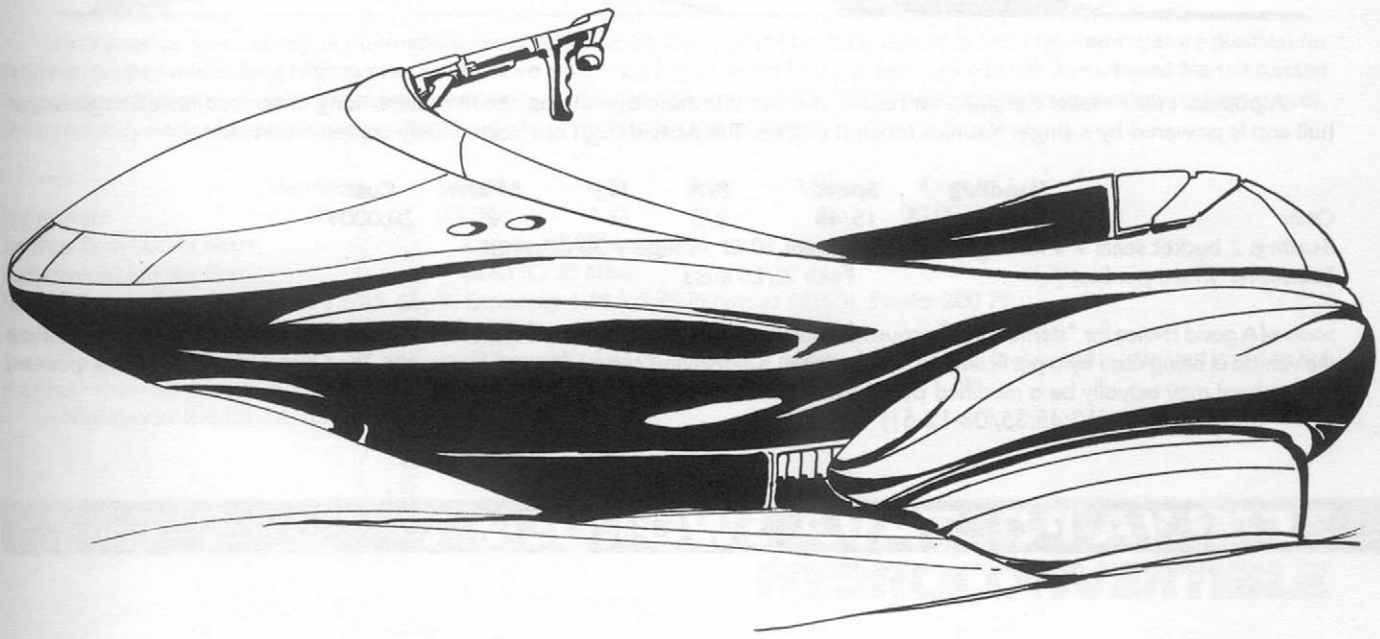
Seating: Twin bucket seats + 1 folding bench
Access: 2 standard + 1 standard
Economy: 2.5 km per liter
Fuel: MultiF/500 liters
Storage: 3 CF in cab**

*See note on p. 100 concerning ACVs and "rough" terrain.
**The cargo flat at rear accepts a standard 500 CF container.

>>>>>[Neato, chummeros! The truck's just the thing for hard 'n' heavy use. I swear, you c'n do almost any repair short of a complete engine swap with the hand and power tools thoughtfully provided as part of the purchase price! Just the thing when the nearest garage's 250 klicks downriver, eh?]<<<<<

—Crazy Juan (15:04:32/08-12-52)

SUZUKI WATERSPORT



Without question, the Watersport is the most popular water jet bike of the last decade, and the 2051 version comes with improved handling and fuel economy. Ride with Suzuki and turn your next water jaunt into the sport it deserves to be! Now available with standard internal combustion and improved electric drives.

Standard Model

	Handling	Speed	B/A	Sig	APilot	Cost
Watersport	2	15/45	1/0	3	0	1,200¥

Seating: 1
Economy: 15 km per liter **Fuel:** IC/10 liters

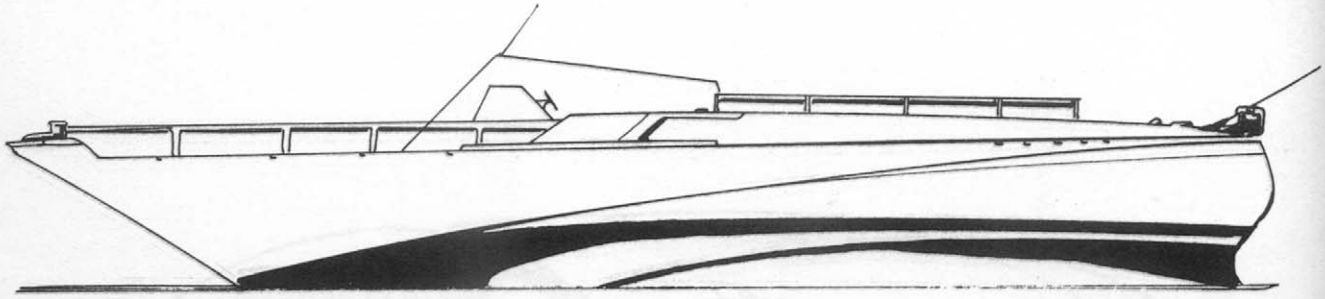
Electric Model

	Handling	Speed	B/A	Sig	APilot	Cost
Watersport	2	10/30	1/0	5	0	1,300¥

Seating: 1
Economy: .5 PF per km **Power:** ImpElec/300 PF

>>>>>[I know lotsa boys who've rigged the Watersport for covert ops. They just tag her with a firmpoint and jazz the works to make her run faster and quieter. Of course, running the Carib League, they've got a lot more use for something like that than I do.]<<<<<
—Mr. Syn (13:41:16/08-06-52)

SAMUVANI-CRISCRAFT OTTER



A popular utility vessel designed for harbor, river, and inshore operations, the five-meter-long Otter features a fiberglass open hull and is powered by a single Nautilus inboard engine. The basic design has been widely copied worldwide.

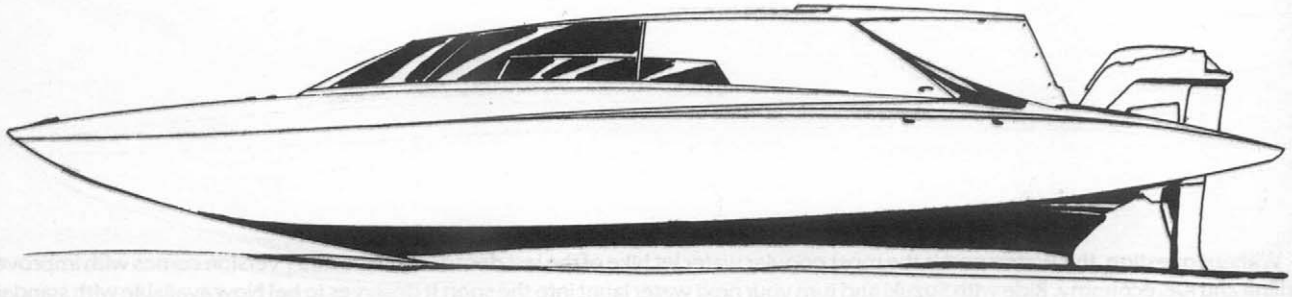
	Handling	Speed	B/A	Sig	APilot	Cost
Otter	4	15/45	2/0	3	2	20,000¥

Seating: 2 bucket seats + 4 folding bench **Cargo:** 10 CF storage + 30 CF cargo
Economy: 30 km per liter **Fuel:** IC/25 liters

>>>>>[A good choice for "sterile" ops, because the number of genuine Otters and clones currently licensed makes it impossible to assume the vehicle is being used by a particular group of people. 'Course, this cuts both ways, chummers. The Otter that looks like a low-powered fishing boat may actually be a modified patrol craft.]<<<<<

—Barracuda Bait (12:45:35/08-12-51)

ZEMLYA-POLTAVA SWORDSMAN



Z-P's classic pleasure-craft design has been updated for the 2050s. The seven-meter-long Swordsman is partially decked-in with space for two bunks in the bow compartment. A folding canopy included as a standard feature mates to the three-sided spray windscreen on the front of the boat to provide shelter against inclement weather. Twin Nautilus Marine outboard engines provide all the speed that you're ever likely to need. They can be replaced easily with more powerful units or with environmentally friendly electric units.*

	Handling	Speed	B/A	Sig	APilot	Cost
Swordsman	4	25/75	3/0	3	2	30,000¥

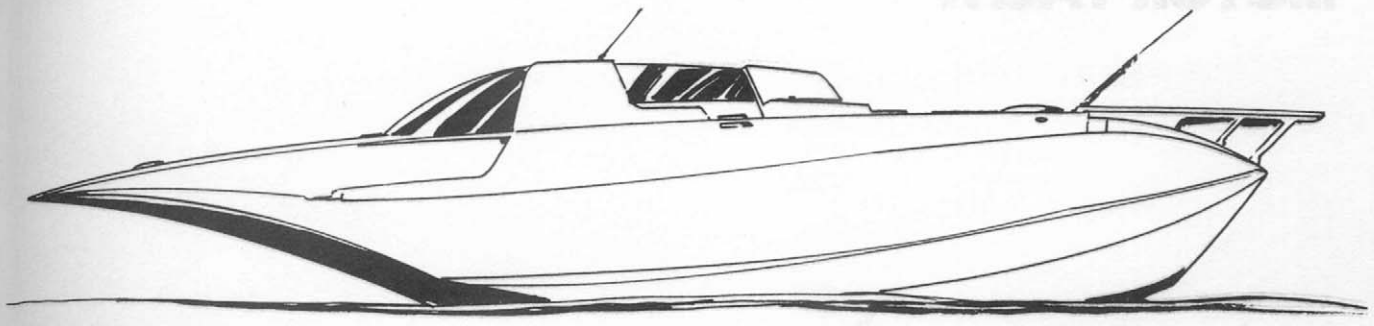
Seating: 2 bucket seats + 6 folding bench **Cargo:** 10 CF storage + 30 CF cargo
Economy: 25 km per liter **Fuel:** IC/50 liters

*The standard engines can be replaced with EuroNav "Poseidon" outboards: Speed 30/90; Economy 20 km/liter; Cost +5,000¥ at time of purchase, 15,000¥ as add-on. Acced Marine electric drive units: Speed 5/15 (Sig 7); Economy 0.1 PF/km; or Speed 10/30 (Sig 5); Economy 1 PF/km (batteries for 200 PF are included); Cost 5,000¥ as add-on.

>>>>>["Environmentally friendly" my rear end! The electrics are a smuggler's tool, pure and simple. You guess who's "simple" if they think it'll do 'em any good!]<<<<<

—AquaCop (23:58:49/08-20-51)

AZTECH NIGHTRUNNER



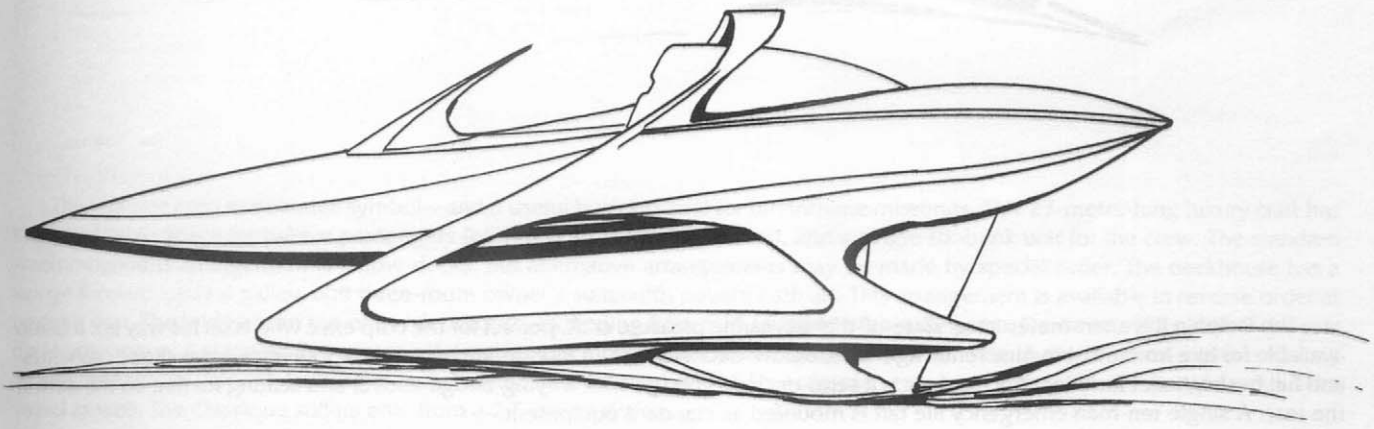
Constructed almost entirely of nonmetallic composites (even the engine is mostly ceramics and high-temperature plastics) for lightness, the five-meter-long Nightrunner can achieve amazingly high speeds for a modestly sized craft. The inboard Marine turbine is supplemented by modest electric-drive units that provide silent power, just the thing for fishing or maneuvering in close spaces. The completely enclosed two-seat cockpit is fitted out with aircraft-style controls.

	Handling	Speed	B/A	Sig	APilot	Cost
Nightrunner	3	25/75*	2/0	4*	3	30,000¥

Seating: Twin bucket seats **Cargo:** 10 CF storage
Economy: 30 km per liter **Fuel:** IC/50 liters
*Electric power: Speed 10/30 or 15/45, Sig 8, Economy 1 PF/km (5 PF/km at 15/45), Power 200 PF.

>>>>>["Just the thing for fishing!" Gee, and we all thought it was for covert ops and surveillance, not to mention a little free trade on the side! Hey—how do you fish from a "completely enclosed" cabin, anyway?]<<<<<
—Nightrunner (08:05:54/05-08-51)

COLORADO CRAFT "CIGARETTE" HYDROCONVERTIBLE



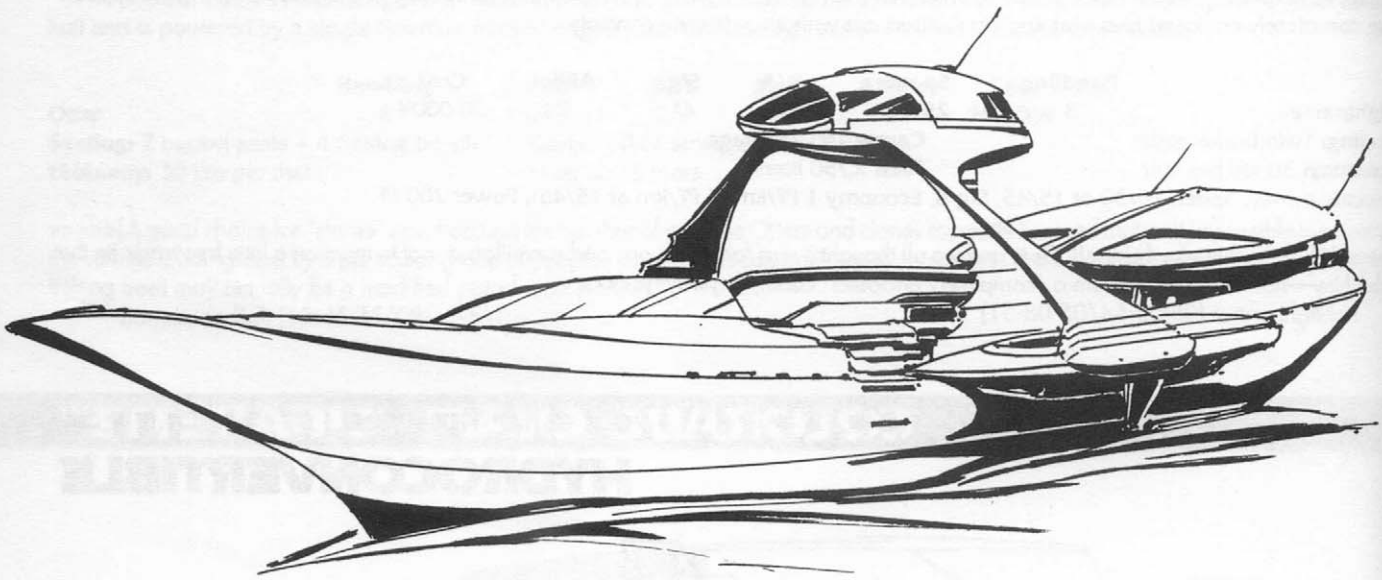
The name you trust for white-water and river craft moves to the open sea with the convertible hydrofoil! The Cigarette combines high-speed planing with low-speed sea-keeping qualities, all available at the flick of a switch. Sales prove that this six-meter-long design is just what all you high-speed water jocks and jockettes have been waiting for.

	Handling	Speed	B/A	Sig	APilot	Cost
Cigarette	4/5*	25/75*	2/0	3*	2*	35,000¥

Seating: 2 bucket seats **Cargo:** 10 CF storage
Economy: 25 km per liter **Fuel:** IC/50 liters
*With foils down: Handling 8, Speed 35/105, Sig 1, APilot may not be engaged, Economy 12 km/liter.

>>>>>[The Cigarette has to be stationary for a full minute in order to extend or retract the foils. Even worse, the foils tend to snap off when in the down position if they hit anything solid, or even if you drive them too hard through the water.]<<<<<
—Captain Ahab (18:26:17/07-30-51)

MARINE TECHNOLOGIES "DOLPHIN II" MOTOR YACHT



The Dolphin II is a ten-meter-long, state-of-the-art marine pleasure craft, perfect for the corp exec who is on his way up. It is also available for hire from most marine rental agencies. Below-decks features a lounge/kitchen area, a double and two single cabinettes, and full fresher/toilet facilities. Above deck is a semi-enclosed bridge with a flying bridge above, and seating for five on the deck at the rear. A single ten-man emergency life raft is mounted as standard equipment.

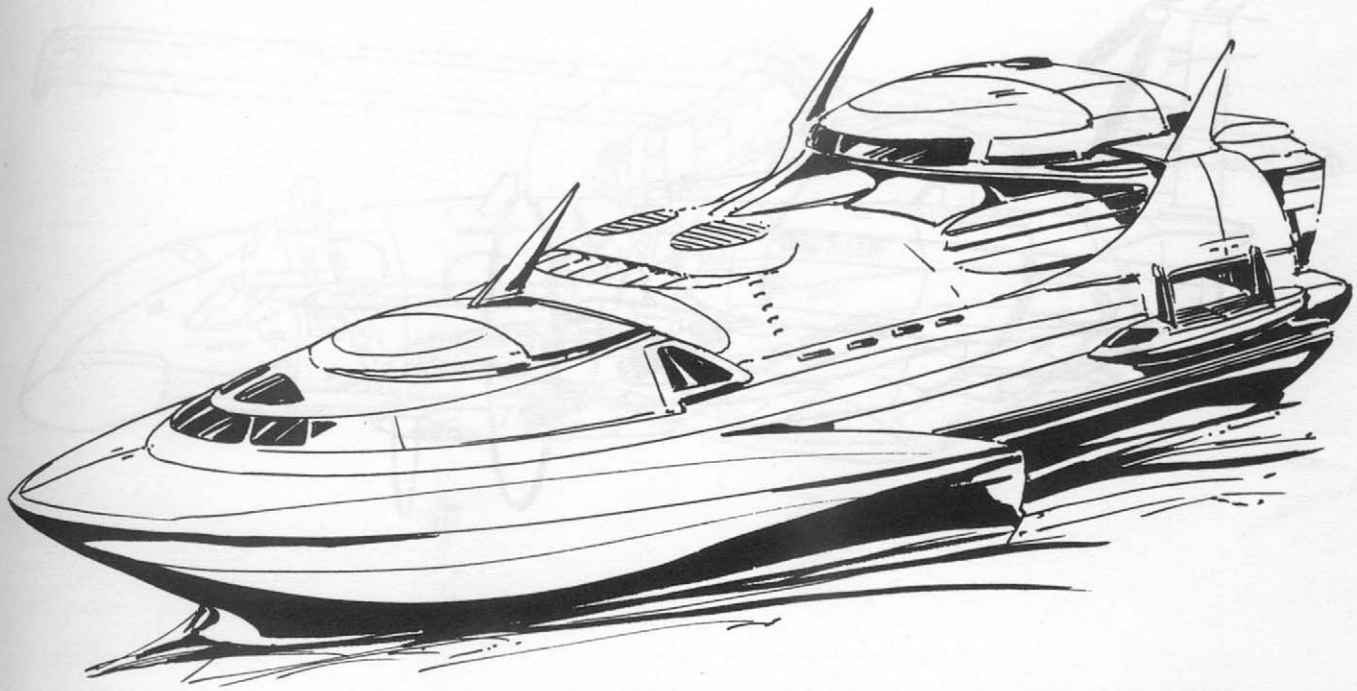
	Handling	Speed	B/A	Sig	APilot	Cost
Dolphin II	3	15/45	3/0	3	2	50,000¥

Economy: 35 km per liter **Fuel:** IC/100 liters
Cargo: 10 CF storage

>>>>>[A nice shipshape little craft, though the "cabinettes" are about the size of a standard "coffin hotel" cubicle. She's no speed demon, either.]<<<<<
—Blue Whale (21:32:13/07-12-51)

>>>>>[Yeah, but like the Otter, she's so common that she tends to blend in with the scenery. If she didn't, those Aztlan patrol cutters would've caught onto me for sure on my last little trip down there.]<<<<<
—Nightrunner (15:34:56/07-15-51)

HARLAND & WOLFF "CLASSIQUE" MOTOR YACHT



The ultimate corp exec status symbol—and a useful business tool for ultraprivate meetings. This 27-meter-long luxury craft has individual cabin space for twelve passengers (each pair sharing a bathroom), and a single six-bunk unit for the crew. The standard accommodations arrangement is below-decks, but alternative arrangements may be made by special-order. The deckhouse has a lounge forward, central galley, and three-room owner's suite with private bath aft. This arrangement is available in reverse order at no extra cost. The bridge is on top of the deckhouse, extending from mid-lounge to the galley area. Davits on either side of the rear deckhouse mount a standard five-meter runabout, or any similarly sized craft of the owner's choice. A single seven-meter craft may be mounted on chocks (with launching davits) on the rear deckhouse roof. Four ten-man emergency life rafts are mounted around the vessel as well. The Classique suffers only from a 2.5-meter draft.

	Handling	Speed	B/A	Sig	APilot	Cost
Classique	5	15/45	6/0	2	4	3.5M¥

Economy: 30 km per liter **Fuel:** IC/2,500 liters
Cargo: 25 CF storage

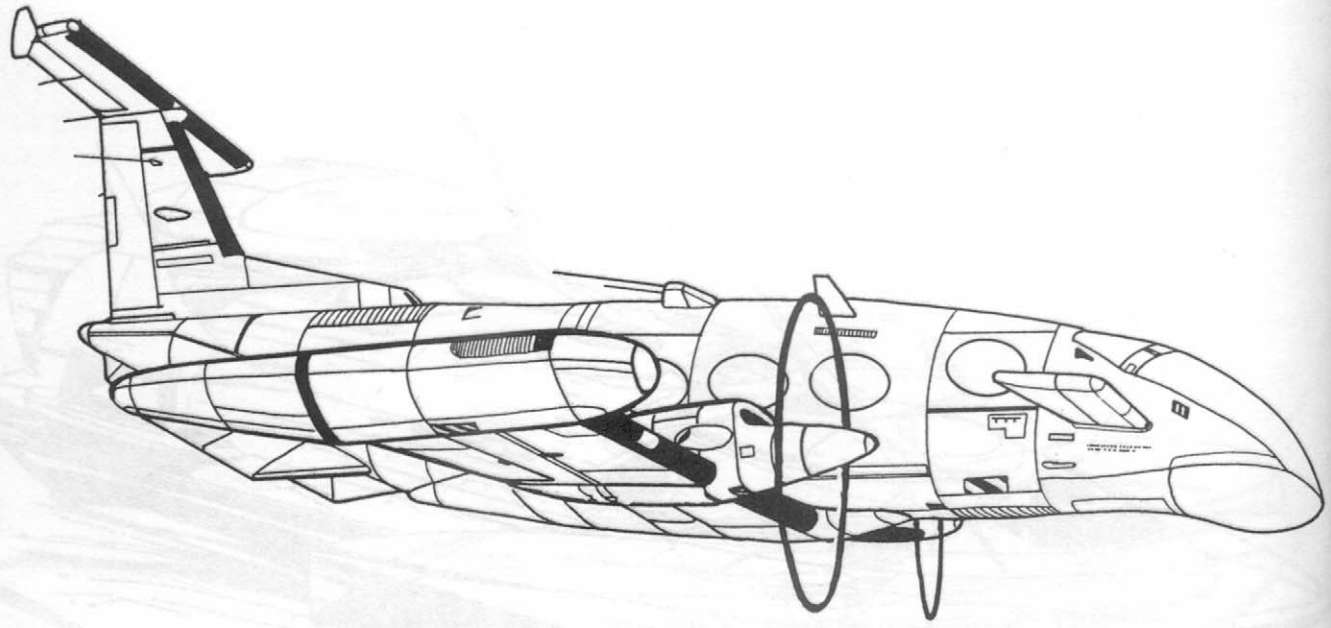
>>>>>[I had the good fortune to spend a weekend on one of these, bodyguarding some corp high muckamuck. Talk about luxury! Direct satnav matrix, comm and entertainment links, real wood paneling throughout—that's solid, not veneer—and gold faucets, what a life!]<<<<<

—Steel Lynx (06:01:23/02-30-51)

>>>>>[Hey, is this guy for real? I mean, lookit the date!]<<<<<

—MiTee Man (15:12:34/08-28-51)

CESSNA C750



The C750 is a classic Cessna design; a twin engine, low-wing monoplane with tricycle undercarriage and STOL capability. A full instrument suite (including basic satnav) is standard, with enhanced navigation and security upgrades available as options. A number of interior arrangement options are available, including Commuter, Executive, Cargo, and Medical. Custom interiors are also available by request.

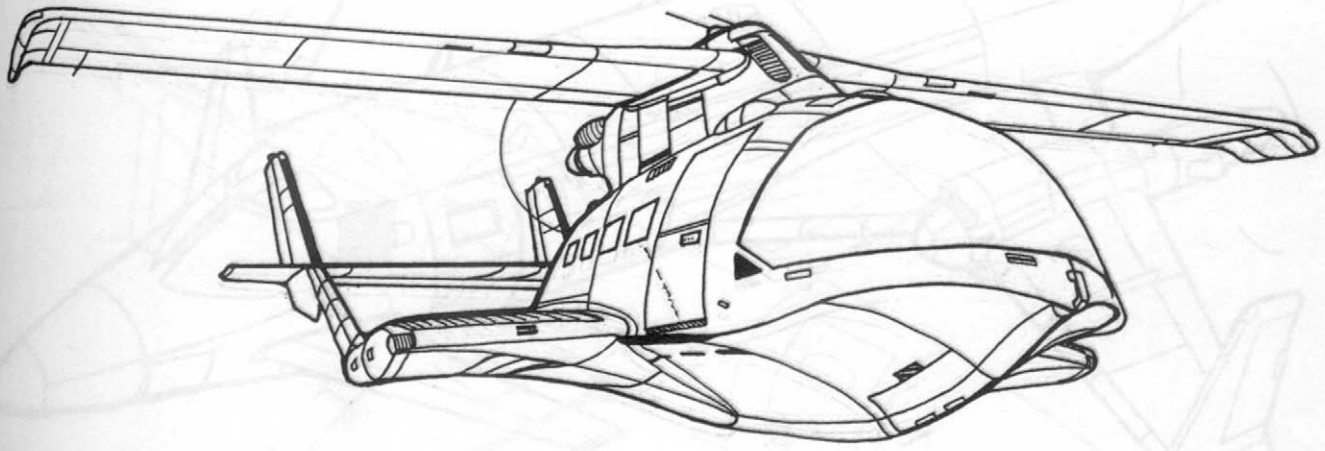
	Handling	Speed	B/A	Sig	APilot	Cost
C750	5	340/680	3/0	2	2	200,000¥

Seating: Twin bucket seats
Access: 1 standard*
Economy: 3 km per liter
Fuel: IC/500 liters
Cargo: 8 CF cargo + 2 CF storage
Landing/Takeoff Profile: STOL
Options: Commuter variant features eight or twelve bucket seats. Executive variant has six reclining bucket seats. Cargo variant has six folding benches, one large standard door access, and 20(+18) CF cargo space, 20(+30) CF if folding bench seats are removed. Medical variant has two folding benches, a single large door access, and space for four stretchers and 15 CF of cargo or medical equipment.
*Standard emergency exits are provided: two up front in the cabin plus two in the passenger compartment.

>>>>>[The Cessna is pretty standard stuff these days, but a few possibilities still exist. I know of at least one group of free traders who've fitted one out with some stealth sensors (Coyote knows where they got them, but he's not telling) and two wing-mounted hardpoints for antiradar missiles, and use it to "import" a whole drekload of primo Carib League BTLs north on a regular basis.]<<<<<
—Nightmare (09:34:01/05-18-52)

>>>>>[STOL capability is only available when she's not carrying any cargo—strictly the passenger version, chummers.]<<<<<
—Wheelie (21:13:42/05-19-52)

FIAT-FOKKER "CLOUD NINE" AMPHIBIAN



A purpose-built, reinforced-boat-hull amphibian with high-wing monoplane layout, over-wing, rear-mounted turboprop "pusher" propeller, and tailwheel undercarriage in land mode, the Cloud Nine is a classic European pleasure craft that is also becoming popular in North America. Its "go anywhere" nature, coupled with STOL (water) and VSTOL (land) capabilities make it just the craft to get into and out of that perfect vacation hideaway. A roomy cabin with plenty of luggage space rounds out the features of this fine aircraft. Don't delay, get one now!

	Handling	Speed	B/A	Sig	APilot	Cost
Cloud Nine	4	300/450	3/0	3	2	175,000¥

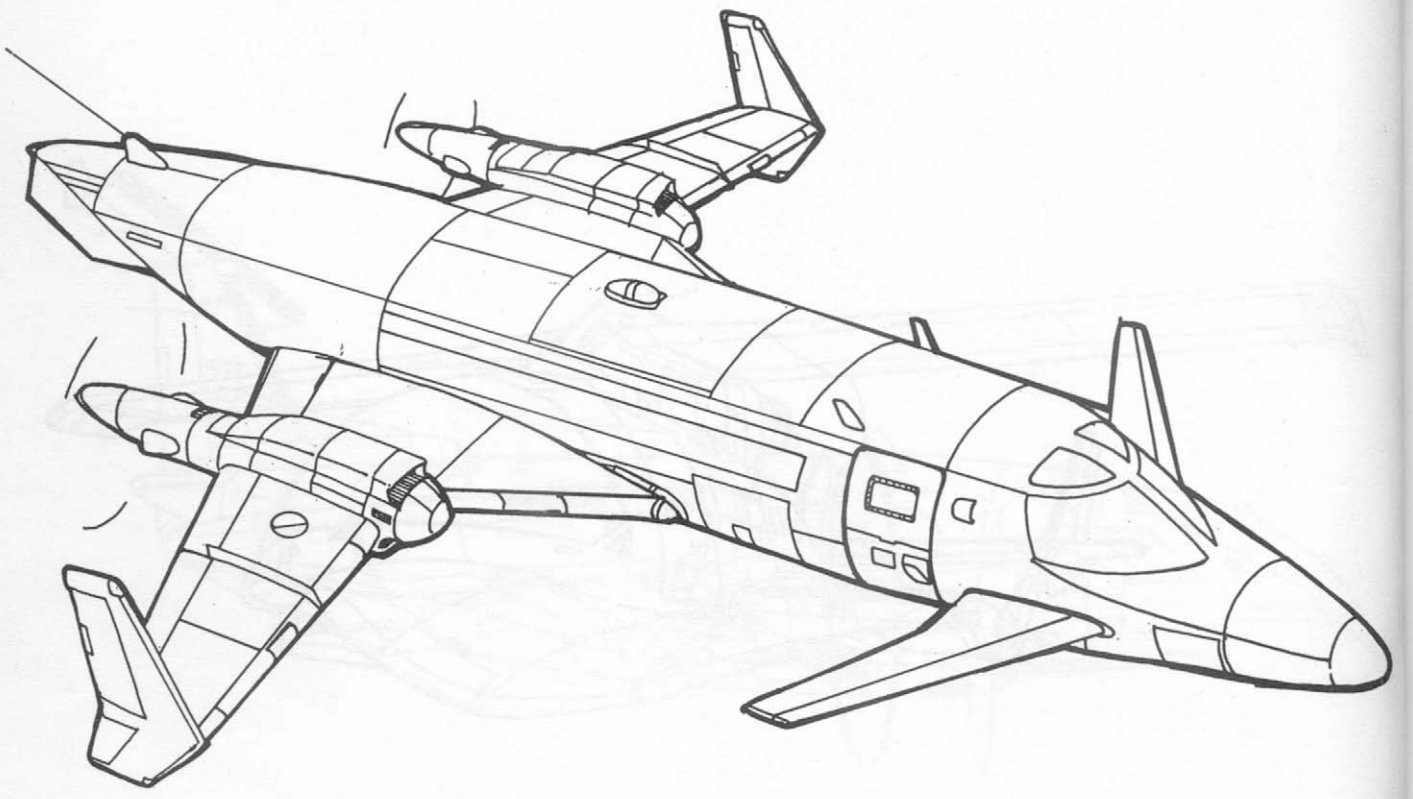
Seating: Twin bucket seats + 6 bench
Access: 2 + 2 standard
Economy: 3 km per liter
Fuel: IC/250 liters
Cargo: 8 CF cargo + 2 CF storage
Landing/Takeoff Profile: STOL (water), VSTOL (land)

>>>>>[Maybe some corp types use her for a pleasure craft, but the real market's the rigger/runner community. Amphib with STOL/VSTOL capability—just the thing for a little enterprising free trade, or covert ops.]<<<<<
—Nightmare (21:53:11/05-01-52)

>>>>>[My, my, what a nasty, suspicious nature you have, Nighty, old chum. By the way, be sure to check the boat hull after every water op; she has a nasty tendency to pop some rivets—glug, glug!]<<<<<
—Blue Max (15:21:32/05-08-52)

>>>>>[Sounds to me like you've got a problem. My CN's never sprung a leak, and I use her for water ops 90 percent of the time.]<<<<<
—Graeme Green (12:01:23/05-09-52)

EMBRAER-DASSAULT MISTRAL



The Mistral was originally designed to serve the aircraft needs of civilians, security, and the military, and has proved a great success in all these roles. A twin-turboprop, low-wing monoplane with an unusual, slightly swept-forward wing and tricycle undercarriage (also available with optional floats), it is fully VSTOL-capable and offers full flight instruments (rated to unrestricted-instrument standard) as a standard option. Special design features include enhanced rough-field performance and easy engine access to improve in-the-field maintenance.

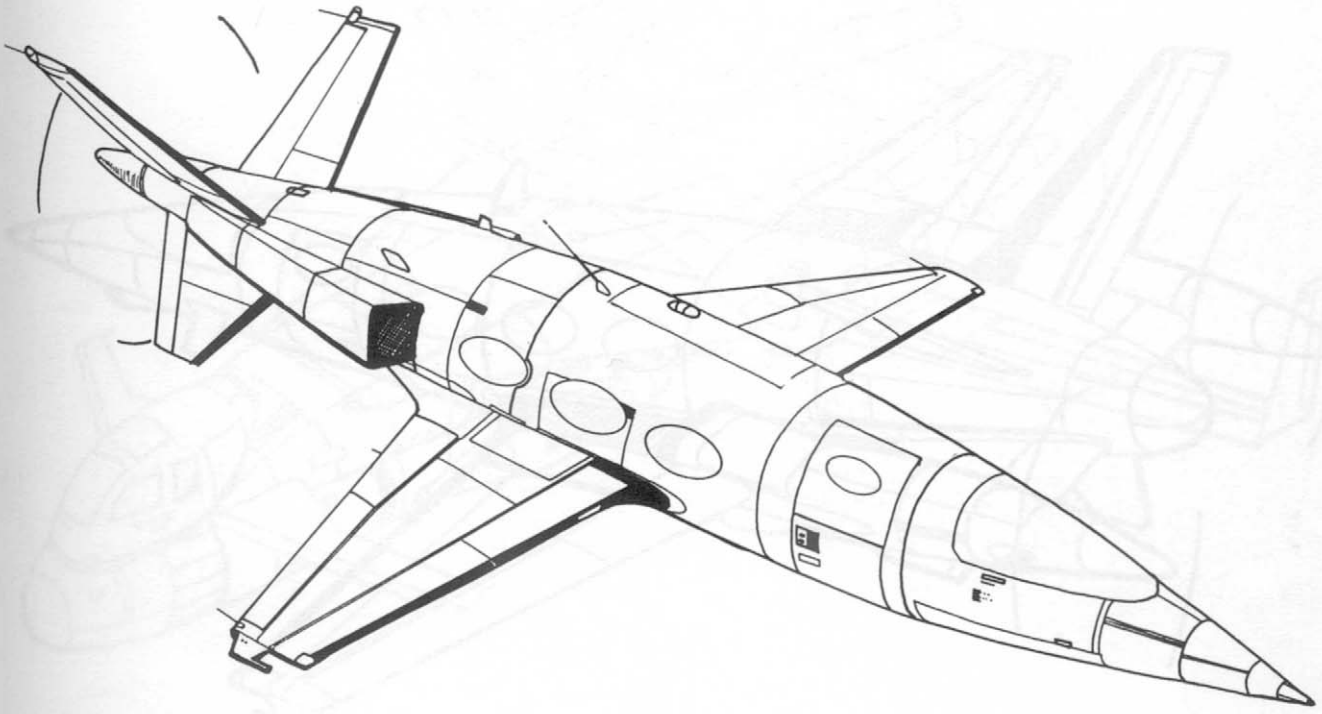
	Handling	Speed	B/A	Sig	APilot	Cost
Mistral	4	300/450	4/0	3	2	375,000¥

Seating: Twin bucket seats
Access: 1 standard + 1 double-sized*
Economy: 2 km per liter
Fuel: IC/2,000 liters
Cargo: 10 CF storage **
Landing/Takeoff Profile: VSTOL
Options: Commuter variant has fifteen bucket seats in 2-aisle-1 or ten bucket seats in 1-aisle-1 arrangement. Executive variant has six or eight bucket seats. Cargo variant has 60 CF internal storage. Security variant has six bucket seats plus sensor package that includes radar, IR, magnetics, low-light cameras, multiband radio, satnav, satellite comm link and onboard computer. Sensor suite Cost 2.5M¥. Military variant is identical to Security model, but has military-grade sensors. Sensor suite Cost (thought to be 10M¥ or more). Float variant: Speed 225/350, Cost +25,000¥. Includes standard undercarriage, floats may be removed if desired.
*Standard emergency exits are provided: two up front in the cabin and four in the passenger compartment (two over the wing and two to the rear).
**Cargo storage is in rear compartment, not accessible from inside the cabin.

>>>>>[Jackleg, a decker mate of mine, swears he got a peek into a military database that indicated some sort of experimental magic-related sensors are under development by the UCAS, among others (he thinks), but black IC wiped out his defenses before he could download anything.]<<<<<
—Red Baron (19:34:21/07-18-52)

>>>>>[Aztlan uses Mistrals for assault. They have all sorts of underwing hardpoints, and can carry a whole drekload of ordnance, chummeros, but a standard SAM turns them into a very pretty fireworks display.]<<<<<
—Crazy Juan (07:21:55/06-03-52)

LEAR-CESSNA PLATINUM I



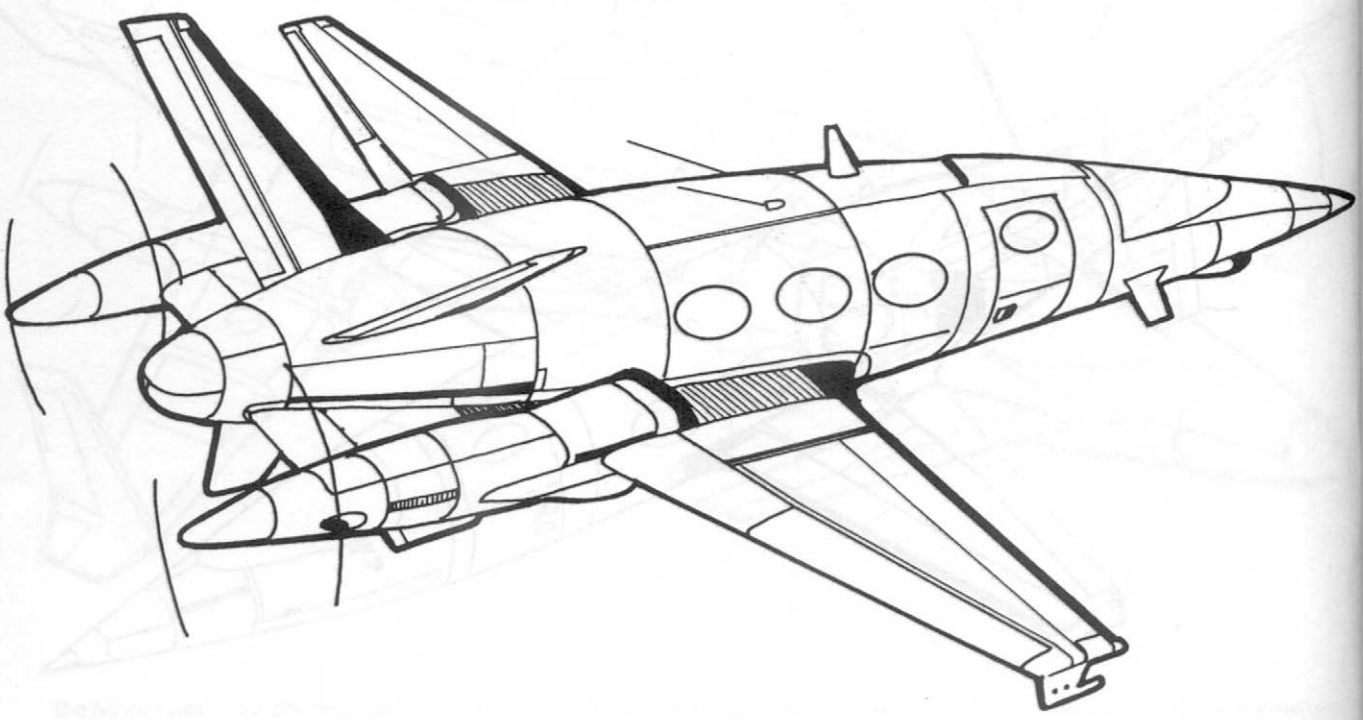
A sleek, super-luxury executive transport with a unique rear-mounted push-pull twin turboprop arrangement, STOL capability, a tricycle undercarriage, and complete navigational sensors that include satnav. The Luxury Executive variant provides a modest lounge with wet bar, satt-linked telecomm and entertainment system, lounge-style seating, and a mini-kitchen—just the ticket for the pampered executive.

	Handling	Speed	B/A	Sig	APilot	Cost
Platinum I	4	400/550	5/0	3	3	500,000¥

Seating: Twin bucket seats
Access: 2 standard*
Economy: 2 km per liter
Fuel: IC/500 liters
Cargo: 10 CF cargo**
Landing/Takeoff Profile: STOL
Options: The Luxury Executive variant features six luxury bucket seats and the standard facilities of the main cabin. The Standard Executive variant has nine reclining bucket seats in 2-aisle-1 seating. The Commuter variant has eighteen bucket seats in 2-aisle-1 seating. The Cargo variant has six folding benches and 10(+50) CF for cargo, 10(+60) CF if folding seats are removed.
*Standard emergency exits are provided: two up front in the cabin and four in the passenger compartment (two over the wing and two to the rear).
**Cargo compartment is not accessible from the interior of the aircraft.

>>>>>[A real nice aircraft, chummers, but way out of most freelance riggers' leagues. I've flown them on corp contracts once or twice, and they're real easy fliers, but STOL takeoff is definitely harder than it should be.]<<<<<
—Jetboy (01:08:41/07-17-52)

° LEAR-CESSNA PLATINUM II



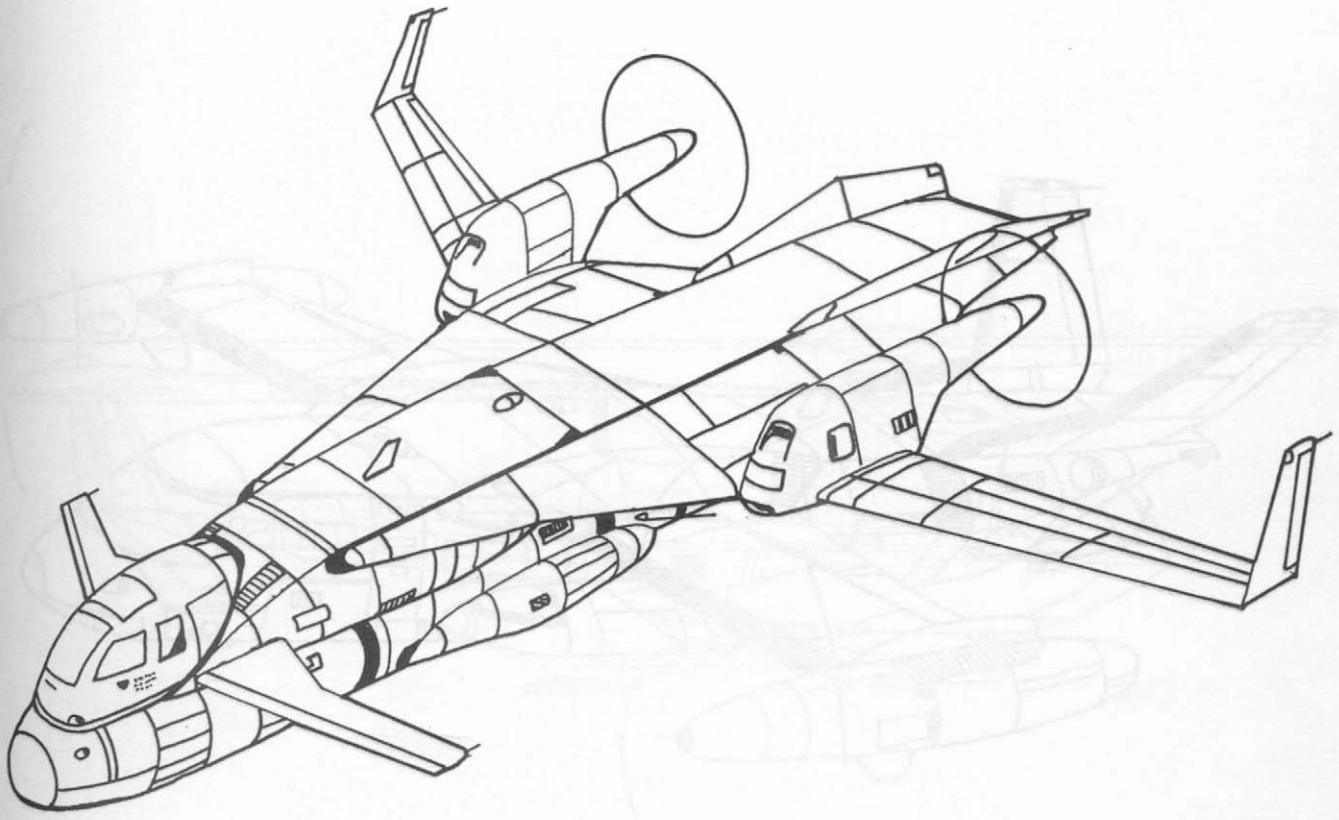
A progressive development of the basic Platinum I frame, internal layout is almost identical, but power is provided by twin rear-mounted turbofans that provide greater speed for the exec in a hurry.

	Handling	Speed	B/A	Sig	APilot	Cost
Platinum II	5	800/1600	5/1	3	4	1.5M¥

Seating: Twin bucket seats
Access: 2 standard*
Economy: 1.5 km per liter
Fuel: IC/750 liters
Cargo: 5 CF cargo**
Landing/Takeoff Profile: STOL
Options: The Luxury Executive variant has five luxury bucket seats and main cabin facilities identical to the Platinum I. The Standard Executive variant has nine reclining bucket seats in 2-aisle-1 seating. The Commuter variant has fifteen folding bucket seats in 2-aisle-1 seating. The Cargo variant has four folding benches and 5(+30) CF for cargo, 5(+40) if folding seats are removed.
*Standard emergency exits are provided: two up front in the cabin and four in the passenger compartment (two over the wing and two to the rear).
**Cargo bay cannot be accessed from cabin while in flight.

>>>>>[As you can see, they added cargo/passenger capacity at the expense of speed, but the rear-mount turbofans offer better protection against ground-installation IR sensors (such as those used with SAMs). I know of at least one third-party aerospace outfit that offers special engine shrouds that reduce signature even more.]<<<<<
—Red Baron (07:51:12/07-23-52)

HAWKER-SIDDLEY HS-895 SKYTRUCK



The 21st century's DC-3, the Skytruck is in worldwide use in both British- and license-built versions. Users include everyone from regional airlines to police, security, and paramilitary outfits, right through to service with several national armies including the CAS, elements of the Caribbean League, and California Free State. As a result, there is an almost unlimited number of variants available at point-of-sale, and it is easy to refit the basic airframe to almost any configuration an individual purchaser may desire at a later date. The basic airframe is a twin turboprop VSTOL, wing mounted, but with rear-facing pusher propellers, and a tailwheel undercarriage arrangement with the exceptions noted below.

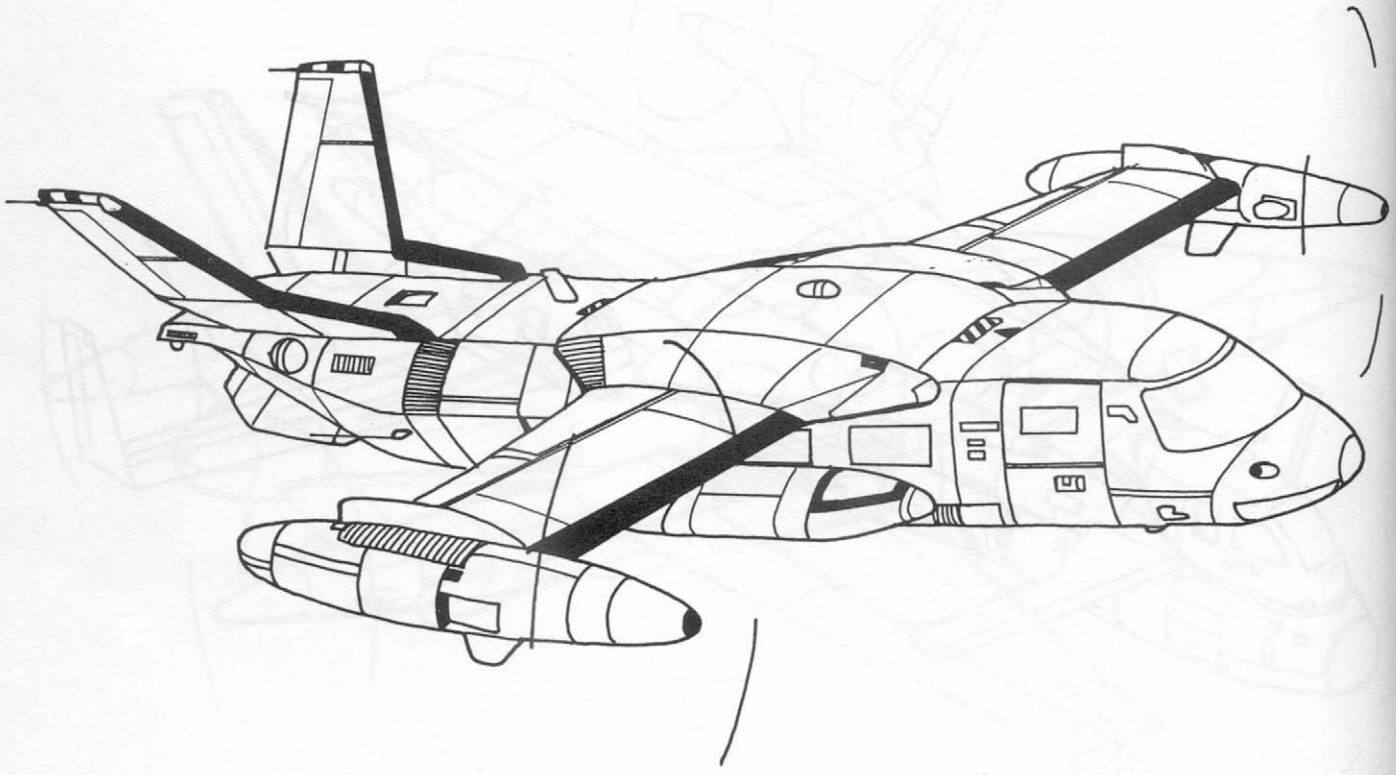
	Handling	Speed	B/A	Sig	APilot	Cost
H5-895	5	400/600	5/0	3	2	2.5M¥

Seating: Twin bucket seats
Access: 2 standard + 1 double-sized*
Economy: 2.5 km per liter
Fuel: IC/2,500 liters
Cargo: 5 CF cargo
Landing/Takeoff Profile: VSTOL
Options: The Standard model has 40 folding bench seats and 10(+60) CF cargo, 10(+100) CF if all benches are removed. The Commuter variant has 36 bucket seats in 2-aisle-2 seating plus an air-service station. The Cargo version has 10(+100) CF cargo capacity. The Amphibious variant, with underwing floats that must be removed in order to use the standard undercarriage, has an extra 10 CF cargo space in each float, but is not VSTOL capable. Cost +35,000¥.
*Standard emergency exits are provided: two up front in the cabin and six in the passenger/cargo compartment (two in front of, and two over, the wing, plus two in the rear).

>>>>>[Rough-field capability is damn good, making her a favorite in less-developed regions.]<<<<<
—Jetboy (21:23:34/07-21-52)

>>>>>[Some of the license-built versions use metric components, and so spares manufactured in Britain and North America are useless on the opposite continent. The Calcutta-built models are a real puzzle; they are a mix of metric and imperial components, and can only accept Calcutta-built spares!]<<<<<
—Pumper (07:51:31/07-23-52)

FEDERATED-BOEING COMMUTER 2050



The tilt-wing Commuter offers the VTOL capabilities of a standard chopper with the fuel efficiency of a conventional fixed-wing aircraft. This makes the 2050 model a favorite of city-airport shuttle services—and the considerable seating capacity makes it a profitable choice, too! Purchasers interested in the Security and Military variants should refer to the "F-B Commander" series for the militarized version of this aircraft.

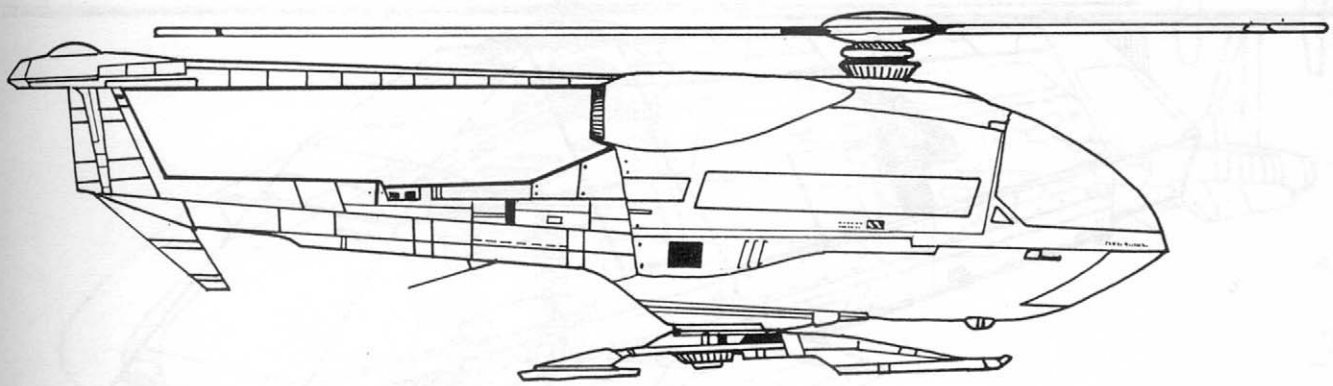
	Handling	Speed	B/A	Sig	APilot	Cost
Commuter	5	140/320	3/0	3	3	625,000¥

Seating: Twin bucket seats
Access: 1 + 1 standard
Economy: 2.5 km per liter*
Fuel: IC/750 liters
Storage: 10 CF storage + 30 CF cargo
Landing/Takeoff Profile: VTOL/STOL
Options: The Commuter variant has 15 bucket seats in a 2-aisle-1 layout. The Executive variant has six individual bucket seats. The Cargo variant has six folding benches and 10(+28) CF cargo, 10(+30) cargo if seats are removed.
*VTOL Economy 0.5 km/liter

>>>>>[She burns petrochem like water, but she does the job as advertised. The Commander variant has a slightly better autopilot and minimal armor protection, increasing the cost to 750,000¥.]<<<<<
—Red Thunder (14:32:53/04-03-52)

>>>>>[The Commander's set up for in-flight refueling to avoid the gas-guzzling takeoffs. Fuel consumption for a flight ending in a STOL landing is about 2.5 kloms per liter. With a VSTOL landing at the end, she's only gonna pull an average of one klick per liter, so plan ahead.]<<<<<
—Jetboy (03:21:47/05-29-52)

HUGHES WK-2 STALLION



The Stallion has achieved the single largest production run of any helicopter since it hit the market (as did the WK-1 in 2012), and is in licensed production worldwide. The 2050 model has been redesigned to embody the very latest technology, and represents the best available value for the money of all currently available medium choppers (after all, basic design costs were amortized years ago). A wide variety of internal layouts are available.

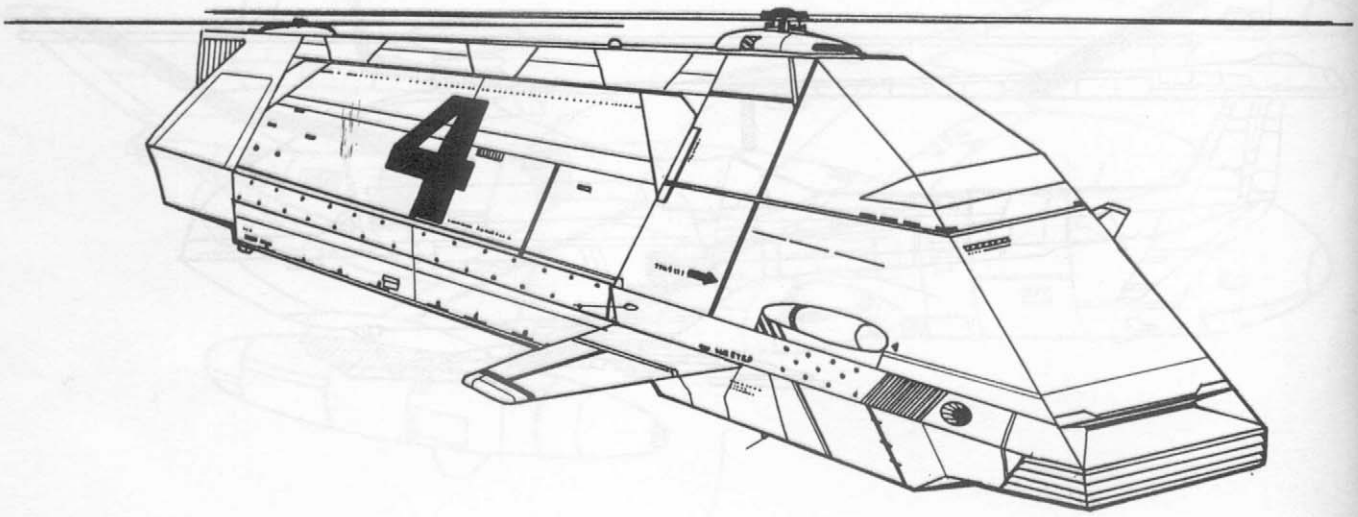
	Handling	Speed	B/A	Sig	APilot	Cost
Stallion	5	170/250	4/0	4	3	300,000¥

Seating: Twin bucket seats **Access:** 2 standard + 1 double-sized
Economy: 0.25 km per liter **Fuel:** IC/1,250 liters
Cargo: 10 CF storage*
Options: The Commuter model has twelve bucket seats in a 2-aisle-2 layout. The Executive model has six bucket seats. The Cargo model has six folding benches and 10(+18) CF cargo, 10(+30) CF cargo with seats removed. Military variant has the same layout as the Cargo model, but with B/A 5/1.
*All models may carry up to 150 CF of cargo underslung beneath the fuselage, but Economy drops to 0.1 km/liter.

>>>>>[The structure is so common that maintenance is much simpler than usual, and spares are readily available almost anywhere.]<<<<<
—Pumper (17:51:32/06-12-52)

>>>>>[No need to militarize this baby. Just hang a couple of MGs in the rear cabin door and she's ready to rock 'n' roll!]<<<<<
—Zombie (18:31:41/08-18-52)

ARES "DRAGON" ROTORCRAFT



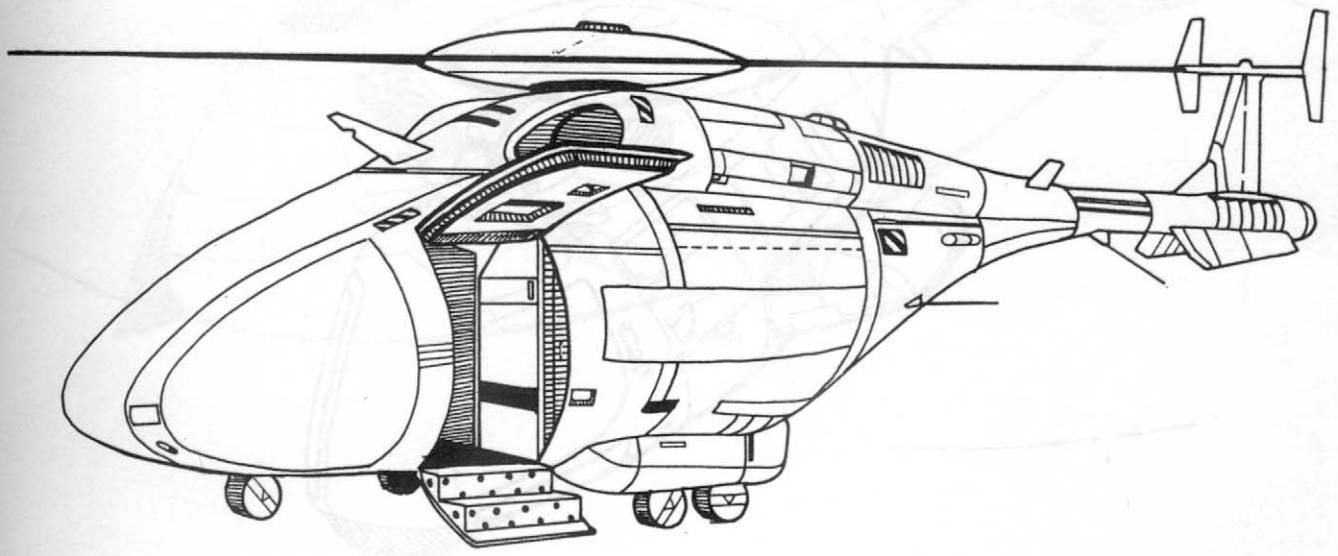
Based on the classic Sikorsky-Kamov Roc that first appeared in 2018, the Dragon is a greatly improved and updated model, one of the best things to result from the collapse of the Sikorsky-Kamov corp in 2029. The Dragon's popularity can be directly attributed to the fact that the design has held, unchallenged, the world load-carrying record for helicopters since 2019, and to a continuing need for heavy-lift VTOL craft that has, if anything, become greater in recent years. Its versatility, including the capability of attaching standard seven-meter cargo containers to its lifting bay and its capacity for a wide variety of configurations, must also account, at least in part, for the Dragon's continuing high sales.

	Handling	Speed	B/A	Sig	APilot	Cost
Dragon	5/7	140/320	6/0	3	3	600,000¥

Seating: Twin + single bucket seats* **Access:** 2 + 1 standard
Economy: 0.2 km per liter **Fuel:** IC/4,500 liters
Cargo: 5 CF storage + 100 CF cargo
Options: Standard interior layouts for the seven-meter cargo module (1,000 CF) include the Commuter variant which features bucket seating for 40 (2-aisle-2 layout). It has two standard side doors plus a rear access. The Executive variant has luxury bucket seating for ten, a complete lounge, communications center, and full fresher/toilet facilities.
*The Dragon's cabin is small, with just enough room to house a pilot and copilot facing forward and a loadmaster facing rearward. The rest of the body is simply a spine leading to the rear rotor and running above the open cargo bay.

>>>>>[If you wanna start a long conversation among techno-geeks, ask them to name every Dragon load-out variant they know. They'll be busy for a while.]<<<<<
—Zephyre (20:14:09/03-13-52)

HUGHES AEROSPACE AIRSTAR 2050



The Airstar is *the* medium chopper for the executive or luxury commuter, combining the convenience of VTOL site-access with a standard of accommodations usually found aboard only the most expensive luxury aircraft. The design also gave soundproofing high priority.

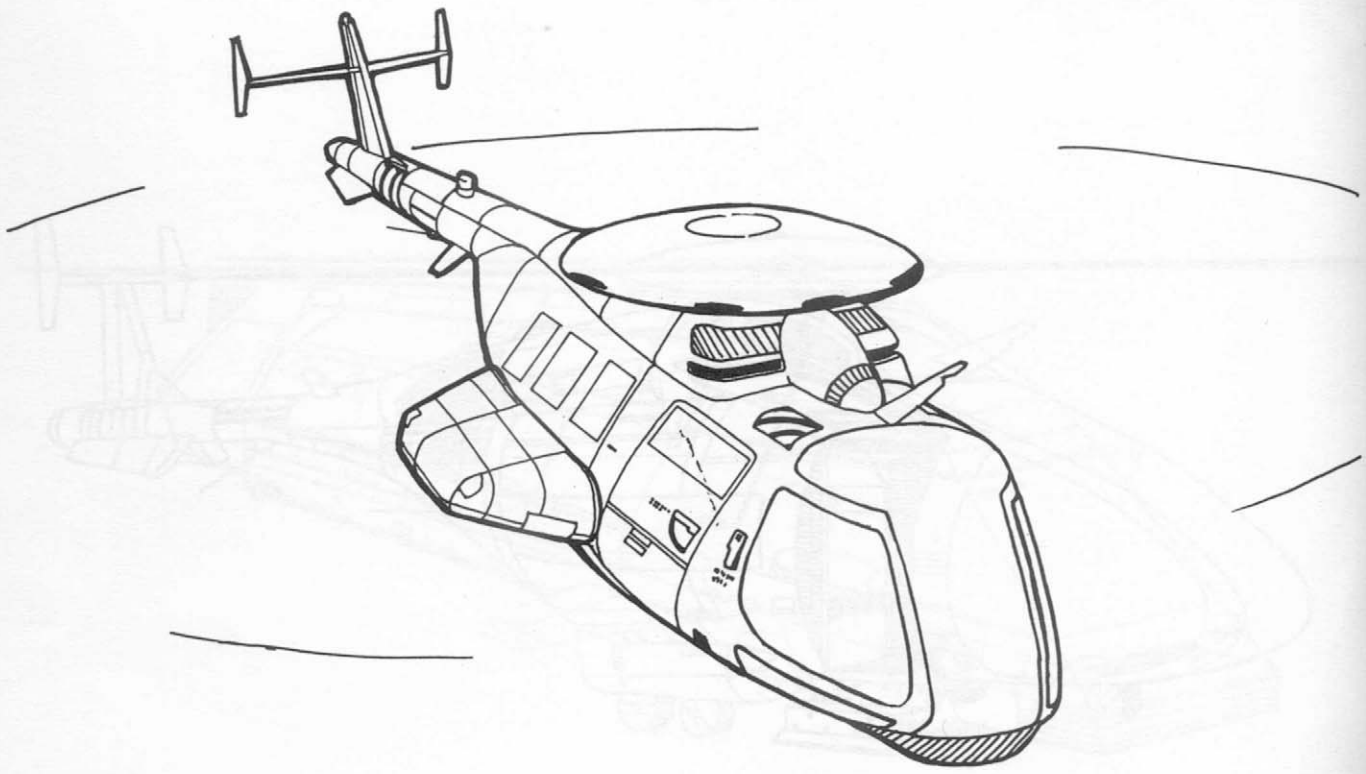
	Handling	Speed	B/A	Sig	APilot	Cost
Airstar	4	190/260	4/2	3	4	900,000¥

Seating: Twin bucket seats
Access: 2 + 2 standard + 1 double-sized
Economy: 2.5 km per liter
Fuel: IC/4,500 liters
Cargo: 10 CF storage
Options: The Executive layout has nine bucket seats. The Super Luxury layout features five luxury bucket seats in a lounge-style arrangement, fresher/toilet facilities, and a full communications suite.

>>>>>[Lone Star Security uses these extensively in their Executive Protection operations, but don't think they're easy prey, chummers, because they're all armed. Some are even Q-modified, making them the next best thing to camouflaged gunships!]<<<<<
—Nightmare (21:13:12/01-12-52)

>>>>>[You ain't half right, chummer. I ran into one the other day that was carrying—as far as I could tell while I was hightailing it outtathere—a mix of Vindicator miniguns, some sorta HMG, and missile launchers. Until the moment she tripped our ambush, she looked just like a standard Airstar. This is real Trojan Horse stuff.]<<<<<
—Red Rover (03:12:15/08-29-52)

AGUSTA-CIERVA "PLUTOCRAT" ROTORCRAFT



The Plutocrat is a purpose-designed luxury transport chopper out to beat the competition. How? Simply by offering the most expensive luxury interiors, including real leather upholstery and real wood paneling throughout, combining it with the finest onboard facilities, including satcomm uplink, full comm suite, and satnav, and putting it all in a package for which speed is a byword. For those situations where security means carrying a big stick, the Plutocrat offers a chin-turret-equipped version available at nominal extra cost.

	Handling	Speed	B/A	Sig	APilot	Cost
Plutocraft	4	200/450	4/1	4	4	950,000¥

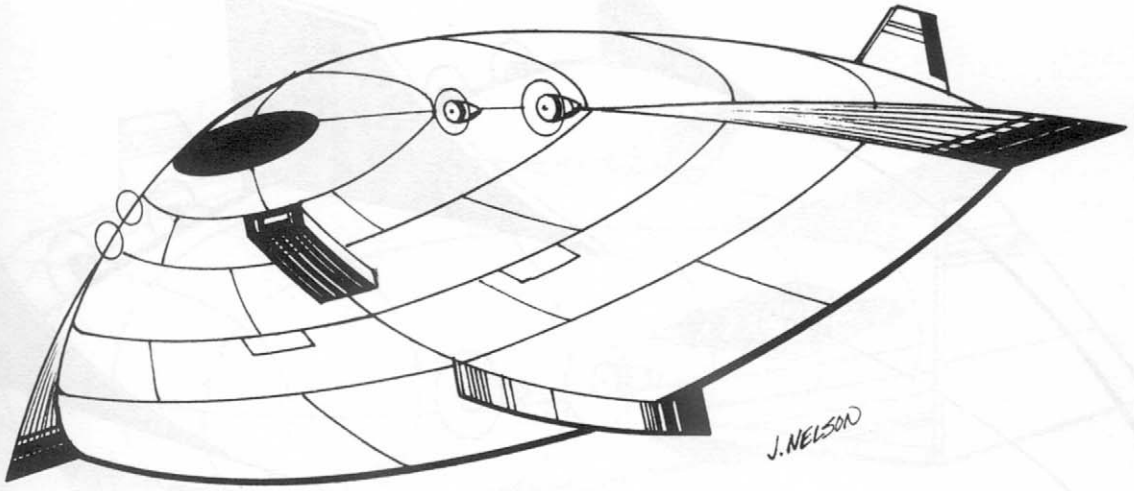
Seating: Twin bucket seats + 6 bench **Access:** 2 + 2 standard
Economy: 1.5 km per liter **Fuel:** IC/1,000 liters
Cargo: 15 CF storage
Options: The armed variant has a chin turret offering a 270° firing arc to front and sides with one hardpoint and one firmpoint available for weapons. Speed 180/400, Armor 2, Cost 1.25M¥.

>>>>>[One honey of a chopper, chummers. Of course, the armed variant is overpriced, but only corp execs would be stupid enough to buy it.]<<<<<
—Whirlybird Warrior (18:31:51/08-12-52)

>>>>>[Yeah, and the speed reduction is unnecessary. Agusta-Cierva simply added the turret in the least aerodynamic manner possible. Yer right, chummer, whatinthehell would corp types know about it!]<<<<<
—Zero-Zero (14:56:13/08-13-52)

>>>>>[Wa'al, chummeros, some of us do know where it's at. Here at Sea-Tac Custom Aerospace we know the A-C front to back, and our weapon upgrades don't cost an arm and a leg. They don't degrade performance noticeably, either!]<<<<<
—Vector Niner Bravo (17:32:15/08-17-52)

LUFTSCHIFFBAU ZEPPELIN LZ-2049



The LZ-2049 is the latest SHAPELY (SHaped Airfoil Positive Enhanced Lift) airship by the famous Zeppelinwerke. Designed for the low-end commercial user, but not at the expense of quality, the LZ-2049 uses the now-standard triangular lifting-body airfoil with the control section and passenger/cargo deck built into the wing. The airframe is of standard reinforced carbon-fiber composites, and the external surfaces are coated with alloy plates where extra strength is required. Wingspan is 65 meters, and length is 26 meters from nose to tail, 24 meters from forward wingtip to tail. The advantage of inherent, unpowered, nonflammable lift is a major selling point for any dirigible, and no one does it better than the acknowledged masters in the field, Zeppelinwerke!

	Handling	Speed	B/A	Sig	APilot	Cost
LZ-2049	3	100/250	12/2	8	2	750,000¥

Seating: 2 + 2 bench
Access: 1 + 2 standard + 1 double-sized
Economy: 5 km per liter
Fuel: IC/2,500 liters
Cargo: 200 CF*

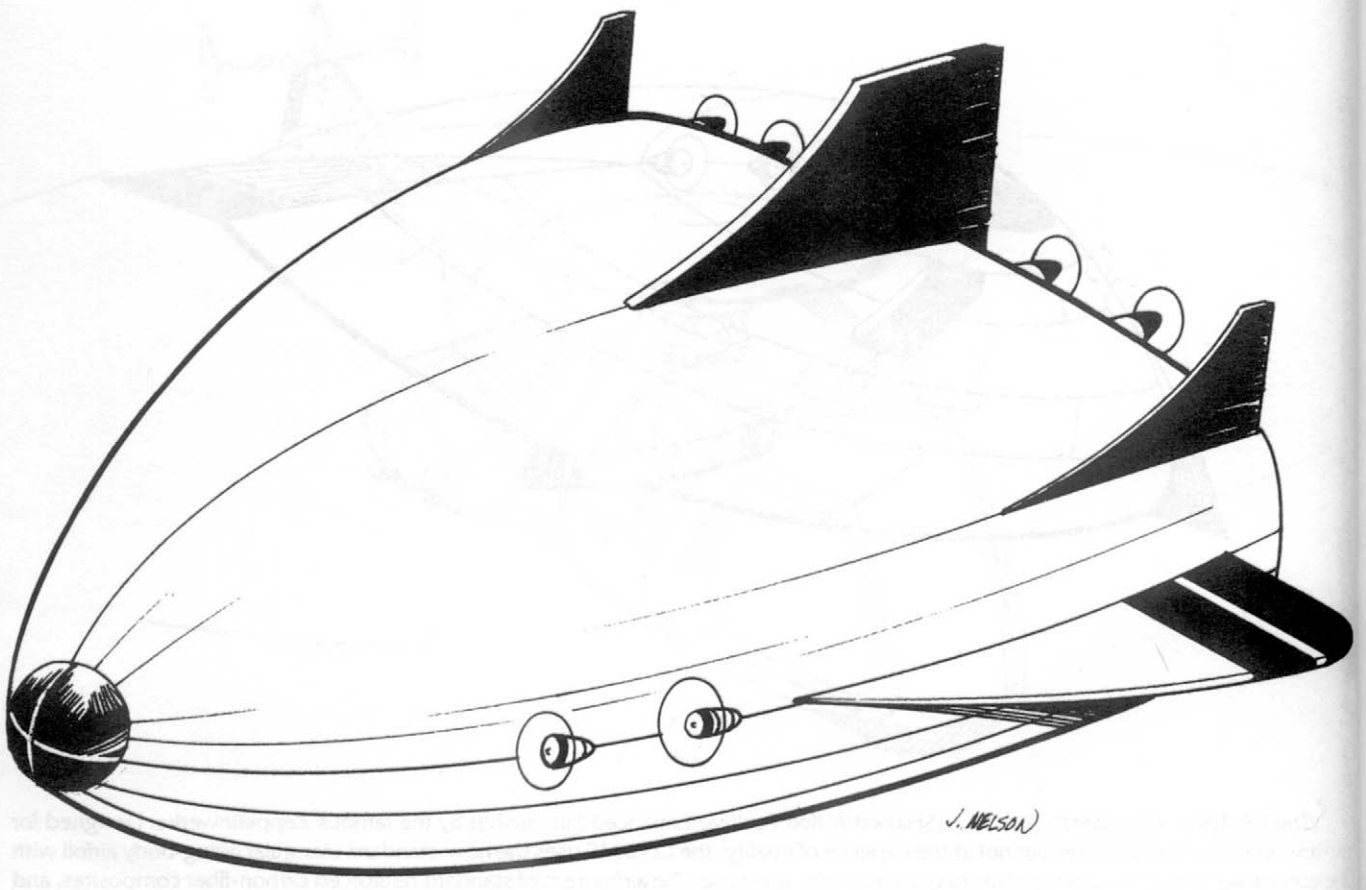
Options: Passenger modules are specially fitted-out seven-meter containers. Each has bucket seats for 32 (10 rows of 2-aisle-1, 1 row of 2-aisle-entry) plus a toilet and a flight attendant's station. Access is dual standard plus one rear door, which mates each module to the other through the rear door, and to the outside by the side doors and one door at the rear. Cost 50,000¥ each. Assault modules are special double-width seven-meter containers (the equivalent of two side-by-side units) that may be outfitted for 80 troops, used for cargo, as a command post, for communications, as an aid station, or even to transport vehicles (or vehicles + cargo + troops). Vehicles require one hundred times their Body Rating in cargo space in such a module. Cost is 150 percent of a single standard seven-meter container for each basic troop/cargo unit. The cost for special-purpose modules varies greatly.

*The cargo bay has 200 CF capacity, enough to hold two seven-meter standard containers (1,000 CF internal space each). A single fifteen-meter standard container may also be carried as an external (slung) load.

>>>>>[A great idea, chummlichen. Works like a chopper in all the important ways, but fuel consumption's much better. In fact, with a following wind, it's one-quarter normal!]<<<<<
—Fliegende Bayerische (15:12:34/07-21-52)

>>>>>[Zeppelinwerke has a well-deserved reputation for quality and performance, and is the model to buy over the competition. But remember, you're paying through the nose for it, chummers.]<<<<<
—Red Thunder (09:57:12/07-29-52)

GOODYEAR COMMUTER-47 LTA



A small SHAPELY lighter-than-air (LTA) craft designed mainly for personal use or as an executive transport. The Commuter-47 uses the now-standard triangular lifting-body airfoil shape, but, unlike the LZ-2049, the flight deck and passenger facilities are enclosed completely within the 25-by-10-meter airframe. The control cabin is in the nose, enclosed in a special glassed-in skin to provide good forward, upper, and lower vision.

	Handling	Speed	B/A	Sig	APilot	Cost
Commuter-47	3	150/300	8/1	8	2	225,000¥

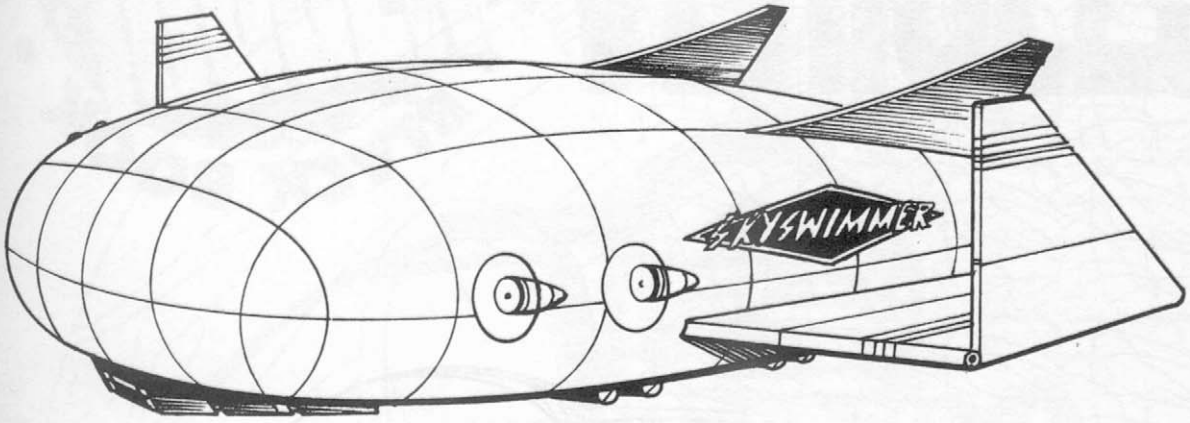
Seating: 2 + 1 bench **Access:** 1 + 2 standard
Economy: 8 km per liter **Fuel:** IC/625 liters
Cargo: 75 CF*

*Passenger bay has 50 CF capacity, usually configured with six individual bucket seats, toilet/fresher, and communications suite, though other arrangements are available. Cargo bay has an internal 25 CF capacity.

>>>>>[Be careful with this one, jokers. I nearly crashed 'n' burned with one. She'd only taken about 50 percent damage when the left engine jus' fell off—no warnin' or nuthin'. I think the drekheads must've skimped on structural supports.]<<<<<
—Elfbasher (05:42:21/08-12-52)

>>>>>[Be careful, because visual evidence of structural damage in these critters is hard to judge. It may look all clean and pretty, but who knows what could have slipped through the skin and tagged a link-beam?]<<<<<
—Pumper (19:34:51/08-17-52)

AIRSHIP INDUSTRIES SKYSWIMMER



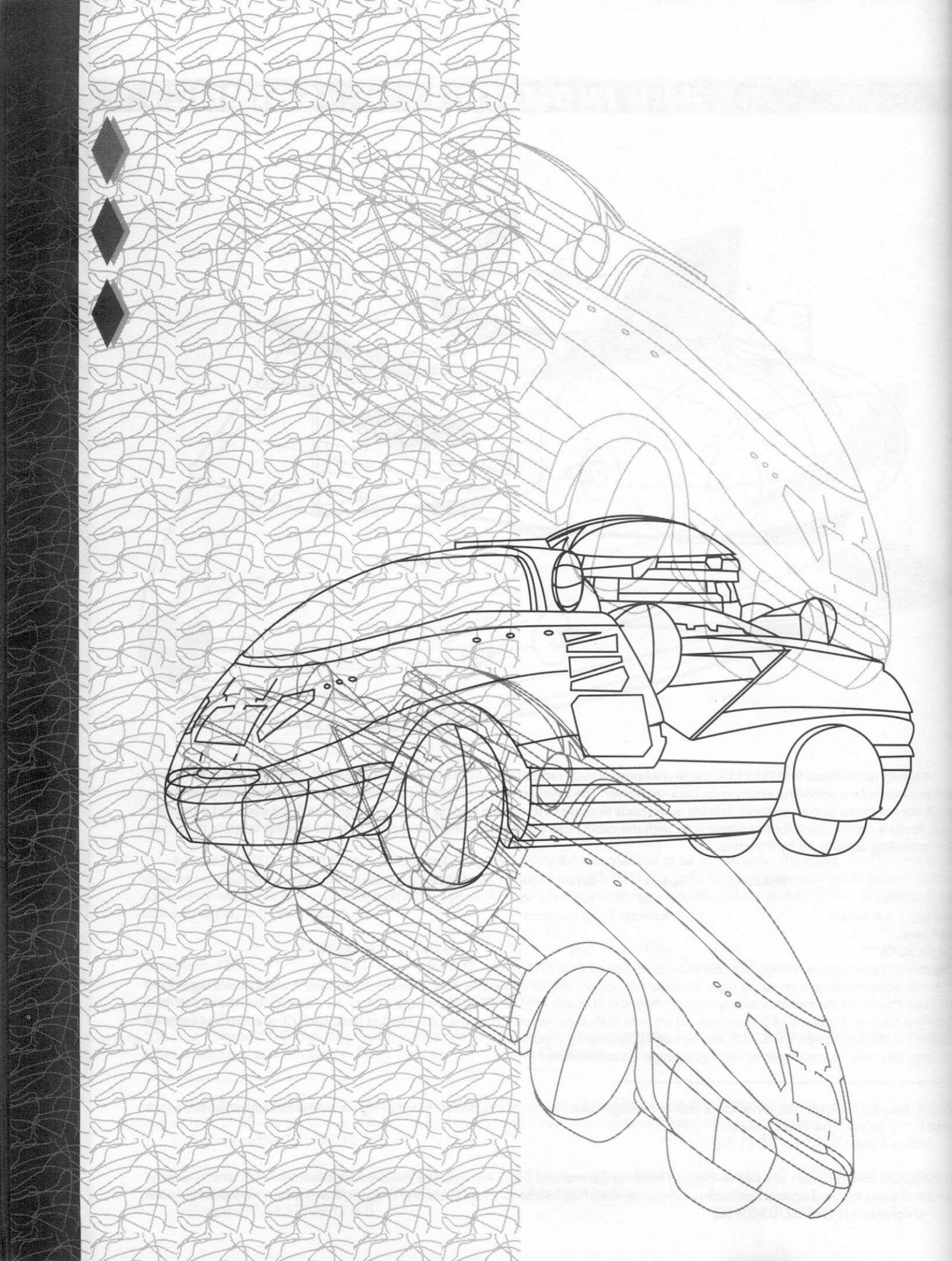
A purely recreational SHAPELY LTA, the Skyswimmer's main propulsion is from solar-electric powered, gimbaled and ducted fans, with mini-turbofans providing emergency back-up power. The Skyswimmer is capable of unlimited flying time, weather permitting, and is not restricted to conventional airfields or helipads because of its unique folding wingtip design. The flight deck and passenger cabin forms a central spine for the whole unit, with the cabin nose projecting some two meters past the leading edge of the airfoil. Size excluding airfoil is 18 by 7 meters.

	Handling	Speed	B/A	Sig	APilot	Cost
Skyswimmer	3	90/180*	6/1	8	2	100,000¥

Seating: 2 + 4 bench **Access:** 2 + 2 standard
Economy: **
Cargo: 30 CF***
*Electric: turbofans alone, Speed 60/120; dual drive, Speed 110/220.
**Electric Economy is zero on sunny days, because the upper surfaces of the LTA are covered with SunCell™ units, providing 360 PF per hour. Power for the electric drive runs direct from the SunCells or from a 200 PF storage battery, as desired, at a rate of 1 PF/km. Turbofans have an Economy of 10 km/liter, 20 km/liter in dual-power mode, and a 125-liter fuel tank. Each CF of additional cargo or equipment reduces Speed by -5/-15, and reduces Economy by 2 percent.
***Cargo bay may be converted to extra passenger accommodation.

>>>>>[Great for the high-tech surveillance jock or the high-value, low-bulk free trader. Minimal signature and virtually unlimited range make it a must-buy, chummers.]<<<<<
—Blue Angel (21:13:43/05-21-52)

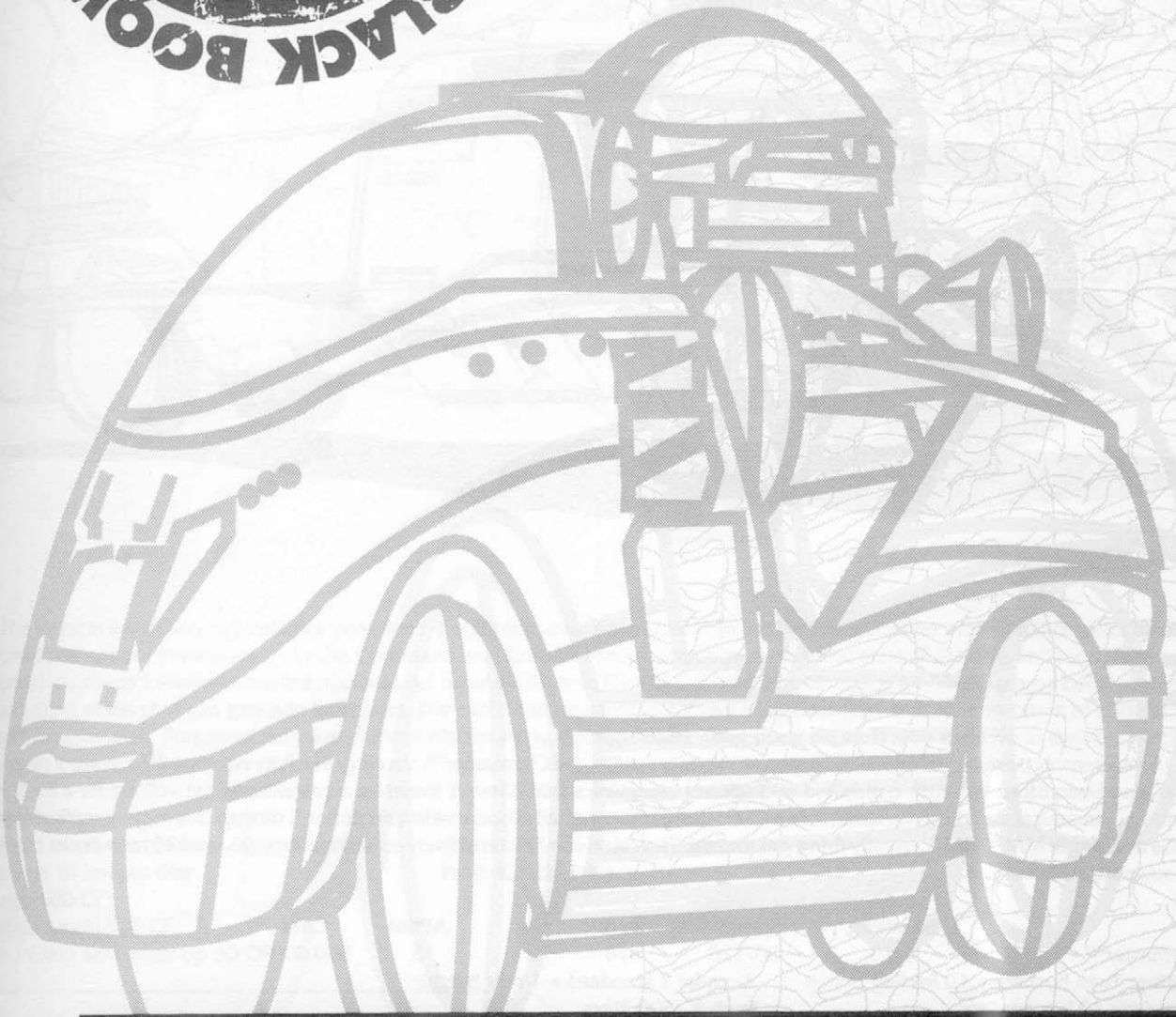
>>>>>[Unconfirmed rumors say that Awakened forces in Central and South America use modified Skyswimmers with sensors and/or armament suites to guard against free traders. Of course, since they're also rumored to use real dragons, this may be a moot point!]<<<<<
—Nightmare (11:48:32/05-29-52)



BLACK BOOK • BLACK BOOK • BLACK BOOK

RIGGER

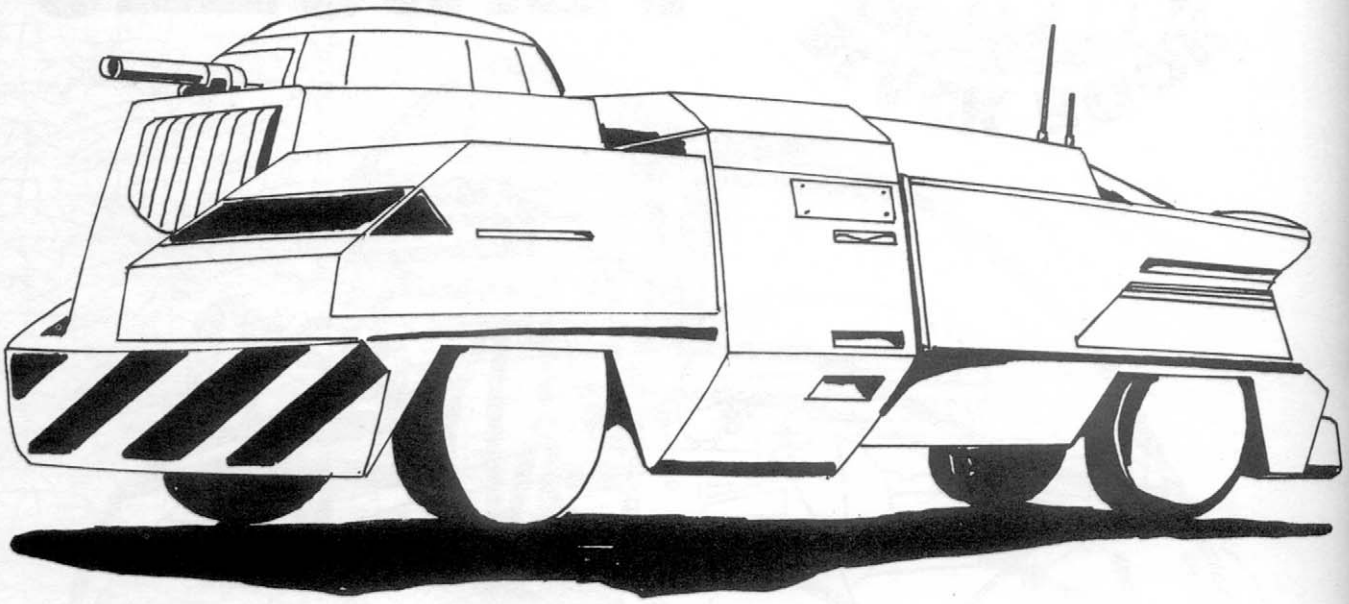
SECURITY VEHICLES



>>>>>[Many corp or government security forces use civilian vehicles specially modified to fill their particular requirements. However, because these modifications are as numerous as the organizations who order them, we will not deal with specially modified vehicles here, only purpose-built security vehicles.]<<<<<

—Nightmare & Wheelie (16:21:1/07-29-52)

CITYMASTER™ URBAN SECURITY VEHICLE



An extremely popular vehicle with corporate security outfits, the Citymaster™ can carry five fully equipped riot control personnel. It has also been fitted out with command and control electronics that allow it to act as a command post vehicle for a five-person command/technical staff. Both variants have a micro-turret that normally mounts a watercannon*, though this may be replaced by twin LMGs or a single MMG/HMG, usually firing gel rounds. The cabin can be completely sealed against gas, and 20 man-hours of internal life-support are provided.

	Handling	Speed	B/A	Sig	APilot	Cost
Citymaster™	4/10	30/120	4/4	2	3	500,000¥

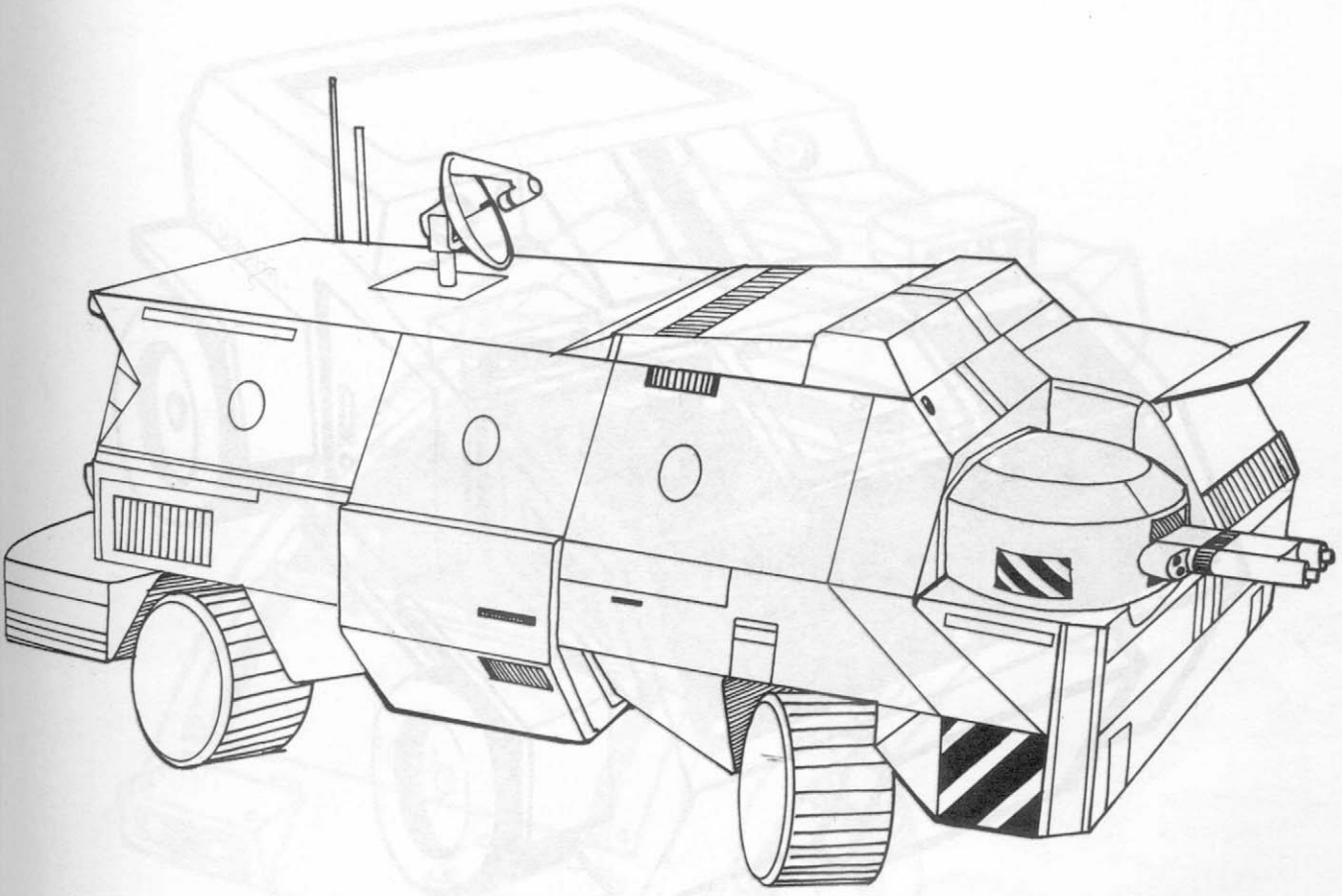
Seating: Twin buckets + 10 folding bench **Access:** 2 standard + 1 rear hatch
Economy: 10 km per liter **Fuel:** IC/500 liters
Storage: 500 CF**
Standard Load: 500 CF

*Watercannon has internal access to 20 Combat Turns of water. Fifty meters of hose and all required couplers are provided to allow hookup to an external water supply. A character must make a successful Strength (6) Test to remain standing when hit, but suffers no damage.

**Each folding seat takes up 50 CF of cargo.

>>>>>[Real popular with corpcops of all shades, chummers. Some merc outfits use it for rear security work, or even as a command APC if they're strapped for the real thing.]<<<<<
—Nightmare (12:54:12/05-15-52)

MOBMASTER™ RIOT CONTROL VEHICLE



The latest in urban security vehicles from Ares, the Mobmaster™ is available in the Personnel Carrier model, which seats ten fully equipped riot-control personnel, or in the Command and Control model, which seats five riot control and five technical/command personnel. Its single forward-mounted micro-turret comes with twin FN-MAG 5 MMGs (with space for 50x50 ammo belts), and twin forward-firing triple-shot gas grenade launchers. The cabin can be completely sealed against gas, and 30 man-hours of internal life-support are provided. Personnel may fire without dismounting through three firing ports on each side and two in the rear hatch.

	Handling	Speed	B/A	Sig	APilot	Cost
Mobmaster™	4/10	30/120	5/5	2	5	3.65M¥

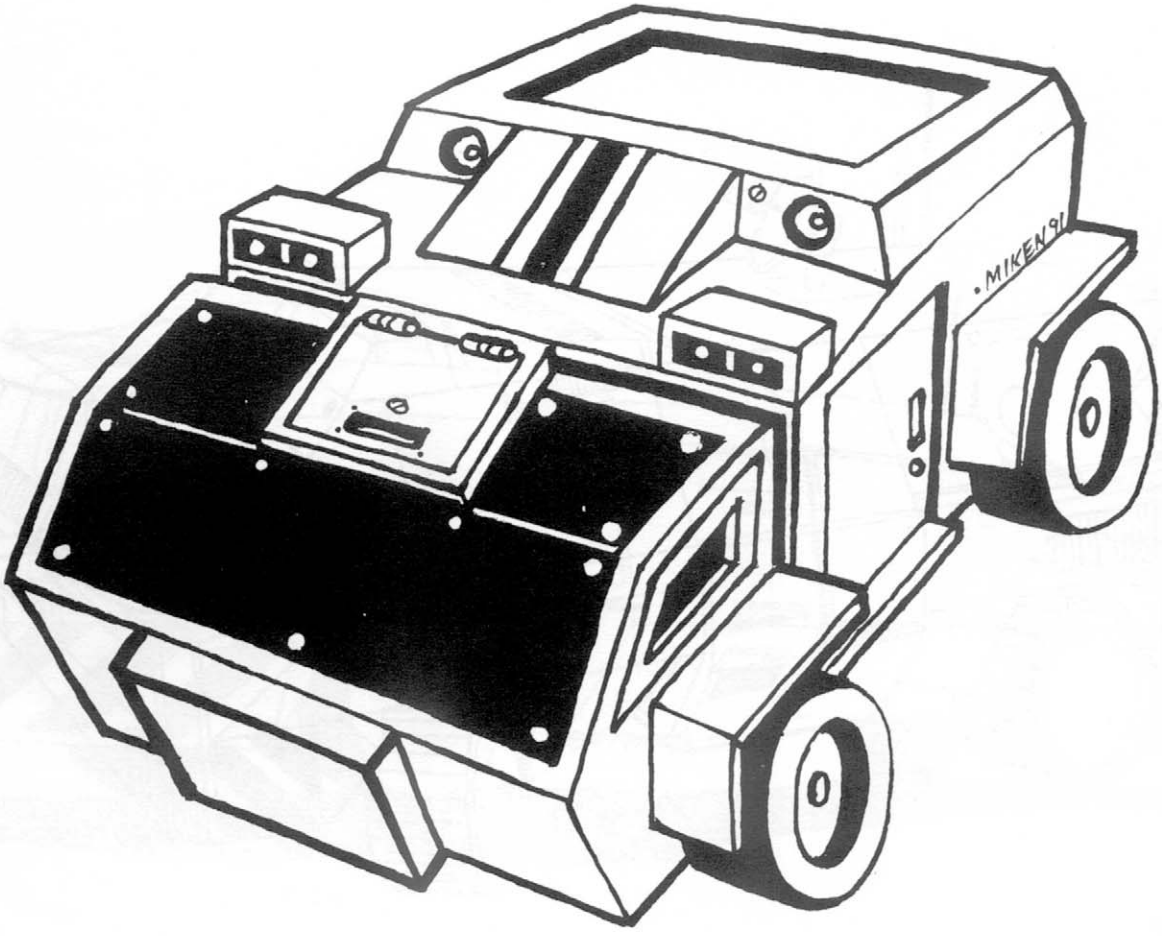
Seating: Twin bucket seats + 10 folding bench **Access:** 2 standard + 1 rear hatch
Economy: 10 km per liter **Fuel:** IC/500 liters
Storage: 500 CF*
Standard Load: 500 CF
*Each folding seat takes up 50 CF.

>>>>>[Great Spirit! Have you seen the pricing on the "optional extras"? They're way over the top! Passive thermal masking for 85K¥—my tech, Pumper, can do it for 37.5K¥, state and federal taxes included, chummers! And that pricing structure is the norm!]<<<<<
—Iron Lord (08:01:56/06-13-52)

>>>>>[And what've they done to the basic chassis that adds 3.15M¥ to the price? Added a little armor, toughened up the chassis a little—gee, I wish I could get that sort of money for that amount of work.]<<<<<
—Pumper (23:45:28/06-15-52)

>>>>>[Yer both missin' the point, chum-pals. Lookit the autopilot rating. She's a milspec job. This'ere's no ordinary riot control vehicle, she's military through 'n' through. Ever wonder why the Seattle Metroplex Guard uses 'em?]<<<<<
—Sarge (17:51:56/07-21-52)

CHRYSLER-NISSAN PATROL-ONE



The Patrol-One is the most popular of the current range of urban security and patrol vehicles. Standard features include a completely separate driver/passenger front section and a rear compartment with doors lockable from the front, a reinforced chassis with integral light armor, full urban-range comm gear, EnviroSeal™, lightbar with siren, and runflat tires. The trunk has a reinforced lock and is designed to hold assorted riot and specialist gear securely.

	Handling	Speed	B/A	Sig	APilot	Cost
Patrol-One	4/8	60/180	3/2	4	3	100,000¥

Seating: Twin bucket seats + 3 bench
Access: 2 + 2 standard
Economy: 30 km per liter
Fuel: IC/45 liters
Storage: 2 CF storage + 9 CF trunk
Options: While firmpoints and hardpoints are not standard, the front compartment has one firing port sealed against gas installed in each side window that will accept standard service pistols, submachine guns, shotguns, and rifles, providing a 135-degree arc of fire.

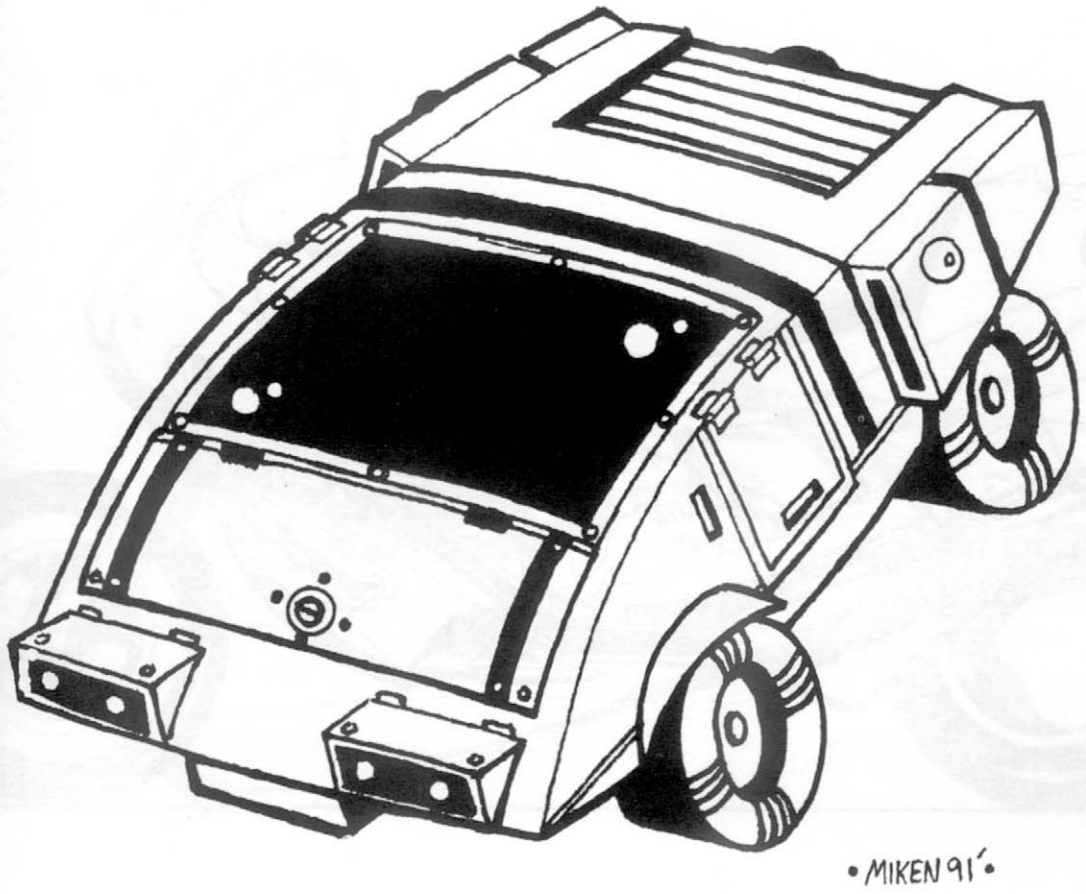
>>>>>[This is the plain vanilla cop car, chummers, but never assume that all's what it seems! Lone Star Security uses Patrol-Ones in the Sea-Tac area, and almost a quarter of them have souped-up engines. A small number (maybe as many as 10 percent) mount concealed pop-up turrets. So, be careful out there!]<<<<<

—Wheelie (17:41:33/05-12-52)

>>>>>[Don't believe that drek about the firing ports being sealed against gas. If you insert a weapon into a gas-filled area, some of that gas is going to get into where you are. Depending on the gas, this can get real nasty. If the weapon is already seated, then it's okay, chummers.]<<<<<

—County Mountie (01:23:31/07-15-52)

GENERAL PRODUCTS COP



The City Operations Patroller (COP) is built with the beat cop in mind, providing safe, secure transport to and from patrol areas without the hassle and expense of a full-size patrol car. Efficiency is further enhanced by the installation of the GridLink™ system to supplement internal battery power. The small trunk provides secure storage for heavy weapons and other equipment standard foot patrols require only occasionally.

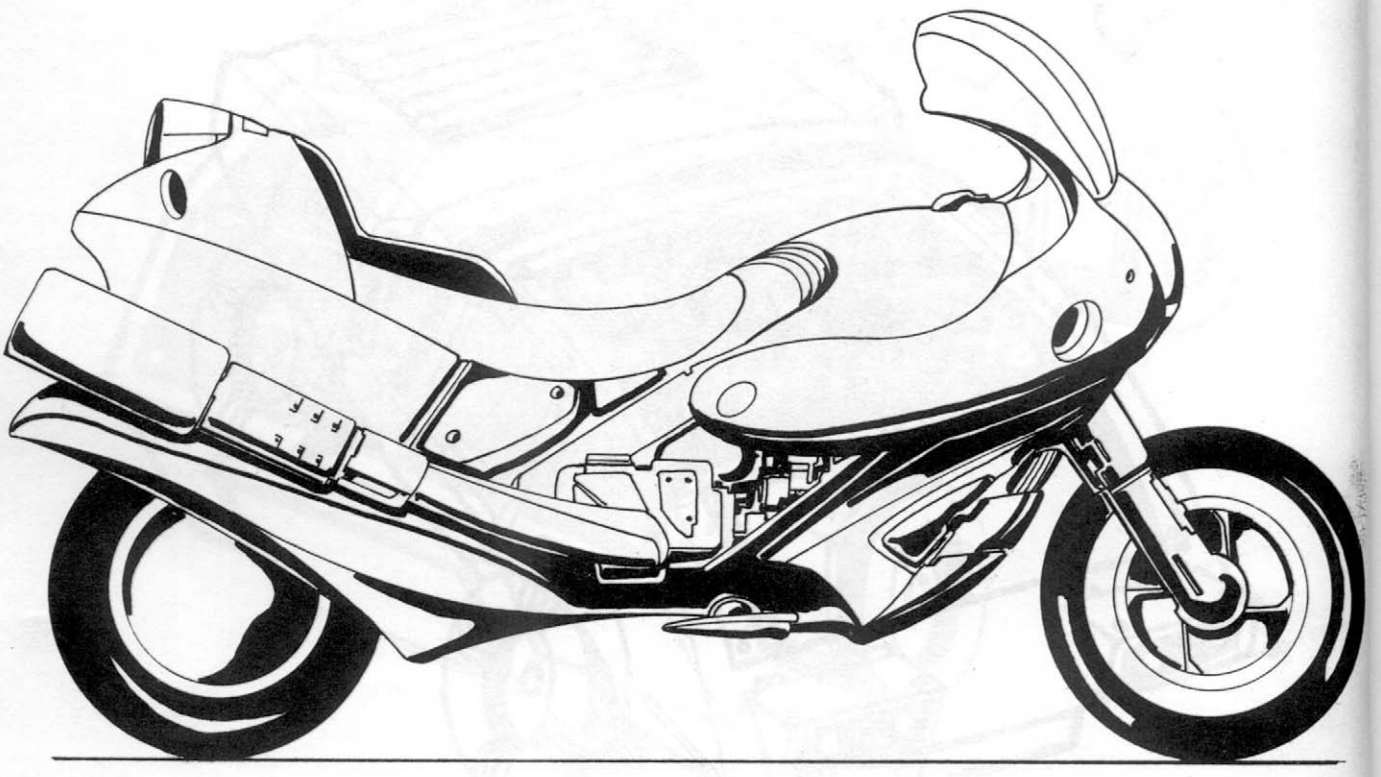
	Handling	Speed	B/A	Sig	APilot	Cost
COP	4/9	30/90	1/1	4	1	25,000¥

Seating: 1 + 1 single bucket seats
Access: 1 canopy
Economy: 1 PF per km
Power: Elec/200 PF
Storage: 2 CF storage

>>>>>[Grossly overpriced, chummers, but, hey, no one's reading this to actually buy one, eh?]<<<<<
—Roadrunner (05:22:21/06-09-52)

>>>>>[Right. Just sizing up the opposition!]<<<<<
—Shoot 'n' Scoot (22:18:46/08-12-52)

HARLEY ELECTRAGLIDE-1000 PATROL CYCLE



The ultimate police cycle from the name you trust. Not only is this the fastest police cycle on the road, it features runflat tires and off-road suspension for nonstandard pursuits, as well. For those occasions when an officer needs to be more heavily armed, the Electraglide-1000 provides, as standard, two forward and one rearward firmpoint*. A standard urban comm suite, light standard, and siren are also standard equipment.

	Handling	Speed	B/A	Sig	APilot	Cost
Electraglide-1000	3/4	95/285	3/2	2	1	75,000¥

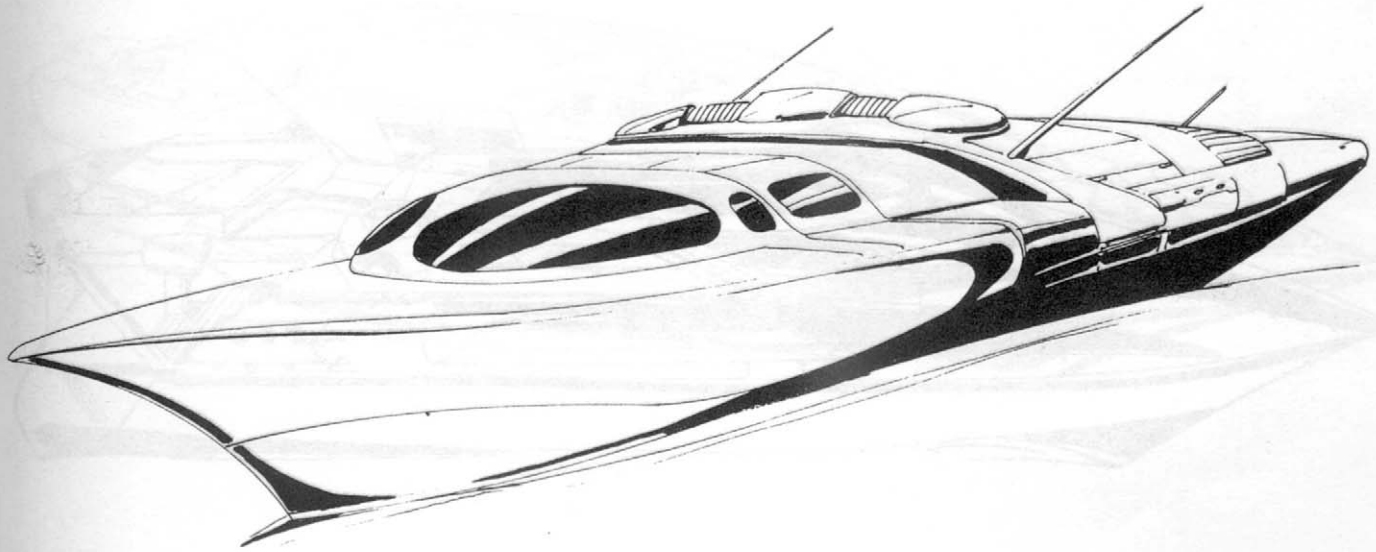
Seating: 1 + 1
Economy: 50 km per liter **Fuel:** IC/45 liters
*Each firmpoint provides 1 CF of dedicated ammo storage.

>>>>>[Dr-e-e-e-k! I surely wouldn't wanna come up against one of these mothers!]<<<<<
—Cylinder Head (12:43:21/02-09-52)

>>>>>[You kidding, chummer? Or are ya just a wannabee? Gimme my Blitzen 2050 and I'll scrag one of these scuzzy bikes anytime ya want!]<<<<<
—Death's Head (16:54:02/02-11-52)

>>>>>[Well, maybe, but the E-1000 has *no* handling problems at top speed. You gotta get something for the extra 50K¥ you're paying!]<<<<<
—Pumper (05:32:54/03-12-52)

SURFSTAR MARINE SEACOP (5M)



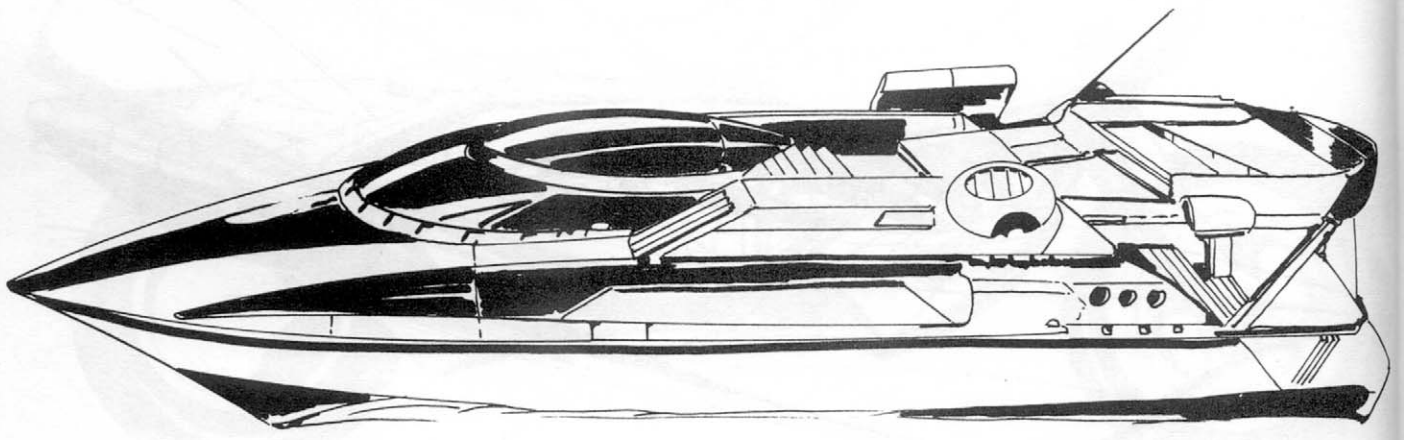
A general-purpose patrol craft designed as the riverine and harbor equivalent of the land-based Chrysler-Nissan Patrol-One, this five-meter craft is popular round the world with maritime security operations for that simple reason! The Seacop has a completely enclosed cabin with seating identical to the Patrol-One, but includes a cargo bay to the front of the crew section that is accessible both from the inside and outside, with completely separate front and rear passenger areas. A lightbar, siren, external remotely controlled white-light spotlight, and communications suite make up the remainder of the standard equipment.

	Handling	Speed	B/A	Sig	APilot	Cost
Seacop	3	30/90	3/2	3	2	50,000¥

Seating: Single bucket seat + 3 bench **Access:** 2 gullwing + 2 standard
Economy: 25 km per liter **Fuel:** IC/100 liters
Cargo: 10 CF cargo
Options: Two forward-firing firmpoints are provided, accessible from the cabin interior only.

>>>>>[The only sensors on this baby are Eyeball Mk.1. Even the spotlight doesn't really give her night capability. Speed's okay—a Cigarette can outrun her with the foils down, but there's damn few Cigarettes around.]<<<<<
—AquaCop (01:15:41/08-21-52)

GMC RIVERINE



The twelve-meter patrol boat provided to the Seattle Metroplex Guard by GMC is now available for approved corporate or security purchasers. The Riverine's edge over the competition consists of water-jet impellers so finely tuned that it can run over wet grass, and a fully enclosed and environmentally sealed cabin. In addition, several special-purpose configurations of the basic hull are available, including Police, Security, and Assault options. GMC is the one to beat in marine military technology!

	Handling	Speed	B/A	Sig	APilot	Cost
Riverine	3	30/90	4/2	3	2	125,000¥

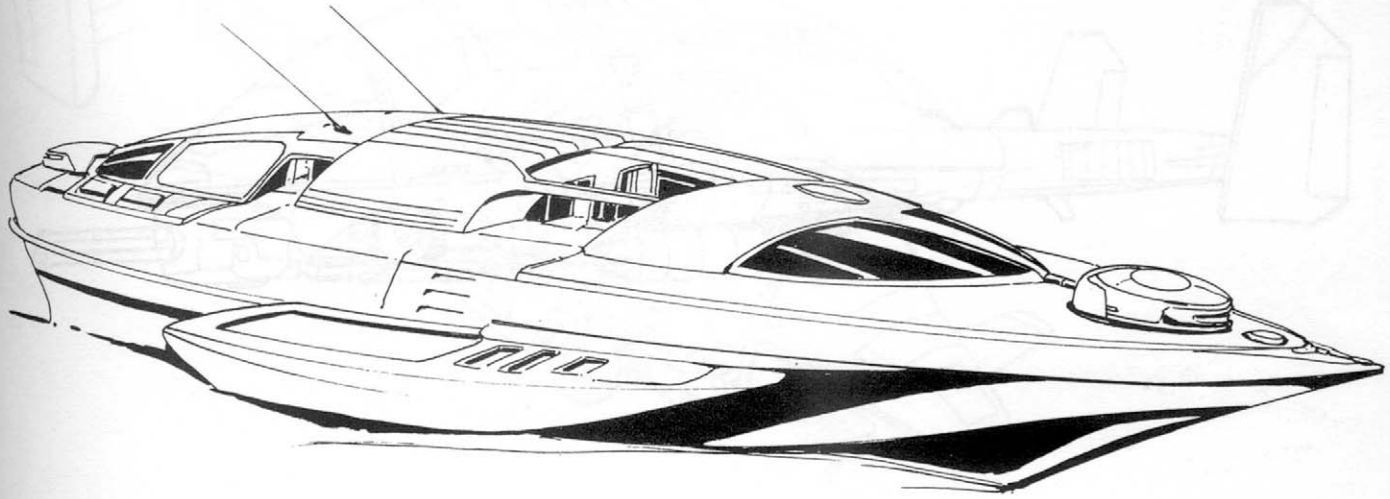
Seating: Twin bucket seats
Economy: 25 km per liter
Fuel: IC/200 liters
Options:

Police Model: This model has ring mounts on either side of the cabin rear that provide a 225-degree arc of fire. Each location can mount two light or a single heavy weapon, and has 1 CF of dedicated ammo storage. This model also features a single fixed forward-firing hardpoint with 1 CF of dedicated ammo storage. The central cabin has two folding bunks, fresher/toilet facilities, mini-kitchen, and two individual bucket seats, as well as 15 CF of cargo storage. Cost +25,000¥ (weapons not included).

Security Model: The Security model has a micro-turret providing a 225-degree arc of fire on either side of the cabin rear, replacing the ring mounts of the Police version. Each micro-turret has 3 CF of dedicated ammo storage. It also has a small turret mounted over the rear cabin with a 360-degree arc of fire. Fuel capacity is 500 liters, and a full civilian-rated navigation electronics suite is provided. The rear cabin has the same facilities as the Police version. Cost +75,000¥.

Assault Model: This model has a 360-degree ring-mount mounted in the center of the rear cabin, fitted for twin light or heavy weapons with 3 CF of dedicated ammo storage. The rear cabin has ten folding benches plus 10 CF cargo space, 10(+30) CF if benches are folded and 10(+50) if they are removed. Cost as listed.

BLOHM & VOSS RIVER COMMANDER



A purpose-built paramilitary patrol boat, the RC is widely used throughout North, Central, and South America for riverine patrols as well as harbor security. A specially upgraded seagoing version of the fifteen-meter boat, the Ocean Commander, is also available, though the standard model is capable of undertaking limited seagoing patrols. The main difference between the two models is that the River Commander lacks satnav and marine sensors. Base models are sold without armament, and so are suitable for a wide variety of security and military applications simply by changing the weapons fit.

	Handling	Speed	B/A	Sig	APilot	Cost
River Commander	4	25/75	6/3*	3	3	300,000¥**

Seating: Twin bucket seats + rear bench

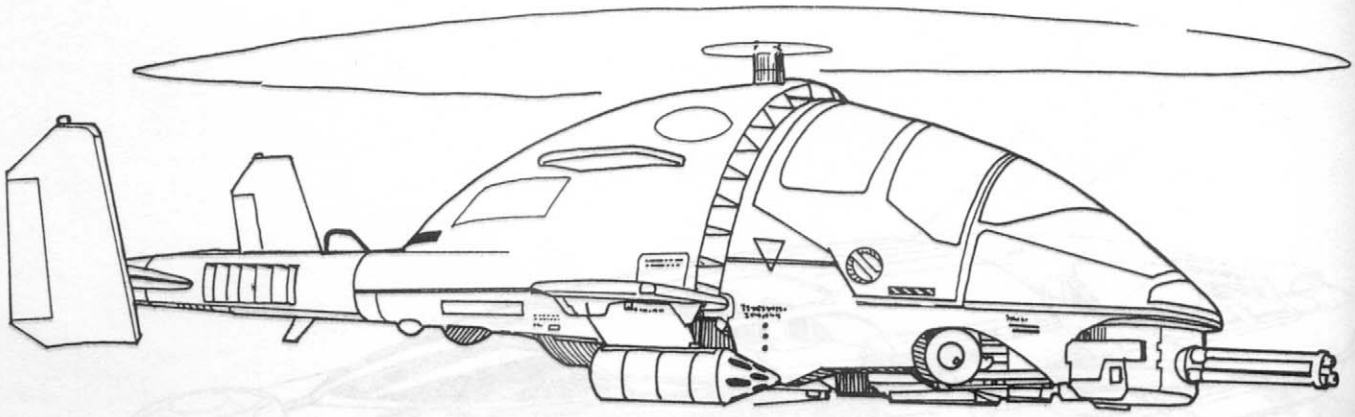
Economy: 15 km per liter **Fuel:** IC/1,000 liters

Options: Standard configuration provides a medium turret with 2 CF ammo storage in the bow and a small turret with 1 CF ammo storage in the stern, both with a 315-degree arc of fire; two micro-turrets at midship, port, and starboard, each with 1 CF of ammo storage and a 180-degree arc of fire; a midship crew and cargo bay, 70 CF and 30 CF respectively. The River Commander has a toilet/fresher and mini-galley in the crew bay, but no overnight accommodation. It can also carry twelve-person folding benches, or eight individual bucket seats for security or other personnel. The cargo bay is divided into a 20 CF cargo area and a 10 CF armory. The Ocean Commander has a toilet/fresher, mini-galley, captain's cabin, and bunks for seven crew in the crew bay. The cargo bay is divided as above.

*Military variant: Armor 4.

**Seagoing variant: Cost 325,000¥ (includes all electronics).

NORTHROP PRC-42B WASP



Specially designed for security work, the Wasp chopper has several major advantages that make it the aircraft of choice for a majority of security and law enforcement professionals. The most obvious advantage is that it is designed to be easily disassembled for ground transport, requiring no special tools or skilled personnel. Disassembly takes 20 minutes, assembly takes 30 minutes, and it takes up a minimum amount of cargo space in a standard pickup. The second major advantage is that it is almost undetectable when the main rotors are autorotated, allowing unpowered stealth approaches to a target.

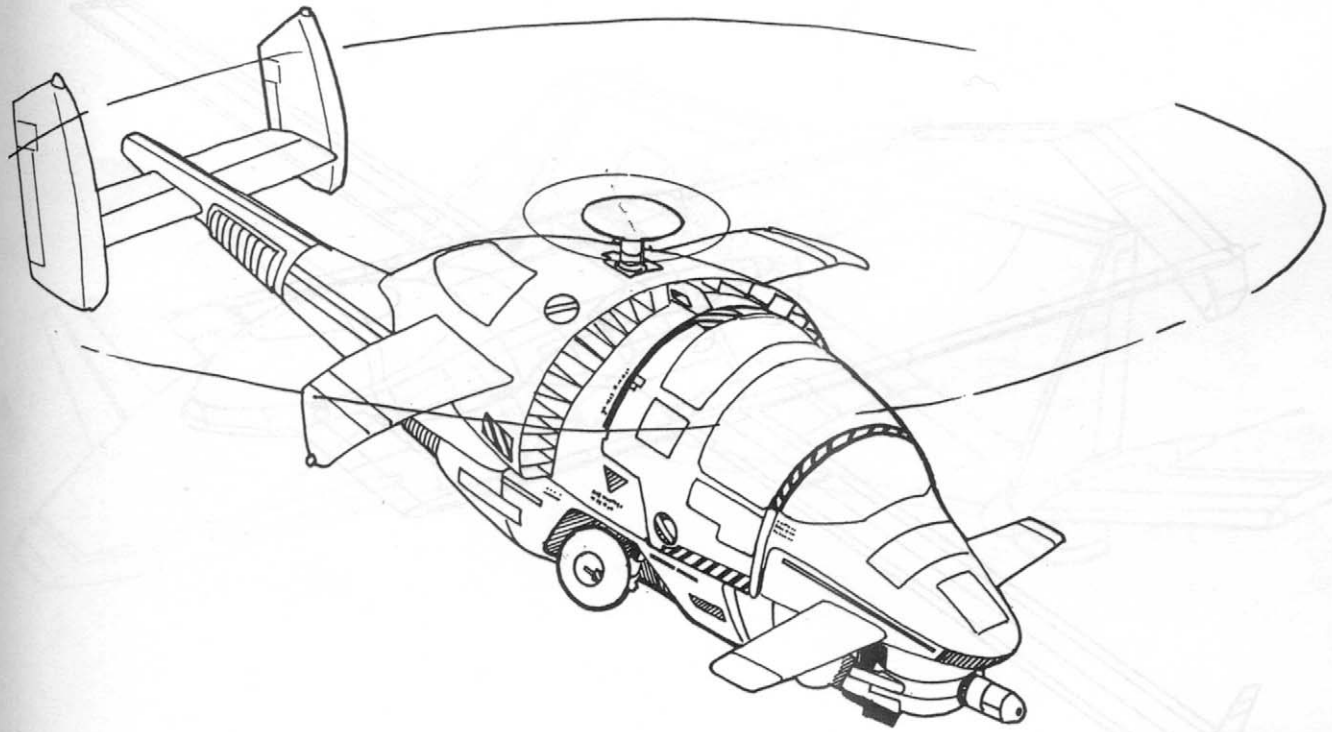
	Handling	Speed	B/A	Sig	APilot	Cost
Wasp	3	65/130	1/0	3/5	0	220,000¥

Seating: Single bucket seat
Access: Full canopy
Economy: 3 km per liter
Fuel: IC/75 liters
Cargo: 2 CF underseat
Sensors: Security I (4)
ECM/ECCM: None/Security 1 (1)
Additional Features: The disassembled vehicle requires 15 CF of cargo space to store vehicle for transport. One under-chin firmpoint may be installed, but offers a limited traverse of 45-degrees off center to either side. The Wasp can also lift a slung load of 10 CF, which triples fuel consumption, halves speed, and doubles handling.

>>>>>[Don't believe everything you read, chummers. They're right, it takes only 30 minutes to assemble, but if you don't do it just right, your handling suffers and fuel consumption goes way up. You need a mechanic to check the work, which is why most Wasp pilots have at least minimal mechanic quals as well.]<<<<<
—Pumper (01:21:56/03-13-52)

>>>>>[Watch the autorotation hype as well. Handling becomes drekking impossible, and the damn thing takes on the flight characteristics of a streamlined house brick! The glide ratio drops to 4:1, in other words, it drops 4 meters for every 1 meter of forward movement.]<<<<<
—Zombie (17:01:52/03-19-52)

NORTHROP PRC-44B YELLOWJACKET



This model uses the basic Wasp chassis, which the designers ran through the works to produce a classic light paramilitary chopper. While maintaining the disassembly for transport and autorotation "stealth" mode features, the Yellowjacket also offers a strengthened airframe, full night-flying instrumentation, and an enhanced weapons load-out.

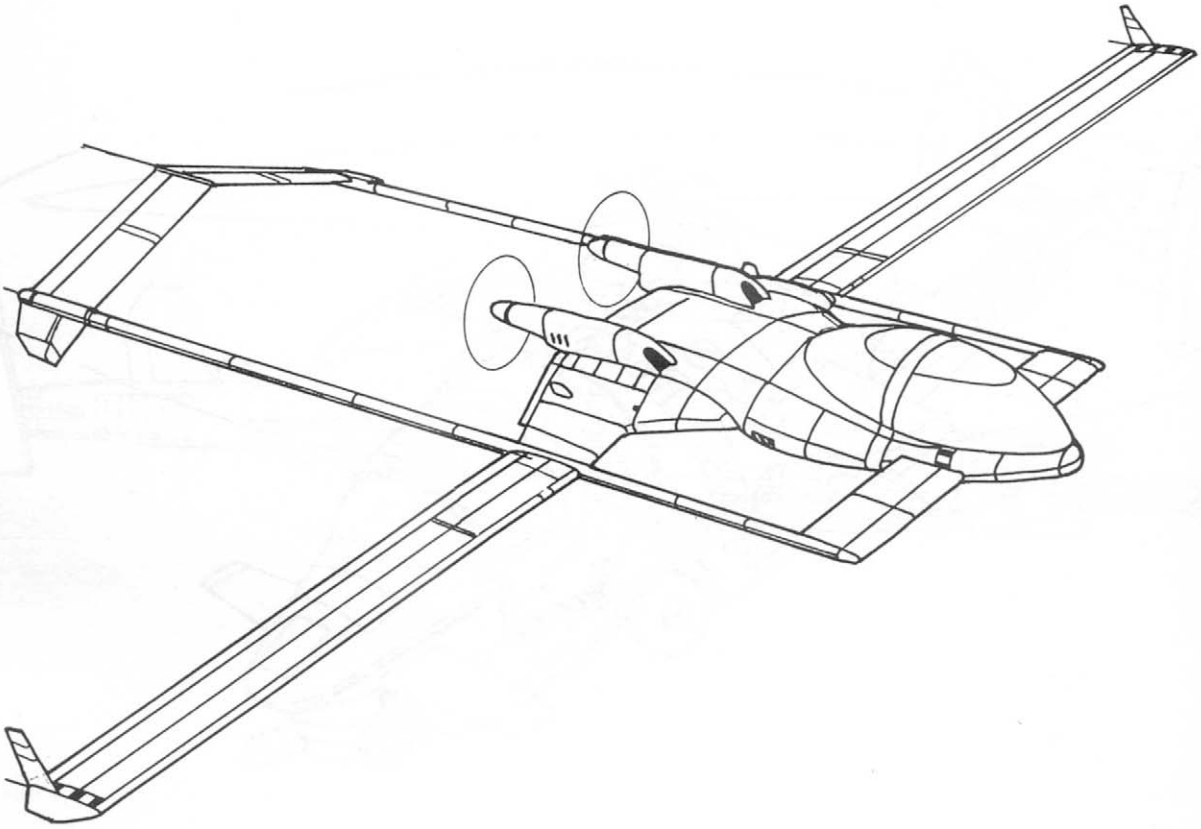
	Handling	Speed	B/A	Sig	APilot	Cost
Yellowjacket	4	65/130	2/0	3/5	0	280,000¥

Seating: Single bucket seats
Access: Full canopy
Economy: 2 km per liter
Fuel: IC/125 liters
Storage: 3 CF underseat
Sensors: Security 1 (4)
ECM/ECCM: None/Security 1 (1)
Additional Features: This model requires 30 CF of cargo space to store vehicle for transport. One under-chin micro-turret with a 270-degree arc of fire is available. Mid-fuselage stub-wings available only on this model can carry ordnance of 5 CF each. An optional under-fuselage, forward-firing, fixed twin firmpoint is available for +5,000¥.

>>>>>[When she's carrying a full ordnance load, performance is considerably degraded, so be careful you aren't "jumped."]<<<<<
—Whizzer (21:32:43/06-18-52)

>>>>>[Has anyone else noticed how slow these suckers are, even compared to civilian choppers?]<<<<<
—Red Thunder (16:51:12/07-02-52)

CASA J-239 RAVEN



The Raven is basically a reinforced glider airframe with twin micro-turbofans mounted behind a side-by-side two-man cabin. The J-239's major selling point has always been that the operator can turn the engines off and glide* for considerable distances to extend range/operational duration and reduce detectability. Other popular features include the ability to mount sophisticated electronics, especially detection and navigation devices, and STOL landing capabilities. Provision is made for mounting twin firmpoints in the nose and, if desired, a single under-fuselage hardpoint.

	Handling	Speed	B/A	Sig	APilot	Cost
Raven	3	200/400	3/0	4	1	175,000¥

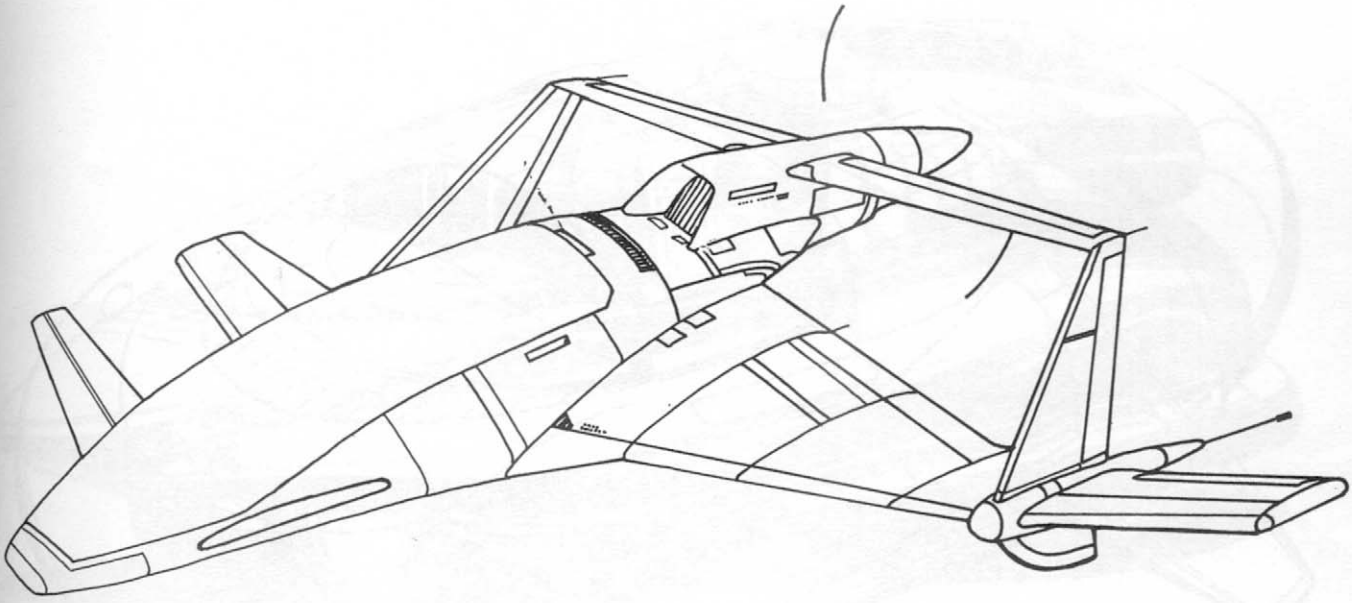
Seating: Twin bucket seats **Access:** Single canopy
Economy: 5 km per liter **Fuel:** IC/250 liters
Cargo: 5 CF storage
Landing/Takeoff Profile: STOL/Normal
*Gliding: Handling 5, Speed 50/100, Sig 9, Glide Ratio 1:3 (drops 1 meter for every 3 meters of forward flight). Each success achieved against Handling increases altitude by (number of successes x 100 meters).

Hardpoint may mount 6 CF of ordnance, but each CF mounted increases Handling in Gliding mode by +1.

>>>>>[These drekkers are a real threat! You just can't detect them when they're gliding. In my first, and damn near my last, encounter with the Raven, a pair just appeared over the treetops and caught me, literally, with my pants down. If they'd been better gunners, they'd have had me then and there.]<<<<<

—Wi-lee-Coyote (05:44:23/01-01-52)

MOONLIGHT AEROSPACE AVENGER



An ultralight, multipurpose, paramilitary aircraft designed for use in areas where landing strips and formal maintenance facilities are nonexistent (or in unfriendly hands!), the Avenger features enhanced rough-field (STOL) performance, and can land on and take off from calm water. The rear-mounted pusher turboprop creates minimal signature and maximizes protection from ground fire. The whole airframe, including the bulk of the engine, is constructed from semirigid alloys, rigid plastics, carbon-fiber, high-tensile polyceramics, and other materials with a low radar reflection.

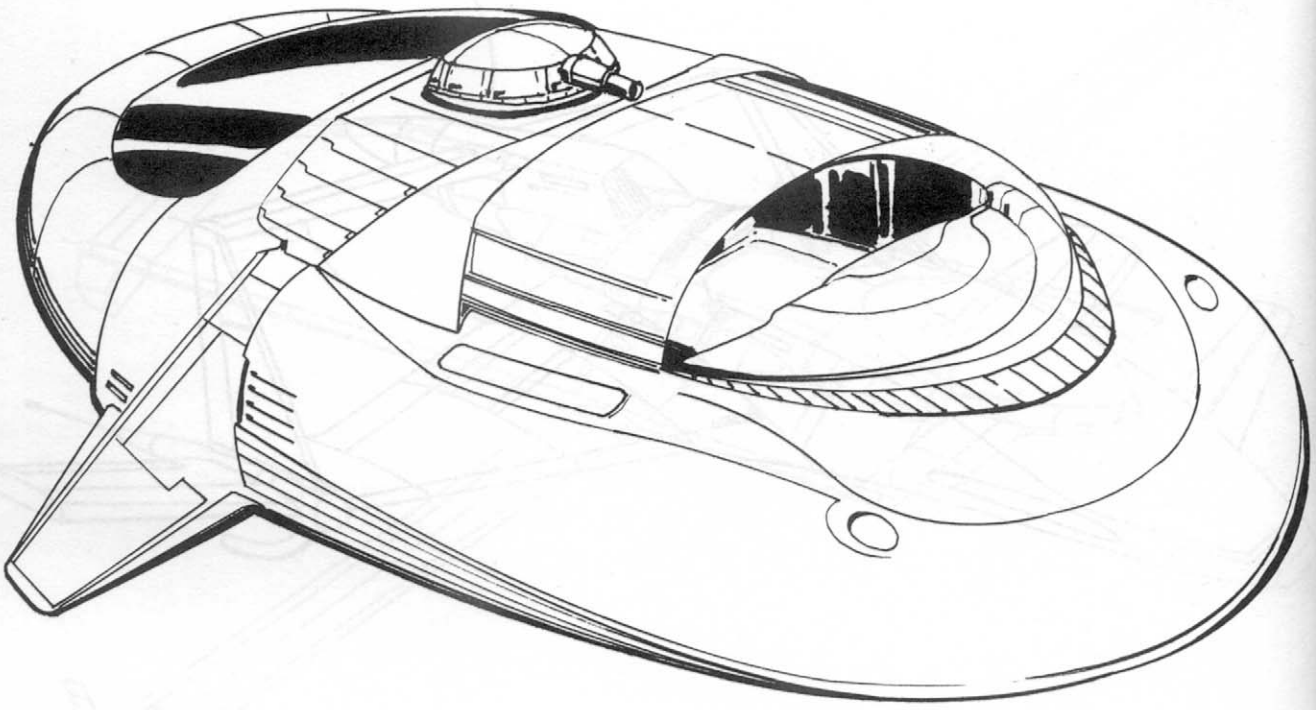
	Handling	Speed	B/A	Sig	APilot	Cost
Avenger	4	100/200	3/3	8	2	250,000¥

Seating: Single bucket seat
Access: Single canopy
Economy: 4 km per liter
Fuel: IC/150 liters
Cargo: 3 CF storage
Landing/Takeoff Profile: STOL
Additional Features: Like the Wasp/Yellowjacket, the Avenger can be disassembled, but the process takes 40 minutes, and 25 CF of space is required for transport. The vehicle is armed with two firmpoints in the fuselage, a center-line fuselage hardpoint of 6 CF, and two underwing hardpoints of 4 CF each. The maximum ordnance load is 10 CF, 5 CF in STOL or amphibian mode.

>>>>>[I know of one merc outfit that launches Avengers from a specially modified LZ-2049 Zepp! They carry two each, along with special launch and retrieval gear—very nasty.]<<<<<
—Nightmare (05:41:34/04-11-52)

>>>>>[As with the Wasp/Yellowjacket, it's good to have a mechanic on hand when assembling these babies. Otherwise, handling and fuel consumption are likely to suffer.]<<<<<
—Pumper (23:12:54/06-15-52)

GMC-BEACHCRAFT PATROLLER



The Patroller is a small, very fast air-cushion vehicle designed for security and paramilitary operations, built on the same basic chassis as the Vacationer civilian ACV. It boasts a high-power engine, integral boat hull and fully sealed cabin as well as a full suite of comm and nav gear for enhanced overwater operational capability. A pair of retractable, unpowered steering/braking wheels give improved rough-terrain and general handling.

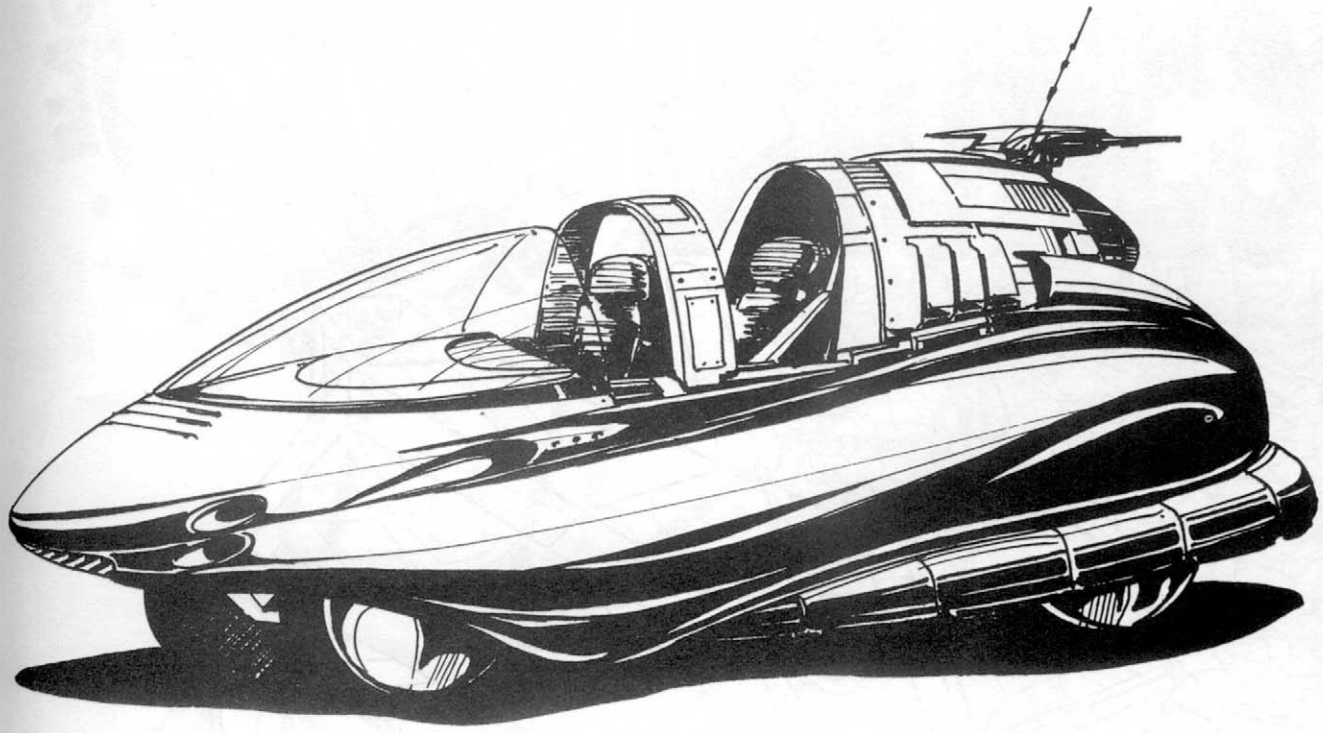
	Handling	Speed	B/A	Sig	APilot	Cost
Patróller	4	55/165	4/2	5	2	750,000¥

Seating: 2 + 2 bucket seats + bench
Access: 2 gull wing + 2 standard
Economy: 0.5 km per liter
Fuel: IC/1,000 liters
Storage: 10 CF storage
Additional Features: Armament is provided in the form of two hardpoints. The most common configuration is a single micro-turret with a 360-degree arc of fire over the rear seat in the center hull and a fixed forward-firing mount along the center-line. Each have 2 CF dedicated ammo storage.

>>>>>[Seattle Metroplex Customs uses a number of Patrollers armed with twin LMGs in the turret and an MMG in the fixed mount. The LMGs usually are loaded with gel rounds, but the MMG is always loaded for bear.]<<<<<
—Wheelie (09:11:13/05-08-52)

>>>>>[Any scuzzball free trader who thinks a Cigarette can get past one of these critters had better think again—while he still can! (By the way, the official security term is "loaded for duck." Thought you'd like to know.]<<<<<
—AquaCop (01:15:41/08-21-52)

SIKORSKY-BELL "RED RANGER" SCOUT ACV



A light, ultra-fast, two-man ACV specially equipped for scouting and reconnaissance missions, the Ranger is unique in having dual motive systems; standard ACV, and powered wheels for rough terrain, which also add to controllability in ACV mode. Standard civilian-grade sensors, including IR/UV and visible light, ground and air survey radar, sound detection, heat sensors, and motion sensors are installed as standard, along with a standard rural-grade communications suite and satnav. Sikorsky-Bell assures the potential purchaser that "the Red Ranger can outfight anything it can't outrun and outrun anything that it can't outfight," in its class, making it the premier light scouting vehicle available today for paramilitary or security requirements.

	Handling	Speed	B/A	Sig	APilot	Cost
Red Ranger	4/6*	150/450*	2/2	3*	3	250,000¥

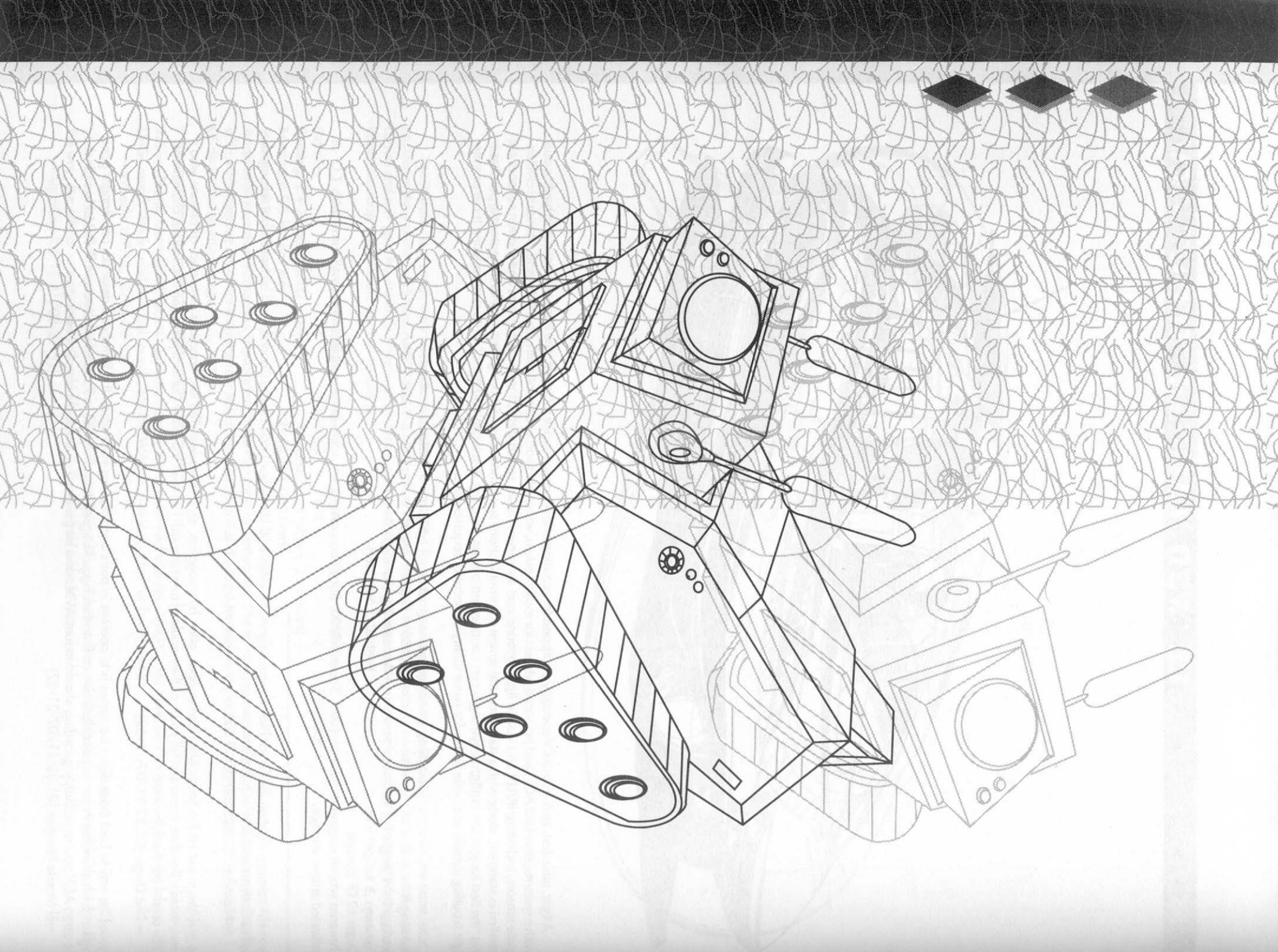
Seating: 1 + 1 single bucket seats
Access: 2 gull wing
Economy: .5 km per liter
Fuel: IC/2,500 liters
Cargo: 10 CF storage

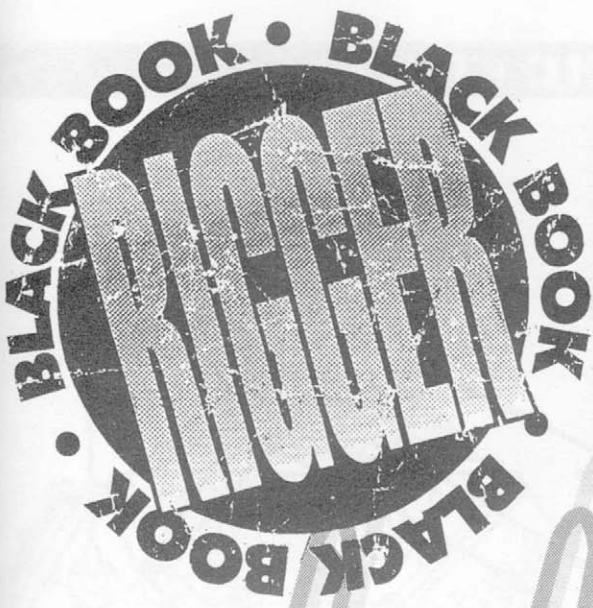
*Powered wheels engaged: Handling 3/5, Speed 30/90, Sig 8, Economy 2 km/liter. Armament is in one small turret with 2 CF of dedicated ammo storage.

>>>>>[A common sight on the Great Plains, especially in the Sioux and Ute nations and Pueblo Council, used by local tribal security as well as Customs and Border patrols.]<<<<<
—Nightmare (17:23:52/05-03-52)

>>>>>[Also in use on the South American steppes, often by smugglers, er, free traders. The Red Ranger is overrated, as anyone who's encountered a Banshee in one can tell you—or they would, if any survived! I've seen too many "funeral pyres" on the steppes, chummeros, so be careful out there.]<<<<<
—Don Diego (05:32:28/07-12-52)

>>>>>[The way to beat those damn Banshees is to operate in pairs and leapfrog each other. If a Banshee's detected, one Ranger goes to ground, which makes it near impossible to detect. Then the doggo Ranger hits the Banshee in the rear with a couple of AVMs! In a pinch, the cargo ACV you're probably guarding should mount AVMs and hit the Banshee the same way.]<<<<<
—El Muerte Hombre (21:32:11/07-21-52)



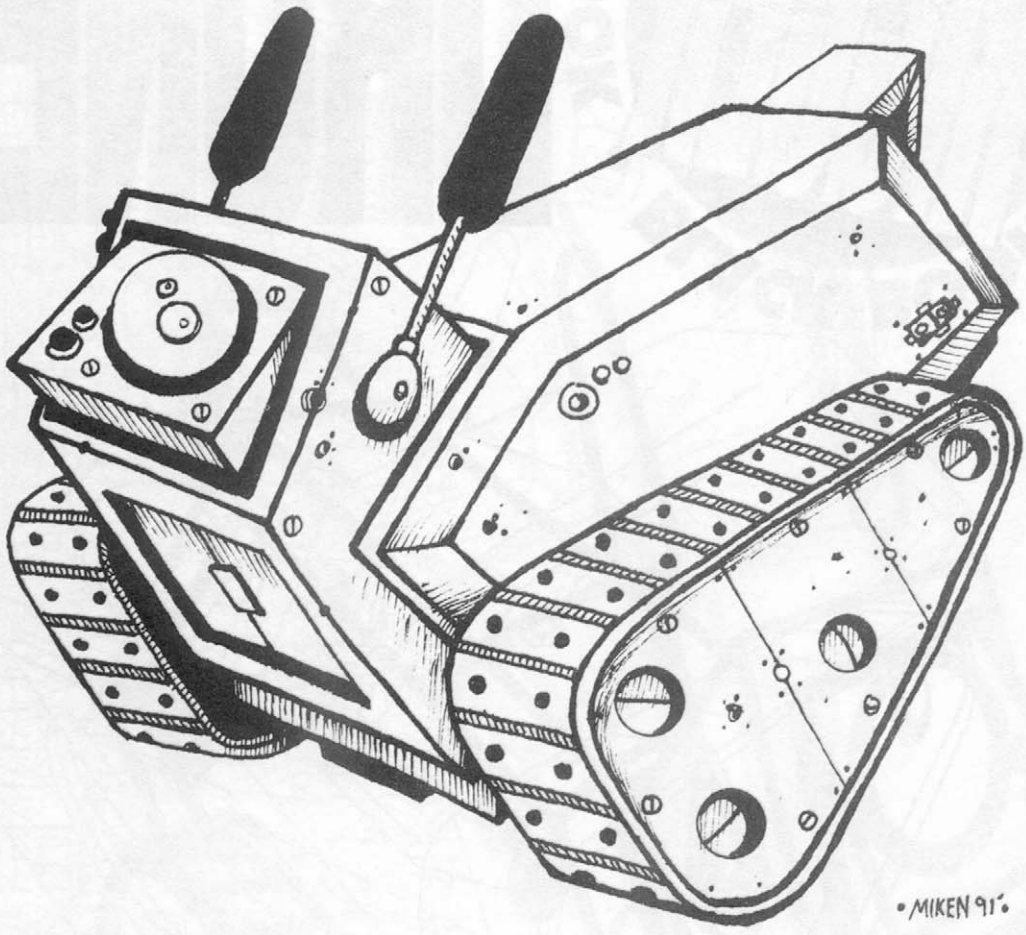


DRONES

>>>>>[One of the most important, yet often neglected, areas of interest for riggers is the drone vehicles and remotely operated systems they control from the safety of their very own vehicle-control rig or rigger control cell. We at the megaplush HQ of TRBB (just a joke, chummers) have not forgotten this important concern, and we have made every effort to bring you an up-to-date survey of the more important items of drone/remote equipment available.]<<<<<

—Nightmare & Pumper (13:23:02/07-29-52)

AZTECHNOLOGY GCR-23C CRAWLER



A tracked drone vehicle based on a chassis the size of a large bread box, the Crawler is designed to operate as a remote snooper in rough and urban terrain. Though slow moving, it is capable of negotiating slopes of angles up to 45 degrees, and has a special stair-climbing mode. Fully electric-powered, it can operate in mobile mode for four hours on a standard charge, and will plug itself into a handy power source at the designated surveillance site. In stationary mode, sensors can operate for 24 hours on a full charge. A standard sensor package is included in the purchase price, and enhanced sensors may be added to upgrade the system.

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Crawler	4/4	5/15	1/0	4	1	2 CF*	1,250¥

Operational Duration:** 24 hours in stationary mode

Set-up/Breakdown Time: None **Sensor Package:** Standard (1)

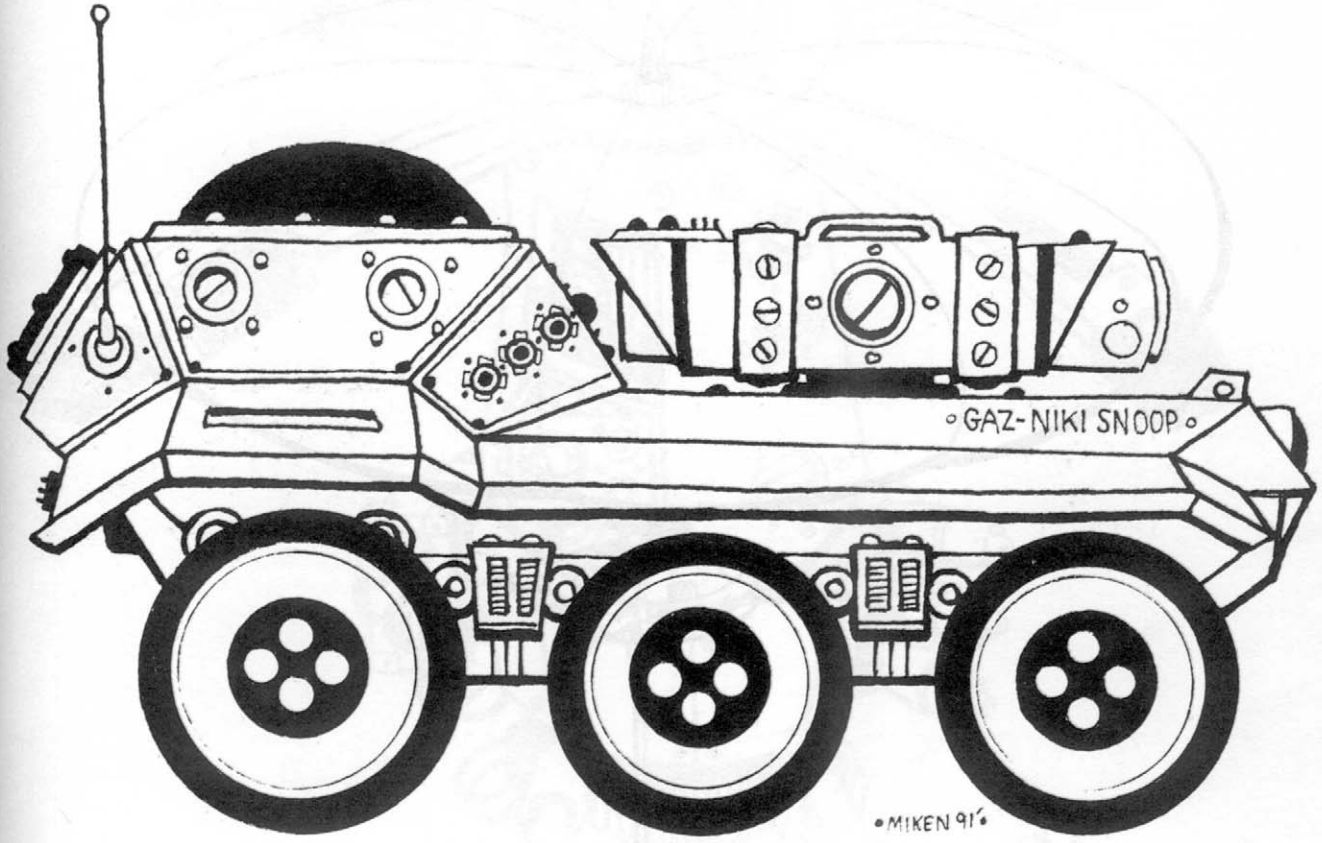
*Two CF of cargo space is required to carry this unit onboard another vehicle.

**Each minute of mobile-mode operation at cruise speed or less counts as six minutes of stationary, sensor-only-mode operation. Each minute of mobile-mode operation at greater than cruise speed counts as twelve minutes of stationary, sensor-only-mode operation.

>>>>>[Many's the time when I've sussed out otherwise "secure" areas with my trusty Crawler. It's possible to load enough extra batteries on her to increase operational duration by 50 percent. Of course, this costs an extra 1,500¥ in mods and high-performance, special-purpose cells, but, what the hell, information's the only real wealth these days, eh, chummers?]<<<<<

—Public Eyewash (00:03:32/07-20-52)

GAZ-NIKI GNRD-71BIS SNOOPER



Designed in response to a request submitted by the Polish Union's security police, the Snooper is a masterpiece of Russo-Polish design, used by a number of middle-European government and corporate security organizations. Now, for the first time, it is available in North America! The size of an average loaf of bread, the Snooper is propelled on six independently driven, electric-powered balloon tires and has a fully articulated joint between each wheel, which allows it to traverse even the most difficult terrain at good speed. A standard, upgrade-capable sensor package is provided, and the audio/video pickups feature an extending boom that enables the operator to see over objects up to three meters in height, around corners, and through openings at least five centimeters in diameter.

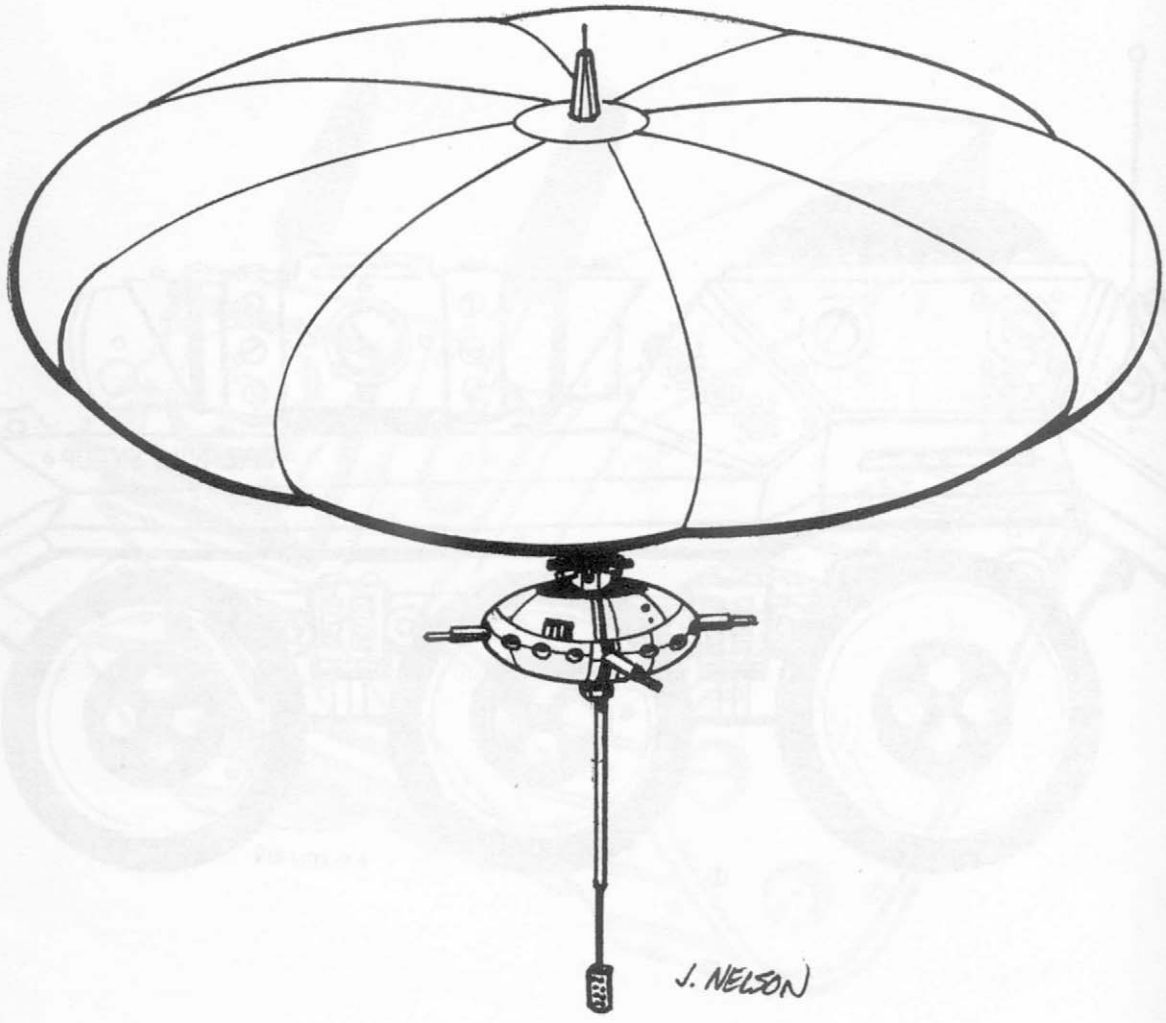
	Handling	Speed	B/A	Sig	APilot	Store	Cost
Snooper	4/3	25/75	1/0	5	1	1 CF*	1,750¥

Operational Duration**:** 6 hours in stationary mode
Set-up/Breakdown Time: None **Sensor Package:** Standard (1)
*One CF cargo space is required to store onboard another vehicle.
**Each minute at full speed counts as twelve minutes of operational time. Each minute at cruise speed counts as six minutes of operational time.

>>>>>["Masterpiece of Russo-Polish design," huh. Great spirits, next thing ya know, we'll be readin' 'bout "Franco-Italian efficiency" or "Anglo-Scottish design flair" or some such drek! These little buggers have a rep for low reliability that's legendary in Eastern Europe, chummski.]<<<<<
—Bad Boris (12:14:38/07-18-52)

>>>>>["Bad Boris," huh. Great spirits, are we supposed to, like, believe this chum-pal?]<<<<<
—Joe the Gadget Man 2 (22:27:51/07-21-52)

AERODESIGN SYSTEMS CONDOR LDSD-23



The Condor pushes "state-of-the-art" to the max. The latest long-duration drone from AeroDesign is almost impossible to detect, completely solar-powered, and hydrogen-filled for greater lifting capacity. Constructed entirely of sensor-transparent and, as much as possible, light-transparent materials (including the electrical conductors, which are nonmetallic electroplast with lift provided by hydrogen gas cells, and powered by solar-electric ducted turboprops), the Condor is an amazing technological development. An upgrade-capable standard sensor package is included in the purchase price.

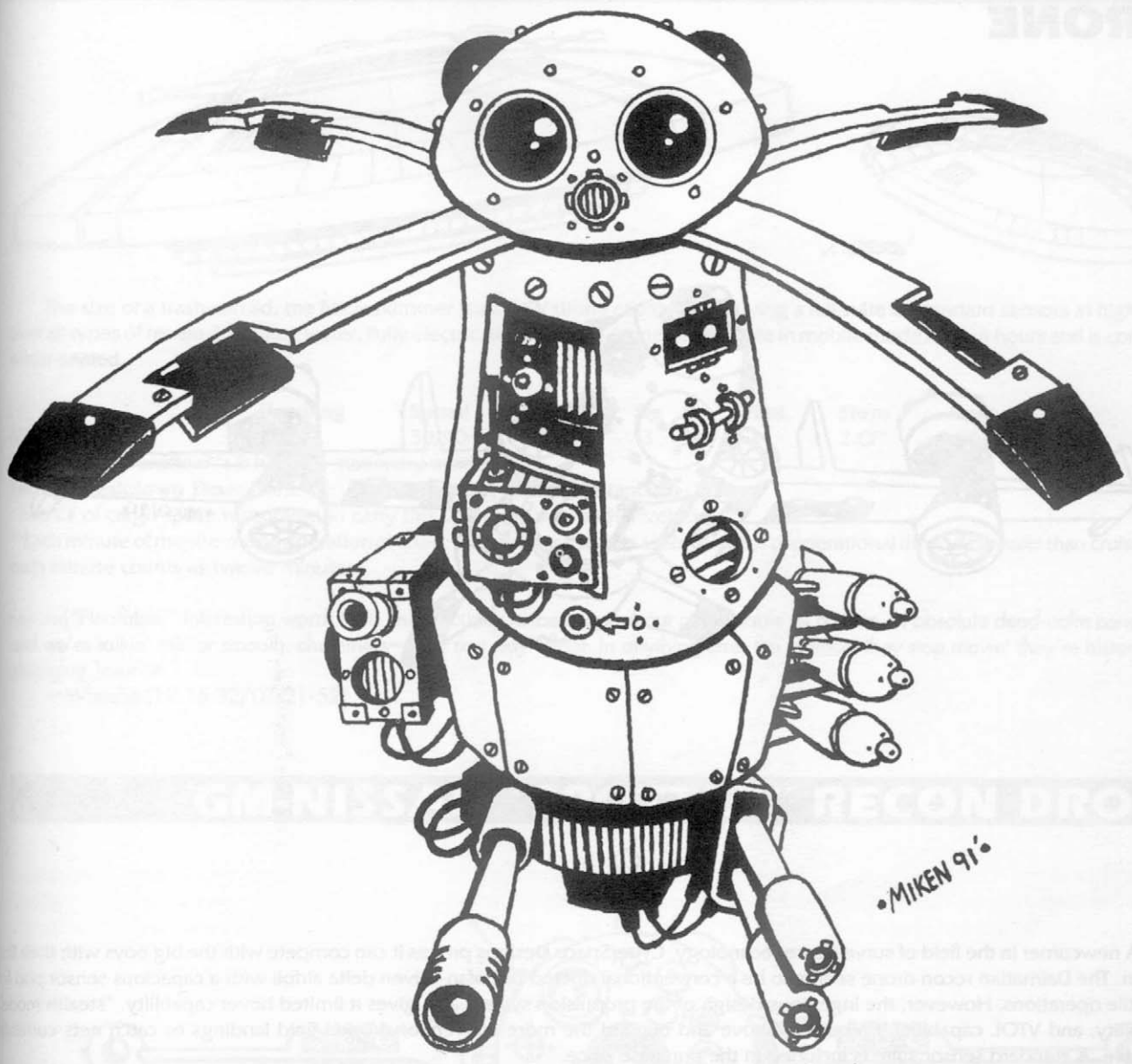
	Handling	Speed	B/A	Sig	APilot	Store	Cost
Condor	5	20/60	1/0	10	1	1 CF*	2,500¥

Operational Duration:** Daylight: unrestricted. Night: 8 hours.
Set-up/Breakdown Time: 3 minutes **Sensor Package:** Standard (1)
Landing/Takeoff Profile: VSTOL
*When deflated, the Condor requires 1 CF storage space. If inflated, requires 10 CF.
**Onboard batteries provide eight hours of sensor power at night, but only when station-keeping on a designated target point. Each minute of operation at up to cruise speed costs six minutes of power; each minute at greater than cruise speed requires twelve minutes of power. During daylight hours, no such restriction applies.

>>>>>[These little beauties can also mount a single SMG-size firmpoint, just enough to give some fragger a nasty shock—as a lot of fuzzy-wuzzy hotshots found out in Engee. Cuts speed by half, though.]<<<<<
—True Blue (17:13:43/04-03-52)

>>>>>["Fella belong him mistuh guvmin kill-kill"—one of the Aussie thugs who served in New Guinea, eh?]<<<<<
—Yusuf Bey (09:04:52/04-01-52)

MCT-NISSAN ROTODRONE



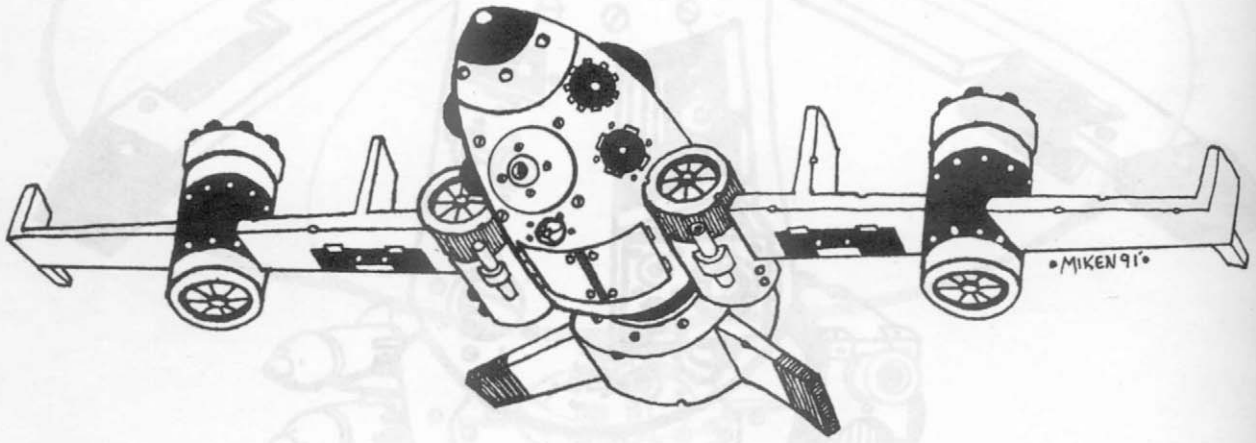
Sensors and electronics by Mitsuhama, engine and airframe by Nissan—names you can trust—the Rotodrone is destined to be the drone against which all chopper drones will be measured for years to come! The basic model includes full chopper flight-emulation, superior handling, a full load of standard sensors included in the purchase price, and plenty of onboard fuel for surveillance operations. Launch and recovery may be either ground/ground, using the retractable tripod stilts included in the basic chassis, or to a specialized vehicle mount. In some jurisdictions, local or national law forbids the sale of Rotodrones equipped with anything other than the basic sensor package unless proper licensing is presented at time of ordering.

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Rotodrone	4	35/70	2/0	3	2	5 CF*	7,500¥

Economy: 7.5 km per liter **Fuel:** 25 liters
Cargo: 1 CF storage
Operational Duration: Fuel-limited
Set-up/Breakdown Time: 3 minutes **Sensor Package:** Standard (1)
Landing/Takeoff Profile: VTOL
Options: Armed variant: Speed 30/65, B/A 4/0, Sig 4, Store 7, Economy 5 km/liter, Fuel 35 liters. Two firmpoints installed, enhanced sensors. Cost 12,500¥.
*Five CF of cargo space is required to carry this unit inside another vehicle.

>>>>>[As if Mitsuhama really gave a good drek as to legality! They'll sell 'em to anyone at all, chummers. They just tack on a "delivery" fee based on how tough the local law is on the matter. (Seems as if 10–20 percent is the usual.)]<<<<<
—Ripperjock (10:02:29/07-29-52)

CYBERSPACE DESIGNS DALMATIAN RECON DRONE



A newcomer in the field of surveillance technology, CyberSpace Designs proves it can compete with the big boys with their first design. The Dalmatian recon drone seems to be a conventional ducted turbofan-driven delta airfoil with a capacious sensor pod for versatile operations. However, the ingenious design of the propulsion system also gives it limited hover capability, "stealth mode" capability, and VTOL capability if required, above and beyond the more conventional open-field landings or catch nets currently available. A standard sensor suite is included in the purchase price.

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Dalmatian	3	35/105	2/0	4	2	6 CF*	15,000¥

Economy: 15 km per liter **Fuel:** 50 liters
Storage: 1 CF storage
Operational Duration: Fuel-limited **Sensor Package:** Standard (1)
Set-up/Breakdown Time: 5 minutes with wings folded
Landing/Takeoff Profile: VSTOL (VTOL in emergency)
Options: Armed variant: Handling 3, Speed 35/105, B/A 4/1, Sig 5, APilot 3, Store 12, Economy 12 km/liter, Ordnance 2 CF. Two firmpoints installed. Cost 30,000¥.
*Six CF of cargo space is required to carry this unit inside another vehicle if the drone is stored with its wings folded. Storing the drone with the wings deployed increases the cargo space needed to 10 CF, and reduces the set-up/breakdown time to three minutes.

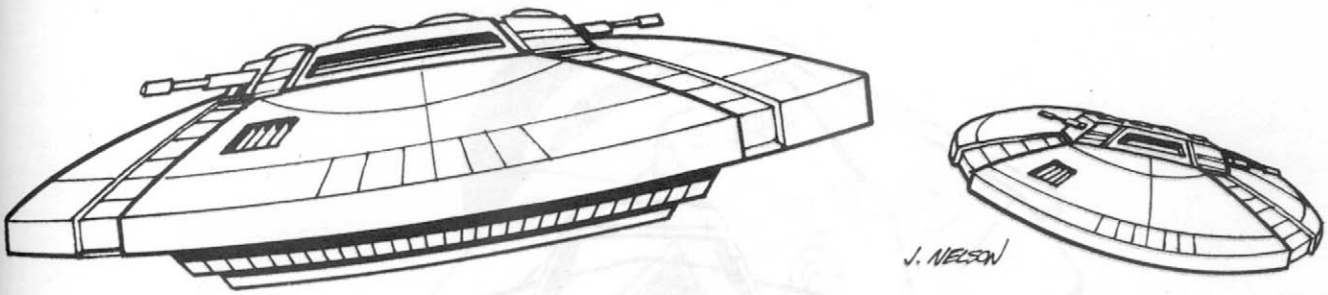
>>>>>[Rumor has it that the Dalmatian was an "in joke" with the design team—and if I hear that stupid jingle of theirs just one more time, I swear I'll trash their corporate computer! That aside, the stealth mode is great, with a signature improvement of about 50 percent, but it guzzles gas at nearly five times the regular rate. The hover mode is a nifty design feature, but it sucks the tank dry at about ten times the normal fuel-use rate.]<<<<<

—Nightmare (21:15:25/07-21-52)

>>>>>[Arf! Arf!]<<<<<

—The Boys at CyberSpace (11:15:21/08-01-52)

SIKORSKY-BELL MICROSKIMMER



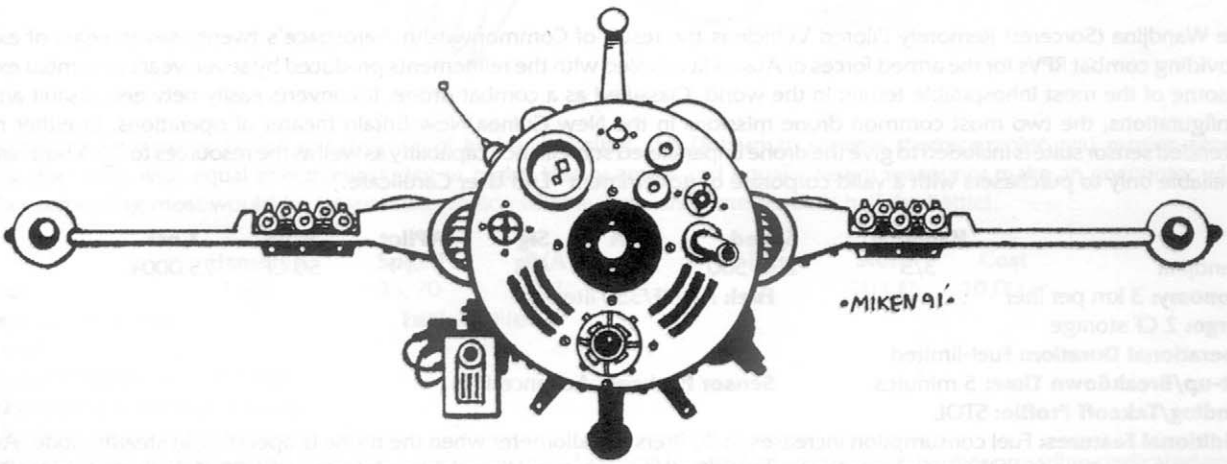
The size of a trash-can lid, the Microskimmer is an ACV drone capable of carrying a full suite of standard sensors at high speeds over all types of terrain, including water. Fully electric, this floatable drone can operate in mobile mode for four hours and is completely water-sealed.

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Microskimmer	5	30/90	1/0	3	1	2 CF*	2,750¥

Operational Duration:** 8 hours in stationary mode
Set-up/Breakdown Time: None **Sensor Package:** Standard (1)
*Two CF of cargo space is required to carry this unit onboard another vehicle.
**Each minute of mobile-mode operation at cruise speed or less counts as six minutes of operational time. At greater than cruise speed, each minute counts as twelve minutes.

>>>>>["Floatable." Interesting word, that. These scuzzy frisbees are about as floatable as a sieve. In absolute dead-calm conditions—and we're talkin' mirror smooth, chummers—they can stay afloat. In anything else, the moment they stop movin' they're history! Glug-glug-glug.]<<<<<
—Wheelie (19:15:32/07-21-52)

GM-NISSAN "SPOTTER" RECON DRONE

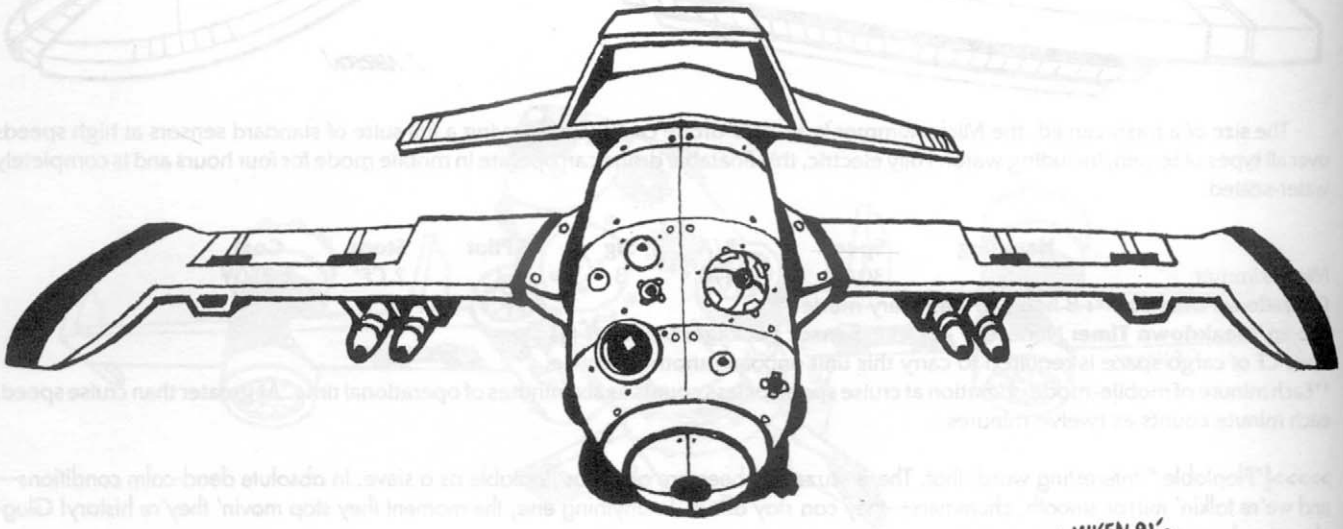


The standard for long-range spotter drones since its appearance in 2039, the Spotter still has what it takes to fulfil its mission in the 2050s. STOL performance is coupled with enhanced airframe integrity to allow retrieval by crash net where landing strips are not available. A full suite of standard sensors is included in the purchase price.

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Spotter	3	35/100	2/0	3	2	8 CF*	12,500¥

Economy: 12 km per liter **Fuel:** 35 liters
Cargo: 1 CF storage
Operational Duration: Fuel-limited
Set-up/Breakdown Time: 3 minutes **Sensor Package:** Standard (1)
Options: Armed variant: Handling 3, Speed 30/90, B/A 4/0, Sig 4, Store 15, Economy 9 km/liter. Two firmpoints installed. Cost 20,000¥.
*Eight CF of cargo space is required to carry this unit inside another vehicle if the drone is stored with the wings folded. Storing the drone with the wings deployed requires twelve CF of cargo space, and reduces set-up/breakdown time to two minutes.

CAS "WANDJINA" RPV



The Wandjina (Sorcerer) Remotely Piloted Vehicle is the result of Commonwealth Aerospace's twenty-seven years of experience providing combat RPVs for the armed forces of Australia coupled with the refinements produced by seven years of combat experience in some of the most inhospitable terrain in the world. Classified as a combat drone, it converts easily between assault and anti-air configurations, the two most common drone missions in the New Guinea/New Britain theater of operations. In either mode, an extended sensor suite is included to give the drone unparalleled surveillance capability as well as the resources to "kick butt" as needed! Available only to purchasers with a valid corporate or government "End User Certificate."

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Wandjina	3/5	250/500	5/2	4/8	4	50 CF	75,000¥

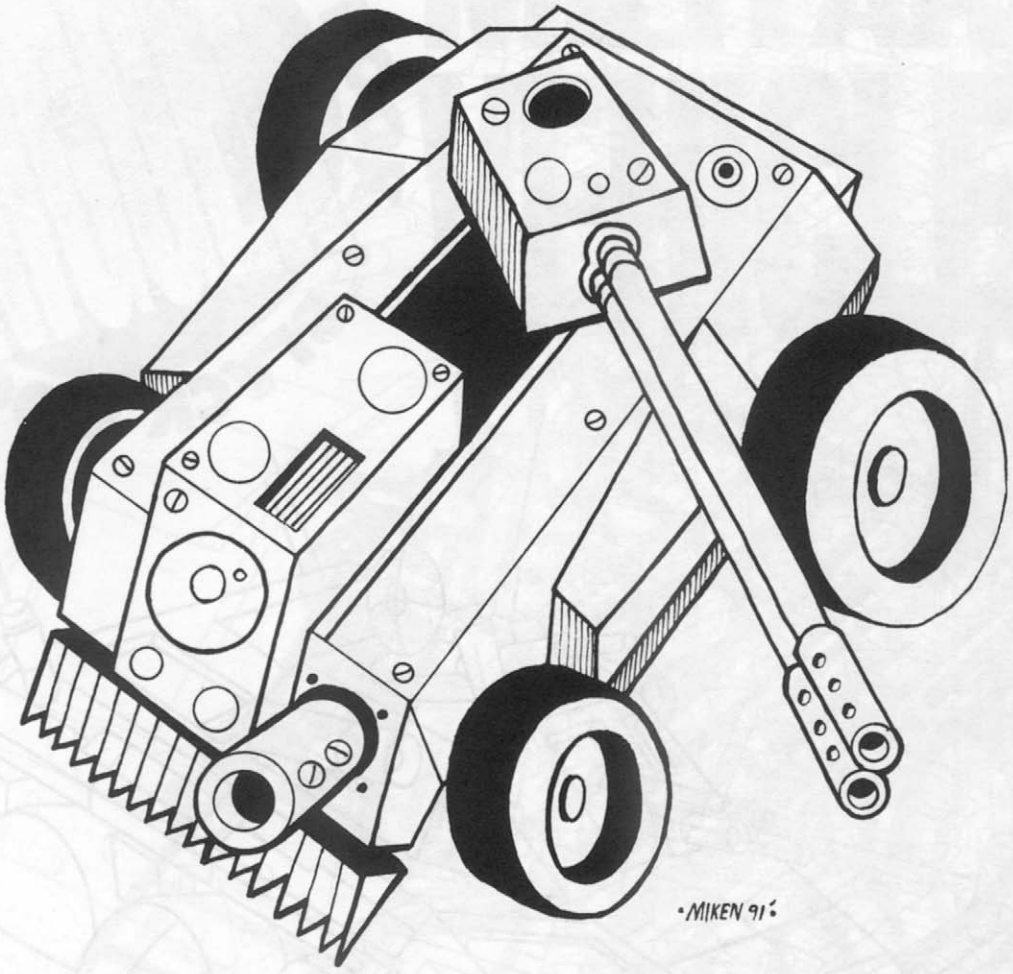
Economy: 3 km per liter
Fuel: MultiF/350 liters
Cargo: 2 CF storage
Operational Duration: Fuel-limited
Set-up/Breakdown Time: 5 minutes
Sensor Package: Advanced (3)
Landing/Takeoff Profile: STOL
Additional Features: Fuel consumption increases to 30 liters per kilometer when the drone is operating in stealth mode. Armament packages vary, but are built around one hardpoint with a Vengeance or Vanquisher minigun and 1 CF of dedicated ammo storage in the nose, a firmpoint with 1 CF of dedicated ammo storage each in each wing, and three external ordnance hardpoints. Fuselage centerline storage 4 CF, underwing storage 2 x 2 CF. When carrying full ordnance load, Speed is reduced to 175/250.

>>>>>[Watch these mommas, they're hot! I hear that the Metroplex guard is testing them out at Fort Lewis and in the Urban Combat Simulator. The ground-pounders have been giving each other the willies, and causing the wild-blue-yonder types no end of sleepless nights. I understand that the Air Force wants 'em put under their control so that they can bury 'em deep. Typical flyboy ostrich drek.]<<<<<
—Nightmare (05:32:53/05-19-52)

>>>>>[I understand the fuzzy-wuzzys call 'em the "whispering death"—they don't like 'em at all.]<<<<<
—Newshound (21:15:32/05-21-52)

>>>>>[I hear rumors that at least one major corp has imported some for covert ops in the Sea-Tac area—but which one?]<<<<<
—Steel Lynx (18:05:01/08-27-52)

GM-NISSAN "DOBERMAN" PATROL VEHICLE



Designed for perimeter patrol and defense of high-value sites, the Doberman mounts thermographic and motion-sensing detectors, operating with equal effectiveness day or night. Heavy armor and equally heavy weaponry make an encounter with a Doberman something most would-be trespassers would rather avoid—and deterrence is half the battle!

	Handling	Speed	B/A	Sig	APilot	Store	Cost
Doberman	3/5	35/70	3/2	3	2	20 CF*	10,000¥

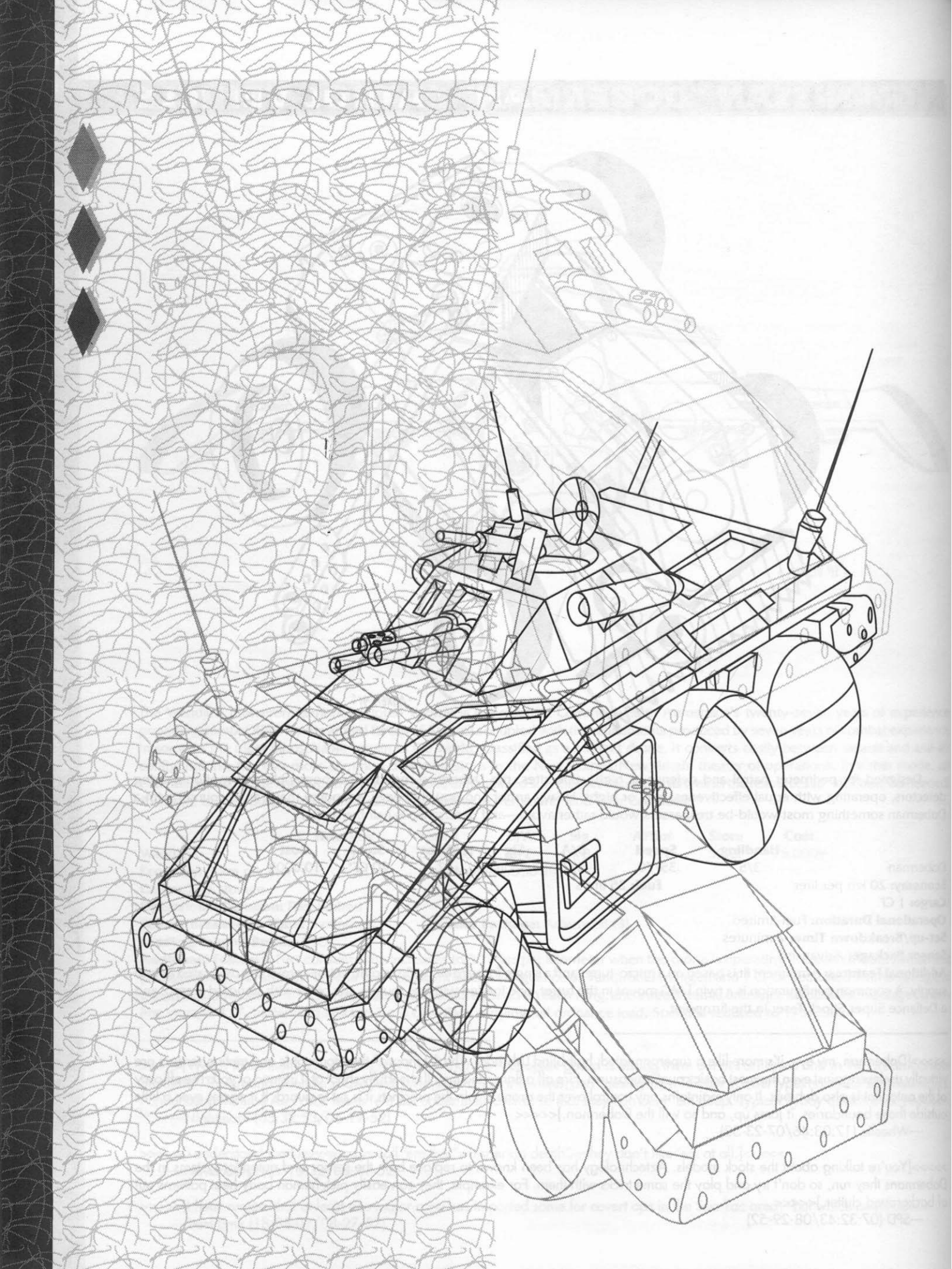
Economy: 20 km per liter **Fuel:** 25 liters
Cargo: 1 CF
Operational Duration: Fuel-limited
Set-up/Breakdown Time: 2 minutes
Sensor Package: Advanced
Additional Features: Armament fit is based on a micro-turret and a single forward-firing firmpoint, neither providing dedicated ammo supply. A common configuration is a twin LMG mount in the turret, one loaded with gel rounds, the other with standard ammo, and a Defiance Super Shock Taser in the firmpoint.

>>>>>[Doberman, my eye, it's more like a superannuated, half-blind Labrador. The "standard" thermographic and motion sensors are virtually useless against even the most basic countermeasures. Fire off a flare, and they'll cheerfully shoot at it instead of you. The efficacy of the autopilot is also dubious. It only maintains any control over the drone within the precincts it is set to guard. If it passes even a little outside those boundaries, it jams up, and so will the Doberman.]<<<<<

—Wheelie (17:03:46/07-23-52)

>>>>>[You're talking about the stock models. Aztechnology has been known to replace both the sensor and autopilot systems in the Dobermans they run, so don't try and play the same tricks with them. For example, they can easily pick human body-heat patterns out of background clutter.]<<<<<

—SPD (07:32:43/08-29-52)



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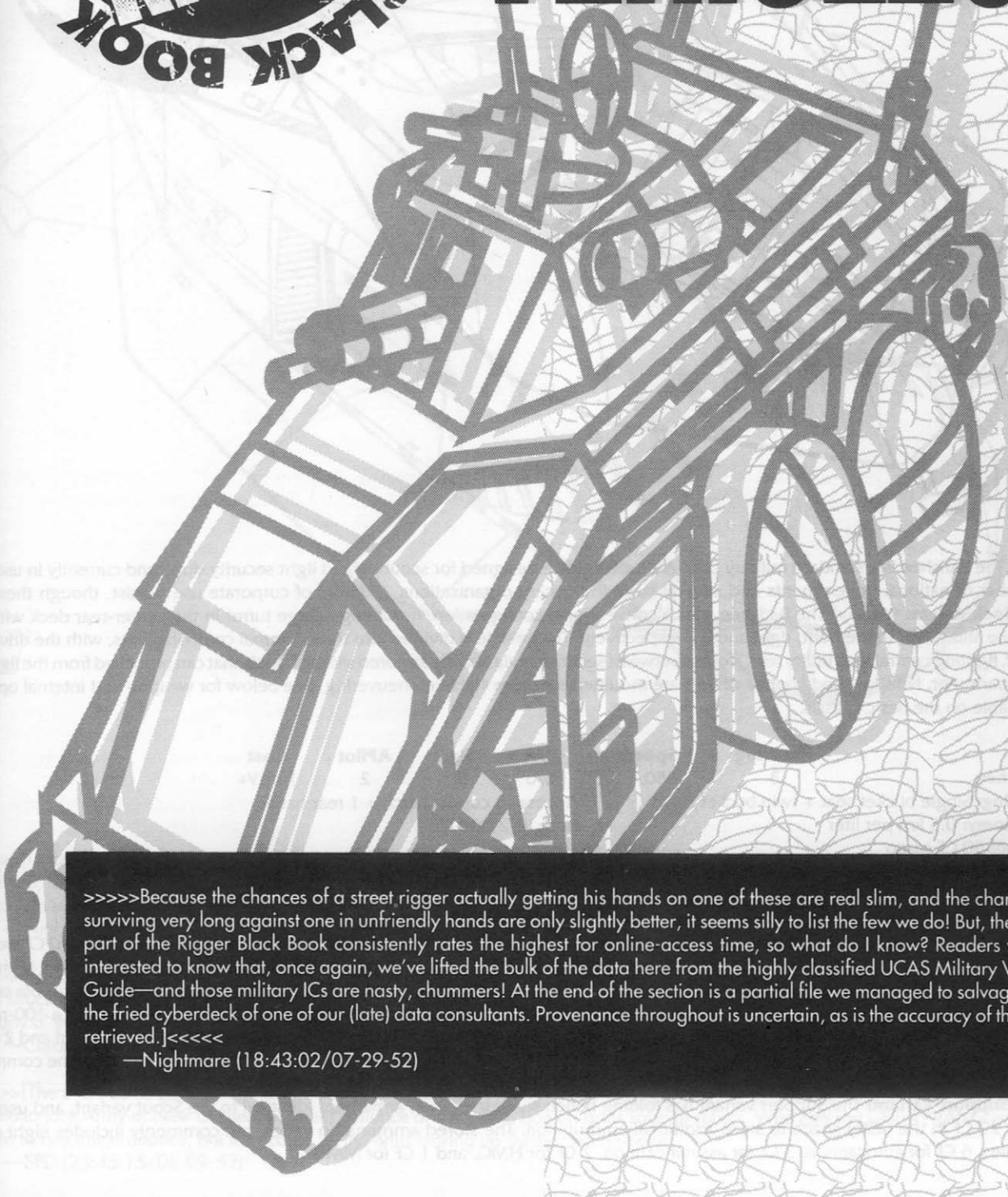
RIGGER

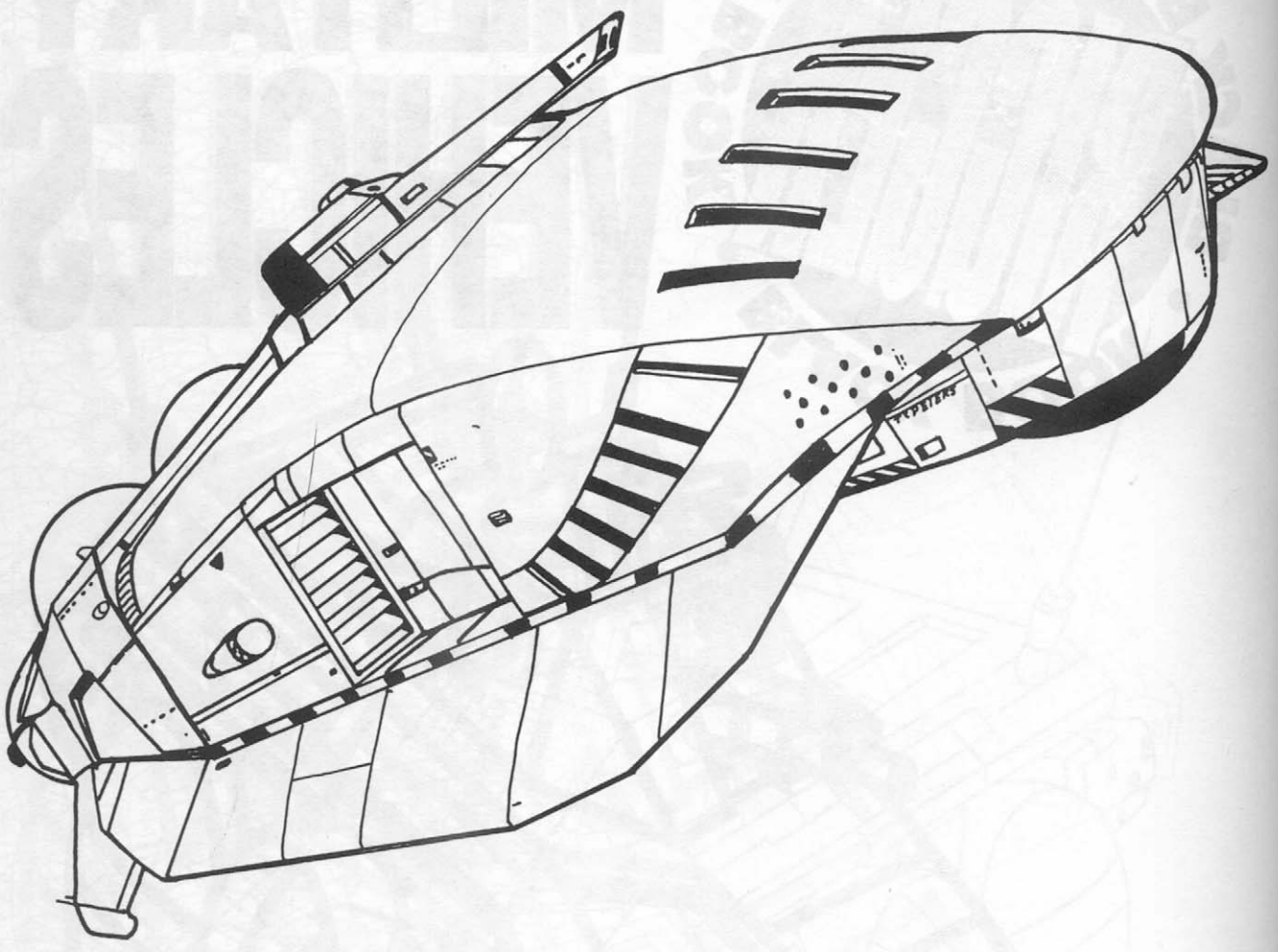
MILITARY VEHICLES



>>>>>Because the chances of a street rigger actually getting his hands on one of these are real slim, and the chances of surviving very long against one in unfriendly hands are only slightly better, it seems silly to list the few we do! But, then, this part of the Rigger Black Book consistently rates the highest for online-access time, so what do I know? Readers will be interested to know that, once again, we've lifted the bulk of the data here from the highly classified UCAS Military Vehicle Guide—and those military ICs are nasty, chummers! At the end of the section is a partial file we managed to salvage from the fried cyberdeck of one of our (late) data consultants. Provenance throughout is uncertain, as is the accuracy of the data retrieved.]<<<<<

—Nightmare (18:43:02/07-29-52)

GMC BANSHEE LAV



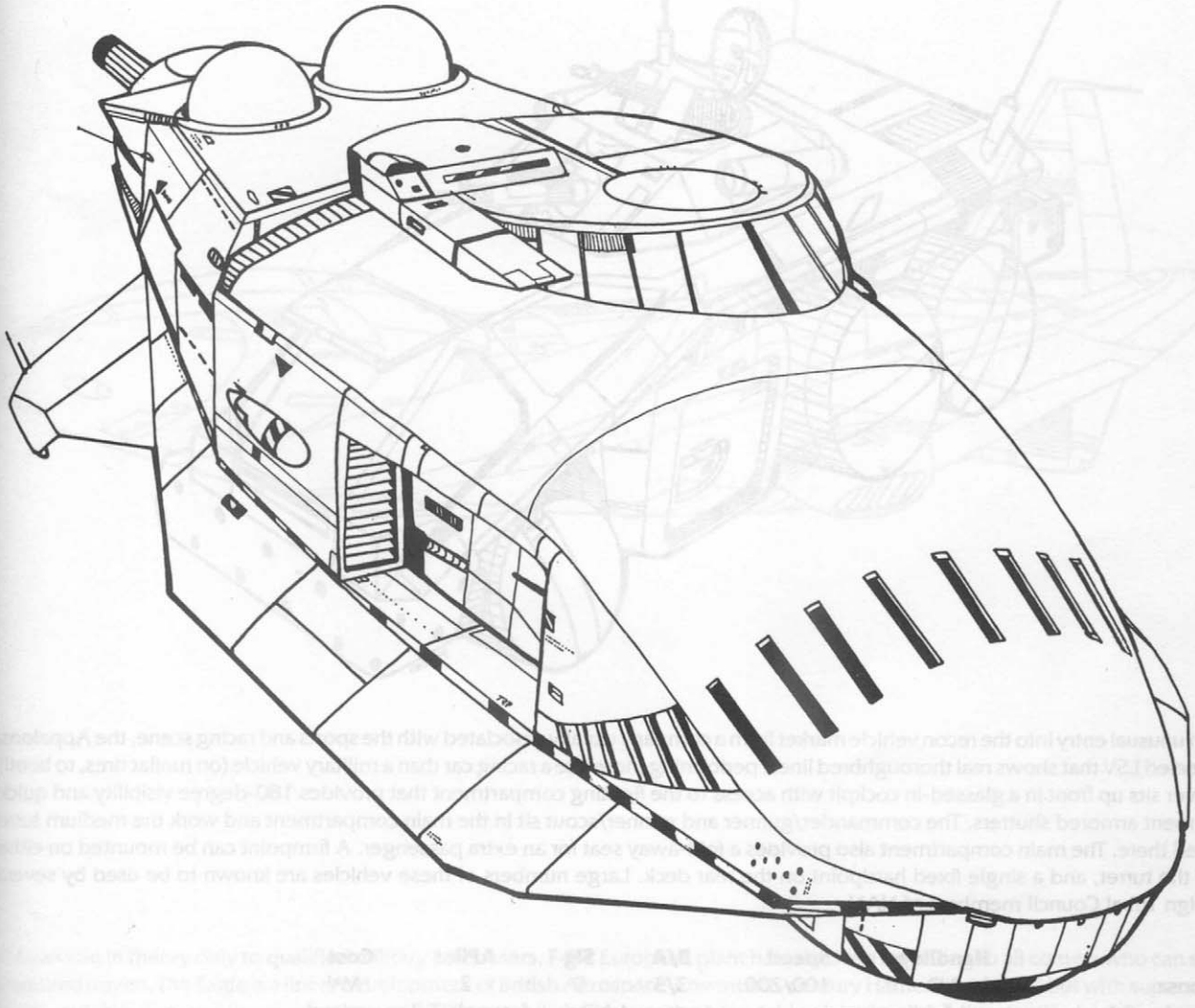
The Banshee is a standard military Low-Altitude Vehicle designed for scouting and light security duty, and currently in use by a number of national governments and several large mercenary organizations. (Rumors of corporate use persist, though these are <<**block delete: 9Mp**>>) The Banshee uses a conventional configuration, mounting a large turret in the center-rear deck with the engine and driver to the front, right and left respectively. The vehicle is divided into three internal compartments, with the driver up front, fighting central, and utility rear. Access between sections is via heavily armored sliding panels that can be locked from the fighting compartment. Nonpowered control wheels are mounted for more stable maneuvering. See below for weapon and internal options available on the basic chassis.

	Handling	Speed	B/A	Sig	APilot	Cost
Banshee	3	650/1000	6/6	5	2	10M¥+

Seating: Single bucket seat + twin bucket seats
Access: 3 cupola hatch + 1 rear hatch
Economy: 0.5 km per liter
Fuel: IC/2,000 liters
Cargo: 30 CF cargo
Sensors: Military II (7)
ECM/ECCM: Military II (5)/Military II (5)
Landing/Takeoff Profile: Effective VSTOL (vector thrust)
Options:

Scout Variant: The Scout variant has four individual bucket seats in the utility compartment, which also provides 10 CF storage for equipment. Turret armament is a 1,250-round autofeed Vigilant rotary autocannon, a 2,500-round coaxial assault cannon, both with antiaircraft capability, and a four-slot, armor-protected missile-launcher unit on the left turret side. The commander's cupola on the left turret top is a micro-turret mounted with a single 500-round HMG, and the gunner's cupola has a pintle mount for a 100-round MMG. External hardpoints of Armor 4/4 can be set on either side of the hull, each with space for a single heavy weapon and 2 CF of dedicated ammo storage, or 500 liters of fuel in a self-sealing, unarmored container that can be jettisoned from inside the command compartment.

Support Variant: The Support variant has folding bench seating for four, armament identical to the Scout variant, and uses the extra 20 CF in the utility space to store additional ammunition. The stored ammunition varies, but commonly includes eight extra missiles, 6 CF for autocannon, 3 CF for assault cannon, 2 CF for HMG, and 1 CF for MMG.



>>>>>[I wouldn't take the autopilot rating too seriously, chummers. The UCAS military versions have a nasty psuedo-AI autopilot as standard, adding full NOE, or nape-of-earth, flight capability at only a slight reduction in autopilot performance. Is this disinformation just a little surprise for scuzzballs like us?]<<<<<

—Nightmare (01:32:58/02-03-52)

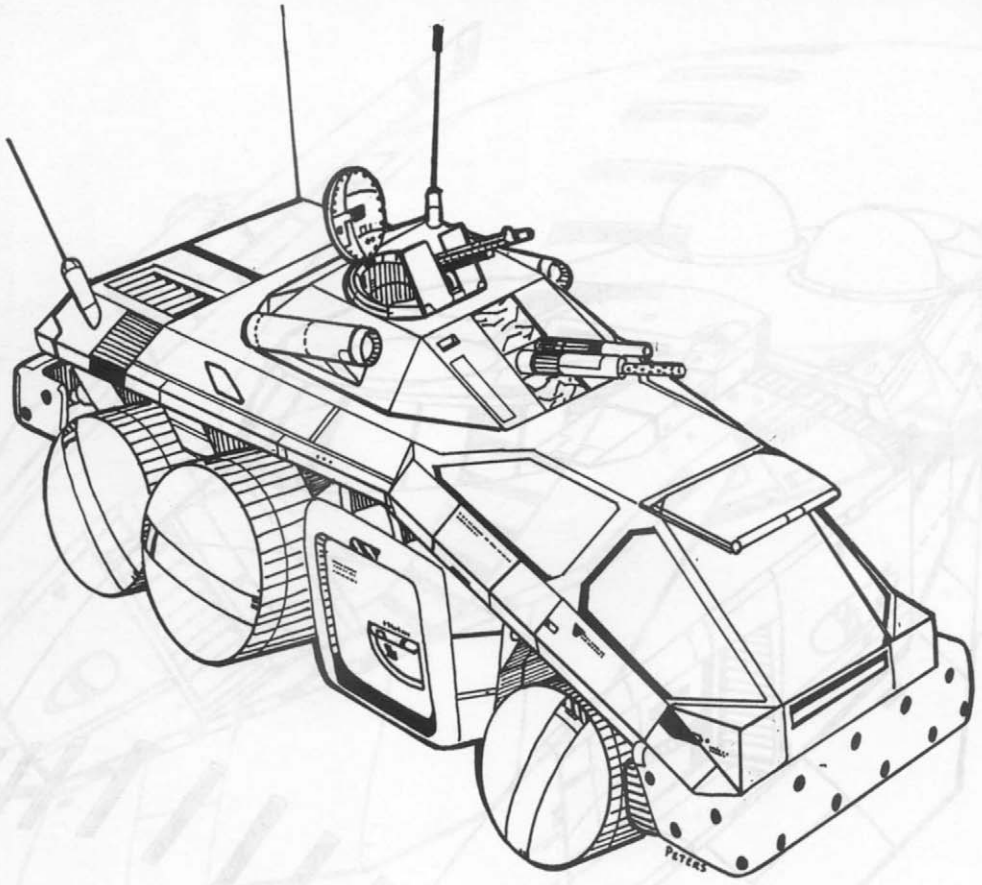
>>>>>[I'm pretty sure that someone's been running some Banshees through Hell's Kitchen out in Puyallup in recent weeks, because I've seen structures that've been chewed up by something that had to be at least a Vigilant rotary autocannon. What the great spirit's goin' on, any o' you chummers know?]<<<<<

—Chrome Dome (20:12:43/08-09-52)

>>>>>[There are some persistent rumors floating around that say the Metroplex government is selling some Banshees to the People's Revolutionary Army of New Guinea, in direct defiance of the UCAS ban on arms sales to rebels. Who can say where PRANG gets the nuyen to buy this ordnance, but they could be the ones tearing up the Barrens.]<<<<<

—SPD (23:45:15/08-09-52)

FERRARI "APPALOOSA" LIGHT SCOUT VEHICLE



An unusual entry into the recon vehicle market from a company usually associated with the sports and racing scene, the Appaloosa is a wheeled LSV that shows real thoroughbred lines, performing more like a racing car than a military vehicle (on runflat tires, to boot!). The driver sits up front in a glassed-in cockpit with access to the fighting compartment that provides 180-degree visibility and quick-deployment armored shutters. The commander/gunner and gunner/scout sit in the main compartment and work the medium turret mounted there. The main compartment also provides a fold-away seat for an extra passenger. A firmpoint can be mounted on either side of the turret, and a single fixed hardpoint on the rear deck. Large numbers of these vehicles are known to be used by several Sovereign Tribal Council members of NAN.

	Handling	Speed	B/A	Sig	APilot	Cost
Appaloosa	2/3	100/200	3/3	5	2	1M¥

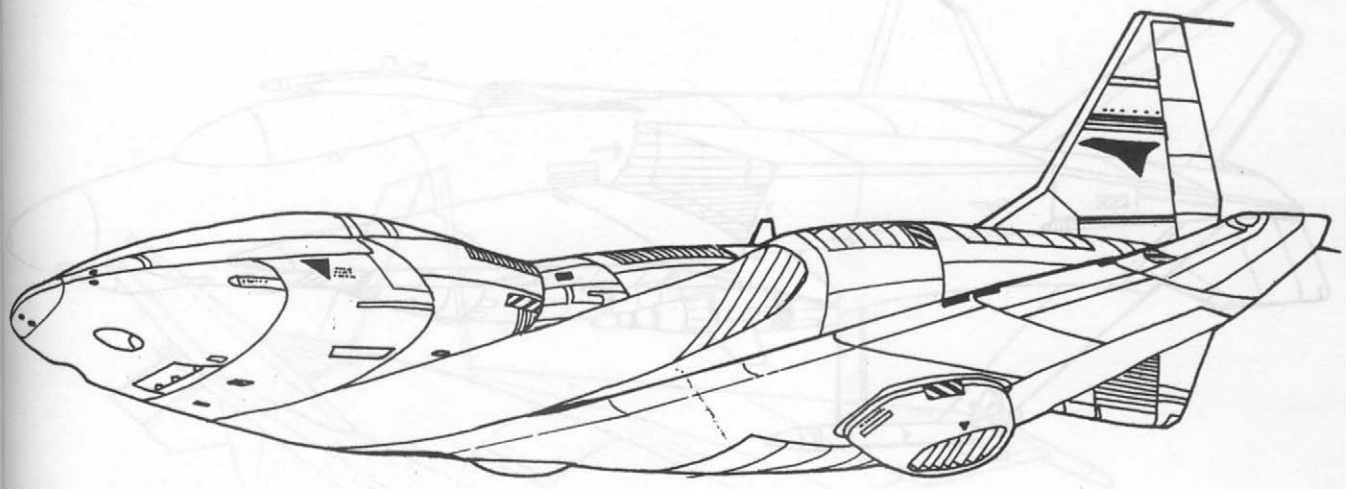
Seating: 1 + 2 bucket seats + 1 folding bench
Access: 1 hatch + 1 cupola + 1 oversized
Economy: 5/7 km per liter
Fuel: 250 liters
Cargo: 5 CF storage
Sensors: Military I (6)
ECM/ECCM: Military I (4)/Military I (4)
Additional Features: Armament is variable, but the basic configuration mounts a Vanquisher rotary 1,250-round HMG and a standard coaxial 2,500-round LMG in the medium turret. The commander's cupola has a pintle mount normally fitted with an LMG. The firmpoints normally fit a single-cell missile launcher, and the rear-deck hardpoint is normally empty.

>>>>>[Watch the Muscovite variants, chummskis. They mount aircraft-style rocket pods on the turret firmpoints and an eight-cell missile launcher on the rear-deck hardpoint.]<<<<<
—Ivan Denisovitch (12:14:32/05-17-52)

>>>>>[Some NAN models have Vigilant rotary autocannon with 625 rounds of ammo as their turreted armament—as some free traders have found out to their regret.]<<<<<
—Lone Wolf (07:54:34/06-23-52)

>>>>>[Some of the early models have faulty fuel-tank self-sealing and so can be "brewed up." The tanks are placed in the side door, so any penetrating hit at that target area can be the one you need!]<<<<<
—Wheelie (18:26:56/01-26-52)

FEDERATED-BOEING EAGLE



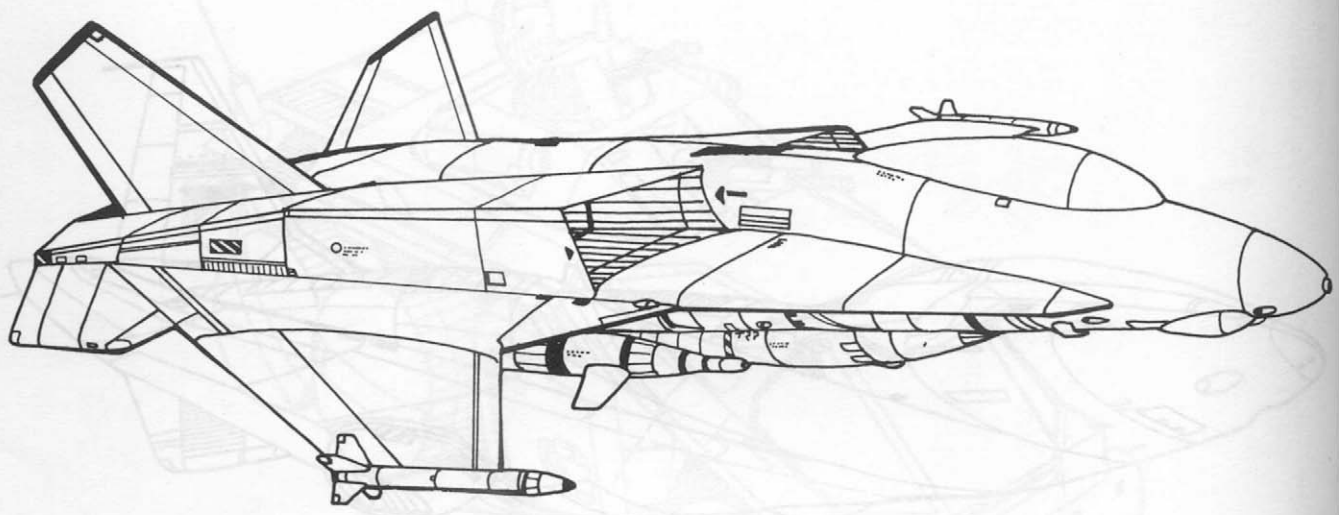
Available in theory only to qualified military purchasers, F-B's European plant has a bad rep for selling to all comers who can show the required nuyen. The Eagle is a linear development of British Aerospace's twentieth-century Harrier "jump-jet," but with supersonic-capable, variable-directed thrust engines and VTOL capability. The standard model is a single-seat fighter with variable-geometry wings which maximize hi-lo speed performance. A two-seat trainer version is also available. The Eagle is all-weather capable. The 2048 model offers a full suite of military-grade avionics onboard as standard, but the UCAS military has 2050 upgrades onboard.

	Handling	Speed	B/A	Sig	APilot	Cost
Eagle	3	900/1800*	5/4	5	3	50M¥

Seating: 1 bucket seat
Access: 1 canopy
Economy: .25 km per liter
Fuel: 3,000 liters
Cargo: 5 CF storage
Sensors: Military II (7)
ECM/ECCM: Military I (4)/Military II (5)
Additional Features: Armament varies, but standard models have two hardpoints in the nose that mount two Victory rotary assault cannon with 250 rounds each. Also available are two center-line under-fuselage hardpoints with 10 CF each, two inner-wing hardpoints with 5 CF each, and two outer-wing hardpoints with 2 CF each that mount a variety of ordnance and/or weapons pods.
*Speed increases to 2,700 kph on afterburner, but Economy also drops to 10 liters per km.

>>>>>[The vectored-thrust engines give the Eagle a real advantage over standard fighters. She can VIFF, Vector in Forward Flight, and let her opponent overshoot her almost at will. Handle the Eagle as capable of speed roughly equivalent to any faster aircraft she comes up against!]<<<<<
—Steel Lynx (21:09:23/08-27-52)

BAC-DASSAULT-MBB EFA VARIANTS



The EuroFighter Aircraft (EFA) originally entered service in 2020 as the EEC's standard STOL tactical fighter. The basic design was soon pirated by a joint Israeli-Singaporean task force, which hawked the plans to anyone with the nuyen to purchase them. Though obsolete by 2050 in military terms, the EFA still gives a good account of itself when mounted with up-to-date avionics. For this reason, it is often found in the service of large corporations and is commonly used by the military service of smaller nations. The Seattle Metroplex Guard also uses EFAs, which places them at the low-tech end of UCAS National Guard units.

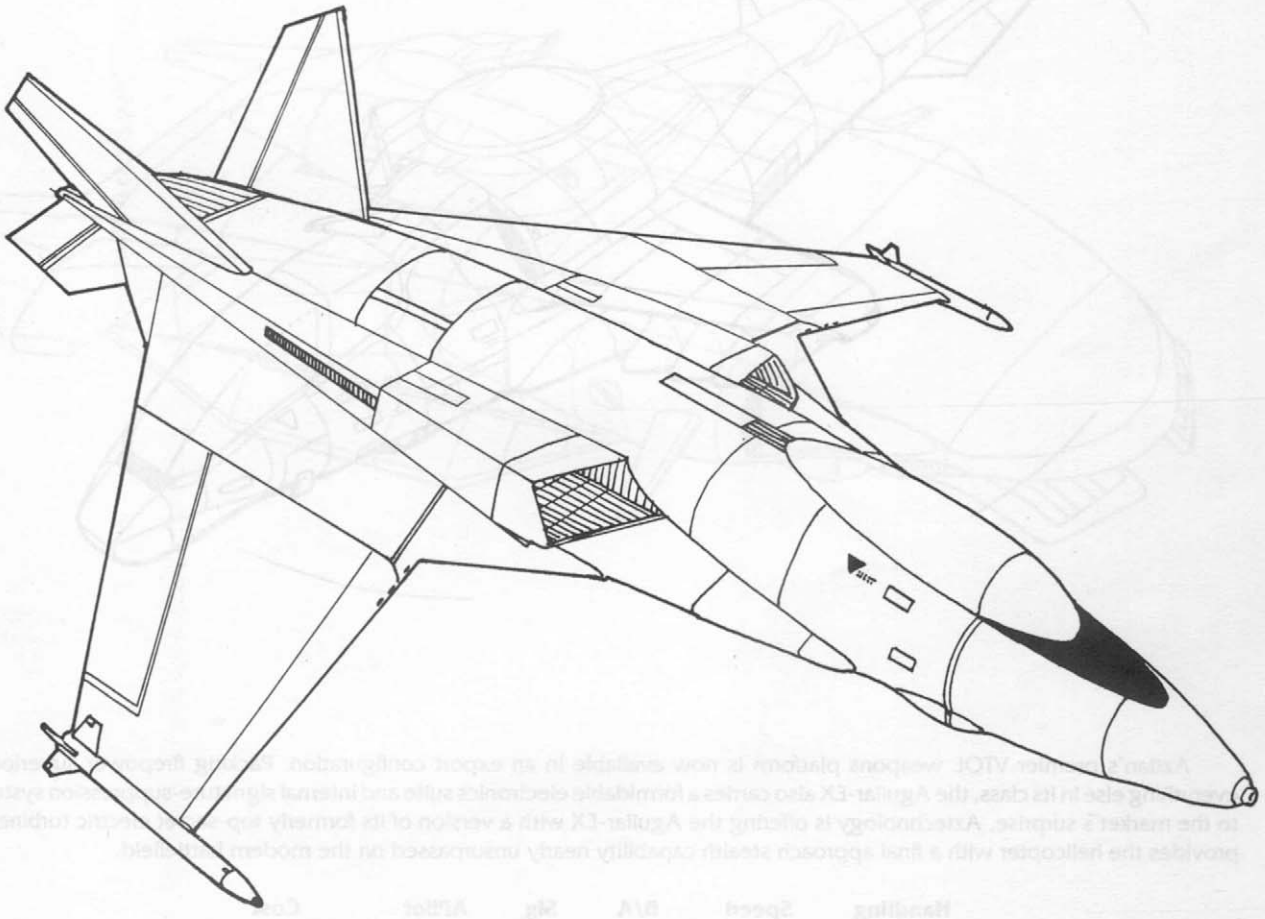
	Handling	Speed	B/A	Sig	APilot	Cost
EFA	3	950/1900*	4/2	4	3	5M¥

Seating: 1 bucket seat
Access: 1 canopy
Economy: .5 km per liter
Fuel: 2,000 liters
Cargo: 2 underseat + 2 storage
Sensors: Military II (7)
ECM/ECCM: Military I (4)/Military II (5)
Additional Features: Armament varies, but standard models mount a Victory rotary assault cannon with 500 rounds in the nose. Also available are two center-line under-fuselage hardpoints with 25 CF each, two inner-wing hardpoints with 12 CF each, and two outer-wing hardpoints with 5 CF each, which mount a variety of ordnance and/or weapons pods.
*Speed increases to 2,850 kph on afterburner, but Economy also drops to 5 liters per km.

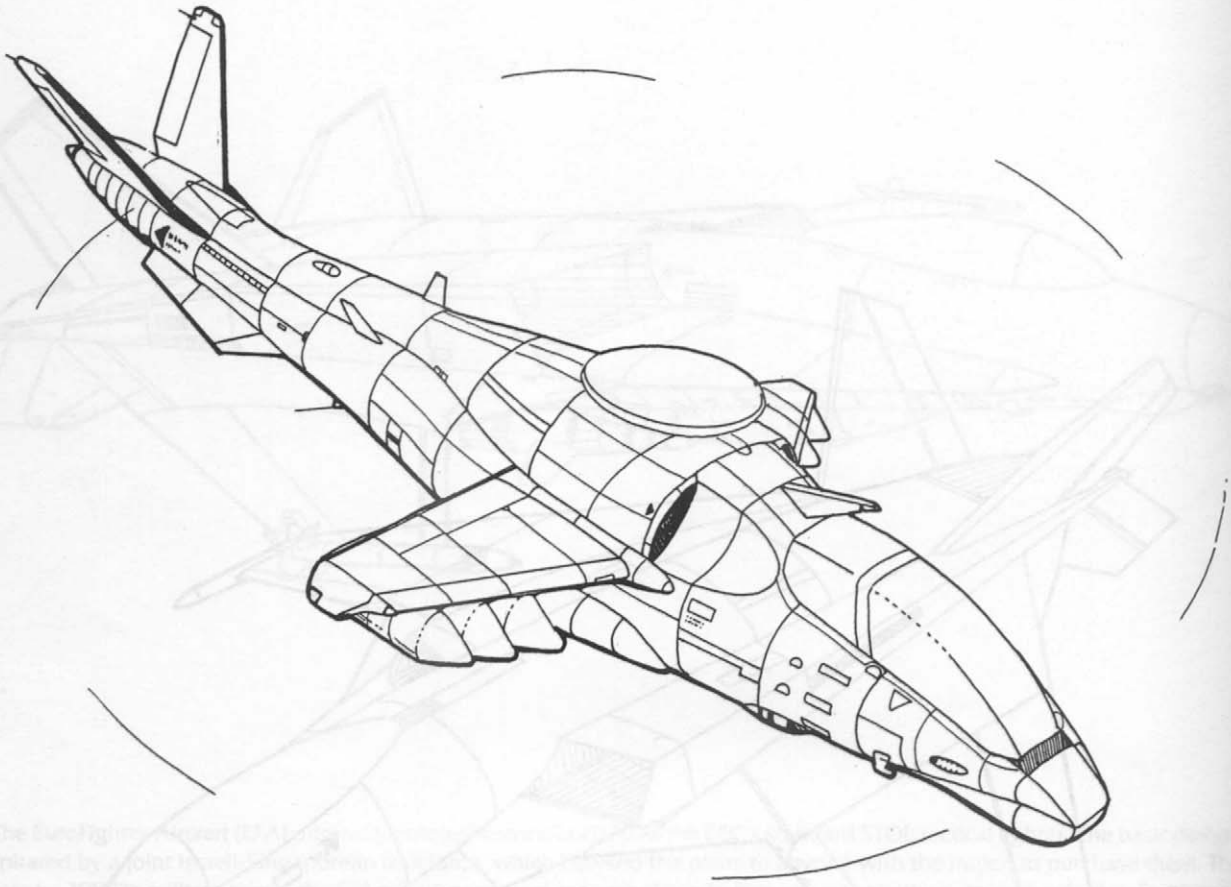
>>>>>[You know why the Seattle Metroplex Guard isn't equipped with anything better, don't you? No, it's not UCAS penny-pinching, they're just afraid to give us anything better in case we decide to secede! Not that anyone but the high muckamucks down at City Hall would benefit from such a move.]<<<<<
—Private Nose (12:03:43/07-12-52)

>>>>>[It's a breeze converting the civilian models to milspec standard, because the weapons bays are still there, and so are the underwing hardpoints. Just mount upgraded avionics and install the weapons. Of course, getting the electronics is the real problem!]<<<<<
—Spike (17:12:23/07-18-52)

>>>>>[Yeah, and that's only one good reason for UCAS security (among others) to keep a close eye on anyone with one of these babies.]<<<<<
—SPD (21:47:13/07-18-52)



AZTECHNOLOGY AGUILAR-EX ATTACK HELICOPTER



Aztlan's premier VTOL weapons platform is now available in an export configuration. Packing firepower superior to nearly everything else in its class, the Aguilar-EX also carries a formidable electronics suite and internal signature-suppression systems. Much to the market's surprise, Aztechnology is offering the Aguilar-EX with a version of its formerly top-secret electric turbine drive that provides the helicopter with a final approach stealth capability nearly unsurpassed on the modern battlefield.

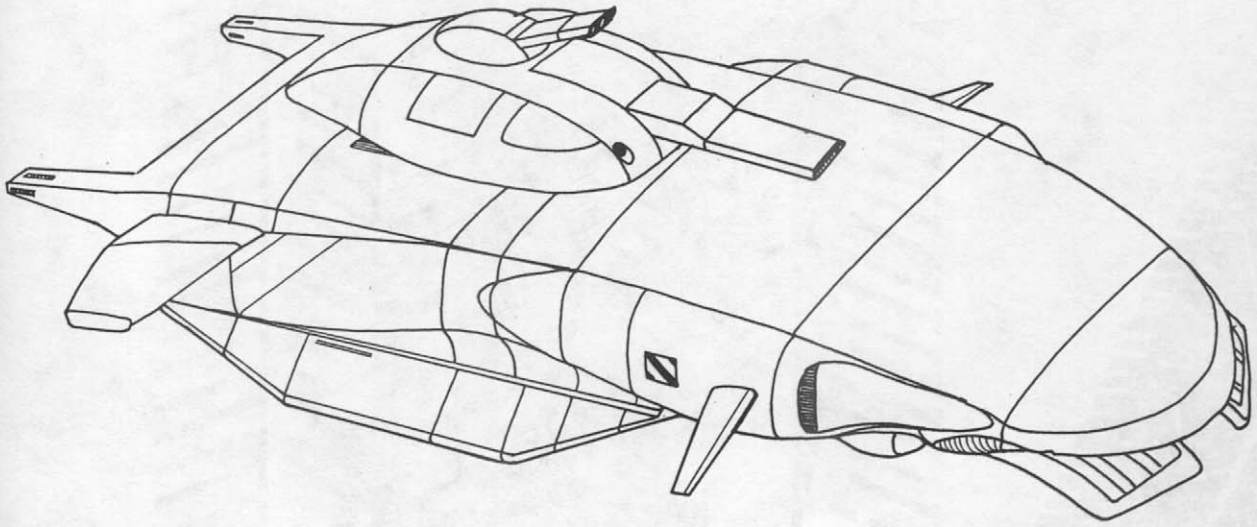
	Handling	Speed	B/A	Sig	APilot	Cost
Aguilar-EX	4	280/560	3/2	4 (8)*	4	2.6M¥

Seating: 1 + 1 integrated bucket seats
Access: 1 + 1 canopy
Economy: 1 km per liter/2 PF per km*
Fuel: 1,000 liters/100 PFs*
Storage: 2 CF storage
Sensors: Military II (7)
ECM/ECCM: Military I (4)/Military II (5)
Additional Features: Basic armaments package consists of two wing and two side mounts mounting a 1,000-round HMG and three Bandit AGMs or three "ripples" of 7.62cm unguided rockets. An underbelly missile rack providing a mix of a total of four AAMs and AGMs is also available.
*Under short-term electric drive.

>>>>>[The Azzies have recently begun to use their Aguilars extensively against various rebel groups. The electric drive gives them the advantage of almost complete surprise, and so I'm amazed that the drive is standard on the EX.]<<<<<
—Eye In The Sky (12:25:41/06-07-52)

>>>>>[Hey, the Azzies don't need to worry. They know exactly how to detect the exported Aguilars. And they do it very easily.]<<<<<
—Military Max (09:22:01/08-13-52)

CAS/GD "STONEWALL" MBT



The Confederated American State's recently fielded Stonewall Main Battle Tank remains somewhat of an enigma to UCAS intelligence services. The information presented here is purely speculative, based on reports and documentation issued via <<**block delete: 16.2Mp**>>

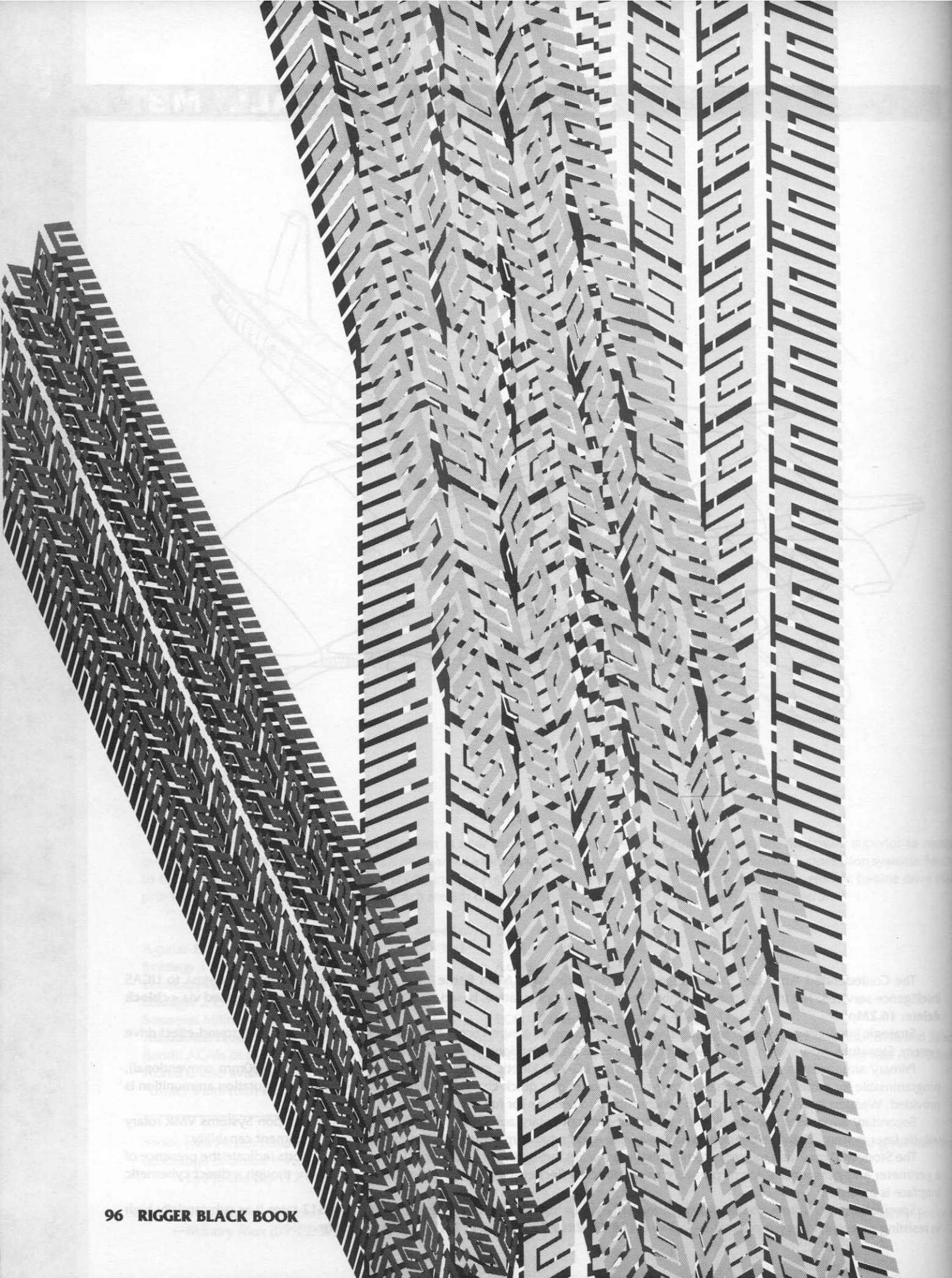
Strategic intelligence systems report the vehicle carries either a pure vector-thrust, or a combination vector/ground-effect drive system. Signature, however, is significantly below simulation projections.

Primary armament is reported to be the new Ares EG-200 kinetic rail-gun system (equivalent to the 180mm conventional), programmable for either a slow-recharge long-range mode, or a quick-charge fast-fire mode. Variable configuration ammunition is provided. Weapon is fully automated and synchronized to sensors for full-response fire capability.

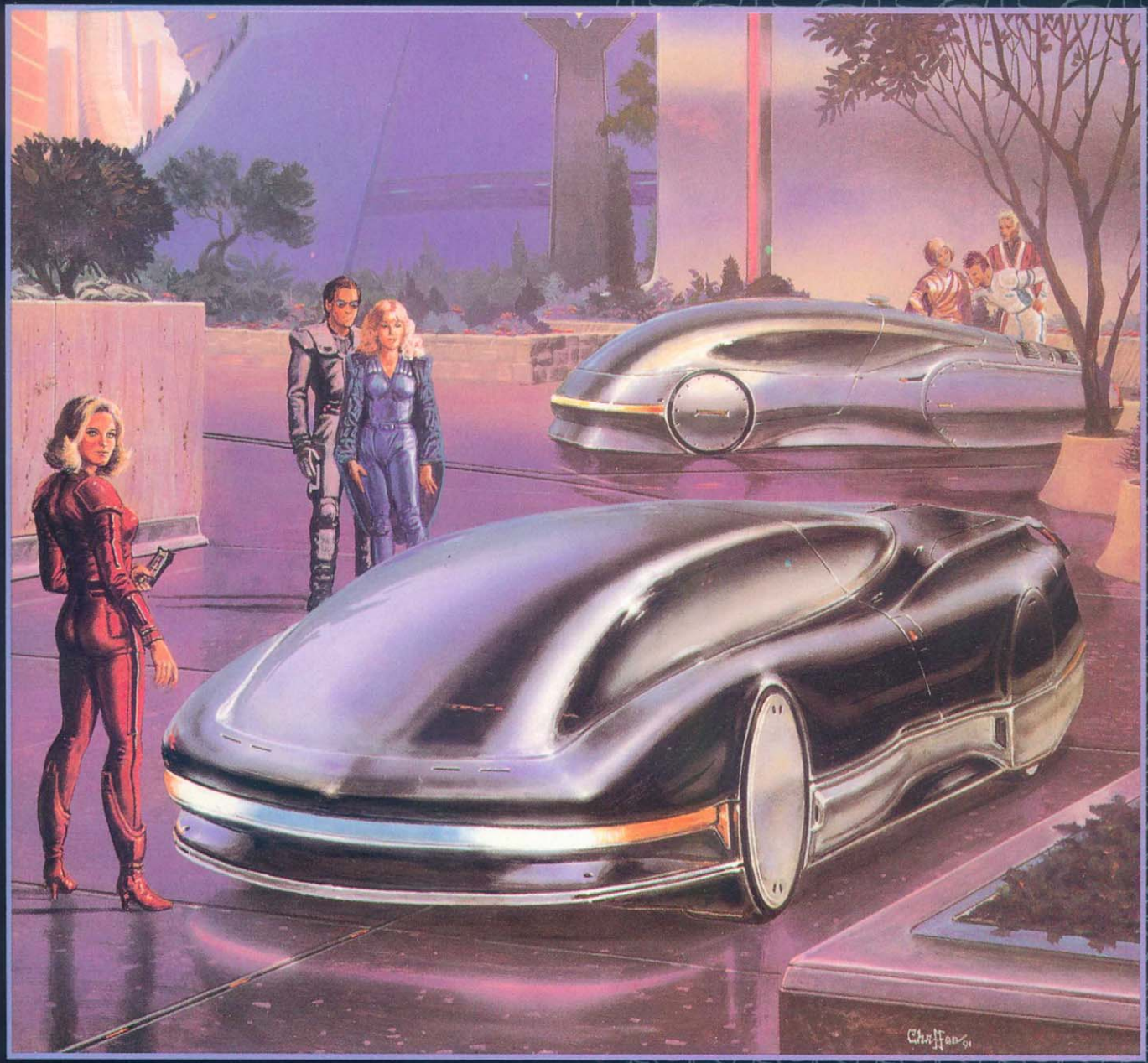
Secondary armament may be either a secondary-mount rotary autocannon, or the new Winter Weapon Systems VMR rotary vehicle laser system. Both are alleged to have variable-profile turret mounts allowing full anti-air engagement capability.

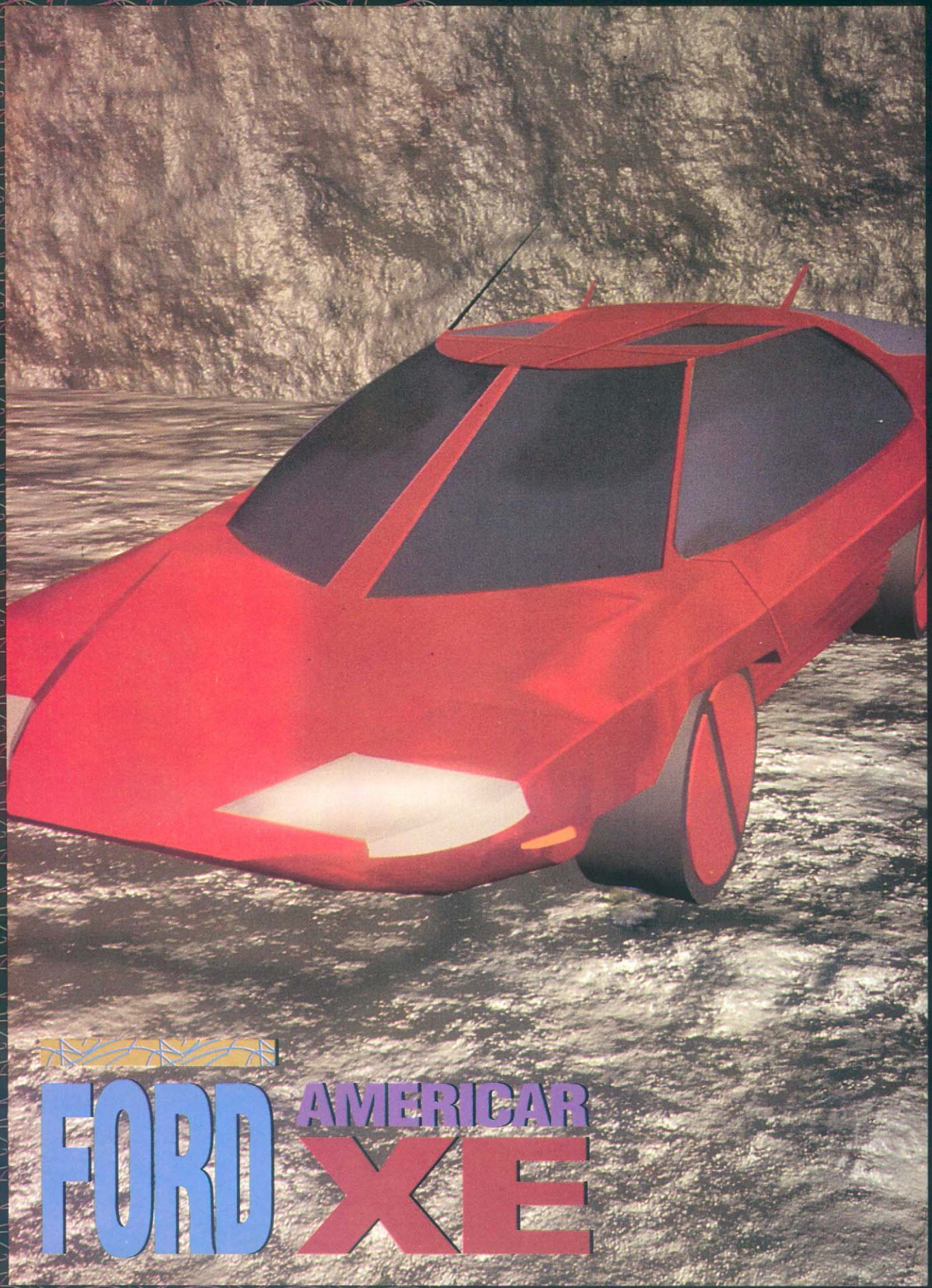
The Stonewall may also mount external missile or rocket racks, or twin RPV pods. Unconfirmed reports indicate the presence of a perimeter anti-personnel system, probably using directed flechettes. Crew complement is unknown, though a direct cybernetic interface is assumed.

Speculation as to armor composition ranges widely, but Intelligence Document RSD-10829-AS12 rates it as substantially high in resisting external, directed paranatur—>>>>***DATA CORRUPT:::::PARTIAL DATA LOSS 23.65Mp***<<<<



RIGGER

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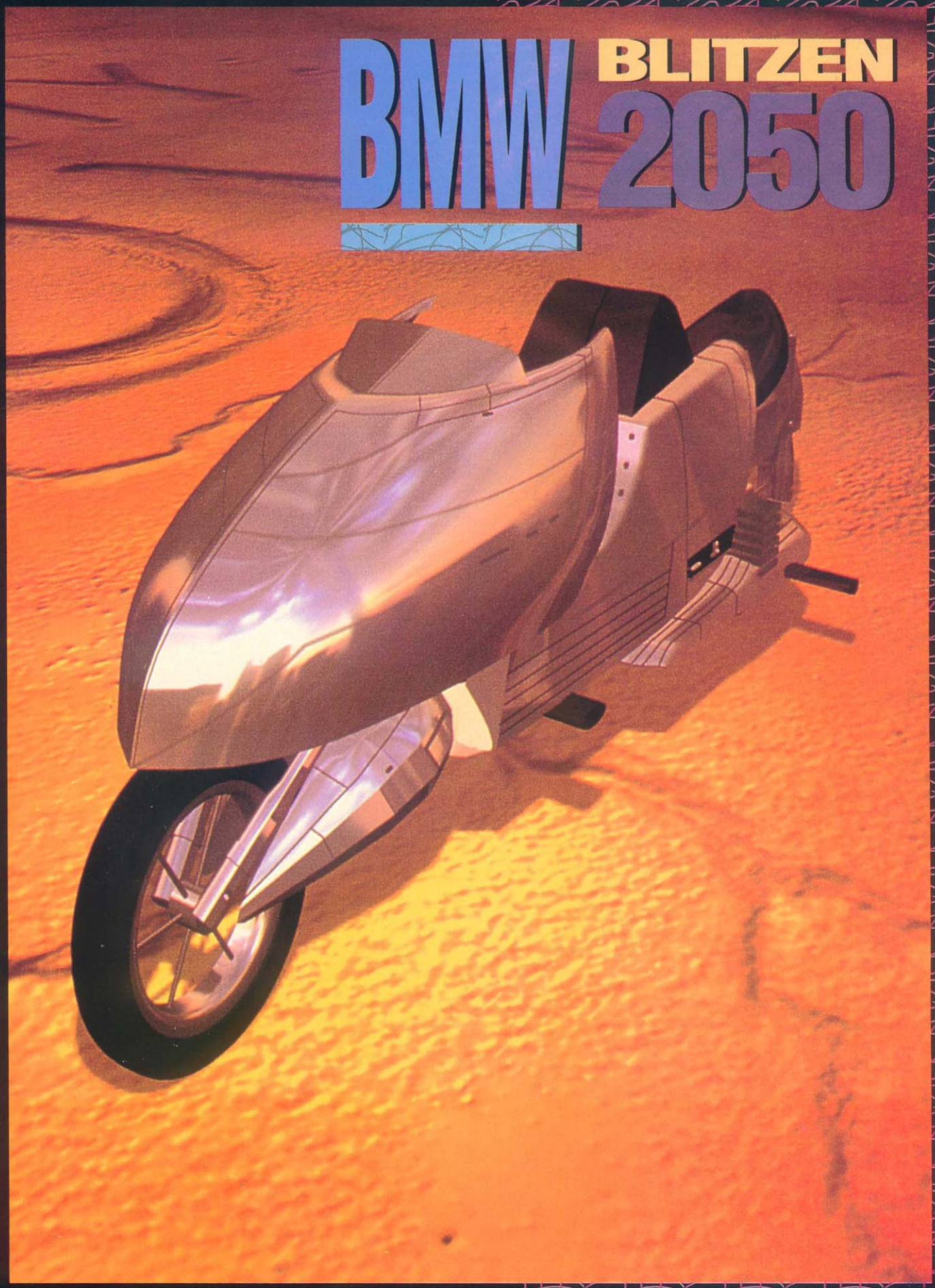
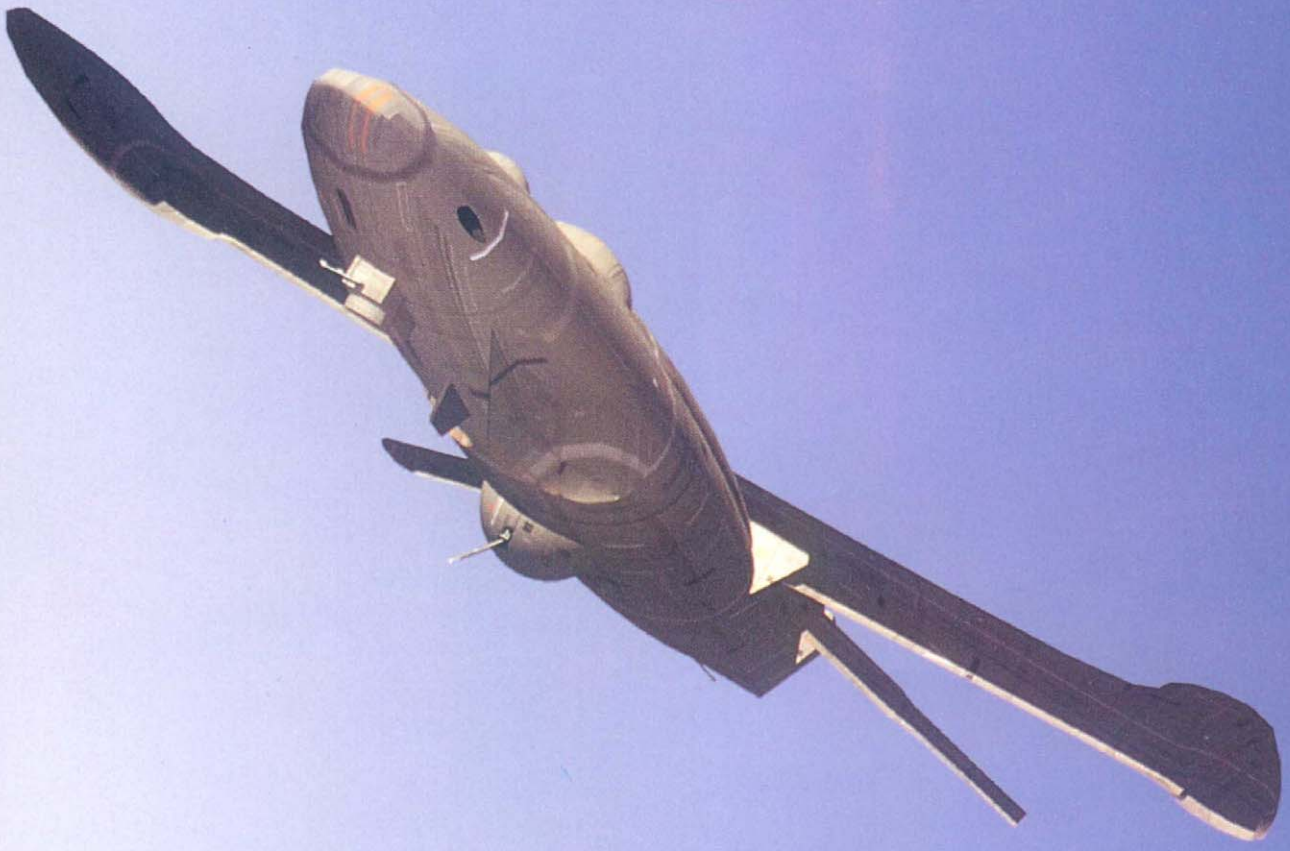
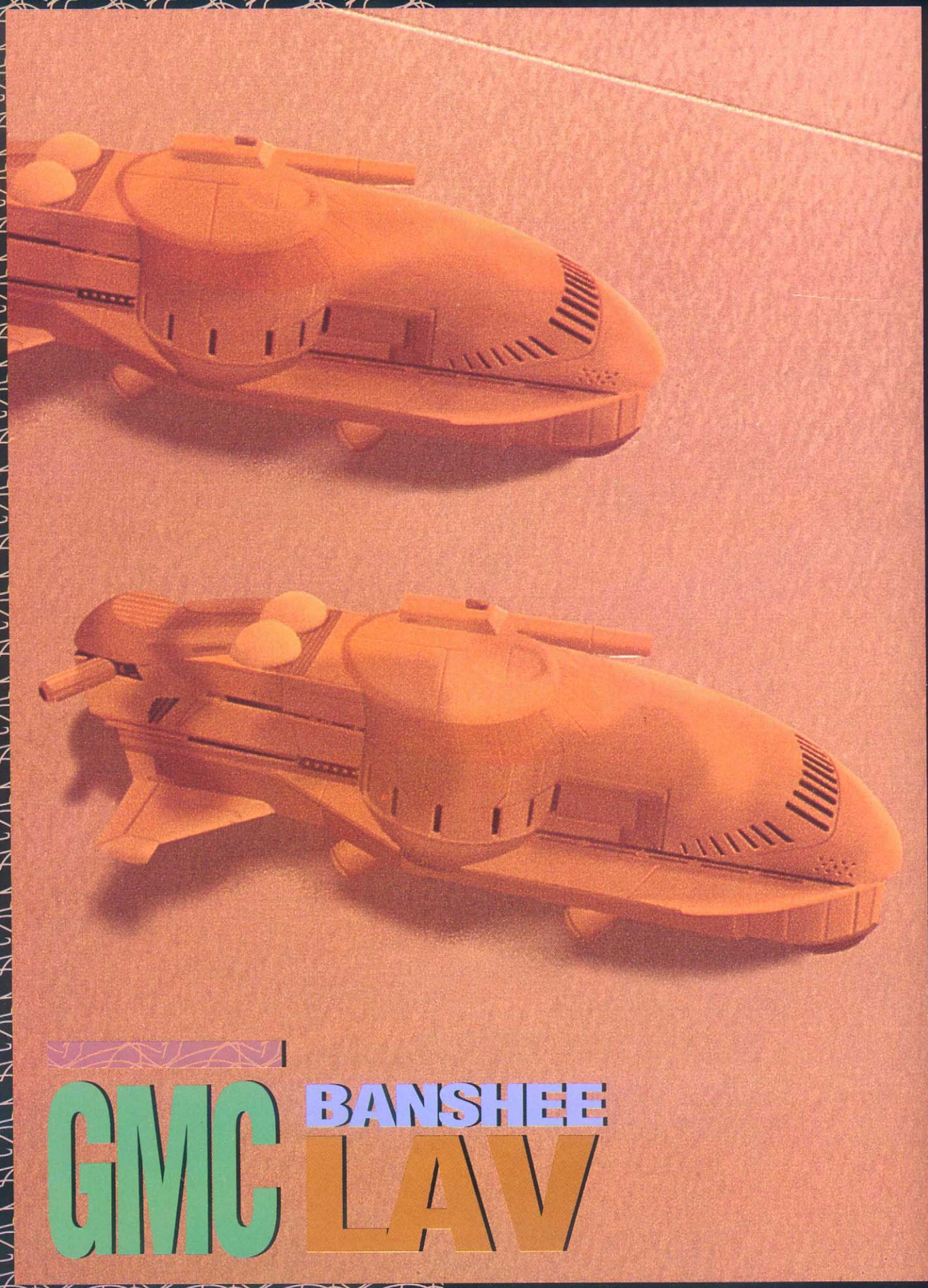


AZT GCR-23C CRAWLER

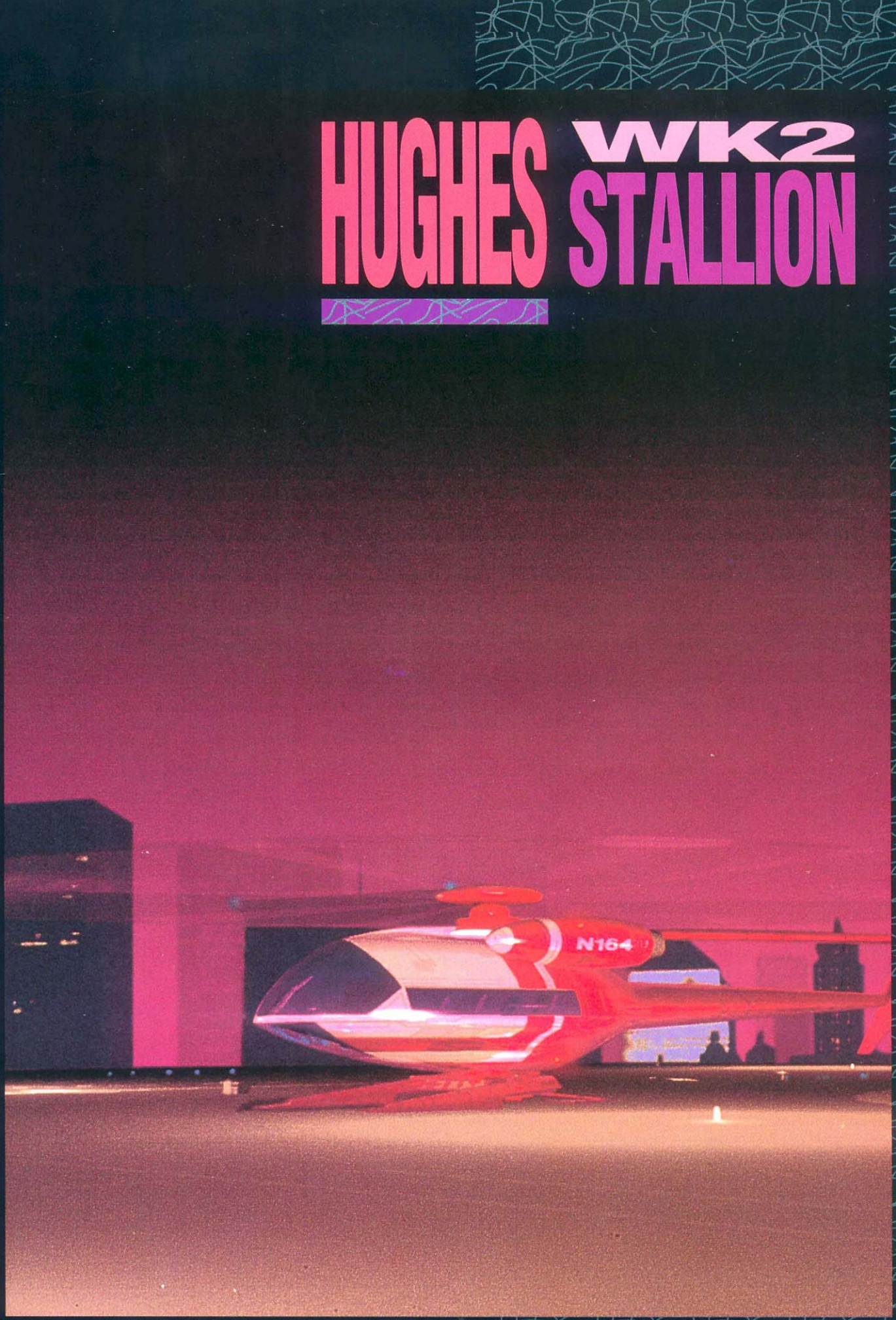
CAS WANDJINA RPV

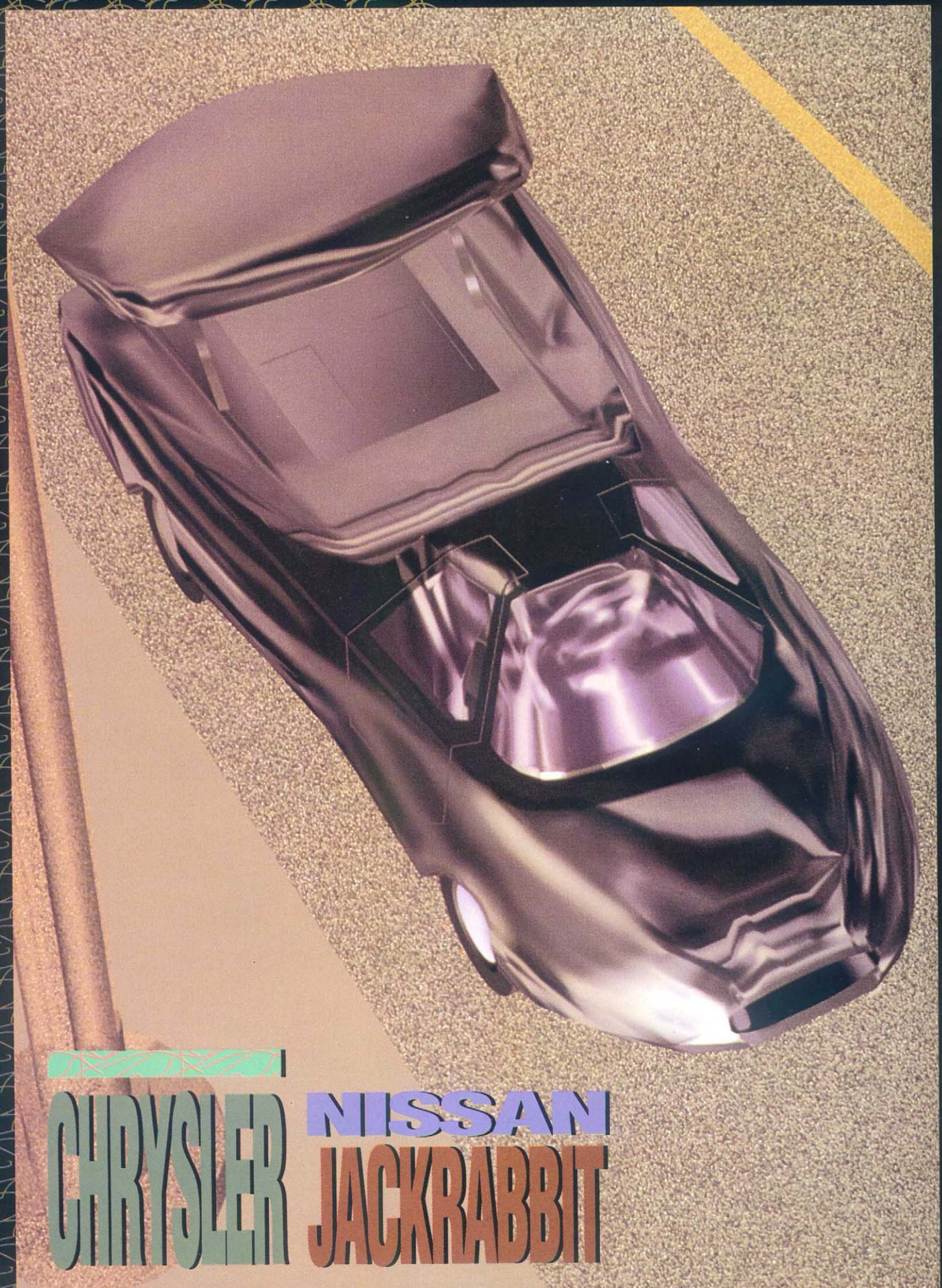




GMC BANSHEE LAV

HUGHES WK2 STALLION




CHRYSLER
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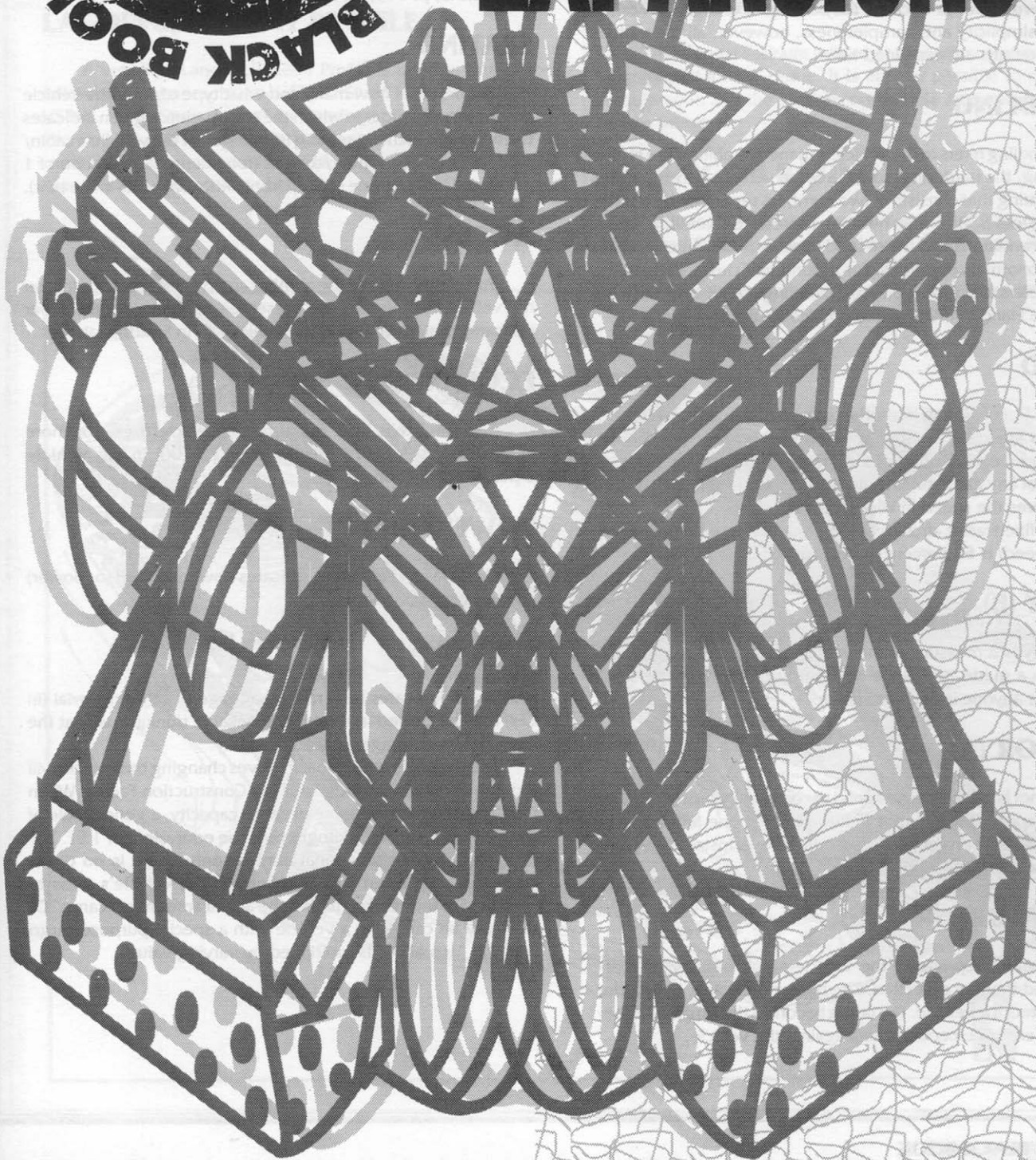
RIGGER

RULES EXPANSIONS



VEHICLE RATINGS

In the previous section, each vehicle is rated according to factors such as handling, speed, body/armor, signature, autopilot, and cost. Some of these values are easily enough deciphered, either because they are virtually identical to the basic **Shadowrun** rules or because they are self-explanatory. For the sake of simplicity and completeness, however, all the various vehicle ratings are explained here.

HANDLING

Handling refers to the vehicle's maneuverability. The higher the rating, the harder it is to control the vehicle. Most vehicles have a rating that consists of two numbers separated by a slash. In those cases, the first number represents handling under normal conditions and the second number represents handling under abnormal conditions. For ground vehicles, the Handling Rating refers to on-road/off-road handling. Other vehicles have only one Handling Rating that applies to all conditions.

SPEED

The Speed Rating is another two-digit value that gives the vehicle's standard cruising speed and then its top speed in meters per combat turn. To determine the vehicle's speed outside of any game turn, multiply the speed listed by 1.2. The result gives the speed in kilometers per hour.

For fixed-wing aircraft, assume that stall speed (i.e., minimum speed) is 50 percent of standard cruising speed.

BODY (B)

Body is a measure of the vehicle's structural ruggedness and also a guide to relative size. Body performs as personal armor for anyone inside the vehicle.

ARMOR (A)

Armor is protection designed to completely protect against light weapons (they cannot penetrate even one level) and to provide variable protection (according to level installed) against heavy weapons.

SIGNATURE

Signature represents the vehicle's vulnerability to electronic and thermal detection. The higher the value, the harder it is to detect the vehicle. The rating becomes the Target Number for any Sensor Perception Tests against the vehicle.

AUTOPILOT

The autopilot assists in the control of the vehicle. See **Autopilots,** p. 114, for more information.

SEATING

Seating tells how many and what type of seats the vehicle possesses. The order in which the information is given indicates the order in which the seating is arranged in the vehicle's cabin/passenger compartment/cockpit (for example, a notation of 1 + 2 would indicate one seat up front, with two seats in the rear).

ACCESS

Access represents the number and type of access points on the vehicle. When they are presented in sequence, the order indicates their location on the vehicle, as in **Seating**, above.

ECONOMY

Economy tells how much fuel a vehicle uses. For more information, see **Fuel Consumption,** p. 100, in the **Vehicle Operations** section.

POWER/FUEL

The Power/Fuel Rating indicates how much fuel (or power) can be carried onboard.

CARGO

Cargo indicates how much baggage or other material (in CFs) may be carried in a vehicle's lockable trunk (usually at the rear), general storage, or the cargo bay.

Thus, any procedure that involves changing the vehicle will require calculations in terms of the Construction Factor. When the CF is used as a measure of cargo capacity, a general rule of thumb is to assume 25 kilograms is the equivalent of 1 CF. The CF is a relative or notational number only; there is **no** direct relationship between a CF number and the vehicle's mass or volume. For this reason, to find the actual amount of "cargo" CF that may be carried in a vehicle with a special-purpose cargo bay, the "actual" CF is multiplied by varying values.

STANDARD LOAD

Standard Load represents the amount of cargo the vehicle can carry at its listed cruising and maximum speeds. If a truck or tractor is carrying or pulling less than its Standard Load, the vehicle's speed increases by +5/15. If a truck or tractor is traveling unloaded, its speed increases by +10/30.

A truck or tractor pulling or carrying more CF than its Standard Load suffers the following speed reductions.

Overload	Speed Reduction	Economy
Up to 2x	Half-speed	50%
2x–3x	One-fourth speed	30%
3x or more	Impossible	—

LANDING/TAKEOFF PROFILE

A vehicle's Landing/Takeoff Profile is rated in one of the following categories: Normal, STOL (Short Takeoff or Landing), VSTOL (Very Short Takeoff or Landing), Conventional VTOL (Vertical Takeoff or Landing), Helicopters, and Dirigibles. For more information on takeoff and landing runs, see the **Vehicle Operations** section of this book.

OPERATIONAL DURATION

Operational Duration for drones indicates how long a particular drone can operate in stationary sensor-mode. Listed with the vehicle are the conversions for duration in other modes.

SET-UP/BREAKDOWN TIME

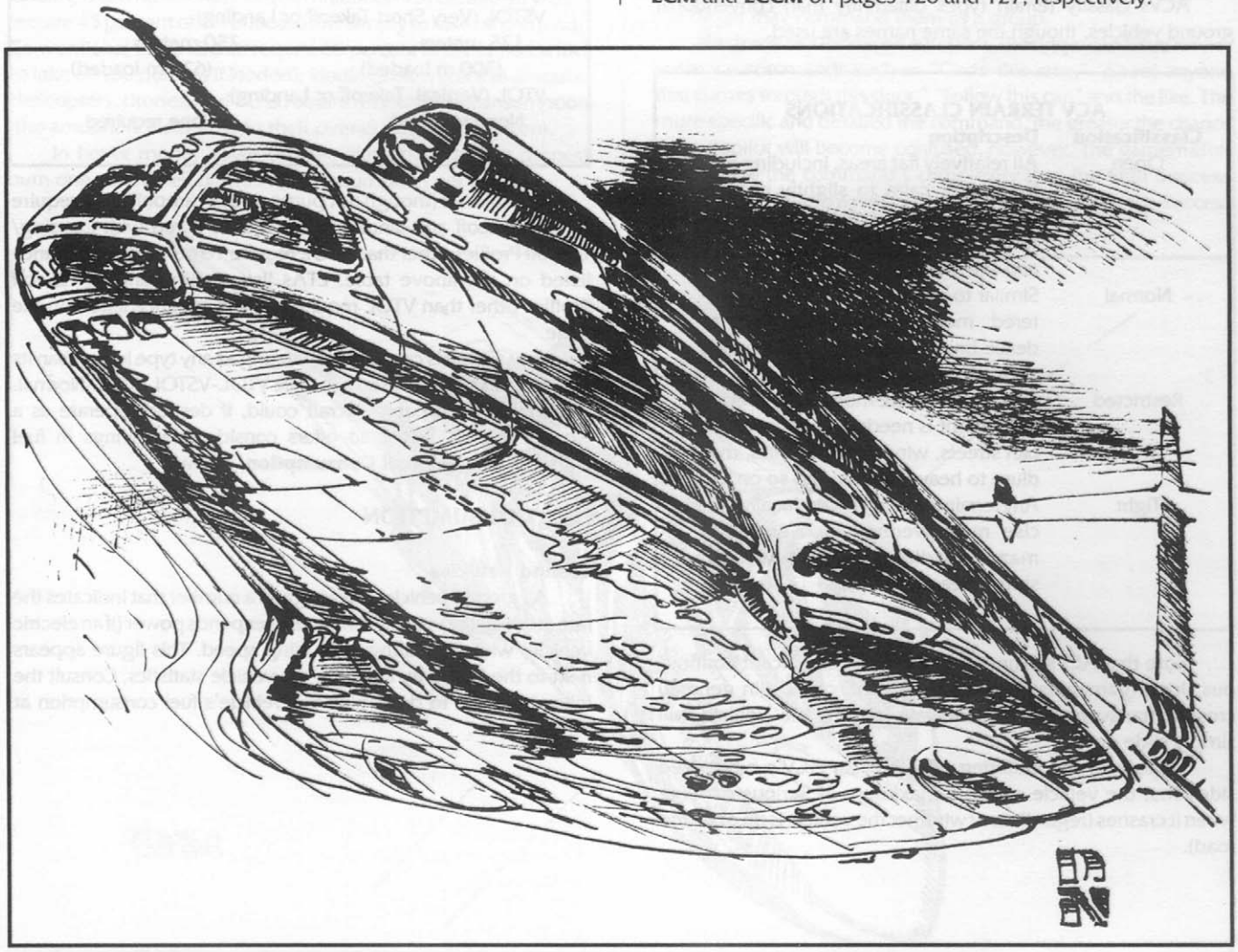
This number tells how long it takes to set up a drone or to tear one down for storage. All drones, regardless of their Set-up/Breakdown time, take one combat turn (3 seconds) to "power-up" from their dormant, storage state.

SENSOR PACKAGE

The Sensor Package tells what type of sensors are standard equipment for the drone. It is entirely possible to modify this equipment. See the sections on **Vehicle Accessories** and **Vehicle Sensors**.

ECM/ECCM RATING

This is the vehicle's respective ECM/ECCM ratings. See **ECM** and **ECCM** on pages 126 and 127, respectively.



VEHICLE OPERATIONS

This section addresses some aspects of vehicle operations not specifically addressed in previous discussions of vehicles in **Shadowrun.**

TERRAIN EFFECTS

Off-road terrain, which, as the name implies, is anywhere off a road—becomes a subcategory of the existing terrain types (Open, Normal, Restricted, and Tight). A vehicle moving in off-road terrain increases its Handling (use the second value) and reduces its speed (this number is reduced by half for those vehicles lacking off-road suspensions).

AIR CUSHION VEHICLES

ACVs classify terrain types differently than conventional ground vehicles, though the same names are used.

ACV TERRAIN CLASSIFICATIONS

Classification	Description
Open	All relatively flat areas, including rolling plains, calm to slightly choppy water, and such normally impassable terrain as swamps, bogs, marshes and the like.
Normal	Similar to open terrain, but with scattered, moderate obstacles (light to dense brush, creek beds, continuous slight slopes, and so on.)
Restricted	Any terrain where moderately precise movement is needed, such as suburban streets, winding roads, hills, medium to heavy woods, and so on.
Tight	Any terrain requiring exceptionally precise maneuvering, such as urban mazes, badlands, dense woods, stormy seas, and so on.

Note that ACVs cannot negotiate any significant continuous slope (gamemaster's discretion), and cannot (in general) cross a transverse slope (sideways slope): the vehicle will simply slide down.

Because of the buffering effects of an ACV's rubberized sideskirts, the vehicle suffers a maximum of Serious damage when it crashes (regardless of whether the vehicle is on or off the road).

AIRCRAFT

Aircraft require a certain amount of ground space to take off or to land. Consult the following table to determine the distance required for takeoffs and landings for different categories of aircraft.

AIRCRAFT TAKEOFF/LANDING DISTANCES

Takeoff Distance	Landing Distance
Normal	
1,000 meters (1,500 m loaded)	2,000 meters (3,000 m loaded)
STOL (Short Takeoff or Landing)	
250 meters (625 m loaded)	500 meters (1,250 m loaded)
VSTOL (Very Short Takeoff or Landing)	
125 meters (300 m loaded)	250 meters (625 m loaded)
VTOL (Vertical Takeoff or Landing)	
None required	None required

Floatplanes (though not purpose-built amphibians) require double takeoff and landing runs. Drones listed with Landing/Takeoff Profiles other than VTOL require 10 percent the distance listed on the above table. LTAs listed with Landing/Takeoff Profiles other than VTOL require half the distance listed on the table.

Any aircraft is capable of operating as any type lower than its Landing/Takeoff Profile on the scale VTOL-VSTOL-STOL-Normal. Thus, an STOL-capable aircraft could, if desired, operate as a Normal aircraft. Doing so offers considerable savings in fuel consumption. See **Fuel Consumption,** below.

FUEL CONSUMPTION

Ground Vehicles

All ground vehicles are assigned a number that indicates the rate at which the vehicle burns fuel or expends power (if an electric vehicle) while operating at cruising speed. This figure appears next to the Economy Rating in the vehicle statistics. Consult the following table to determine the vehicle's fuel consumption at other speeds.

ECONOMY RATING TABLE

Speed	Elec/ImpElec	IC/MultiF
Cruising, or less	As listed (Base)	As listed (Base)
Up to Cruising x 2	Base x 2.5	1/2 Base
Cruising x 2 to Max	Base x 5	1/3 Base
Pursuit Combat	Base x 2.5	1/2 Base

Air Cushion Vehicles

Economy in air cushion vehicles remains the same, regardless of speed or terrain.

Aircraft

The Economy Rating applies to speeds of cruising or less. At greater speeds, fuel consumption is doubled. In Pursuit Combat, fuel consumption is four times normal.

Takeoff and Landing also affect fuel supply. Normal takeoff/landing requires no extra fuel consumption (it is factored into the overall Economy Rating). An STOL takeoff burns 20 percent of the onboard fuel (30 percent if loaded). Landings burn half this amount so that, say, an unloaded STOL aircraft would require 30 percent of onboard fuel simply to takeoff and land. A VSTOL takeoff burns 30 percent of the onboard fuel (45 percent if loaded); landings burn half this amount (an unloaded VSTOL aircraft would require 45 percent of the onboard fuel simply to take off and land). Conventional VTOL aircraft require 60 percent of the onboard fuel to take off (80 percent if loaded); landings burn half this amount. Helicopters, drones, and LTAs require no extra fuel consumption (the amount is factored into their overall fuel consumption).

In hover mode, hover-capable aircraft (excluding drones) burn one-tenth their normal fuel consumption per minute.

VEHICLE CONTROL RIGS

To become a rigger requires using a piece of cyberware known as a vehicle control rig (VCR). This equipment allows the rigger to cybernetically command a vehicle directly by jacking into it or to operate it remotely via a remote-control deck. The vehicle control rig gives the rigger advantages such as bonuses to Reaction and Initiative, plus a new advantage, the Control Pool.

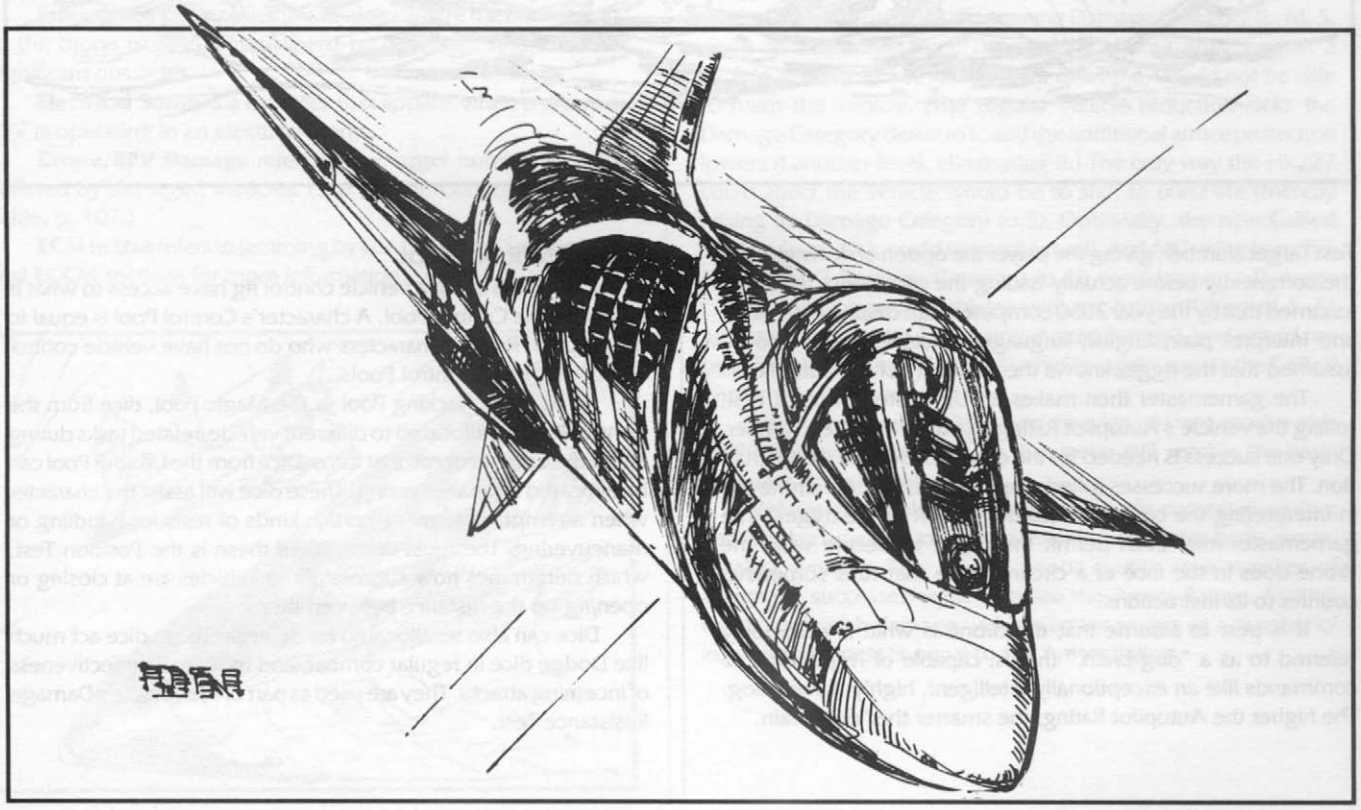
RIGGER/VEHICLE INITIATIVE

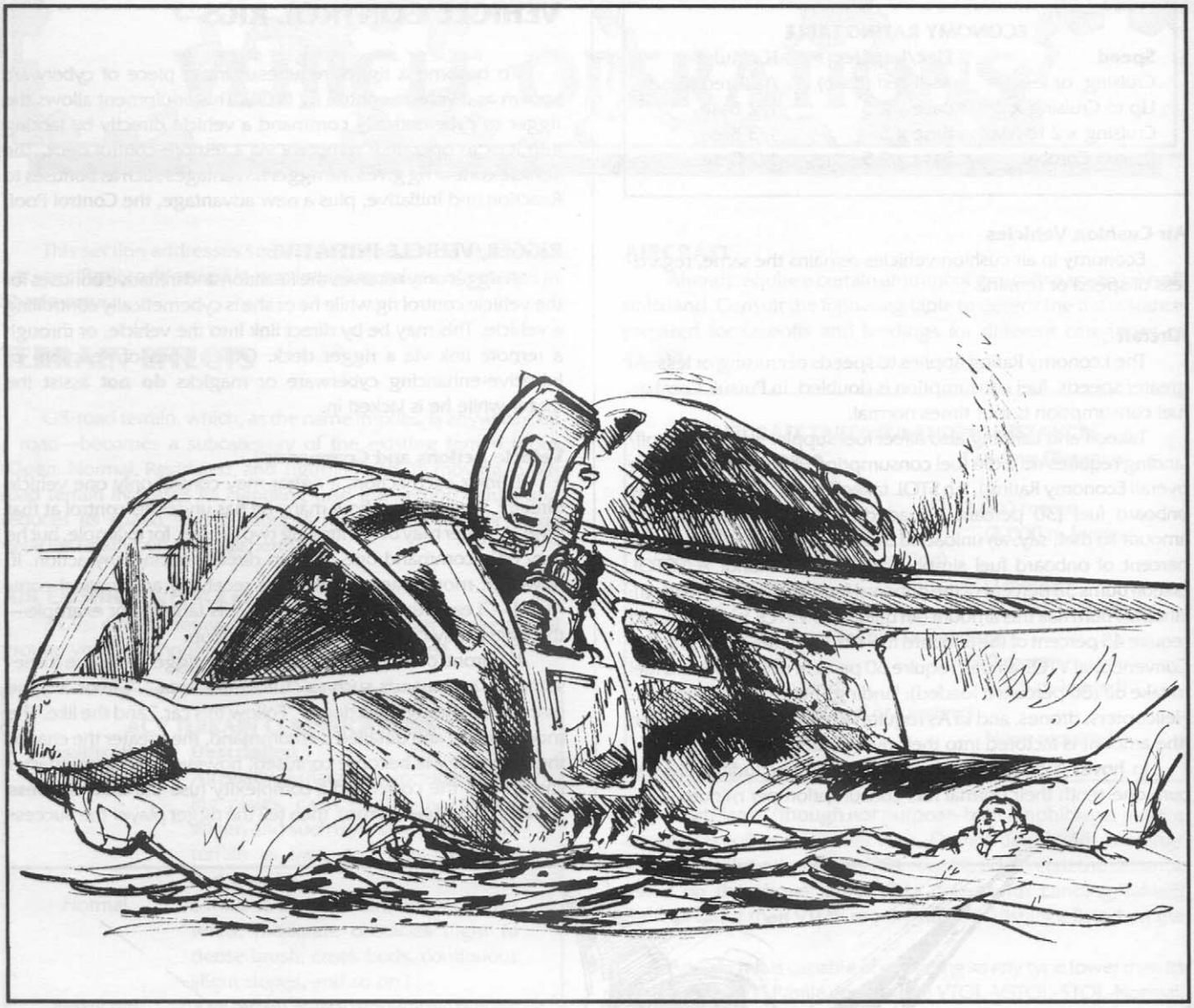
A rigger only receives the Reaction and Initiative bonuses for the vehicle control rig while he or she is cybernetically controlling a vehicle. This may be by direct link into the vehicle, or through a remote link via a rigger deck. Other types of Reaction- or Initiative-enhancing cyberware or magicks **do not** assist the rigger while he is jacked in.

Vehicle Actions and Commands

During each action, a rigger may control only one vehicle directly, regardless of how many he has under his control at that time. A rigger may be controlling two drones, for example, but he may only command one of them directly during any action. If, however, more than one drone is receiving an identical command—"Leave the area" or "Attack this target", for example—the rigger may command them as a group.

If a drone or RPV has an autopilot, the rigger can issue it one-sentence commands such as "Circle this area," "Shoot anyone that comes through this door," "Follow this car," and the like. The more specific and detailed the command, the greater the chance the autopilot will become confused, however. The gamemaster should rate the command's complexity (use the **Skill Success Table,** p. 55, **Shadowrun**), then tell the rigger player the Success





Test Target Number, giving the player the option of downgrading the complexity before actually issuing the command. (It can be assumed that by the year 2050 computers can clearly understand and interpret plain English-language structure. It can also be assumed that the rigger knows the capability of the autopilot.)

The gamemaster then makes an Unresisted Success Test, rolling the vehicle's Autopilot Rating against the Target Number. Only one success is needed for the drone to execute the instruction. The more successes rolled, the more latitude the drone has in interpreting the command (to the benefit of the rigger.) The gamemaster may even permit the rigger to decide what the drone does in the face of a circumstance that runs somewhat counter to its instructions.

It is best to assume that the drone is what is commonly referred to as a "dog-brain," that is, capable of responding to commands like an exceptionally intelligent, highly trained dog. The higher the Autopilot Rating, the smarter the "dog-brain."

THE CONTROL POOL

Characters using a vehicle control rig have access to what is known as the Control Pool. A character's Control Pool is equal to his Reaction Rating. Characters who do not have vehicle control rigs do not have Control Pools.

As with the Hacking Pool or the Magic Pool, dice from the Control Pool are allocated to different vehicle-related tasks during either the Combat or combat turns. Dice from the Control Pool can be allocated for maneuvering. These dice will assist the character when attempting to make certain kinds of tests for handling or maneuvering. The most common of these is the Position Test, which determines how successful the vehicles are at closing or opening up the distance between them.

Dice can also be allocated for defense. These dice act much like Dodge dice in regular combat, and reduce the effectiveness of incoming attacks. They are used as part of the vehicle's Damage Resistance Test.

REMOTE CONTROL DECKS

Remote control decks permit the remote control and operation of drones and remotes, as described above. Each slave port on a deck permits the control of one drone or RPV. Thus, a remote control deck with three slave ports can control up to three drones or RPVs, though only one may be commanded per action, as described above.

Remote control decks may be equipped with ECCM systems to counter ECM jamming.

Note that the standard remote control deck is noncybernetic. Cybernetic remote control decks that allow full vehicle control rig bonuses cost 25,000 nuyen per level.

Any success tests attempted by the remote-controlled vehicle are subject to the following modifiers.

REMOTE HANDLING MODIFIERS TABLE

Situation	Modifier
Urban Environment	+1
Direct LOS	0
Interrupted LOS	+1
Electrical Storm	+2
Drone/RPV Damage	As per damage
ECM in Use	See ECM rules, p. 126

The **Urban Environment** modifier applies in a heavily urbanized area such as the downtown district, an industrial park, or a major non-residential area of the sprawl.

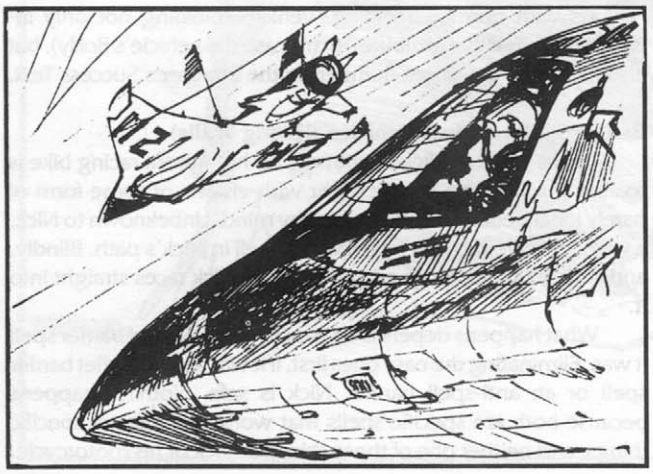
Direct LOS refers to any situation in which a clear, uninterrupted line-of-sight can be traced between the controlling deck and the drone or RPV.

Interrupted LOS applies in situations where the line-of-sight to the drone or RPV is interrupted by buildings, hills, or other significant obstacles.

Electrical Storm is a modifier that applies when a drone or RPV is operating in an electrical storm.

Drone/RPV Damage refers to the target number increase suffered by damaged vehicles. (See Vehicle Damage Modifiers Table, p. 107.)

ECM in Use refers to jamming by ECM systems. See the **ECM** and **ECCM** sections for more information.



VEHICLE COMBAT

This section includes notes, clarifications, and modifications to the general handling of vehicle combat. See also the **Pursuit** rules, pp. 128–29 of this book. Most of the information given here applies to both the standard combat turn and to the new pursuit turn.

FIREARMS AGAINST VEHICLES

Heavy weapons are listed with two Damage Codes; the first for hits against "soft" targets like people, and a second, lower, code for damage against "hard" targets like vehicles. To determine a weapon's Damage Code against vehicles, halve both the Power Level and the Staging Number (round down) of its standard Damage Code, and reduce the Damage Level (L, M, S, or D) by one step. This holds for *all* weapons, not just heavy weapons.

A character firing an HK227, for example, would find his Damage Code reduced from 5M3 to 2L1. He may hit the target vehicle and chew into it, but to do significant damage, he will have to pump a lot of lead into it. (See the revised **Autofire** rules, p. 131 of this book for new rules on burst fire and sustained autofire.)

Firearms that are rated as only Light damage to begin with can never harm a vehicle, unless the firing character aims for something vital—the tires, for instance. See the new **Called Shots** rule on p. 132 for more information.

Reduce the Damage Codes for grenades and other explosives in the same manner.

Vehicle Armor

The Damage Code for regular weapon (non-heavy) fire against vehicles is reduced in the above manner. If the vehicle has an actual Armor Rating there are additional modifications. Each level of armor protection reduces the Damage Category (L, M, S, or D) an additional level. The popular HK227 firing against a vehicle with an Armor Rating 1, for example, would not be able to harm the vehicle. (The regular vehicle reduction kicks the Damage Category down to L, and the additional armor protection lowers it another level, eliminating it.) The only way the HK227 could affect the vehicle would be to shift to burst fire (thereby raising its Damage Category to S). Optionally, the new **Called Shots** rule, p. 132, could be used as well. An LMG using burst fire (raising its S Damage Category to D) would have a Damage Category of S against vehicles with an Armor Rating of 1, M against Armor Rating 2, L against Armor Rating 3, and would not be able to harm Armor Rating 4 vehicles (again, unless the **Called Shots** rule was used).

Heavy weapons, MMGs and heavier, do not receive this additional reduction. They do, however, still receive the basic vehicular damage reduction.

Vehicle armor also counts as automatic successes against vehicle damage in a manner identical to character body armor. Against weapon fire, vehicle armor counts as a number of automatic successes equal to twice the Armor Rating. Against magic and crash damage, vehicle armor counts as a number of automatic successes equal to the Armor Rating.

Breaking Windows

Though the **Shadowrun** vehicle damage system does not use specific damage locations, it is sometimes necessary to know whether or not a vehicle's windows have shattered.

It is assumed that civilian vehicles taking Moderate damage have one or more windows blown out or shattered. Military and security vehicles, however, have reinforced windows that do not shatter or blow out until the vehicle takes Serious damage.

Aircraft whose windows have shattered or blown out must immediately descend to a safe, oxygen-rich altitude. Because none of the **Shadowrun** vehicle systems are concerned with altitude, this is more a note for roleplaying.

Shooting at Moving Targets

For attacks against a moving target, consult the table below for additional maneuvering-based modifiers. Compare the speed of the firing vehicle or the vehicle from which the character(s) is firing against the speed of the target.

MOVING TARGET MODIFIERS TABLE

Relative Speed	Modifier
Target's speed less than or equal to Attacker's	0
Target's speed up to twice the Attacker's	+2
Twice to three times higher	+4
More than three times higher	+6

Stationary attackers have a speed of 5. When using the new vehicle combat turn rules, pp. 128-30, compare the vehicles' cruising speeds.

Firing at Airborne Targets

Mounted weapons that are not AA-capable (see **Vehicle Weapons**, p. 121) receive a +4 target modifier when firing at airborne or elevated targets outside their area of coverage. See the descriptions of the individual weapon mounts, pages 121-23, for more information.

Mounts that are AA-capable do not suffer any modifiers.

MAGIC AGAINST VEHICLES

Combat Spells against Vehicles

Only physical combat spells that do physical damage can affect vehicles. Mana spells affect minds and living things, while physical spells affect physical things.

A physical combat spell cast against a vehicle has a Target Number 6 because of the machine's complex technological and electronic nature. The vehicle resists damage by making a standard Resistance Test in the same manner as a person in that vehicle can attempt to offset the casting magician's successes. The dice rolled for the vehicle's Resistance Test is 7, again due to the machine's complex technological and electronic nature. The Target Number for this test is equal to the Sorcery Skill of the magician casting the combat spell.

A player can allocate spell defense dice to assist a vehicle. In some instances, this is a particularly efficient use of spell defense dice.

If the casting magician's Force Success Test produces extra successes beyond the vehicle's Resistance Test, damage is done. Damage is calculated in the same manner as for damage against characters.

Gamemasters and players are referred to **How Spells Work**, pp. 50–51 of **The Grimoire**. Keeping that section in mind, vehicles have simple, limited auras that make them vulnerable to physical combat spells. The attempt is difficult, hence the high target number and resistance dice. A vehicle is considered a single, complete entity. Its wheels and windshield, for example, are not directly connected and may be constructed from different materials, but they are interrelated components. Because of this "aural wholeness" of the vehicle, a mage cannot selectively target an individual portion of the vehicle using magic. Single-target combat spells like bolt and missile spells affect a vehicle in the same manner as an area-effect spell. A magician cannot cast an area-effect spell and selectively attack individual parts of the vehicle.

Combat Spells against Characters and Vehicles

A mage can, however, use a combat spell to selectively target riders of motorcycles and those riding in other open or open-topped vehicles. This is possible because the rider's aura is more than adequately distinct from the vehicle's. Convertibles are not generally popular vehicles with shadowrunners, except of course for those who think they have a certain standard to uphold.

A combat spell cannot affect passengers completely enclosed within a vehicle because the passengers cannot be seen. A combat spell cannot work unless it has a direct line-of-sight. Merely knowing that someone is on the other side of the darkened glass is not good enough. Nearly every vehicle manufactured since 2030 is equipped with tinted windows that allow driver and passengers a full, unrestricted view **out** of the vehicle while completely blocking anyone outside the vehicle from looking in. Yes, this means that a magician riding in a vehicle can cast spells **through** the windows at targets outside of the vehicle while remaining relatively protected within. Tinted windows also block low-light and thermographic vision. Combat spells can blow out windows, however, just like normal attacks. See **Breaking Windows** in the previous section for more information.

Vehicles and Initiate Shielding

Initiates can shield vehicles, but it is somewhat difficult. An initiate can usually provide a number of shields equal to his Grade +1 per action. Due to their size and mass, vehicles use up more of those available shields. A single vehicle requires a number of shields equal to its unmodified Body Rating. Thus, a Grade 5 initiate who shields a vehicle with a Body Rating 3 could provide two additional shields per action.

As with normal shielding, vehicle shielding not only increases the resistive attribute (in this case the vehicle's Body), but also increases the target number for the attacker's Success Test.

Barrier Spells against Vehicles (Hitting Walls)

Let us say that Nick Nightmare on his Aurora racing bike is roaring through the Seattle night with visions of some form of barely legal debauchery filling his tiny mind. Unbeknown to Nick, a wiz-kid mage has erected a barrier spell in Nick's path. Blindly, and with an anticipatory grin on his face, Nick races straight into it.

What happens depends on exactly what type of barrier spell it was. Eliminating the easy ones first, if it was an anti-bullet barrier spell or an anti-spell barrier, Nick is safe. Nothing happens because both are specific spells that work only against specific things, and neither one of those things is Nick or his motorcycle.

If, however, the wiz kid had cast a straight mana barrier spell, Nick would have some problems. The Aurora racing bike is unimpeded by the mana barrier spell and roars on into the night. Whether Nick is still seated on it is another question entirely.

Nick hits the mana barrier as if he were hitting a wall. The speed at which he hits that wall is the speed at which his bike was traveling. Treat the barrier like an actual, physical wall with a Barrier Rating equal to the Force of the spell. When Nick hits the barrier, both he and his bike may take damage.

The Power Level of the impact is equal to the speed of the vehicle in **meters per combat turn** divided by 10 (round down). Thus, if Nick were traveling at the bike's maximum of 210 meters per combat turn, the Power would be a nasty 21. If he were traveling at its cruising speed of 70 meters per combat turn, it would be a 7. (By the way, two bikes hitting head-on would add their individual speeds together to get the net speed of the impact.)

The Damage Category of the impact is based on the vehicle's speed. Consult the table below.

IMPACT TABLE

Speed	Damage Level
1–20	Light (L)
21–60	Moderate (M)
61–200	Serious (S)
201+	Deadly (D)

The Staging is equal to either the Barrier Rating or Body of the other force involved. In this instance, Nick's Barrier Rating would be the Force of the barrier spell (for example, a 4). For the barrier, it would be Nick's Body, in this case a 3. To determine Staging, consider vehicles to have a Body equal to twice their actual Body Rating.

So, poor Nick hitting this barrier would face the equivalent of a 21D4 attack. He can make a normal Damage Resistance Test using any impact armor he may have as automatic successes. (With a Target Number of 21, he *better* hope to have some armor

because those successes are likely to be the only ones he gets. If he is aware of the impact, he may add dice from his Dodge Pool.) If Nick had been traveling at a more leisurely 70 meters per combat turn, the Damage Code would be 7S4.

The barrier must also make a Damage Resistance Test against the impact. For the barrier, the Damage Code is 21D3. It may roll a number of dice equal to its Barrier Rating to resist. It also gets a number of automatic successes equal to its Barrier Rating. At a 4, that assures the damage being Staged down to at least M. The spell would still require at least five more successes to remain standing intact, however. If it fails to achieve those successes, the spell's Force is reduced by the number of boxes of damage that has been done to it. Light damage would reduce its Force by 1, Moderate damage by 3, and Serious damage by 6. If reducing the Force in this manner takes the Force below 1, the spell is knocked down. Deadly damage always knocks the spell down completely.

Handle damage against walls in the same manner.

If Nick had been traveling in an enclosed car, he and the vehicle would have blithely passed through the mana barrier spell, completely unaffected by it.

If the barrier spell were physical, the Aurora would be in trouble, too. In fact, the bike would hit the barrier before Nick, and that impact must be resolved before dealing with Nick. Use twice the vehicle's Body to determine the Staging of the impact, but all other values remain the same as for Nick.

If the barrier breaks as a result of the impact, Nick has to make a Crash Check, as per page 130 of this book. If the barrier does not break, Nick (or the passenger of any vehicle) suffers an attack of the same Power and Staging as the bike, but at one Damage Category less.

Damaging Manipulations against Vehicles

Damaging manipulation spells, per page 52 of **The Grimoire**, do damage against vehicles as if they were regular weapons, and are treated as such. They do not, however, suffer the same reductions in Power, Damage Category, and Staging as do regular weapons.

Elemental effects (p. 52, **The Grimoire**) apply in full against vehicles.

For damaging manipulation spells that require a Threshold Number, use the Object Resistance Ratings Table on page 81 of **Shadowrun** to determine that number.

VEHICLE-MOUNTED WEAPONS

Vehicle-mounted weapons can be fired in one of two manners: by using the vehicle's onboard sensors for enhanced targeting or by standard optical means. The vehicle must have at least a Level One (standard) sensor package before it can use sensor-enhanced targeting. Optical targeting may be either through visual sighting or by using the visible-light sensors of the vehicle (primarily computer-enhanced video.) The procedure is slightly different for each.

SENSOR-ENHANCED TARGETING

Sensor-enhanced targeting uses the vehicle's onboard sensor systems to assist in target acquisition, weapon targeting, and engagement. Sensors are detailed on pp. 126-27 of this book. Consult that section for more information about sensor use.

When making the success test to target the sensor-enhanced weapon, add a number of dice equal to the vehicle's Sensor Rating to the dice rolled in that test. The base number of dice is still equal to the firing character's appropriate weapon skill or to the Autopilot Rating of the drone or RPV, whichever is appropriate. The Target Number for this test is the signature of the target vehicle, regardless of range. Even if the target is at the absolute maximum range for the weapon type, the target number is still equal to the vehicle's signature. (The target vehicle's signature may, however, be modified if it is equipped with an ECM system. See pp. 126-27 for more information.

The only other target modifiers that apply are given in the following table.

SENSOR TARGETING MODIFIERS

Situation	Modifier
Urban Environment	+2
Direct LOS (except missiles)	–4
Interrupted LOS (except missiles)	0
Targeting Vehicle Damaged	As Target Modifier
ECM in Use	See ECM rules

The Urban Environment Modifier applies when the combat occurs within a major industrial area such as a major city, an industrial park, or most non-residential areas of a sprawl.

The Direct LOS modifier applies only when it is possible to trace a direct, clear, continuous line-of-sight between the vehicles involved. This particular modifier comes into play primarily with aircraft; the rare occasion when it applies to ground vehicles is during combat on clear, open terrain. Clear terrain often results in Direct LOS Modifiers. Self-guiding missiles (weapons with an Intelligence Rating) ignore the Direct LOS Modifier.

The Interrupted LOS Modifier is more the standard. Interrupted line-of-sight occurs when the LOS between the vehicles can be traced only intermittently because of frequent interruptions by intervening terrain like buildings, trees, hills, smoke, and the like. Normal, restricted, and tight terrain nearly always result in Interrupted LOS Modifiers. Self-guiding missiles (weapons with an Intelligence Rating) ignore the Direct LOS Modifier.

The Targeting Vehicle Damaged Modifier refers to the Target Modifier incurred by the vehicle's damage status (Light, Moderate, or Seriously damaged).

For information about the ECM in Use Modifier, see the **ECM** and **ECCM** rules on pp. 126-27 of this book.

Weapon damage is resolved normally.

Missile Fire

Smart weapons like missiles do not use the vehicle's onboard sensors for targeting. Instead, they rely on their own onboard systems. All missiles have an Intelligence Rating, which is added to the firing character's Gunnery Skill to determine the total number of dice rolled in the Success Test. If ECM is present, the target number is always the modified signature of the target.

Vehicles equipped with ECCM systems may use them to counter the ECM of the target vehicle to assist the missile.

Missiles also have a minimum-range requirement. At any range shorter than the lowest value listed under short range on the missile range table, p. 124, the missile warhead will not arm before it strikes the target. It is possible to override this effect, but it is risky because of the danger of premature detonation as the missile leaves the launcher. If the missile's onboard sensors are in use at the time of the launch, make a Success Test using a number of dice equal to the missile's Intelligence Rating against a Target Number 2. If the test results in at least one success, the missile flies correctly and explodes on impact. If the result is a roll of all ones, the missile detonates 2D6 meters from the launcher. For this blast damage use the "soft" target's (character's) Damage Code for the weapon. The Power of the blast is reduced by 1 per meter the blast travels.

Rocket Fire

An unguided rocket is a "dumb" missile—an engine with warheads on its end. A vehicle's Sensor Rating adds in the same manner for rocket fire as for other weapons. See **Sensor Enhanced Targeting,** p. 106. Each success generated represents one rocket that has hit the target. The rest scatter as per the scatter rules, p. 69 of **Shadowrun**. Each rocket will scatter 3D6 meters. This scatter cannot be reduced in any manner.

To determine the final Power of the attack, add together the Power Ratings of the individual rockets that struck the target. The Damage Category and Staging remain the same. If, say, four 2D8 rockets all hit the same target, their combined damage would be 8D8.

Rockets that scatter do blast damage two Damage categories less than their direct impact value. Thus, a 2D8 rocket that scatters would have an effective blast of 2M8. The Power of the blast is reduced by 1 point for every four meters the blast travels.

OPTICAL TARGETING

Optical targeting relies on physical sight for visual aiming and targeting or on the visual-spectrum video systems of the vehicle's sensor systems. It is used primarily when sensor-enhanced targeting is impossible because the vehicle lacks sensor systems, because of excessive local interference or ECM activity, or similar factors.

The Success Test uses the standard Firearm Test procedure. The base dice for the test is equal to the weapon user's appropriate Weapon Skill. The target number is based on the range to the target, modified by the appropriate Fire Combat Modifiers (see p. 65, **Shadowrun** and the **Shooting at Moving Targets** section, p. 104 of this book.)

Missile Fire

Missiles may not be targeted optically.

Rocket Fire

Rockets targeted optically use the exact same to-hit procedure as described above. See **Rocket Fire** under **Sensor-Enhanced Targeting** for impact resolution.

VEHICLE DAMAGE

Vehicles have a standard Condition Monitor marked off in Thresholds of Light, Moderate, Serious, and Destroyed. As a regular character receives modification based on his damage status, so does a vehicle.

VEHICLE DAMAGE MODIFIERS

Vehicle Damage	Target Number	Initiative	Speed
Light	+1	–1	No change
Moderate	+2	–2	75%
Serious	+3	–3	50%

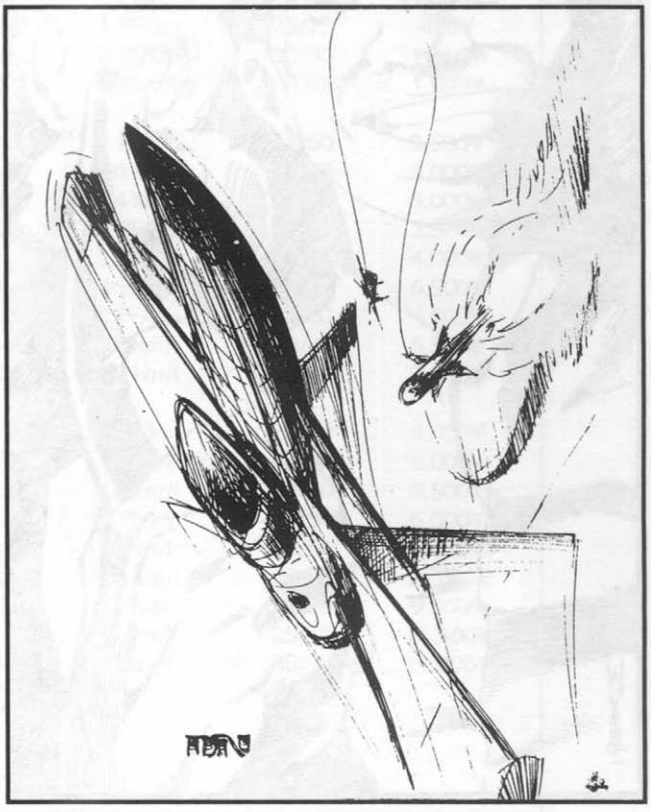
The Target Number Modifier applies to all Success Tests that actually involve the vehicle, be they Handling Tests or Combat Success Tests for vehicle-mounted weapons. Hand-held weapons and optically targeted weapons do not receive these modifiers.

The Initiative Modifier reduces the effective Reaction Rating of the character controlling the vehicle.

The Speed Modifier reduces the vehicle's cruising speed and maximum speed.

DRONE DESTRUCTION

A character who is cybernetically controlling a drone may receive harmful feedback if that drone is destroyed. When an actively controlled drone is destroyed, the character must make a Willpower (6) Test or take a Light mental wound.



VEHICLE MODIFICATION

This section provides rules and guidelines for modifying or upgrading the production-model vehicles described in the first section of this book. Players should note that some security vehicles and most military ones are custom-built using state-of-the-art technologies and manufacturing techniques that sometimes allow them to break the rules. By the same token, security and military vehicles are available in such a wide variety of configurations and load-outs that it would be pointless to list them all. Many of these variations do, however, stretch the capabilities of the chassis and the engine to the breaking point.

Of course, the diversity of custom security and military vehicles is matched only by the sheer creativity of the half-crazed street mechanic and his trusty, faithful blowtorch.

UPGRADING SPEED

The four basic methods for upgrading the speed of a vehicle are swapping engines, installation of a high-performance engine, turbocharging, and customization. Though it is possible to turbocharge a high-performance engine or a customized engine, it is not possible to customize a high-performance engine.

SWAPPING ENGINES

The table below gives the relative sizes and costs of the various engines that can power a given vehicle and chassis type. If players are confused about which engine to use in one of their own designs, a good solution is to try to match the vehicle type with the Body column. The Body listed is the base Body of the vehicle.

The base time for swapping out an engine is two days. The Target Number for the appropriate Vehicle Build/Repair Test is 4. Extra successes reduce the base time in the usual manner.

The engines that power air cushion vehicles, marine craft, rotorcraft, and other forms of aircraft, including drones and RPVs cannot, within the scope of these rules, be swapped out for alternative engines. This is the result of a variety of factors, not the least of which are the changes to the existing hull or airframe that would also be necessary. For engine modification alternatives for these types of vehicles, see **Customization** and **Turbocharging** below.

If the intent is to increase the speed of a vehicle by swapping engines, a high-performance engine should be installed instead of a larger engine from the above table.

HIGH-PERFORMANCE ENGINES

High-performance engines are special, factory-modified, stock engines that increase the speed performance of a vehicle's standard engine, but at a cost. Replacing an engine with a high-performance variant increases the cost of the engine as follows:

Speed Increase	+50%
Fuel Consumption	+50% to base
Cost	x 2 (IC); x 2.5 (MultiF); x 3 (Elec); x 3.5 (ImpElec)
Signature	–1 (overall)

The procedure for installing a high-performance engine is identical to that for swapping engines given above. The difference is that the Target Number for the Build/Repair Test is 5. Again, air-cushion, marine, rotorcraft, and other forms of aircraft, including drones and RPVs, cannot have high-performance engines installed within the scope of these rules.

SWAPPING ENGINES TABLE

Type	Body	Motor	Economy	Speed	Cost
CARS PICKUPS AND VANS					
Compact	1	Elec	1 PF/km	20/60	250¥
		ImpElec	2 PF/km	25/75	750¥
		IC	60 km/l	35/105	800¥
		MultiF	90 km/l	30/90	600¥
Small	2	Elec	1 PF/km	20/60	500¥
		ImpElec	2 PF/km	25/75	1,500¥
		IC	50 km/l	35/105	1,600¥
		MultiF	75 km/l	30/90	1,000¥
Standard	3	Elec	1 PF/km	20/60	750¥
		ImpElec	2 PF/km	25/75	2,500¥
		IC	30 km/l	35/105	2,400¥
		MultiF	45 km/l	30/90	1,800¥
Large	4	Elec	1 PF/km	20/60	1,000¥
		ImpElec	2 PF/km	25/75	3,000¥
		IC	20 km/l	35/105	3,200¥
		MultiF	30 km/l	30/90	2,000¥
Luxury	5	Elec	1 PF/km	20/60	1,500¥
		ImpElec	2 PF/km	25/75	4,500¥
		IC	15 km/l	35/105	4,800¥
		MultiF	20 km/l	30/90	3,000¥
MOTORCYCLES					
Small	1	Elec	1 PF/km	25/75	150¥
		ImpElec	2 PF/km	30/90	450¥
		IC	120 km/l	35/105	500¥
Medium	2	Elec	1 PF/km	25/75	300¥
		ImpElec	2 PF/km	30/90	900¥
		IC	90 km/l	35/105	1,000¥
Large	3	Elec	1 PF/km	25/75	450¥
		ImpElec	2 PF/km	30/90	1,350¥
		IC	60 km/l	35/105	1,500¥
VANS AND LIGHT TRUCKS					
Light	4	ImpElec	1 PF/km	25/60	2,500¥
		IC	16 km/l	30/75	3,000¥
		MultiF	24 km/l	35/85	5,000¥
Medium	5	ImpElec	1 PF/km	25/60	3,500¥
		IC	12 km/l	30/75	4,000¥
		MultiF	16 km/l	35/85	6,500¥
Heavy	6	ImpElec	2 PF/km	25/60	4,500¥
		IC	10 km/l	30/75	5,500¥
		MultiF	15 km/l	35/85	7,500¥
TRACTORS					
Light	4	ImpElec	1 PF/km	20/50	4,000¥
		IC	8 km/l	25/60	5,000¥
		MultiF	12 km/l	30/70	8,500¥
Medium	5	ImpElec	1 PF/km	20/50	6,000¥
		IC	6 km/l	25/60	7,500¥
		MultiF	10 km/l	30/70	13,000¥
Heavy	6	ImpElec	1 PF/km	20/50	9,000¥
		IC	4 km/l	25/60	11,500¥
		MultiF	6 km/l	30/70	20,000¥

TURBOCHARGING

More commonly known as boosting (short for turbo-boosting), the turbocharge procedure involves modification to the standard engine, be it electric (Elec), improved electric (ImpElec), multifuel (MultiF), or standard internal combustion (IC) engine.

The Base Time for boosting an engine is one day per level of increase. The Target Number for the appropriate Vehicle Build/Repair Test is equal to the number of levels of increase, +2 for ground and marine vehicles, +3 for air cushion, drones, RPVs, and aircraft, and +4 for rotorcraft. Also, any work done to this engine is now permanently modified by +1 for every boosted level installed.

The vehicle receives the following performance modifiers for every +5/+15 increase in speed:

Maximum Increase	25% of listed speed (1 level of increase is always possible)
Fuel Consumption	+5% (IC/ImpElec); +10% (MultiF/Elec)
Cost	+10% (IC/ImpElec); +15% (MultiF); +20% (Elec) per increment
Signature	–1

CUSTOMIZATION

The customization alternative involves a significant modification of the existing engine to perform at levels considerably beyond normal. Such a procedure costs a great deal of performance and money. The Base Time is five days per level of increase and the Target Number for the Build/Repair Test is equal to the level of increase +3 for ground and marine vehicles, +4 for air cushion, conventional aircraft, and drones/RPVs, and +5 for rotorcraft. Even if the installation was successful, customization always brings a chance that the engine might fail sometime later in its use. When that occurs it is usually the result of the parts failing under extreme stress. If the Installation Test is successful, the gamemaster then makes another, secret roll, using the character's appropriate Build/Repair Skill against twice the previous Target Number. If the test succeeds, the engine will not fail. If the test fails, the engine has a chance of failing every time it operates above cruising speed or within a vehicle turn. (See **Vehicle Combat Turn,** p. 128.) When the engine must operate in that manner, the gamemaster rolls 2D6. The result is the number of vehicle turns (or minutes, if the vehicle is being driven hard outside a turn sequence) that pass before the engine fails. When it does fail, roll 1D6 against the following table to determine the result.

ENGINE FAILURE TABLE

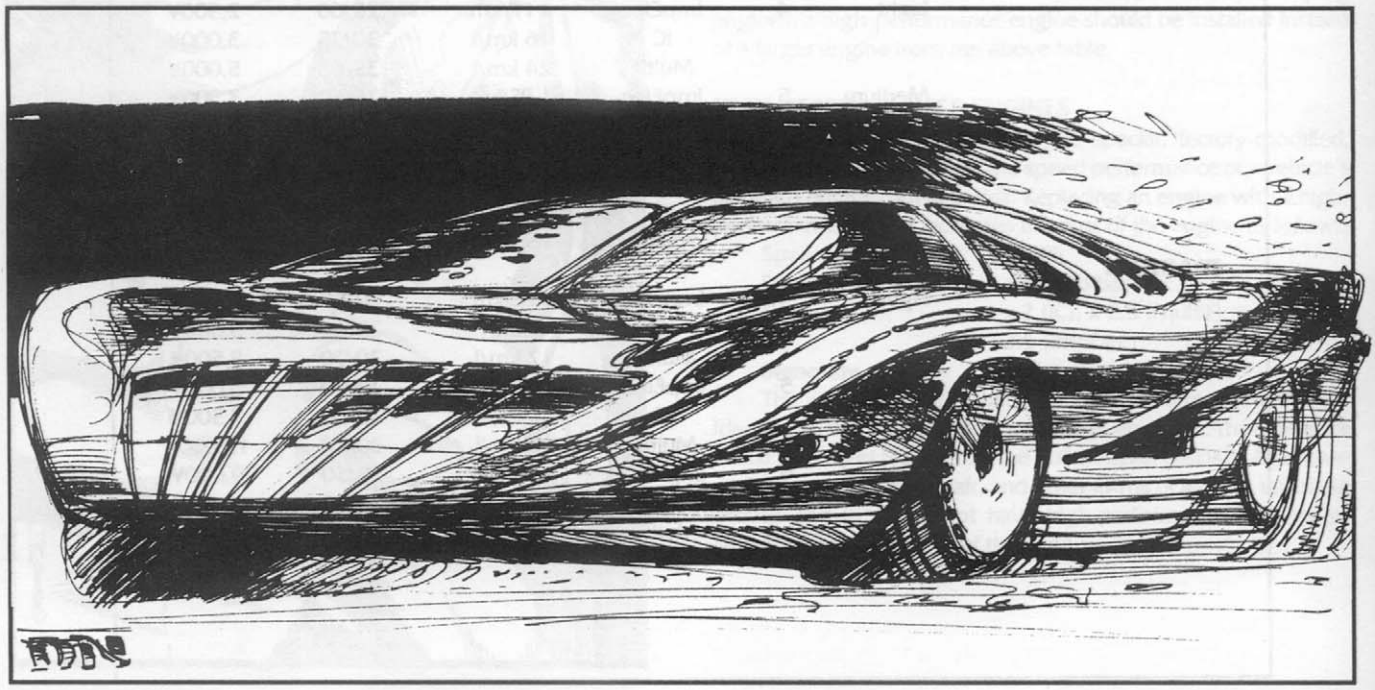
1D6	Result
1	Vehicle loses 10% of speed.
2	Vehicle loses 20% of speed.
3	Vehicle loses 30% of speed.
4	Vehicle loses 30% of speed and receives a +1 to Handling.
5	Vehicle loses 30% of speed and receives a +2 to Handling.
6	Engine fails completely, no movement possible.

Repair

To repair an engine that has failed requires a Base Time in hours and a Target Number equal to the 1D6 roll above.

For every +10/+30 increase in speed, the following modifiers apply.

Maximum Increase	+50 of original speed (one level of increase is always possible)
Fuel Consumption	+10% (IC/ImpElec); +20% (MultiF/Elec)
Cost	+25% for first increment and +15% each extra (IC); +40%/+20% (MultiF); +50%/+25% (Elec); +20%/+30% (ImpElec)
Signature	–2 (total)



UPGRADING HANDLING

A vehicle's Handling Rating is based on the type of suspension installed. Depending on the type of vehicle, the various ways in which Handling may be improved include removing the rigger or autopilot system, by improving suspension, by adding off-road suspension, by improving the control systems, and by adding a fly-by-wire system.

REMOVE RIGGER OR AUTOPILOT SYSTEM

The removal of existing rigger controls or autopilot system reduces Handling by 1 point. Base Time is a number of days equal to the Body of the vehicle, Target Number 4.

IMPROVING SUSPENSION

It is possible to improve a vehicle's suspension, but the costs and levels of improvement depend on the type of vehicle. The procedure is usually the same for all vehicles, however. The Base Time for any suspension modification is one week per level of modification. The Target Number for the Installation Test is equal to 10 minus the new, desired Handling Rating.

All vehicle chassis or hulls have a base Handling of 3. Off-road Handling, if applicable, is generally twice that rating.

Marine vehicles, air cushion vehicles, aircraft, rotorcraft, and drones/RPVs cannot increase their Handling in this manner.

Cars, 4WD, Vans, Pickups, Light Trucks

Improved suspension modifies on-road Handling only. Off-road Handling continues to be calculated as twice the original on-road Handling.

Handling: –1 per increment (max –2)
Cost: +10% of vehicle cost per level

Motorcycles

Improves on-road and off-road Handling equally.

Handling: –1/–1 per increment (max –2/–2)
Cost: +10% of vehicle cost per level

Trucks And Tractors

Improved suspension modifies on-road Handling only. Off-road Handling continues to be calculated as twice the original on-road Handling.

Handling: –1/0 per increment (Max –2/0)
Cost: +10% of vehicle cost per level

ADDING OFF-ROAD SUSPENSION

Off-road suspension improves off-road Handling at the expense of on-road speed and fuel consumption. This modification completely replaces the standard with new suspension components. For this reason, the vehicle is not subject to the normal x 2 increase in Handling that applies when normal vehicles are used off-road. The downside is that the vehicle's on-road Handling (only) is increased by 1 point.

See **Improving Suspension** above for the modification procedure.

Marine vehicles, air cushion vehicles, aircraft, rotorcraft, and drones/RPVs cannot increase their Handling in this manner.

Cars, 4WD, Vans, Pickups, Light Trucks

Handling: +1*/–1 per increment, maximum +2*/–2
(*= Once-only increase, regardless of levels taken)
Cost: +35% per level
Speed Penalty: –5/15* (on-road), –10/30* (off-road)
Fuel Consumption: +10% (on-road), +20% (off-road)

Motorcycles

Handling: +1*/–1 per increment, maximum +2*/–2
(*= Once-only increase, regardless of levels taken)
Cost: +20% per level
Speed Penalty: –5/–15* (on-road), –10/30* (off-road)
(*= Once-only increase, regardless of levels taken)
Fuel Consumption: +20% (on-road), +40% (off-road)

Trucks and Tractors

Handling: Reduces off-road Handling to +50% of Base Handling
Speed Penalty: –5/15* (on-road), –10/30* (off-road)
(*= Once-only increase, regardless of levels taken)
Cost: +50% of vehicle cost
Fuel Consumption: –25% (on-road),+50% (off-road)

IMPROVING RUDDER CONTROL

It is possible to improve the Handling of marine vehicles with the addition of advanced rudders and steering surfaces. Hydrofoils only receive this increase when in a foil-down position. See **Improving Suspension** above for the modification procedure.

Handling: –1 per level (max –2)
Cost: +15% of vehicle cost per level

IMPROVING CONTROL SYSTEMS

It is possible to improve the Handling of hydrofoil and air cushion vehicles with the addition of advanced control systems and surfaces. A hydrofoil only receives this increase when it is up and running on the hydrofoils. See **Improving Suspension** above for the modification procedure.

Handling: –1 per level (max –2)
Cost: +20% of vehicle cost per level

ADDING A FLY-BY-WIRE SYSTEM

It is possible to improve the Handling Rating of aircraft, rotorcraft, and drones/RPVs with the installation of advanced, computer-controlled fly-by-wire systems. Most air and rotorcraft already carry basic versions of such systems. The Base Time for this modification is a number of months equal to the Body of the aircraft, but the modification requires three separate success tests. The tests are an appropriate Vehicle B/R (4) Test, a Computer (4) Test, and an Electronics (4) Test. The successes from each of these tests may be used to reduce the overall Base Time.

Handling: –1 per level (max –2)
Cost: +25% of vehicle cost for air and rotorcraft; +100% of vehicle cost for drones and RPVs

UPGRADING BODY

Because the vehicle's Body also serves as protection against light weapons, riggers will no doubt want to increase it. The Base Time for this modification is equal to twice the desired Body in days. The desired Body Rating is the Target Number for the Installation Test.

Maximum Body: 8 (+100% for motorcycles, aircraft, rotorcraft, drones and RPVs)

Speed Penalty: –1% per increase for ground and marine vehicles; –5% per increase for air vehicles of all types

Cost: 1,000¥ (500¥ for cycles and aircraft) for first point. +500¥ x original Body per point thereafter

UPGRADING ARMOR

Players may wish to add vehicle armor for protection against heavy weapons. The Base Time for this modification is a number of days equal to the desired Armor Rating. The Target Number is also the desired Armor Rating.

Maximum Value: Vehicle's Body (original Body for cycles and aircraft)

Speed Penalty: –5/–15 per point

Economy: +10% per point

Handling: +1 per two full points

Cost: 2,500¥ (1,750¥ for cycles and aircraft) per point to original Body. 5,000¥ per point thereafter

IMPROVING SIGNATURE

The several options for increasing the signature of a vehicle are passive thermal masking, active thermal masking, and passive aural masking.

PASSIVE THERMAL MASKING

Passive thermal masking involves adding temperature-blocking (primarily heat) and absorbing materials to the body of a vehicle to cut down its signature's thermal aspect. The advantage of this is that the increased Signature Rating makes it harder to detect the vehicle and more difficult for the multi-sensor heads of anti-vehicle missiles and the like to achieve a lock-on.

Passive thermal masking is available only for internal combustion (IC) and multifuel (MultiF) engines. For each +1 (max +50% increase), the cost is as follows:

Ground vehicles: 5,000¥ x Body or 3,750¥ x Body and a +1/+1 to Handling

Cycles: 6,000¥ x Body

Trucks and Conventional Aircraft: 7,500¥ x Body

Tractors and Choppers: 10K¥ x Body

ACVs: 3,750¥ x Body

Watercraft and LTA craft: 2,500¥ x Body

Players need to keep track separately of the amount of thermal masking because it serves the vehicle as a positive Target Number Modifier against Perception Tests involving thermographic detection techniques.

The Base Time for this task is one day per level of thermal masking, Target Number 4.

ACTIVE THERMAL MASKING

Active thermal masking involves the installation of a high-powered coolant system designed to temporarily absorb the heat emitted by the vehicle. This modification is available only on Customized IC and MultiF engines (not on cycles, though there are rumors!). Each level of customization allows the installation of up to two levels of active masking, each of which increases the vehicle's Signature by +1 Performance. The costs of the modifications are as follows:

Maximum Rating: +5 Signature

Cost: +100% of total engine customization cost for the first point, +25% for each extra point

Speed Penalty: 5/15 per point only when engaged; otherwise, no penalty. (For trucks/tractors, this penalty is to standard load bonus.)

System Duration: (60 – (Masking x 5)) minutes

Running the coolant system for any longer than the indicated system duration runs the risk of damaging the engine. At the end of the duration, the system requires a ten-minute shutdown in order to vent stored heat; during shutdown the vehicle's Signature falls to 2, regardless of any other thermal masking present.

PASSIVE AURAL MASKING

Passive aural masking works in a manner similar to passive thermal masking except that the intent is to reduce the noise the vehicle makes. The vehicle's rating in passive aural masking acts as the Target Number for any aural-based Perception Tests.

This modification is available for all engine types. For each +1 (max +4), the costs are as follows:

Ground vehicles: 2,500¥ x Body

Cycles, Trucks, and LTA craft: 3,750¥ x Body

Tractors: 5,000¥ x Body

ACVs, Aircraft, Choppers: 25,000¥ x Body

Watercraft: 2,500¥ x Body

The Base Time for this modification is one week per level of aural masking. The Target Number is also the level of aural masking.

UPGRADING THE AUTOPILOT

See **Vehicle Accessories**, below, for details.

ADDING FUEL CAPACITY

It is possible to equip a vehicle with larger fuel tanks of up to +25% of current capacity for IC/MultiF engines. Battery power may also be added at the rate of +20%/40% for Elec/ImpElec engines. The cost is negligible, 1¥ per liter or PF increase.

VEHICLE ACCESSORIES

What would a rigger be without his vehicle? And what would his vehicle be without those custom, hand-picked accessories? On the following pages are a wide assortment of items designed to customize the vehicles described earlier in this book.

The general rule of thumb for gauging the extent to which a vehicle may be modified is the amount of CF (Construction Factor) listed as Cargo in the vehicle descriptions. This number refers to the area of space provided for general storage in the vehicle. Some vehicles, primarily the various types of service vehicles, have additional available CF that is normally used for "real" cargo. This space is also available for determining modifications, but using it up will reduce the vehicle's cargo-carrying capacity.

In addition to this available CF, a few extra CF can be scraped together by using up the vehicle's "leg room" and utility space. The "leg room" CF is usually equal to twice the vehicle's unmodified Body Rating. Realize, however, that using up these CF literally means that equipment is being pushed and shoved into the areas normally reserved for elbow-, leg-, and head-room. Not only does this make the vehicle less comfortable, but it also means that when a highway trooper stops the rigger for flying too low through his personal speed zone, he is more likely to notice that the vehicle is, shall we say, "non-standard."

As with vehicle modifications, the Base Time, Skill, and Target Number listings under some of the accessories refer to **Taking the Time,** p. 56, **Shadowrun**. The Parts Cost refers to the base price for the raw parts needed to install the accessory. A rigger will, of course, have to negotiate with his mechanic to get those parts, but once obtained, he can install them himself—assuming he has the equipment noted under Equipment Needed. (For information on kits, shops, and facilities, see **Working Gear,** p. 124 of **Shadowrun.**) If the rigger prefers to hire someone else (qualified) to install the accessory, it will take twice the Base Time and cost four times the Parts Cost.

As noted below, some accessories require additional space in the vehicle and will eat into the available CF, as discussed above. The amount of CF that the accessory takes up is noted with its description. (Remember that the CF concept uses a bit of fuzzy logic to create some form of standard for the removal and/or installation of equipment in the vehicle. The amount of CF also serves to gauge the pure cargo-carrying capacity of some vehicles. Though some relationship exists between equipment CF and cargo CF, it is not a linear one. Gamemasters are encouraged to let common sense prevail.)

STANDARD ACCESSORIES

Standard accessories are those the average citizen might very well wish to add to her vehicle. It is very unlikely anyone will give the character a suspicious look or make a hasty phone call to Lone Star when he asks for a standard accessory. (Unless of course it happens to be a three-meter-tall troll with a full-body leopard tattoo who is requesting "fuzzy dice" for his surplus Banshee.)

Advanced Passenger Protection System (APPS™)

Sometimes installed as standard in expensive cars, this retrofit consists of specially secured seat belts, additional impact-activated air bags in all passenger positions, and special reinforcement of the body panels. In a crash, the system gives the vehicle an extra 1 point of Armor, and gives each of the passengers two extra dice for the Damage Resistance Test. To exit the vehicle following such a crash, however, requires a Strength (5) Test.

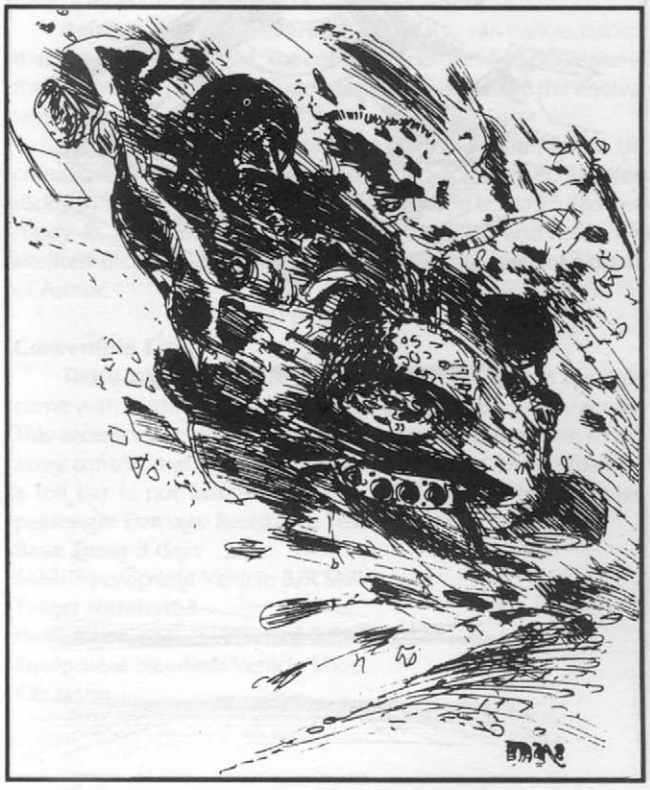
The APPS is not available for motorcycles.

Base Time: 1 week
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 2,500¥ per seat
Equipment Needed: Vehicle Facility
CF: 1

Anti-Theft Systems

Anti-theft systems come in all shapes and sizes, and could fill a sourcebook all their own. For that reason anti-theft systems have been abstracted somewhat. With ratings ranging from 1 to 10 (or maybe higher), each Rating Point represents a number of dice rolled in an Opposed Test against the appropriate Skill of the character wishing to break into the vehicle. If the system wins, the appropriate anti-theft action occurs, be it an automated phone call to Lone Star or the sudden explosion of the vehicle. The gamemaster and players should work together to define the exact parameters of the system.

Rating	Cost
1–3	100¥ per point
4–6	400¥ per point
7–9	1,000¥ per point
10+	5,000¥ per point



Autopilot

Autopilot systems, or more correctly (especially with the lower-rated systems), collision detection/avoidance systems, are available for most vehicles. The basic types of autopilot are described below.

The Autopilot System Rating also represents an extra die that the rigger-character can add to any Handling-related tests. If the character controlling the vehicle has access to a Control Pool (see page 102), the Autopilot Rating is added to the Control Pool and refreshes with the pool.

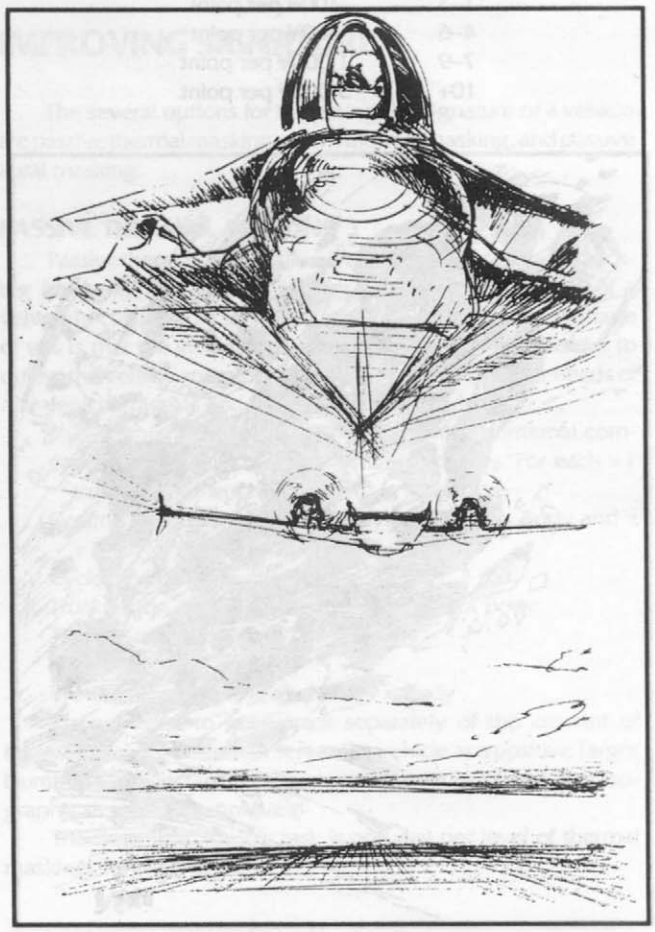
The characters in the vehicle may decide to let the vehicle control itself (assuming the autopilot system permits). In this case, assume that the vehicle has the appropriate Vehicle Control Skill at a rating equal to the Autopilot Rating. See the specific autopilot system for any specific rules that may apply.

Rating 1 Autopilot

This, the most basic model, consists of rudimentary collision detection/avoidance systems. The vehicle cannot pilot itself.

This is the only type of autopilot possible on a motorcycle that does not have rigger-control gear installed. Installation of this or any other level of autopilot increases the vehicle's Handling Rating by +1.

Base Time: 2 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 500¥ per point of unmodified Body
Equipment Needed: Vehicle Facility
CF: None



Rating 2 Autopilot

Slightly more sophisticated, this system is able to tap into the existing traffic-control grid system and, after receiving traffic data from that system, suggest alternative routes to a destination. Using a standard map chip (available for all major urban areas, 25¥ each), it can also follow any route mapped out along non-rough terrain. Rough terrain (where off-road penalties apply) will rapidly overwhelm the system, however. All relevant target numbers are doubled.

Base Time: 4 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 5,000¥ per point of unmodified Body
Equipment Needed: Vehicle Facility
CF: None

Rating 3 Autopilot

Considerably more sophisticated than the Rating 2 model, this system can traverse rough terrain without difficulty, following a pre-programmed route. (Geological Survey Map chips may be purchased for 50¥, each one covering a whole state.)

Base Time: 4 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 10,000¥ per point of unmodified Body
Equipment Needed: Vehicle Facility
CF: None

Rating 4 Autopilot

The most sophisticated model available for sale to private individuals or nongovernment bodies, this system can operate in urban and off-road terrain, as long as the appropriate map chips are provided (see **Rating 3,** above). Not only can it plan its own route if given destination instructions, this autopilot can also modify its programmed route to the next most appropriate route if local conditions make this desirable.

Base Time: 6 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 25,000¥ per point of unmodified Body
Equipment Needed: Vehicle Facility
CF: None

Rating 5 Autopilot

It is rumored that the military has access to autopilot systems of Rating 5 and greater. This version is a full-blown expert system also capable of controlling the vehicle's sensor, offensive, and defensive systems. It is not available on the open market, and any estimates of cost would be purely speculative.

If Rating 5 autopilots did exist, however, they would allow the vehicle's controller to spend the equivalent of two actions, per action, commanding the vehicle's systems. The second action, however, would be rated at the vehicle's Autopilot Rating. If the vehicle's controller also had access to a Control Pool, he could allocate dice from the Control Pool to that action. It is also rumored that these military expert-systems are able to observe sophisticated target-selection criteria and to perform elaborate, pre-programmed mission profiles.

Bench Seat

Bench seats hold one and a half people. Two bench seats, side by side, hold three people, assuming the individuals are of normal size. (A bench seat can hold up to 12 Body Points of characters. Divide that up appropriately to determine how many characters can fit.)

Bench seating is popular in compact vehicles or where space is at a premium.

A bench seat may also be armored (see **Bucket Seat**), but that armor protection only aids against attacks from the rear. Not available for motorcycles.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 750¥
Equipment Needed: Vehicle Shop
CF: 5

Bench Seat, Folding

Folding bench seats are common in vehicles such as limousines, where it is sometimes necessary to provide extra seating for lackeys and the like, or in station wagons to allow for expansion of the rear cargo area's capacity. Two CF of cargo space are freed up when the seat is folded.

This accessory is not available for motorcycles.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 50¥
Equipment Needed: Vehicle Shop
CF: 5

Boat Hull Modifications

This modification makes an ACV chassis watertight enough to float in any type of sea, a useful feature if the engine fails or is deliberately turned off when the vehicle is moving over water.

Base Time: 4 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 500¥ per point of unmodified Body
Equipment Needed: Vehicle Facility
CF: None

Bucket Seat

A bucket seat holds a single person, up to a maximum Body 6, in greater comfort than a standard bench seat. Characters with a Body greater than 6 require a "big" bucket seat (see below).

Removal of a bucket seat frees up 5 CF of available space.

Bucket seats may be armored to provide protection from weapons fire. Each point of armor gives the character an additional die for his Damage Resistance Test against any attacks he suffers while in the vehicle, assuming the attack comes from the rear or side. Each point of armor costs 1,250¥; up to 4 points of armor may be installed.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 700¥
Equipment Needed: Vehicle Shop
CF: 5

Bucket Seat, Big

Required for larger-than-normal characters, the big bucket seat is simply that, a big bucket seat.

Big bucket seats may also be armored (see **Bucket Seats**). For the motorcycle equivalent, see **Reinforced Seating,** below.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 750¥
Equipment Needed: Vehicle Shop
CF: 6

Cargo Container

Cargo containers are available for use with flatbed trailers, specially designed light trucks, cargo aircraft, flatbed rail cars, and sea-going freighters for the shipment and storage of goods. They come in three basic sizes: 7 meters (1,000 CF/Body 1; 5,000¥), 10 meters (1,500 CF/Body 2; 8,000¥), and 20 meters (2,000 CF/Body 3; 10,000¥).

Cargo Trailers

Towed by tractors, cargo trailers are available in three basic sizes, 7-meter, 10-meter, and 20-meter. Different variants are available.

Flatbed Trailers carry cargo open to the air, though they are sometimes covered by tarpaulins. They can also carry cargo containers (see above). The cost of a 7-meter trailer (Body = 1) is 10,000¥, for a 10-meter trailer (Body = 2) the cost is 15,000¥, and a 15-meter trailer (Body = 3) is 20,000¥.

Van Trailers have a body that completely encloses the cargo. Cost of a van trailer is 20,000¥ for a 7-meter (1,000 CF/Body 2) trailer, 30,000¥ for a 10-meter (1,500 CF/Body 3) trailer, and 40,000¥ for a 15-meter (2,000 CF/Body 3) trailer. All van trailers have the equivalent of 1 point of Armor.

Refrigerated Van Trailers are identical to van trailers, except that they are refrigerated. The cost is an additional 15,000¥ above the basic trailer cost. All refrigerated van trailers have the equivalent of 2 points of Armor.

Tank Trailers have a liquid storage tank mounted on the chassis. A 7-meter trailer costs 50,000¥ and holds 50 kiloliters (Body 3), a 15-meter trailer costs 75,000¥ and holds 75 kiloliters (Body 4), and a 20-meter trailer costs 100,000¥ and holds 100 kiloliters (Body 4). All tank trailers have the equivalent of 3 points of Armor.

Convertible Tops

These conversions are available for vehicles that normally come with hardtops and do not have gull-wing or canopy access. This accessory completely replaces the hardtop roof with a fold-away canopy that can be extended or retracted on command. If a roll bar is not installed, double the Target Number for any passenger Damage Resistance Test following a crash.

Base Time: 3 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 10% of vehicle + 2,500¥
Equipment Needed: Vehicle Shop
CF: None

Crash Cage

The so-called crash cage is a high-tech option available for most vehicles only as a retrofit. It takes standard passenger-protection one step further, providing a completely padded and hydraulically cushioned bucket seat that protects the passenger in a crash. In the event of a crash, the crash cage provides the occupant with an extra six dice for the Damage Resistance Test.

The Parts Cost and CF given in parenthesis below apply when installing large crash cages for characters with Body Ratings over 6.

The accessory is not available for motorcycles.

Base Time: 2 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 3,500¥ (4,000¥)
Equipment Needed: Vehicle Shop
CF: 7 (8)

Datajack Link

A datajack link allows an individual equipped with a datajack to plug into a vehicle and control it with rudimentary cybernetic commands. No vehicle control rig is needed to use a datajack link; only a datajack is necessary. In addition to the actual datajack port, various pieces of mechanical and electronic hardware are installed in the vehicle to allow the cybernetic control.

Use of a datajack link adds +2 to the Reaction rating of the character controlling the vehicle. Installation of the datajack control hardware also raises the vehicles' Handling Rating by 1.

Vehicle Control Rig cyberware cannot properly interface with a simple datajack link. Full vehicle-control gear (see **Rigger Control Gear,** below) is required to receive the full Reaction and Initiative bonuses of the cyberware.

Base Time, Target Number, Parts Cost, and CF are all doubled for motorcycles.

Base Time: 1 week
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 2,500¥
Equipment Needed: Vehicle Facility
CF: 2

Electronics Bay

An electronics bay is required for those electronic items that have a listed mass (from the **Shadowrun** rules or supplementary material); items with no listed mass do not require the allocation of CF. Other equipment requires 1 CF per 10 kilograms of mass, with a minimum allocation of 1 CF. The cost is 5 percent of the installed item's value if it is to be powered from the vehicle itself, 10 percent if the item is self-powered.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: As listed
Equipment Needed: Vehicle Shop
CF: As listed

EnviroSeal™

The EnviroSeal™ system provides a vehicle with gas-tight (or, optionally, watertight) seals. Note that opening windows, doors, or hatches breaks the integrity of the seal for as long as they remain open. Note also that this system does not provide any form of life support for the occupants.

For submersible operations, the engine compartment must be sealed separately.

Note that Light damage to the vehicle results in a breach of the seal. Emergency slap-patches that can handle such holes are available at a modest cost of 5¥ each. Of course, some contamination may penetrate even if the hole is sealed relatively quickly. Moderate damage or greater to the vehicle cannot be sealed without work on the vehicle.

This accessory is not available for motorcycles.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost
Gas Seal: 250¥ per point of unmodified Body
Water Seal: 750¥ per point of unmodified Body
Engine Seal: 1,000¥ per point of unmodified Body
Equipment Needed: Vehicle Facility
CF: 1 (+1 CF for engine seal)

External Luggage/Cargo Space

This accessory covers such things as roof racks or externally mounted side cargo-boxes on motorcycles. As such, they require no CF allocation per se. They do, however, affect vehicle performance in that every number of CF equal to the vehicle's unmodified Body reduces the vehicle's speed by –5/15. For every three such increases, the vehicle's Handling Rating increases by 1.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 2
Parts Cost: 250¥ per CF allocated
Equipment Needed: Vehicle Shop
CF: None

Flotation Package (Aircraft)

Any aircraft or helicopter listed in this book may be converted to an amphibious aircraft for on-water operations. For aircraft, fuel consumption during takeoff and landing is increased by 20 percent (see **Vehicle Operations**), cruising and maximum speeds are reduced by 50 percent (though Economy remains the same). Helicopters suffer no landing/takeoff restrictions, may still land on the ground, and suffer only a 10 percent reduction in cruising and maximum speeds.

Base Time: 4 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 10% of vehicle cost
Equipment Needed: Vehicle Facility
CF: 2 + 1 hardpoint (need not be installed)

GridLink Power™

Installation of the GridLink™ system, which is available only for electric-engine driven vehicles, requires extensive modification to the vehicle itself.

Vehicles equipped with GridLink™ need not worry about power consumption while traveling in the better areas of a city (Security Rating B or better), as long as they stay under cruising speed. The GridLink™ system, which is installed into the roadbed, is designed to provide adequate power for vehicles at normal-traffic speeds only. Sometimes, especially in larger cities during rush hour, the GridLink™ power grid overloads and crashes, leaving many motorists stranded (or at least those who have not recharged their onboard batteries lately).

Users of the GridLink™ system must, of course, pay a monthly usage charge based on the general mass of their vehicle. This charge amounts to a number of nuyen per month equal to the vehicle's unmodified Body Rating x 100 for standard vehicles, unmodified Body x 25 for motorcycles, and unmodified Body x 250 for trucks and tractors.

Base Time: 2 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 600¥
Equipment Needed: Vehicle Facility
CF: 3

Headlight Options

Standard, externally mounted, or "pop-up," headlights are integral to stock chassis types, but other options are available.

Each option has the same installation characteristics. If installing multiple options, increase only the Parts Cost.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: Per option
Equipment Needed: Vehicle Shop
CF: None

Swivel Mounts are headlight units that can swivel within their standard mounts to provide a sweep of illumination in a 45-degree arc either side of forward. Parts Cost = 1,250¥ per pair.

Whitelight Lamps provide daylight-level illumination out to 300 meters, but in a limited arc (coverage is about 20 meters at maximum range). Parts Cost = 500¥ per pair.

They may also be purchased on a separate, controllable swivel mount for use as a spot or searchlight for 600¥.

Life Support

It is possible to install a self-powered life-support system that provides oxygen and rudimentary climate control and that is capable of complete gas and watertight sealing via the EnviroSeal™ system. Each CF of dedicated life support provides ten man-hours (ten hours for one man, five hours for two, and so on.)

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 500¥ + 100¥ per man-hour
Equipment Needed: Vehicle Shop
CF: 1 per 10 man-hours

Reinforced Seating

Reinforced seating is necessary for any ork, troll, or any other extra-big passenger on a motorcycle. Without it, Handling is +1 and Speed –5/15 for characters with a Body Rating of 6 to 9. Handling is +2, Speed –10/30 for characters with a Body Rating of 10 or greater. The maximum number of seats a bike can have (normal seats) is equal to the unmodified Body of the cycle. Larger-than-normal seats take up 1.5 "seats" and 2, depending on the character's Body Rating.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 2
Parts Cost: 250¥
Equipment Needed: Vehicle Shop
CF: 1

Roll Bars

A roll bar adds to the rigidity of the vehicle in a crash situation, adding three dice to any character's Damage Resistance Test following a crash.

Base Time: 3 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 2,000¥
Equipment Needed: Vehicle Shop
CF: 2

Secondary Controls

Rarely installed on ground vehicles, secondary controls duplicate the basic steering and speed-control functions of the primary controls, and they are normally slaved to those controls. A good example of secondary controls is the copilot controls on an aircraft.

Not available for motorcycles.

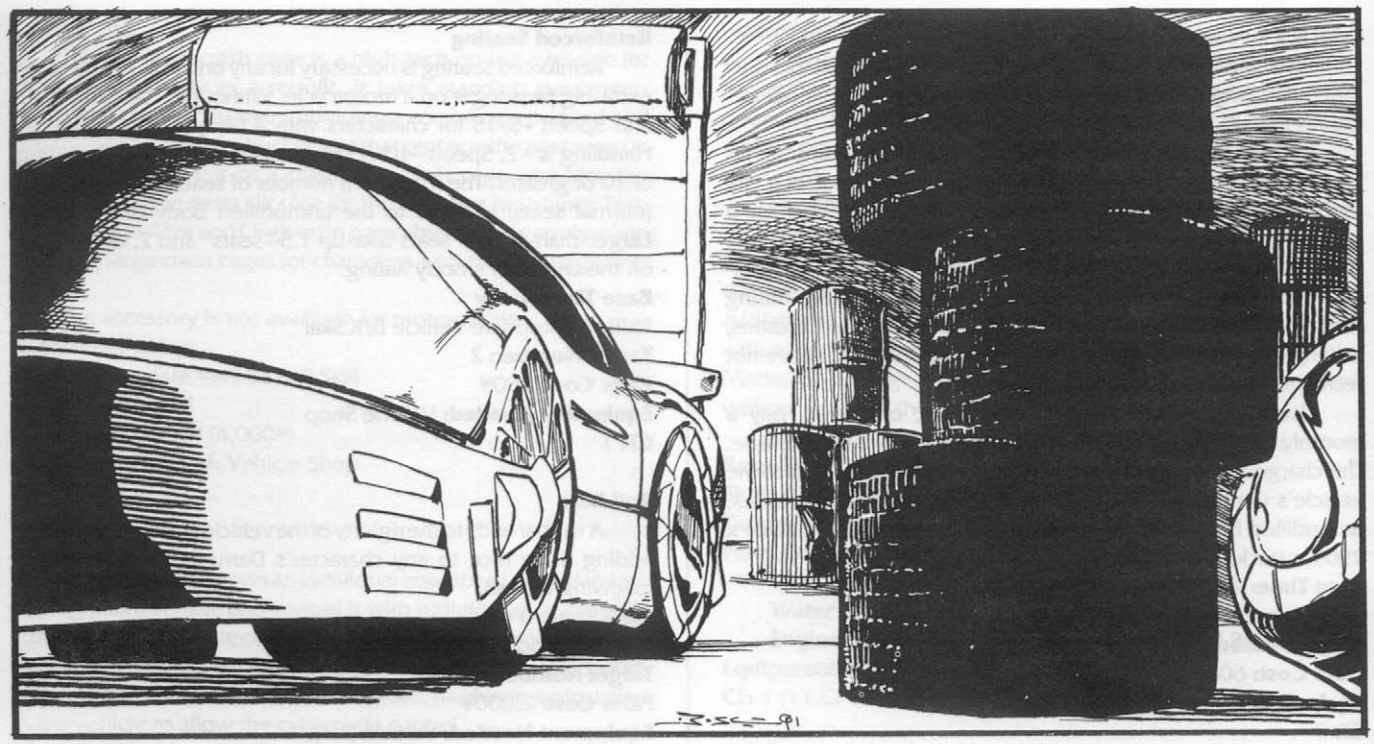
Base Time: 1 week
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 400¥
Equipment Needed: Vehicle Facility
CF: 2

Sensors

Level 0 (minimal) sensors are included with autopilot packages. Other levels must be installed individually.

Base Time: 2 days per level
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: As per Sensors
Equipment Needed: Vehicle Facility
CF: As per Sensors

See the separate section on **Vehicle Sensors**, p. 126, for more information.



Sidecars

Cycles may mount sidecars. Their size is based on the cycle's unmodified Body, as follows:

Cycle Body	Seating	Cargo	Cost
1	Single bucket	4 CF	1,000¥
2	Single bucket	8 CF	2,000¥
3	1 bench or 2 bucket	10 CF	3,500¥

The installation of a sidecar (requires 15 minutes to mount or remove) reduces the cycle's speed by–5/15, increases Handling by +1, and increases Economy by 10 percent. A sidecar has the same Body Rating as the vehicle to which it is mounted. Sidecars may be up-armored in accordance with the regular vehicle modification rules found on page 112.

Firmpoints may be mounted on a sidecar. The only hardpoints that can be mounted are those that fire rockets or missiles.

SunCell™ Power

Installation of SunCell™ Power is possible only for electric-engine driven vehicles. Installing the accessory requires fairly extensive modification of the vehicle itself.

The SunCell™ system consists of externally mounted solar cells that provide electrical power to the vehicle at a rate equal to the vehicle's unmodified Body x 50 Power Factors (PF) per hour on a sunny day. Power output of the system is halved in cloudy weather, and nil at night or in heavily overcast weather. Tractors must mount their SunCell™ panels on their trailers.

The accessory is not available for motorcycles.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 500¥
Equipment Needed: Vehicle Shop
CF: 1

Tires

A number of different tire types are available. All require a standard tool kit to install. Spare tires take up a number of CF equal to one-half the unmodified Body of the vehicle, rounded down.

Standard Tires are regular, run-of-the-mill tires. Use of these tires halves (round down) the effects of any suspension or Handling modifications. Cost = Body x 50¥ each.

Performance Tires are required for use with improved suspension. They also completely negate the effects of off-road or active suspensions in off-road mode. Cost = Body x 75¥ each.

Off-road Tires are required for use with off-road suspensions or active suspensions in off-road mode. With all other types of suspensions, they behave as standard tires. Cost = Body x 125¥ each.

Dual-Purpose Tires are designed for use with active suspensions, allowing vehicles to operate in both off-road and on-road modes without penalty. It is assumed that any vehicle with an active suspension installed is also equipped with dual-purpose tires. They act as standard tires with regard to improved and high speed suspensions. Cost = Body x 250¥.

Runflat Tires are an option available for all the types of tires mentioned here, giving them an individual protection equivalent to an armored vest (5/3). Cost + 200¥ over and above the basic cost.

SPECIAL ACCESSORIES

Special accessories are equipment used for specific purposes, not something the average citizen would want for his or her personal vehicle. These accessories can be useful for business and security-conscious enterprises, but almost guarantee at least a raised eyebrow or two from the law.

Aircraft Drop Tanks

Drop tanks may be attached to underwing/under-fuselage hardpoints. Each CF of hardpoint can support 100 liters of fuel. Each additional 100 liters decreases the aircraft's speed by –5/15, and every two additions of 100 liters increases the Handling by +1. The mounting of drop tanks on the aircraft takes ten minutes. The tanks may be dropped in flight if the pilot expends an action for that purpose. The flight characteristics are immediately increased. The physical cost of the drop tank is 200¥ per 100 liters. They are considered to have a Body of 1 and 1 point of Armor. Fuel costs are extra (see **Vehicle Operations**).

Amphibious Operation Package (Ground Vehicles)

This package modifies a vehicle for amphibious operation. If the vehicle has watertight seals and life support, it can be used for submarine operations. Several options are available.

The first, and simplest, uses the vehicle's wheels as the source of motive power and can produce speeds of 5/15, regardless of the vehicle's normal speed. A +2 penalty is assessed to Handling.

Note that surface operations do not require the engine to be sealed, but submarine operations do.

Base Time: 4 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 2,500¥
Equipment Needed: Vehicle Facility
CF: None

The next level of modification involves installing a propeller or drive system that is linked to the vehicle's own drive system. This system produces a speed of 10/30 and incurs no Handling modifier.

Base Time: 1 week
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 7,500
Equipment Needed: Vehicle Facility
CF: 2

The last option involves installing water-jet units and impellers that are linked to the vehicle's drive system. The speed generated by this system is 15/45, with no modifier to Handling.

Base Time: 2 weeks
Skill: Appropriate Vehicle B/R Skill
Target Number: 5
Parts Cost: 15,000¥
Equipment Needed: Vehicle Facility
CF: 3

Bucket Seat, Ejection

The ejection bucket seat is a standard or armored bucket seat with a small solid-fuel rocket and rudimentary stabilization systems attached. Ejection-activation controls may be included on or near the seat (or elsewhere) at the time of installation. The seat includes a para-sail that deploys on ejection and brings the chair and occupant safely to the ground, assuming the occupant is safely strapped in. The cost of the seat and the necessary CF include the necessary jettison-capable panels that allow the seat to be fired clear.

Base Time: 2 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 3,000¥
Equipment Needed: Vehicle Facility
CF: 8

Drone Rack

Drones that are launched airborne from a moving vehicle must be mounted in a drone rack on that vehicle. The drone rack is a hardware cradle that holds the drone, moves it into launch position, and then releases it. Drone racks can also be used to recover the same drone while the vehicle is moving.

Launching the drone requires no special success test, but it does require two separate actions; the first to activate the drone rack and the second to launch the drone. The drone is then considered to be moving at either the current speed of the vehicle or the drone's cruising speed, whichever is greater. Rotorcraft drones launched from stationary vehicles can be assumed to launch in hover mode.

Recovering the drone requires a Handling Test by the driver of the recovering vehicle (no action required). At the same time, the drone's controller must also make a Handling Test. If either test fails, the drone has not been recovered. If both tests fail, the drone has crashed into the vehicle.

The drone rack is actually an enclosed mini-hangar that protects the drone as well as launching and recovering it. The rack is assumed to have the same armor as the vehicle itself, but only one-half the Body (round down.)

Base Time: 1 day per Body Point
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 1,000¥ per Body Point
Equipment Needed: Vehicle Facility
CF: CF needed to store the drone, + 2

Integrated Controls

Installation of integrated controls involves integrating the vehicle's primary control interfaces (steering, speed, and the like) into fast-response controls built into the arm rests of an armored bucket seat. Doing so improves the reflexes of the vehicle's controller, and also frees up CF through the removal of the primary-control interfaces.

Integrated controls may be used as secondary controls **only** if the primary controls are also integrated.

Removal of the standard, primary controls of a vehicle frees up 3 CF of available space.

Once installed, use of the integrated control system increases the vehicle controller's Reaction Rating by 1 while he is controlling the vehicle. Military vehicles are assumed to have integrated controls already installed.

Base Time: 1 week
Skill: Appropriate Vehicle B/R Skill
Target Number: 5
Parts Cost: 1,500¥
Equipment Needed: Vehicle Facility
CF: 2

Rigger Control Gear

Rigger control gear covers the various pieces of mechanical and electronic hardware that must be installed in a vehicle before a rigger can control it cybernetically. A datajack link is needed in addition to the vehicle control gear for full rigger interface.

Rigger control gear requires an additional 4 CF in addition to the 2 CF needed for the datajack link.

Control of a vehicle through vehicle control gear by a character with vehicle control rig cyberware gives that character access to a Control Pool, as described on page 102, as well as the full Reaction and Initiative increases bestowed by the cyberware.

Base Time: 1 week
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 2,500¥
Equipment Needed: Vehicle Facility
CF: 2 (6)

Weapons and Mounts

See the separate section on **Vehicle Weapons** for more information.

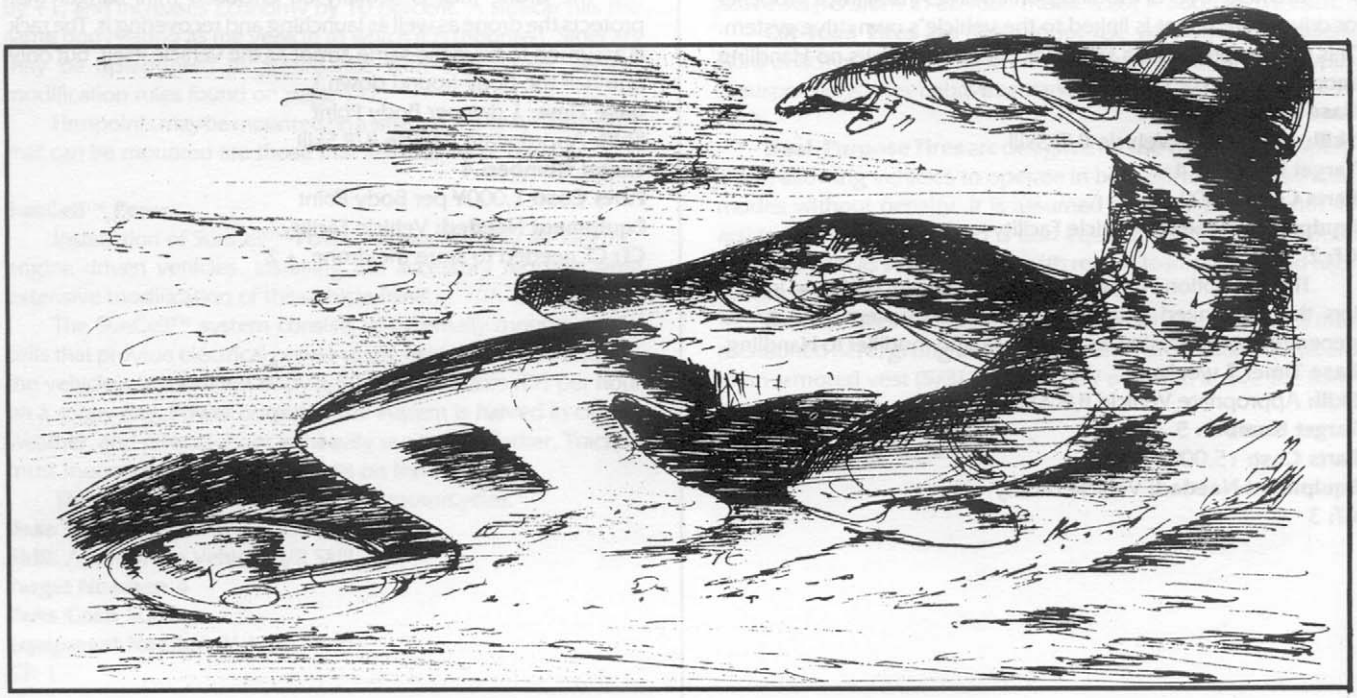
REPAIRING VEHICLES

Vehicles sometimes get broken, and odds are, with these new rules, that it will start to happen a lot more often than before. The vehicle combat notes in the **Vehicle Operations** section (pages 103-6) explained exactly what kind of damage was done to your vehicle. This section tells you how to fix it.

Remember that repairs, like vehicle modifications, cost double the Base Time and triple the Parts Cost if someone else does it for the character.

Due to the complexity of vehicles and their subsystems, the vehicle damage and repair system has been greatly abstracted. For those who wish a model for subsystem damage, we recommend adapting the Cyberware Damage rules on pp. 93–95, **Street Samurai Catalog**.

Base Time: 2 days per box of Vehicle Damage
Skill: Appropriate Vehicle B/R Skill
Target Number: Number of boxes of Vehicle Damage
Equipment Needed
Light Damage: Vehicle Kit
Moderate Damage: Vehicle Shop
Serious or greater Damage: Vehicle Facility
Parts Cost: 5% of total Vehicle Cost per box of damage



VEHICLE WEAPONS

WEAPON MOUNTS

A number of different general-purpose mounts are available, though ostensibly only to licensed law enforcement, security, and military corporations (and a few, rare, individual operatives). There is (of course) considerable shadow-market trade in manufacturers' originals as well as in "back-street" variants made on the spot by street techs for their unlicensed rigger-customers. Some weapons require special mounts, but those are detailed along with the actual weapon data. The following mounts are in general use.

STATIONARY PINTLE MOUNTS

Stationary pintle mounts, consisting of a simple reinforced hole and swivel fitting that allows for the mounting of any rifle or heavy-class weapon, are the simplest mounts available. Firing arcs are generally 45 degrees to either side of the mount, plus 30 degrees upward and 10 degrees downward, pointing in one direction of the side arc to which they are closest. To reduce the problems inherent in this limitation, it is common to equip a vehicle with several pintle mounts (where possible) so that a single weapon can be moved around to provide greater coverage (or so that multiple weapons may be mounted). It does, however, take time to swap over mounts, especially if the vehicle is moving.

To dismount (and remount) a weapon from/onto a pintle mount takes one combat turn for rifles or two combat turns for heavier weapons. If the vehicle is in motion, this also requires a Quickness (3) Test. If a weapon is mounted on a hardtop vehicle, some form of rooftop hatch is required (see below).

Heavy weapons can only be fitted on vehicles that have been fitted with roll bars.

Weapons in a pintle mount receive the equivalent of one level of Recoil Compensation.

Base Time: 12 hours
Skill: Appropriate Vehicle B/R Skill
Target Number: 2
Parts Cost: 50¥
CF: None

RING MOUNTS

The ring mount is a step up from the basic pintle mount. It consists of a pintle mount emplaced on a freely rotating ring in which the gunner stands. The ring is designed to be rotated manually through a full circle, negating the limited arcs of fire that are such a disadvantage on the pintle mount (elevation is still limited to –10 degrees and +30 degrees, however). This mount is usually installed on hardtop vehicles, though open-top vehicles that do not have a convertible top and are equipped with a roll bar can be installed with a special variant of the basic ring mount.

Mounting and dismounting a weapon from the ring mount presents the same problems as the regular pintle mount, but once the weapon is installed, the need to move it is rare. When mounted on a hardtop vehicle, the ring mount may come with an integral hatch (same Armor Value as the vehicle shell) that rotates with the ring, and that provides rear cover for the gunner.

Weapons mounted on a ring-mount pintle receive one level of Recoil Compensation.

Ring mounts can only be mounted on the topside of aircraft, but cannot be mounted on helicopters. A topside mounting means that the aircraft cannot be sealed using the EnviroSeal™ option.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 3
Parts Cost: 1,500¥ (Ring mount only)
2,000¥ (Ring mount and hatch)
3,000¥ (Open-top variant)
CF: None (1 CF for open-top variant)

HARDPOINT MOUNTS

A hardpoint mount is capable of mounting any type of weapon. Because of their cost and other limitations, hardpoint mounts are usually reserved for heavy weapons (see **Shadowrun** rules and supplements like the **Street Samurai Catalog**) or any vehicle-mounted weapons from other sources. A civilian vehicle can mount one hardpoint for every 2 full points of Body. Military-grade vehicles are structurally designed for hardpoints and may mount one hardpoint for every 1.5 points of Body they possess (which translates to two hardpoints for every 3 points of Body.)

On motorcycles, only one hardpoint may be mounted for every 3 points of Body the cycle has. Such mounts are strictly forward-firing.

Only micro and small turrets may be mounted on aircraft and helicopters and RPVs. Their arc of fire is limited, depending on whether they are mounted on the aircraft's top or underside.

Weapons from hardpoints are at one-half (round down) normal Recoil Modifiers. Apply Recoil Compensation against this adjusted value.

A hardpoint may be used as a fixed mount, an external turret, a pop-up turret, a remote turret, and a pop-up remote turret. Each is described below.

Fixed Mount

A fixed mount provides for the emplacement of weapons that fire in a fixed arc, which relies on the driver changing the vehicle's facing for gross changes in facing. (Fine targeting movement, of, say, 5 degrees to either side of the fixed forward point, is possible with internally mounted servos; elevation and depression is likewise limited.) Fixed mounts are most commonly

placed in forward or rear facings, as side mounts interfere with a vehicle's Handling. (Add the Recoil to the vehicle's normal Handling when a weapon is fired from a fixed mount. An instant Handling Test is required. Failure results in a crash. Side-firing hardpoints on ACVs have twice the Recoil, and the Recoil is three times on regular watercraft.)

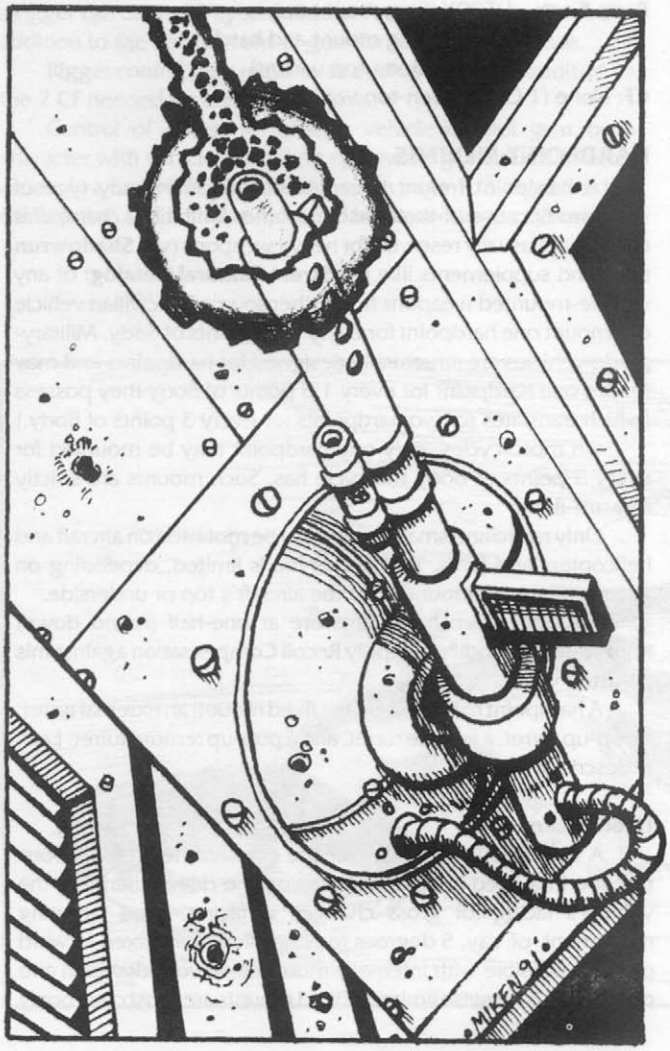
Even in forward and rear mounts, weapons must be emplaced "just so": a single mount must be emplaced along the vehicle center-line, while twin mounts may be placed either side by side along the center-line or in the left and right fairings of the vehicle. If different weapons are to be mounted, they must be mounted along the center-line (to limit recoil imbalance, which would have a negative impact on vehicle Handling).

Base Time: 3 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost:

Single center-line mount	1,000¥
Center-line mount (dual)	1,750¥
Wing/Fairing mounts	750¥ each

CF:

Single center-line mount	2 CF
Center-line mount (dual)	3 CF
Wing/Fairing mounts	.5 CF each



External Turret

An external turret may only be mounted in civilian vehicles that have been equipped with roll bars. External turrets vary in size (and capacity).

A micro turret takes up one hardpoint, and may mount 2 "points" of weapons. (Rifles and LMGs take up 1 "point"; medium and heavy MGs take up 2 "points"; missiles take up 3 "points"; cannons take up 4 "points".)

A small turret takes up 2 hardpoints and may mount 4 "points" of weapons.

A medium turret requires 3 hardpoints and may mount 6 weapon "points".

Such turrets have a 360-degree firing arc (–10 degrees and +45 degrees elevation as standard) and have the same standard armor as the vehicle. They also provide extra space for the vehicle: a micro turret provides 1 CF, a small turret provides 2 CF, and a medium turret provides 3 CF. This extra space is normally used as either ammunition storage for the weapons mounted or for gunner-operated sensor or electronics packages.

Note that large and extra-large turrets exist, but are universally limited to installation in military combat-rated vehicles. The weapons they are capable of mounting are just too heavy for a civilian chassis, or even a light military chassis.

Base Time: 3 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost:*

Micro turret	5,000¥
Small turret	7,500¥
Medium Turret	15,000¥

CF:*

Micro turret	2 CF
Small turret	3 CF
Medium turret	4 CF**

*Special anti-air variants of these turrets are available (–10° to +75° elevation), +50% Parts Cost, and +1 CF.

**Seating must be provided for a gunner as well. There is a separate CF cost for this bucket seat, which is fitted into the turret and rotates with it. All other turrets assume a gunner is stationed with the turret.

Pop-up Turret

A pop-up turret is identical to an external turret, but it only emerges when required, being concealed during normal operations. Certain limitations apply, however. A pop-up mounts 1 weapon "point" less weapons than a standard external turret, the Parts Cost is tripled, and it requires double the CF.

It takes one action to pop up the turret. It is then available for firing on the next available action.

Remote Turret

A remote turret is a weapon-only mount whose operator is seated entirely within the vehicle, and who operates these turrets entirely through remote sensors. A remote turret may be operated by a separate gunner or by the rigger. In the latter case, however, each counts as one drone against his control limit (see **Vehicle Control Rigs**, p. 101, **Vehicle Operations**).

The three types of remote turret are micro, small, and medium, each the equivalent of the same type of external/pop-up turrets. They also mount the same "point" value of weapons. Since remote turrets need no space for a gunner, they require less internal space. Actual cost remains much the same, however, as internal (normal-light video) remote sensors and servolinks must be provided for the operator(s).

Large and extra-large variants do exist, but only for military-rated vehicles.

Base Time: 3 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost:*

Micro turret	6,000¥
Small turret	9,000¥
Medium Turret	17,500¥

CF:*

Micro turret	1 CF
Small turret	2 CF
Medium turret	3 CF

*Special anti-air variants of these turrets are available (–10° to +75° elevation), +60% Parts Cost, and +1 CF.

Pop-up Remote Turret

A pop-up remote turret is a concealable variant of the standard remote turret. It also mounts 1 weapon point's less worth of weapons, its Parts Cost is tripled, and it requires double the CF. Note that no large or extra-large variants exist for pop-up remote turrets.

EXTERNAL RACK MOUNTS

External rack mounts are available only for missile- or rocket-class weapons, and they do not require hardpoints. All that is necessary for mounting is that the vehicle be a hardtop; the external rack simply mounts in the equivalent of a roof rack! Such mounts can only be fired in the forward or rear arcs. Missiles must be fired singly, and rockets must be fired in standard "ripples."

One missile or one "ripple" of rockets may be mounted for each point of Body the vehicle has, but there are no CF requirements.

External rack mounts are available for aerospace vehicles only if the vehicle has no ordnance-rated hardpoints already installed. On those vehicles, each hardpoint may mount one external rack mount with a capacity of half the aircraft's unmodified Body (round down) in CF.

Base Time: 2 days
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 750¥ base, plus 250¥ per missile/ripple
CF: None

FIRMPOINTS

Firmpoints can mount only non-heavy weapons, and are much less versatile than hardpoints. A vehicle may mount one firmpoint for each point of Body it has. However, hardpoints and firmpoints both count toward the same total, so a vehicle with a Body Rating 3 could have three firmpoints, or one hardpoint and one firmpoint.

Motorcycles can only mount one firmpoint for every 1.5 points of Body they have.

On aircraft (including helicopters) each firmpoint may mount one CF worth of missiles or unguided rockets, in addition to the standard weapon choices.

Firmpoints are strictly fixed arc-of-fire (normally forward or rear), and must be mounted in matched pairs if the vehicle will carry more than one (or different) types.

A firmpoint provides one level of Recoil Compensation.

Base Time: 1 day
Skill: Appropriate Vehicle B/R Skill
Target Number: 4
Parts Cost: 750¥ each
CF: 1

TRUCKS AND WEAPONS MOUNTS

Only 10 percent of the cargo CF listed for trucks, vans, and the like is actually available for mounting weapons. (Sorry, no characters driving around dragging trailers packing 1,000 CF of vehicle weaponry.)

AMMUNITION CAPACITY AND RELOADS

The availability of ammo for vehicle-mounted weapons varies among hardpoints, firmpoints, and the like. All costs listed below are solely for the hardware. The ammo is a separate purchase entirely.

Pintle/ring mounts often mount normal weapons that use standard clips, and extra ammo is usually stowed anywhere convenient (no extra cost). Alternatively, the weapons may be modified for belt-feed, with a fire belt usually equal to five clips. Storage is anywhere that is convenient.

Standard hardpoints have enough space for the weapon(s) mounted and the equivalent of two heavy-weapon or five non-heavy weapon clips installed as a belt. Each extra CF allocated to ammunition capacity provides a further 20-magazine capacity for heavy weapons or 50-magazine capacity for non-heavy weapon calibers. Missiles come with one round "up the spout," and extra CF provide space for a further missile, depending on the CF requirements of the missile itself. Ammo storage costs 500¥ per CF for standard weapons and 1,000¥ per CF for missiles. Rockets come with a 1 CF "ripple" ready to fire, and each extra CF provides space for an additional "ripple" at a cost of 1,200¥.

Manned turrets may store (as a single-linked belt) 20 magazine capacities of heavy weapon or 50 magazine capacities of non-heavy weapon ammunition per CF of internal turret space so allocated. Such storage is included in standard turret costs. Extra storage may be allocated from standard cargo space, but the belts must be loaded manually. Each CF of cargo space allocated to ammo storage will contain 50/250 magazine capacities of heavy/non-heavy weapon ammunition, and the cost is as for standard cargo space (nil).

Remote turrets have internal storage identical to manned turrets, except that they must have automatic feeds for extra ammunition. Each CF allocated provides a further 20/50 magazine capacities for heavy/non-heavy weapon ammunition at a cost of 1,000¥ per CF. Missiles and rockets cost as listed previously, but require an additional CF for the reload systems.

Firmpoints are able to store a large feed equal to five times the weapon's normal magazine capacity. If an additional CF is allocated for more ammo, an additional 50 magazine equivalents can be carried.

VEHICLE WEAPONS

VENGEANCE AND VANQUISHER MINIGUNS

The Vengeance (MMG) and Vanquisher (HMG) are powerful weapons whose high rates of fire place them in the minigun class. They are almost exclusively vehicle-mounted weapons, though portable field mounts are available.

The Recoil Modifiers are 1 per round for these weapons. Recoil Compensation costs 500¥ per level. Maximum level is 4.

	Type	Ammo	Damage	Weight	Cost
Vengeance	MMG	Belt *	8S4/4M2	30**	50,000¥***
Vanquisher	HMG	Belt *	12S4/6M2	45**	75,000¥***

*Only 100-round belts are available.

**This is the weight of the base weapon and batteries; the weight as installed in ground or air vehicles. Field mounts include a wheeled carriage that folds up to provide a 360-degree swivel base. Two types are available: a light field mount (250kg; 50K¥; mounts 1–2 Vengeance or 1 Vanquisher and 2 CF for ammo), and a medium field mount (500kg; 65K¥; mounts 1–2 Vanquisher and has 5 CF for ammo). Batteries provide power for ten minutes of barrel-rotation, and the mounts provide for external power and ammo-feed hookups. Note that neither version is man-portable!

***Cost includes vehicular conversion (the field-mount variant costs half this).

For more information on minigun class weapons, see the revised Autofire rules, p. 131, **Revised Combat Rules**.

VICTORY ROTARY ASSAULT CANNON

This weapon is a vehicle-mounted, autofire version of the standard single-shot assault cannon. Though it is capable of full autofire (as per those rules), it can only fire a maximum of five rounds per action.

The Recoil Modifier is 2 per round for this weapon. Recoil Compensation costs 800¥ per level. Maximum Level is 4.

	Type	Ammo	Damage	Weight	Cost
Victory	Cannon	Belt*	10D4/5S2	90**	90,000¥***

*Only 50-round belts are available.

**This is the weight of the base weapon as installed. Note that this weapon is not man-portable.

***Cost includes vehicular conversion (this is not halved if purchased for mounting in a field mount).

See the revised autofire rules, p. 131, **Revised Combat Rules.**

VIGILANT ROTARY AUTOCANNON

The vigilant rotary autocannon is capable of firing up to five rounds per action, using the autofire rules. Standard vehicle-mounted autocannons are single-shot weapons.

The Recoil Modifier is 3 per round for this autocannon. Recoil Compensation costs 1,200¥ per level. Maximum level is 4.

	Type	Ammo	Damage	Cost
Vigilant	Cannon	Belt*	12D4/6D2**	125,000¥***

Range: See Range Table

*Only 25-round belts are available.

**Note that this damage conversion is correct as written.

***Cost includes vehicular conversion.

VEHICLE WEAPON RANGES

VIGILANT ROTARY AUTOCANNON

Range	Short (4)	Medium (5)	Long (7)	Extended (9)
Vigilant	0 m–100 m	101 m–500 m	501 m–2,500 m	3,001 m–5,000 m

SAAB SAAKER AIR-TO-AIR MISSILES

Range	Short (4)	Medium (5)	Long (7)	Extended (9)
Basic AAM	20 m–700 m	701 m–1,500 m	1,501 m–4,500 m	4,501 km–15 km
Improved AAM	20 m–1,500 m	1,501 m–6,000 m	6,001 m–12 km	12 km–15 km

HYUNDAI-CSA ADVANCED AAMS

Range	Short (4)	Medium (5)	Long (7)	Extended (9)
Basic AAM	20 m–3,000 m	3,001 m–6,000 m	6,001 m–12 km	12 km–15 km
Improved AAM	20 m–5,000 m	5,001 m–10 km	10 km +1–20 km	20 km–50 km

ARES DRAGON'S BREATH SEMI-SMART AAMS

Range	Short (4)	Medium (5)	Long (7)	Extended (9)
Dogfight AAM	20 m–3,000 m	3,001 m–6,000 m	6,001 m–12 km	12 km–15 km
Attack AAM	20 m–5,000 m	5,001 m–10 km	10 km +1–20 km	20 km–50 km

MITSUBISHI-GM BANDIT AGMS

Range	Short (4)	Medium (5)	Long (7)	Extended (9)
Bandit AGM	20 m–350 m	351 m–750 m	751 m–1,500 m	1,501 m–5,000 m
Super Bandit AGM	20 m–700 m	701 m–1,500 m	1,501 m–3,000 m	3,001 m–10 km

GENERAL PRODUCTS UNGUIDED AIRCRAFT ROCKETS

Range	Short (4)	Medium (5)	Long (7)	Extended (9)
7.62 cm Rockets	0 m–150 m	151 m–300 m	301 m–750 m	751 m–1,500 m
12.7 cm Rockets	0 m–300 m	301 m–750 m	751 m–1,500 m	1,501 m–3,000 m

SAAB SAAKER AIR-TO-AIR MISSILES

These vehicle-mounted air-to-air missiles are a marked improvement over the man-portable surface-to-air missile described on p. 59 of **Street Samurai Catalog**.

Sales of Saaker AAMs are strictly controlled.

	Intelligence	CF	Damage	Cost
Basic AAM	6	1	12D8/6D4*	25,000¥
Improved AAM	7	2	12D8/6D4*	50,000¥

Range: See Range Table

*Note that this damage conversion is correct as written.

See the **Vehicle Operations** section for more information on missile-fire resolution.

HYUNDAI-CSA ADVANCED AAMS

This weapon is now available for the first time on the open market for sale to purchasers with valid end-user certificates. Hyundai-CSA (Commonwealth Small Arms) are not only using state-of-the-art weapons and sensor technology, but have also benefited from extensive operational use by the Armed Forces of Australia.

	Intelligence	CF	Damage	Cost
Basic AAM	8	1	12D8/6D4*	100,000¥
Improved AAM	9	2	12D8/6D4*	150,000¥

Range: See Range Table

*Note that this damage conversion is correct as written.

See the **Vehicle Operations** section for more information on missile-fire resolution.

ARES DRAGON'S BREATH SEMI-SMART AAMS

The latest in military-grade air-to-air missiles, the Dragon's Breath AAMs are available in two versions: Dogfight (short-range) and Attack (long-range). Both versions use variants of targeting electronics and programming developed by Ares Corporation for use by the UCAS military in their Rattlesnake II AAM.

	Intelligence	CF	Damage	Cost
Dogfight AAM	8	2	12D8/8D4*	500,000¥
Attack AAM	9	4	12D8/8D4*	1.5M¥

Range: See Range Table

*Note that this damage conversion is correct as written.

See the **Vehicle Operations** section for more information on missile-fire resolution.

MITSUBISHI-GM BANDIT AGMS

The Bandit Air-to-Ground Missile from Mitsubishi-GM is the ground-attack weapon of choice for most of the world's air forces, both in direct-purchase models or in licensed production. The weapon is also popular with registered corporate mercenary or security organizations. The two types available are the basic Bandit and the improved Super Bandit; a number of warhead types are available for each of these.*

	Intelligence	CF	Cost
Bandit AGM	6	1	10,000¥
Super Bandit AGM	6	2	15,000¥

Range: See Range Table

*Warheads (choice must be made at time of purchase) available include:

High-explosive (6M4/3M2**; –1 per meter burst-reduction)

Flechette (8S3/2M1**; –1 per meter burst-reduction)

Armor-piercing (12D8/6D4**; –6 per meter burst-reduction).

**Note that this damage conversion is correct as written.

See the **Vehicle Operations** section for more information on missile fire resolution.

GENERAL PRODUCTS UNGUIDED AIRCRAFT ROCKETS

More than a century after its introduction, this weapon is still popular with armed forces and security services throughout the world. Unguided rockets provide almost as much explosive firepower as free-fall bombs, but with a significant "stand-off" capability that enhances aircraft survivability.

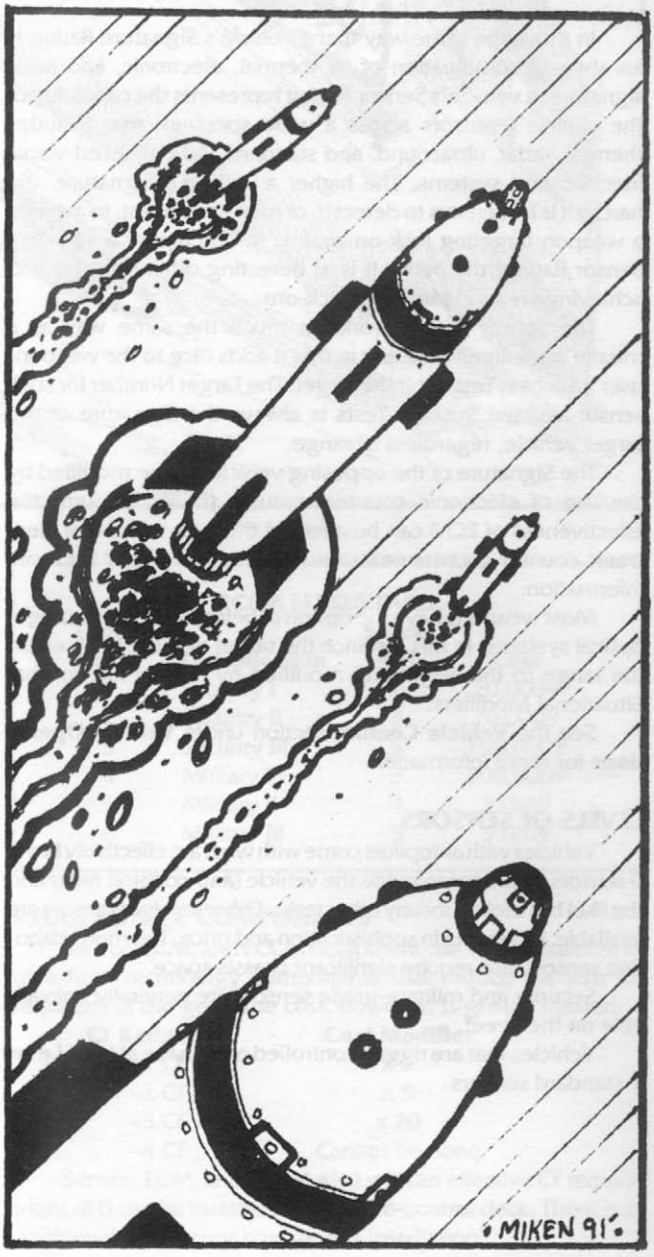
	CF	Damage*	Cost
7.62 cm Rockets	0.1 per rocket	2D8/1D4**	1,000¥
12.7 cm Rockets	0.2 per rocket	4D8/2D4**	1,500¥

Range: See Range Table

*Damage is cumulative per missile if the "ripple" fired is on target; a "ripple" consists of 1 CF worth of rockets. Thus, if 1 CF of 7.62 cm rockets (ten rockets) are being fired at a target, and if all hit, damage would be 20D8/10D4.

**Note that this damage conversion is correct as written.

See the **Vehicle Operations** section for information on combat resolution for unguided rockets.



SENSORS AND ECM

Next to his vehicle, probably the thing most important to a rigger is the quality of that vehicle's sensors, electronic countermeasures, and electronic counter-countermeasures. Each are dealt with separately below, but each is equally important in its own way.

SENSORS

In much the same way that a vehicle's Signature Rating is an abstract combination of its thermal, electronic, and aural signature, a vehicle's Sensor Rating represents the capability of the vehicle's sensors across a wide spectrum that includes thermal, radar, ultrasound, and standard and enhanced-visual identification systems. The higher a vehicle's Signature, the harder it is for sensors to detect it, or more important, to achieve a weapon targeting lock-on against it. The higher a vehicle's Sensor Rating, the better it is at detecting other vehicles and achieving weapon targeting lock-ons.

The Sensor Rating works in much the same way as a missile's Intelligence Rating in that it adds dice to the weapon-user's Success Test to hit the target. The Target Number for such sensor-assisted Success Tests is always the Signature of the target vehicle, regardless of range.

The Signature of the opposing vehicle can be modified by the use of electronic countermeasures (ECM). In turn, the effectiveness of ECM can be affected through the use of electronic counter-countermeasures (ECCM). See p. 127 for more information.

Most weapons have the option of being fired using straight optical systems. In this instance the target number is based on the range to the target and modified by normal fire-combat Situational Modifiers.

See the **Vehicle Combat** section under **Vehicle Operations** for more information.

LEVELS OF SENSORS

Vehicles with autopilots come with what are effectively Level 0 sensors, sufficient to guide the vehicle (anti-collision radar and the like) but useless for any other tasks. Other levels of sensors are available, increasing in sophistication and price. The more elaborate sensors also require significant chassis space.

Security and military-grade sensors are generally unavailable on the street.

Vehicles that are rigger-controlled must have at least Level 1 standard sensors.

SENSOR LEVEL TABLE

Sensor Level	Classification	Space (CF)	Cost
0	Minimal	0	Included with autopilot
1	Standard	0	5,000¥
2	Enhanced	1	15,000¥
3	Advanced	2	45,000¥
4	Security I	1	120,000¥
5	Security II	2	360,000¥
6	Military I	3	1.25M¥
7	Military II	4	3.0M¥

ELECTRONIC COUNTERMEASURES

Electronic countermeasures are a combination of active systems that increase a vehicle's Signature Rating. To determine the effectiveness of ECM, roll a number of dice equal to the vehicle's ECM rating against a Target Number equal to the opposing vehicle's Sensor Rating. Add the number of successes to the vehicle's Signature Rating.

If more than one vehicle in an area is attempting to use ECM, only the best result is used. The effects are not cumulative. One vehicle can use its ECM against many vehicles, but only one success test is made. The result is then compared individually against the Sensor Ratings of each of the other vehicles involved.

ECM systems, unless countered by ECCM systems, also do the following:

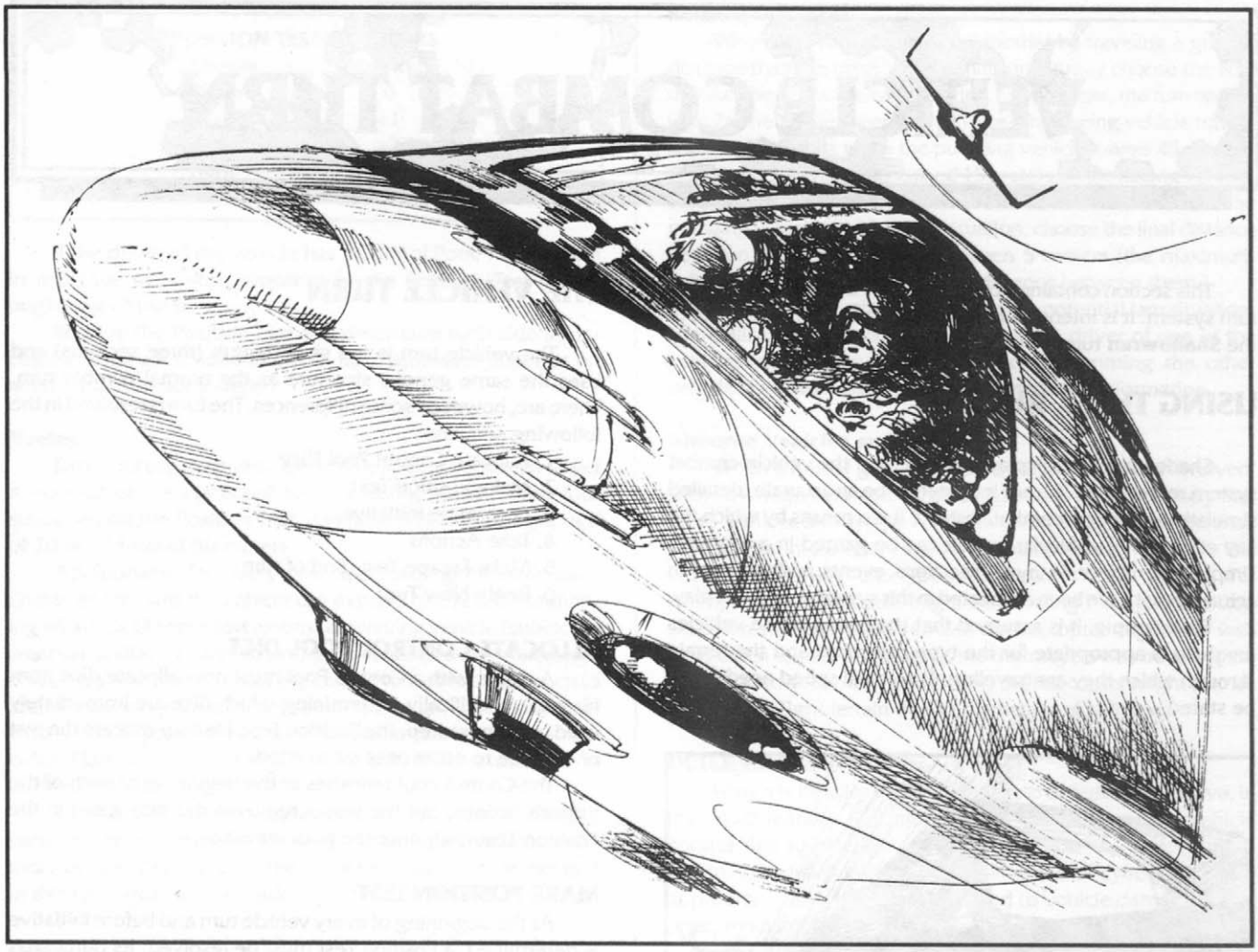
- Jam all local radio communications.
- Add their number of successes to any target numbers of drones or RPVs that are being remotely commanded.

LEVELS OF ECM

ECM equipment is expensive and also takes up a good deal of space. Consult the table below for the relevant information concerning ECM gear. Note that, as with sensors, security and military-grade ECM systems are not normally available on the street.

ECM LEVELS TABLE

ECM Level	Classification	Space (CF)	Cost
1	Security I	1	25,000¥
2	Security II	2	75,000¥
3	Security III	4	225,000¥
4	Military I	2	800,000¥
5	Military II	3	2.4M¥
6	Military III	4	6.0M¥



ELECTRONIC COUNTER-COUNTERMEASURES

Electronic counter-countermeasures (ECCM) work to offset the effects of ECM. Unlike ECM, which can affect an area, ECCM is vehicle-specific, like sensors. To determine the effectiveness of a vehicle's ECCM, roll a number of dice equal to the vehicle's ECCM rating against a Target Number equal to the targeted vehicle's ECM Rating. The number of successes are used to directly counter the successes generated by that ECM system. ECCM successes can counter only ECM successes. They do not affect the target vehicle's Signature Rating in any manner.

LEVELS OF ECCM SYSTEMS

ECCM systems are a little less expensive, but bulkier than ECM systems. Consult the table below for relevant information. Note that security and military-grade ECCM systems are generally not available on the street.

ECCM LEVELS TABLE

ECCM Level	Classification	Space (CF)	Cost
1	Security I	2	20,000¥
2	Security II	3	70,000¥
3	Security III	5	190,000¥
4	Military I	3	700,000¥
5	Military II	4	2.0M¥
6	Military III	5	5.0M¥

REDUCED SIZE COMPONENTS

Sensor, ECM, and ECCM equipment can be purchased with ultra-high technology components that reduce the size (CF required) of the gear. The cost, however, is greatly inflated:

CF Reduction	Cost Modifier
–1 CF	x 2
–2 CF	x 5
–3 CF	x 20
–4 CF	Cannot be done

Sensor, ECM, and ECCM gear with an effective CF requirement of 0 can be installed in a vehicle-control deck. There is an additional 10 percent cost for this installation.

VEHICLE COMBAT TURN

This section contains a completely revised vehicle-combat turn system. It is intended to replace the rules on pp. 71–72 of the **Shadowrun** rules.

USING THESE RULES

Shadowrun is a roleplaying game and the vehicle-combat system reflects that. It is not intended to be an accurate, detailed simulation of vehicle combat. Instead, it is a means by which the key elements of vehicular pursuit can be gamed in a relatively simple, fast manner. Many of the actions, events, and results of an actual pursuit have been abstracted in this system for ease of play.

For example, it is assumed that the speed of the vehicles involved is appropriate for the type of vehicle and the terrain through which they are traveling. The actual speed need never be stated.

THE VEHICLE TURN

The vehicle turn is the same length (three seconds) and uses the same general structure as the normal combat turn. There are, however, some differences. The turn is resolved in the following sequence.

1. Allocate Control Pool Dice
2. Make Position Test
3. Determine Initiative
4. Take Actions
5. Make Escape Test (End of turn)
6. Begin New Turn

ALLOCATE CONTROL POOL DICE

A rigger with a Control Pool must now allocate dice from his pool, specifically determining which dice are immediately used in the next step, the Position Test. He may allocate the rest of the dice to other uses, as needed.

The Control Pool refreshes at the beginning of each of the rigger's actions, but the player removes the dice spent in the Position Test each time the pool refreshes.

MAKE POSITION TEST

At the beginning of every vehicle turn and before Initiative is determined, a Position Test must be resolved. Its purpose is to determine the relative position of the various vehicles engaged in the combat. Each driver involved may have a different intention in the test, these being Flee, Pursue, or Fight.

Fleeing involves maneuvering the vehicle to get away from combat or any pursuers. The driver's objective is to open the distance between the vehicles so that he may ultimately escape.

Pursue is just the opposite. A pursuing driver wants to catch up to a fleeing vehicle to prevent it from escaping.

A driver who chooses **Fight** is primarily interested in getting a clear shot at his opponent, or more correctly, as many clear shots at his opponent as he can manage. He is more concerned with getting the shot than anything else.

The various sides involved choose their individual intentions in secret, only revealing their choice after having rolled the dice.

To make the Position Test, roll the Vehicle Skill of the driving character against a Target Number equal to the Handling Rating of his vehicle, modified by the type of terrain on which the vehicle is traveling. Consult the table below.

POSITION TEST MODIFIERS

Terrain	Modifier
Open	0
Normal	+1
Restricted	+2
Tight	+4

If the driver of the vehicle has a Control Pool, he may add in any dice that were allocated to the Position Test at the beginning of the turn.

Resolve the Position Test and determine each side's successes. What each side does with their successes depends on what their intentions were.

Fleeing

Each success generated allows the fleeing vehicle to travel a number of meters equal to its cruising speed. With four successes on the Position Test, a vehicle with a cruising speed of 20 would travel 80 meters.

Additionally, for every two successes generated, each character onboard the vehicle can expend one action conducting an attack of some sort against a pursuing vehicle (subject to weapon availability and so on.) If six successes are generated, characters in the vehicle can expend up to three actions each to attack a pursuing vehicle. Remember, though, that a character who is only eligible for two actions that turn can still only attack twice. Had he three or more actions, he could have attacked up to three times.

There is also a chance that at the end of this turn the fleeing vehicle evades pursuit and escapes. See **Escape Test** later on for more details. Keep track of the number of successes generated in this test because it will affect the Escape Test.

Pursue

Vehicles in pursuit use successes in the same way as fleeing vehicles, except they are able to close a distance equal to the vehicle's cruising speed times the number of successes. They also receive an attack against the fleeing vehicle for every two successes generated.

Note down the number of successes generated in this test on a sheet of paper for use with the Escape Test later in the turn.

Fight

The fight option is the choice of warriors. In choosing this option, the player character may have to maneuver his vehicle out of position in terms of flight or pursuit in order to make the attack.

Vehicles intending to fight receive a number of attacks against the opposing vehicle equal to the number of successes generated.

For every two successes they generated, they also get to open or close the distance between themselves and the other vehicle by a number of meters equal to the vehicle's cruising speed.

Relative Distances

When one vehicle closes on another by traveling a greater distance than the other vehicle that turn, it may choose the final distance between the two vehicles. For example, the turn begins with 20 meters between the vehicles. The fleeing vehicle travels another 30 meters while the pursuing vehicle travels 45 meters. The pursuing vehicle has gained 15 meters on the fleeing vehicle, cutting the distance between them down to 5 meters. The pursuing vehicle could, in this situation, choose the final distance between them as anything between 5 meters (the maximum gain) and 20 meters (the original distance between them.)

Vehicles closer than 1 meter are in a potential ram situation. The collision only occurs, however, if the driver of one of the vehicles chooses to expend an Action ramming the other vehicle. See **Ramming**, below, for resolution information.

Airborne Vehicles and Terrain

When a mix of ground and airborne vehicles are involved, such as when a helicopter is chasing a motorcycle, it is likely that more than one terrain type will be involved. The gamemaster may wish to take into account factors like building height and the like when determining the type of terrain for each vehicle. For example, the motorcycle might be traveling through Restricted suburban streets, while overhead the helicopter might very well be in Open terrain. If, however, the motorcycle was traveling the streets of downtown (Tight terrain), the helicopter might also be traveling in Tight terrain due to the height of buildings.

DETERMINE INITIATIVE

Now it is time for the participants to determine Initiative, in the usual manner (Reaction +1D6). Characters using vehicle control rigs to operate a vehicle may add the Reaction and Initiative bonuses gained from that piece of cyberware. Also apply any Initiative modifiers related to vehicle damage at this time, reducing the driver's effective Reaction.

One Initiative total is determined for a rigger regardless of the number of vehicles he is controlling. The rigger's Initiative is equal to the lowest Initiative result of all the vehicles he is controlling. This will only occur if the vehicles involved have different damage statuses.

TAKE ACTIONS

Player characters involved in the turn may now take actions as their appropriate phase is reached. Remember, each character can only conduct a limited number of attacks against the opposing vehicle, based on the results of the Position Test.

The driver of the vehicle must expend at least one action—it does not matter which one—controlling the vehicle. He need make no tests; the action is simply expended. If the Action is not expended, a Crash Test must be made at the end of the driver's last Action of that turn. (See **Crash Tests** in the following section.)

Dice from the Control Pool may be spent to assist the Damage Resistance Test against any incoming attacks. Control Pool Dice may not be expended to help defend against magical combat spell attacks or the damage resistance part of Crash Tests.

Dice from the Control Pool may also be expended to assist in any Handling Tests.

Crash Tests

Crash Tests are required in any action where the vehicle takes Serious damage. The driver makes a Success Test using his Vehicle Skill against a Target Number equal to his vehicle's Handling, modified by the vehicle's damage, speed, and terrain. For the speed and terrain modifiers, consult the following table.

CRASH TEST MODIFIERS

Speed	Modifier
1–20	+1
21–60	+2
61–200	+3
201–600	+4
601–2000	+5

Restricted terrain doubles the modifier, while Tight terrain triples it. Boats double the modifier, and aircraft of all types (including airborne drones and LAVs) halve it, down to a minimum modifier of +1.

If the driver fails the test, the vehicle crashes. The Power of the impact is equal to the Target Number of the Crash Test. The Damage Category is also based on the cruising speed of the vehicle. Consult the Impact Table.

IMPACT TABLE

Speed	Damage Category
1–20	Light (L)
21–60	Moderate (M)
61–200	Serious (S)
201+	Deadly (D)

The Staging is equal to one-half the Target Number of the Crash Test. If the vehicle is actually hitting something directly, the Staging is equal to the Barrier Rating of the object.

The Damage Resistance Test is made using the vehicle's Body. Vehicle armor counts as automatic successes to reduce the damage.

Passengers within the vehicle may also be injured in the crash. If the vehicle's Damage Resistance Test eliminates the damage, the passengers are free from worry. If the vehicle does take damage, the passengers will be subjected to an attack with a Power and Staging equal to the crash damage. The Damage Category will be equal to the Damage Category to which the crash damage is reduced, however. If the crash damage starts at Deadly and is reduced to Moderate, the passengers will be subjected to an attack with the same Power and Staging as the crash damage, but a Damage Category of Moderate.

A crash stops a vehicle's travel for the remainder of that turn, eliminating any distance gained from the Position Test.

A Crash Test must also be made at the end of the vehicle driver's last action if he did not spend an action controlling the vehicle sometime during the turn. The Crash Test is resolved in the same manner as detailed above.

Vehicles that receive a Destroyed damage-status result automatically crash.

Ramming

When the distance between two vehicles is less than one meter, one of the drivers involved can choose to ram the other vehicle. In other words, the driver of one vehicle is attempting to force the other to make a Crash Test.

To resolve the ram, make an Opposed Success Test between the two vehicles, rolling dice equal to the vehicle's Body against a Target Number equal to the opposing vehicle's Body plus Armor. The vehicle with the higher cruising speed receives a –1 to the Target Number. The loser of the Opposed Test must make a Crash Test.

MAKE ESCAPE TEST

Vehicles that choose flight in the Position Test may now attempt to escape completely. Compare the successes generated by both sides in the Position Test. If the pursuing or fighting vehicle has more successes, the escape attempt has failed.

If the fleeing vehicle generated more successes, it may yet get away. The pursuing vehicle must now make a Sensor/Perception Test against a Target Number equal to the net successes generated by the fleeing vehicle, modified by the table below.

ESCAPE TEST MODIFIERS

Terrain	Modifier
Open	–4
Normal	–2
Restricted	0
Tight	+2

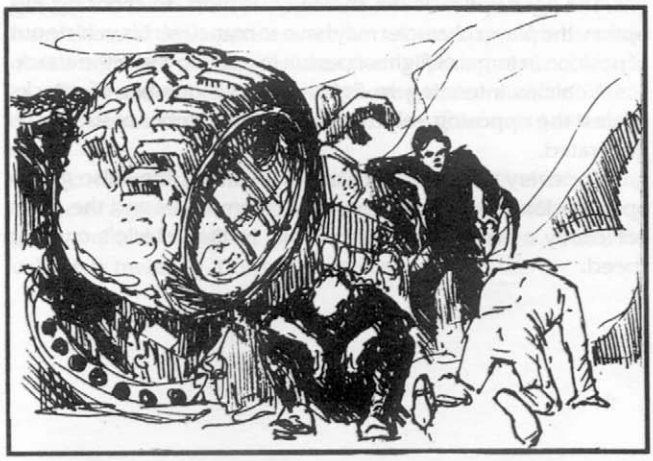
Apply the modifier for the terrain in which the pursuing vehicle is traveling. (It is, of course, very difficult to escape from aircraft.)

The pursuing vehicle can choose to make the test with either a number of dice based on the vehicle's Sensor Rating, or the highest Intelligence Rating of the characters potentially able to see the fleeing vehicle.

If no successes are generated in this test, the fleeing vehicle has escaped.

BEGIN NEW TURN

Start a new turn by re-allocating Control Pool dice for a new Position Test.



REVISED COMBAT RULES

This section contains some revisions and expansions to the firearm combat rules given in the **Shadowrun** rules. They are included here because certain aspects of vehicle combat called for the revisions. Players will note that these rules do make life a little messier on the streets.

WEAPON FIRE MODES

Shadowrun firearms are able to fire in one or more of the following modes: single-shot/semi-automatic (SA), burst-fire (BF), and autofire (AF). It takes one action to shift between weapon modes. Smartguns may shift modes for free.

Consult the following table to determine which types of weapons are capable of firing in which modes.

WEAPON FIRE MODES

Weapon Type	Fire Mode
Hold-Out	SA
Light Pistol	SA (some BF)
Heavy Pistol	SA
Machine Pistol	BF
Submachine Gun	SA/BF
Sport Rifle	SA
Sniper Rifle	SA
Shotgun	SA
Assault Rifle	SA/BF/AF
LMG	BF/AF
MMG/HMG	AF
Minigun	AF*
Assault Cannon	SA
Autocannon	BF

*Miniguns have special autofire rules. See page 132.

SINGLE-SHOT/SEMI-AUTOMATIC

Weapons of this type can fire only one shot per Action. Weapons with reactive triggers (see **Street Samurai Catalog**) can fire two shots per Action, per those rules.

BURST FIRE

Weapons capable of burst fire, or more correctly, controlled burst fire, shoot bullets in three-round bursts. Only one Success Test is made for all the rounds in the burst. The Power of a burst is 3 greater than the base round's Power, and its Damage Category is one higher. Its Staging, however, remains the same. So, a burst of submachine-gun 5M3 rounds would have a Damage Code of 8S3.

The Recoil Modifier for a single burst is only 2, so only 2 points of Recoil Compensation are needed to neutralize it. The recoil of all bursts fired within an action are cumulative.

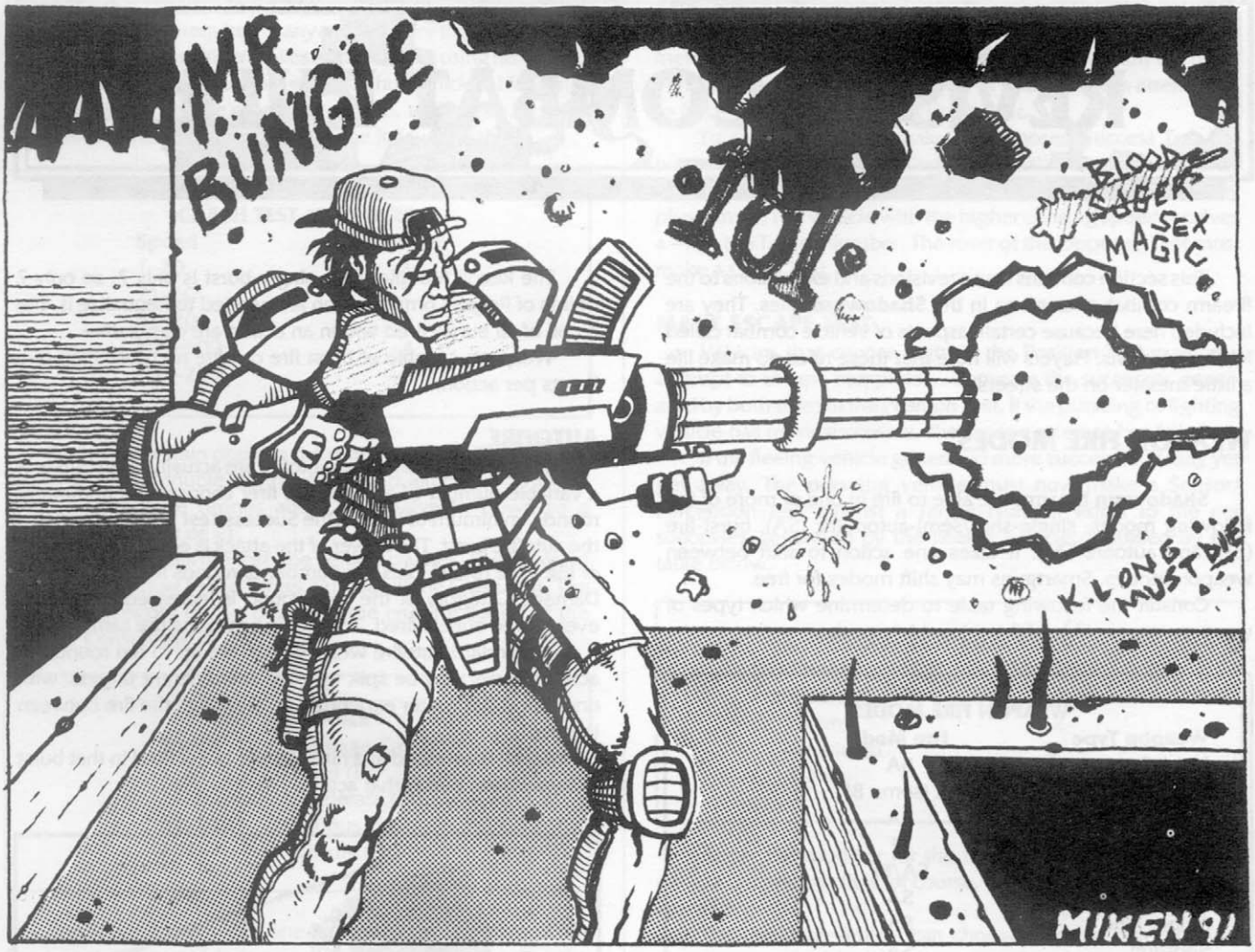
Weapons capable of burst fire can fire no more than two bursts per action.

AUTOFIRE

Weapons capable of full autofire are actually firing bursts of a variable number of rounds. The firer chooses the number of rounds, minimum of three. One Success Test is used to resolve the autofire burst. The Power of the attack is equal to the Power of the base round, plus the number of rounds in the burst. The Damage Category of the base round is increased by one for every three bullets fired. The staging remains the same.

A standard autofire weapon may fire up to ten rounds an action. Bursts may be split up between different targets, with one round per meter expended in "walking" the fire between targets.

Recoil is assessed at a rate of 1 per bullet fired in that burst or in previous bursts that action.



Miniguns

Miniguns, due to their tremendous rate of fire, may shoot up to 15 rounds in an action. Standard autofire rules apply, except that any Recoil Modifiers remaining after Recoil Compensation has been applied are doubled. So, if the minigun is firing eight rounds, but only has Recoil Compensation to handle four, the Recoil Modifier for the remaining four rounds is doubled to +8.

Miniguns must fire a minimum of six rounds per action.

AIMED SHOTS

Actions may now be expended to aim a weapon. For each action expended in that manner, up to a maximum number of actions equal to one-half the character's Intelligence (round down), a –1 Target Modifier is received.

The aiming actions must be expended in sequence, with no other actions interrupting, or else the benefits are lost. Aim may extend across multiple combat turns.

CALLED SHOTS

Characters may "call shots" in an attempt to increase the damage their weapons will do. By calling a shot, a character is aiming at a vulnerable portion of the target such as the head on a person, the tires on a vehicle, shooting out a window, and so on. It is up to the gamemaster to determine if such a vulnerable spot is accessible.

When a shot is called, the Damage Category of the attack is increased by one (an L becomes an M, an M becomes an S, and so on.) The character also receives a +4 Target Modifier for the attack.

Alternatively, a special effect can occur such as shooting out a window to see the mage on the other side (subject, of course to the window taking enough damage), blowing out a tire (thereby forcing a Handling Test), and other similar effects. The gamemaster and the player involved can set the parameters of the special effect. Normal damage is done, but the +4 Target Modifier still applies.

Shots can only be called for weapons that are targeted manually. Vehicle-mounted systems that use onboard sensors cannot fire called shots.

A character can aim, and then call a shot.

INDEX

Entries in ALL CAPITALS are Sections
Entries in **Bold** are Tables

VEHICLES

Name:

Street Name:

Race— **Allergy—**

KARMA

ATTRIBUTES

Physical
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- Quickness [ ]
- Strength [ ]

Mental
- Charisma [ ]
- Intelligence [ ]
- Willpower [ ]

Special
- Essence [ ]
- (Magic) [ ]
- Reaction [ ]

[ ] Initiative Dice

SKILLS & LANGUAGES

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CONDITION MONITOR

Unconscious> Possibly Dead
Seriously Wounded> +3 Target #/-3 Initiative
Moderately Wounded> +2 Target #/-2 Initiative
Lightly Wounded> +1 Target #/-1 Initiative

PHYSICAL

<Unconscious Further damage causes physical wounds
Seriously <Fatigued +3 Target #/-3 Initiative
Moderately <Fatigued +2 Target #/-2 Initiative
Lightly <Fatigued +1 Target #/-1 Initiative

MENTAL

WEAPONS

Type	Concealability	Reach	Short	Medium	Long	Extreme	Ammo	Damage
_____	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
_____	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
_____	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
_____	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

CYBERWARE and GEAR

Type	Rating
_____	[ ]
_____	[ ]
_____	[ ]
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PRINCIPLE VEHICLE

Type _____

HANDLING [ ]
SPEED [ ]
BODY [ ]
ARMOR [ ]
SIGNATURE [ ]
AUTOPILOT [ ]

NOTES -

Seating _____ **Access** _____
Economy _____ **Fuel/Power** _____
Storage _____ **Sensor/ECM** _____
Weapons:

CONDITION MONITOR

<Destroyed
Seriously <Damaged +3 Target #/-2 Initiative
Moderately <Damaged +2 Target #/-2 Initiative
Lightly <Damaged +1 Target #/-1 Initiative

Defense Pool	Dodge Pool	Control Pool	Pool	Pool

RIGGER CHARACTER SHEET

CHARACTER SKETCH

CHARACTER NOTES

CONTACTS and INFORMATION

SECONDARY VEHICLE

Type _____

HANDLING [ ]
SPEED [ ]
BODY [ ]
ARMOR [ ]
SIGNATURE [ ]
AUTOPILOT [ ]

NOTES -

CONDITION MONITOR

- < Destroyed
- Seriously < Damaged +3 Target #/-2 Initiative
- Moderately < Damaged +2 Target #/-2 Initiative
- Lightly < Damaged +1 Target #/-1 Initiative

Seating _____ Access _____
Economy _____ Fuel/Power _____
Storage _____ Sensor/ECM _____
Weapons:

GAME NOTES

Elven Fire

Gang vi0Lence strikes at the heart of **SeaTtle!**

What Are They?

How can they be Stopped?

TONIGHT, the **streets** run with **BLOOD**

Elven Fire is an adventure for Shadowrun.

"With the squeal of tires and the blast of autofire, everyone knows the drek has hit the fan!"

No shadowrunning team is complete without a rigger. Commanding the vehicles that provide fire support, surveillance, and a way out if things go bad, a team's rigger is as important as its street samurai or combat mage. And riggers are never without the vehicles they control. The Rigger Black Book features every kind of vehicle, from urban runabouts to hunter-seeker combat drones and everything in between, and rules for modifiying that off-the-dealer's-floor model into the lean machine of every rigger's dreams.

The Rigger Black Book contains dozens of new vehicles, support gear, cyberware, and new and expanded vehicle rules for the Shadowrun game system. This fully-illustrated source-book also includes eight pages of full-color illustrations.

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