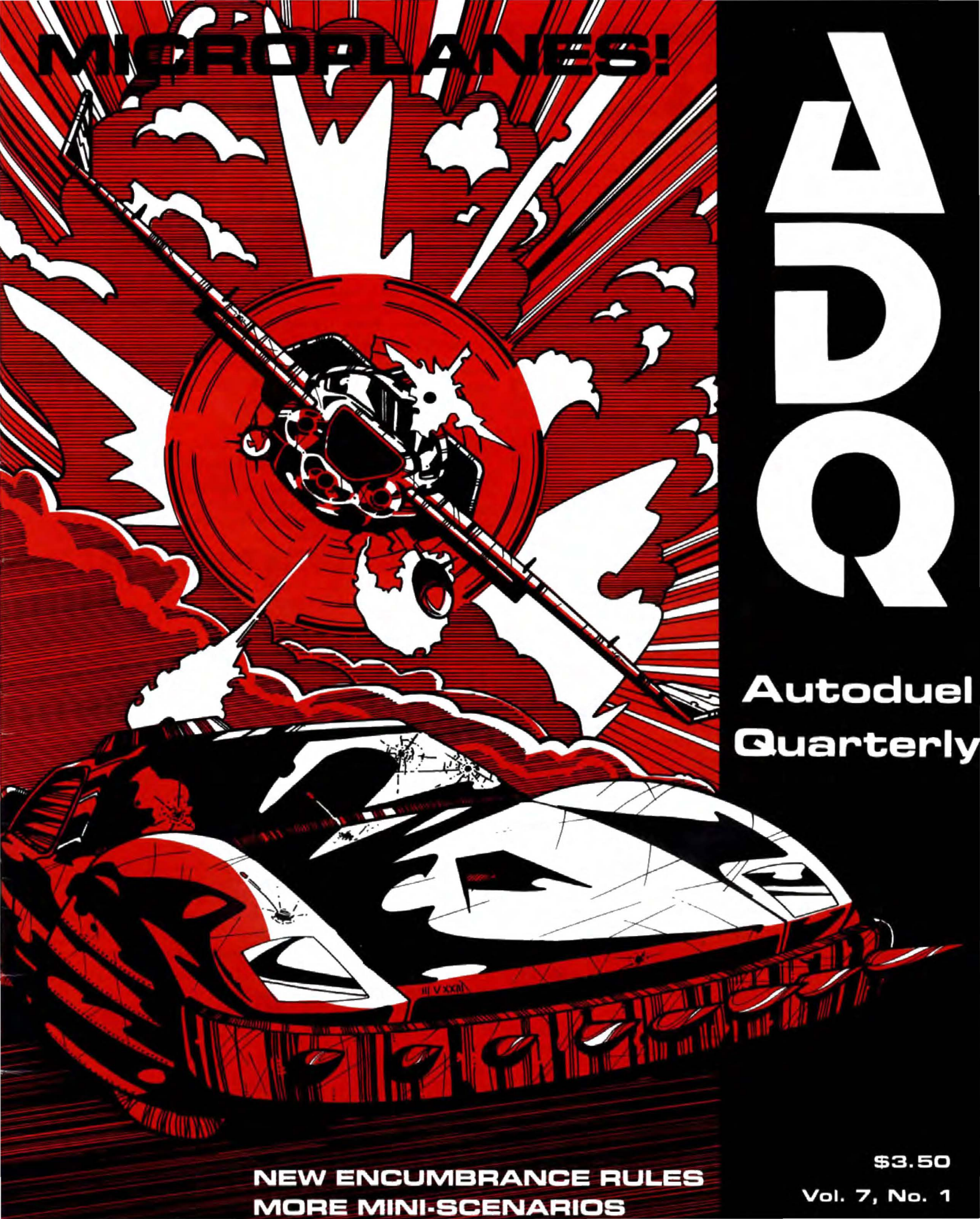


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**Autoduel
Quarterly**



**NEW ENCUMBRANCE RULES
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\$3.50

Vol. 7, No. 1

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DESIGNS IN THIS ISSUE:

Charles Oines: 5 (Widowmaker), Mike Montesano: 5 (Jackhammer), Noel Hendrickson: 5 (Graffiti Warrior)

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STAFF

Editor

Charles A. Oines

Typography

Melinda Spray

Production Staff

Susan Kaminga
Charles Oines
Charlie Wiedman

Publisher

Steve Jackson

Managing Editor

Ken Trobaugh

Circulation Manager

Norman Banduch

Art in this issue:

Charles Oines 5, 14; George "Speed" Webber 5, 10, 17, 18, 27, 28; Charlie Wiedman: 3, 6, 7, 8, 11, 12, 13, 15, 19, 22, 25, 26, 30, 37, 39, 40.

Vol. 7, No. 1

THE DRIVER'S SEAT

We're BIG!

Welcome to the new format. It's been a heavy undertaking, but I believe the work (and wait) was worth it. Our cover story is on Microplanes, bringing fixed-wing aircraft into the Autoduel universe. We have another slew of mini-scenarios for your continued amusement, and plenty of variant articles. Are you tired of the myriad funny results of grenade equivalents? Check out the variant, more realistic encumbrance rules on p. 17. Are your enemies climbing out of the clone vats too quickly for your taste? Read up on what it feels like to wake up as a clone on p. 20. Find out what to do with those shark and duck counters from *Boat Wars* in *Black Gold Blues*, on p. 6. Our regular features are included as always - check 'em out. Uncle Albert has let his advertising contract with us slip while preparing his 2039 sales campaign. Maverick used car salesman Rodger Keller of Keller Motors, San Antonio, has leapt in to take up the slack and is offering some impressive bargains, if you can weasel them past his sales staff.

It's Awards Time

Elsewhere in this issue is an official Origins awards ballot, accompanied by a list of eligible products. Fill it out and send it in! The more ballots the committee receives, the less likely it is that the awards will be influenced by a small group - and the better the award process will be.

But don't stop there. Consider becoming an Academy member, and actually voting on the awards themselves! It's cheap, and is open to "active, accomplished hobbyists, both professional and amateur." Many of you would be surprised to find out that you qualify. Complete details are on the ballot.

Don't mail it to us - these awards are in no way connected with Steve Jackson Games. We print the ballot for your convenience.

On the subject of mail; can you guys slow down a little? I'm looking right now at a pile of letters dating

back quite a way, and I simply haven't been able to find time to answer them as quickly as I should. If yours are among this pile, I apologize. I read them all as soon as I can after they come in, but I need to set aside a *lot* of time to answer them. Some of you are becoming regular correspondents and others seem to be sitting at home, deliberately thinking up bizarre questions . . .

There are *some* letters I won't answer under any circumstances, and they usually have one or more of the following mortal transgressions:

No SASE. Without a self-addressed, stamped envelope, we can't afford the time or stamps to answer your letters.

Letters asking for large numbers of gadget stats. If you can't find the *Uncle Albert's Catalog* with the stats you need, order it directly from us.

Letters that don't require answers. Short commentaries on the world of 2039, vehicle or gadget submissions, etc. The better ones may appear in the magazine, either in *Backfire* or as an advertisement.

Abusive letters. You know who you are, and you're not impressing anyone.

If you desire a quick answer and have a computer and modem, call the Illuminati BBS at (512)-447-4449 (300/1200/2400 baud, 8-none-1, 24 hours/day), and post your questions on the *Car Wars* discussion board. Even if I don't get around to answering it, someone will.

This is Not a Cute Oops Title

Arrrgh. That didn't last long, now did it? Just a couple from the magazine this time: Several of our pickier readers noted that the Airtech Windrider (back cover, *ADQ 6/1*) was both an oversized vehicle and streamlined. According to the third Uncle Albert's, oversized vehicles cannot be streamlined. Rather than change the hover, I'm changing streamlining to cover *all* vehicles.

The second one was on the front cover, claiming *ADQ 6/4* was the "fall" issue. Call it culture shock. I'm originally from northern Illinois. Texas

winter only lasts about two days, and it sure felt like fall to me . . .

In *The AADA Duel Circuit: L'Outrance*, things got a little messier. To start off, the interior art credits should have included Charlie Wiedman and the venerated George "Speed" Webber, and the production credits should also list Charlie Wiedman and Lisa A. Smith.

The entry for the Flying Fortress (p. 14) let a few things slip as well. For those that are confused, the darkest level is the floor, the next lightest is the second level, and the white section is level three. The reference to the ramps at the south end of the map actually refers to the ones at the top. There are three ways to fix this one: 1) Assume the poles shifted, and north is somewhere in the region of Mexico now, 2) cut out the map and tape it back in upside down, or 3) replace "south" with "north." Me, I'd recommend the third choice.

Also, the eight gates leading into the Flying Fortress were not marked. For the record, there are three evenly spaced along each long side, and one, centered, on each short side.

And on p. 24, Running skill got left off the sheet. Put it in place of Prestige, and keep track of your prestige in the blank area at the bottom of the sheet for now.

Down the Road

Uncle Albert's 2039 Catalog Update is due out around the same time as this issue, featuring nautical hardware and a host of other neat stuff. Look for the beautiful *Orange* cover.

As I write this, I've just started working on the *Car Wars Compendium*, a 112-page rulebook that will have (almost) everything in one place; all the rules, gadgets and other useful data in one easy-to-carry book.

Car Wars City Blocks 3 is out, featuring a large, easily-customized arena and a whole mess of useful counters (bunkers, ramps, trenches, etc.). *Car Wars City Blocks 4* should be out fairly soon, filled with extra arena sections, 3-D folding ramps, overpasses, bunkers and whatever else we come up with. Look for it.

The AADA Road Atlas and Survival Guide, Volume 7: Mountain West is on the shelves now, detailing the history and facts behind BLUD, the Republic of Deseret, and its near neighbors.

Theme and Variations

These are several rules variants that have been spawned on the BBS over the past few weeks, amidst flames of controversy . . . feel free to use or ignore these (they're *unofficial*, after all), but try them out and get me some feedback on them. In no particular order:

Variable Top Speeds for Electric Power Plants. The old electric top speeds were fine, when the fastest you could ever go was 100 mph. Now, with powerful gas engines and top-speed-boosting accessories available, the poor old electrics are being left behind. So, to give them some sort of competitive edge, try the following formula for car and cycle power plants: $360 \times \text{power factors} / (\text{power factors} + \text{weight})$, rounding down to a multiple of 2.5 mph. Overdrive and streamlining bonuses are added after finding the base top speed. Some results: A 6,600 lb. luxury with a super power plant tops out at 100 mph. Add platinum catalysts and superconductors and it will manage 110. A midsize with a tricked-up super power plant (PCs and SCs) will hit 122.5 mph, a streamlined heavy cycle with a super trike plant (PCs and SCs), cycle windshell and overdrive will achieve 215 mph flat out; a compact with a Thundercat (PCs and SCs again) will hit a staggering 227.5 mph!

Ram Concussions. When any vehicle is involved in a collision, all occupants must roll for concussion effects from the ram. Take the speed change that resulted (in T-bones, take it from the t-boning vehicle and apply it to both vehicles), divide that speed by 5mph (thus, a 35mph speed change from a 70 mph T-bone would come up with a 7). Roll that number or higher on two dice for each crewmember involved. If you make the roll, no problem. If you blow the roll, that crewman is stunned (unable to control a vehicle or gunner station) for as many seconds as he blew the roll by. Safety seats and impact armor would each add +1 to the roll.

Ram Confetti. A vehicle can only take so much damage at one time, regardless of its construction. If a vehicle takes 1/50 of its weight in damage (1 point per 50 lbs.) in a single phase, either by rams or a tremendous volley of gunfire, the vehicle has shattered and is replaced by a handful of debris and obstacle counters (1 for every 200 lbs. of shattered vehicle) dropped from 4" above the table. No vehicle involved in a collision can ever deliver more damage than it takes to confetti that vehicle. Thus, a fully loaded luxury (6,600 lbs.) can inflict or absorb up to 132 points of damage before shattering, a 40' bus (25,200 lbs.) can handle a whopping 504 points, and a light cycle (800 lbs.) can only dish out or take 16 points.

Fire as Maneuver. In other words, a firing action is considered a maneuver. If the driver fires in a particular phase, he must go straight for the entire phase. If he fires at the end of a phase, he must go straight (if he moves) during the next phase. The driver can still only make a single firing action per turn. This variant can force some very interesting tactics, especially when combined with the *Five-Phase Speed Chart*.

Spinout Recovery. As the rules stand, a spinout at average speeds will leave you out of the action for quite a while. If you wish to recover, make a Control roll at HC -6 plus your Driver skill, at the end of every turn that you're spinning (if you have Driver +2, for example, you would roll at HC -4). If you fail the roll, you simply continue to spinout. If you recover, your facing determines what happens next. If you are facing in the direction you were spinning, you continue normally, recovering your HC from -6. If you're sideways, you'll be forced into a T-Stop (see ADQ 6/2). If you're in reverse, you'll decelerate by 10 automatically until your speed is -20 or less. If you

think your abused tires can handle it, you could attempt a reverse bootlegger to get out of it.

Example: Wildman (Driver +2) blows a control roll and spins out at 90 mph. On the next turn, he attempts to recover, rolling at -4 on the Control Table at 80 mph. At 80, he needs a 5 or 6 to regain control. If he waits another turn, he will need a 4, 5, or 6.

Spoilers, Airdams and other airfoils. There are some out there (I, for one) who find these things to be a bit too effective, allowing a car to do amazing high-gee, high speed maneuvers without even the slightest chance of the tires leaving the ground. There are several ways to change this:

1. Use the *Five-Phase Speed Chart* (see *AADA News*, p. 37). This will cut the available number of maneuvers by half at high speeds, and (for racing) give those vehicles with HC 5+ a workout around the hairpin curves.

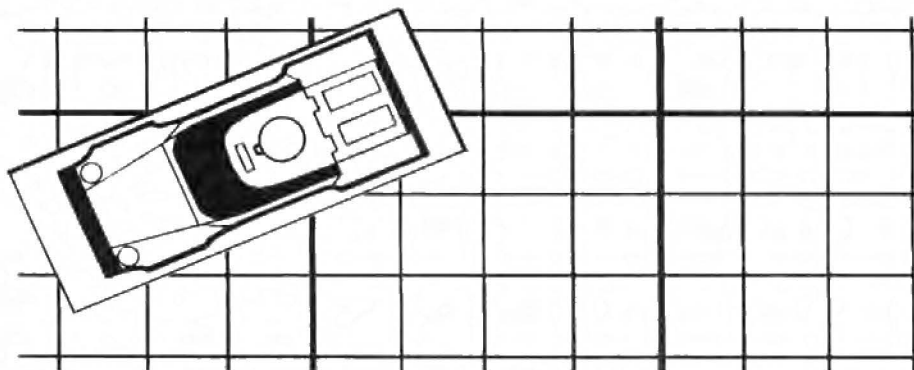
2. Ditch the rules as they stand and replace them with this: A spoiler or airdam (or helicopter maneuver foil, cycle windshell, etc.) subtracts one from any Crash Table roll for every full 60 mph of speed. If a vehicle has two or more airfoils (a car with spoiler and airdam, a transport copter with two pairs of maneuver foils, etc.), an additional -1 is subtracted at all speeds. Thus, a car with a spoiler grants a -1 between 60 and 117.5 mph, -2 at 120-177.5 mph., -3 at 180-237.5 mph., etc. If it has both a spoiler and airdam, it gets an additional -1 at any speed.

3. Ditch the rules as they stand, and have spoilers or airdams add 1 to HC above 60 mph, with the matched pair adding 2.

Driver Skill. To make this skill as useful and desirable as Gunner, Runner, etc., subtract your Driver skill bonus from any Crash Table roll.

Again, try these rules out and let me know what you think.

-Charles A. Oines



To the Ultimate

Welcome to the heartland of Autoduel America – the L'Outrance Duel Circuit! Blaze your way through the toughest arenas in Illinois, Indiana, Michigan, Minnesota, Missouri, Ohio and Wisconsin!



Featuring:

- 14 action-packed arenas, 5 track layouts and a double-sided 22" x 34" map for your added duelling pleasure;
- Advice on running your own AADA annual circuit. Duel your way to the top in a Rags to Riches odyssey – or play rough with the professionals in Corporate Car Wars! Learn how the pros are listed in the annual AADA Duellist Handbook – and earn the right to include your name, too;
- All the racing schedules and track restrictions you need to run a complete campaign in one of the AADA's deadliest circuits. You can become an Ace on the L'Outrance Circuit, but be sure your Gold Cross is paid in full . . .

The *AADA Duel Circuit: L'Outrance* is available at fine stores everywhere.

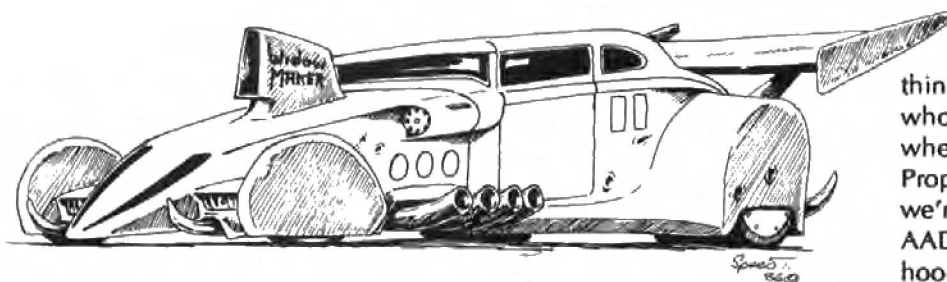


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Keller Motors

*** New and Used Cars ***



Widowmaker

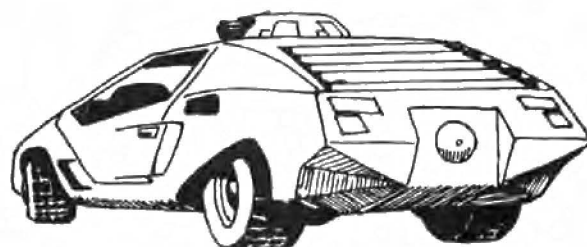
The Widowmaker is a one-of-a-kind plaything, formerly the property of a Mexican jefe who suddenly found pressing business elsewhere. We acquired this vehicle from the Texas Property Reclamation Agency for a steal, and we're letting it go for a staggering 30% off the AADA-approved price! Take one look under the hood at the turbo-supercharged small-block V-8, and you'll fall in love. Needs slight body and engine work.

Widowmaker - Luxury w/CA frame, x-hvy. chassis, hvy. suspension, blueprinted 350 ci engine w/tubular headers, turbo-supercharger, 15 gallon duelling tank, four steel-belted, fireproof PR Radial tires, driver, two linked VMGs forward, HRSWC, spoiler, streamlining. Metal/FP Armor: F12/15, R9/12, L9/12, B10/11, T0/8, U0/7, 10 pts. FP CA around engine, four 10-pt. wheelguards. Acceleration 15 (20 at 40+), top speed 140, HC 3; 6,595 lbs., \$63,865.

Graffiti Warrior

There are some nights you'd like to go out and paint the town bright, phosphorescent red. This customized Amex became the Division 30 Graffiti Warrior to do just that in style and comfort, and is available at our usual spectacularly low price. Armored like a Panzer and solid as a rock. And it comes with full magazines of *Glowworm* phosphorescent paint (in your choice of colors) free of charge!

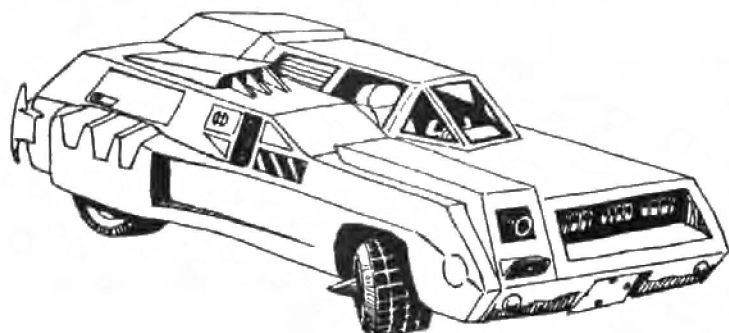
Graffiti Warrior - Sedan w/CA frame, x-hvy. chassis, hvy. suspension, large power plant w/superconductors, four metal tires, driver, paint gun forward, two linked GSs (R and L), HDPS back, all loaded with glow-in-the-dark paint, turreted VMG, overdrive, no-paint windshield. Metal/plastic armor: F5/25, R5/25, L5/25, B5/25, T0/40, U0/26. Acceleration 5, HC 3; 6,114 lbs., \$26,638.



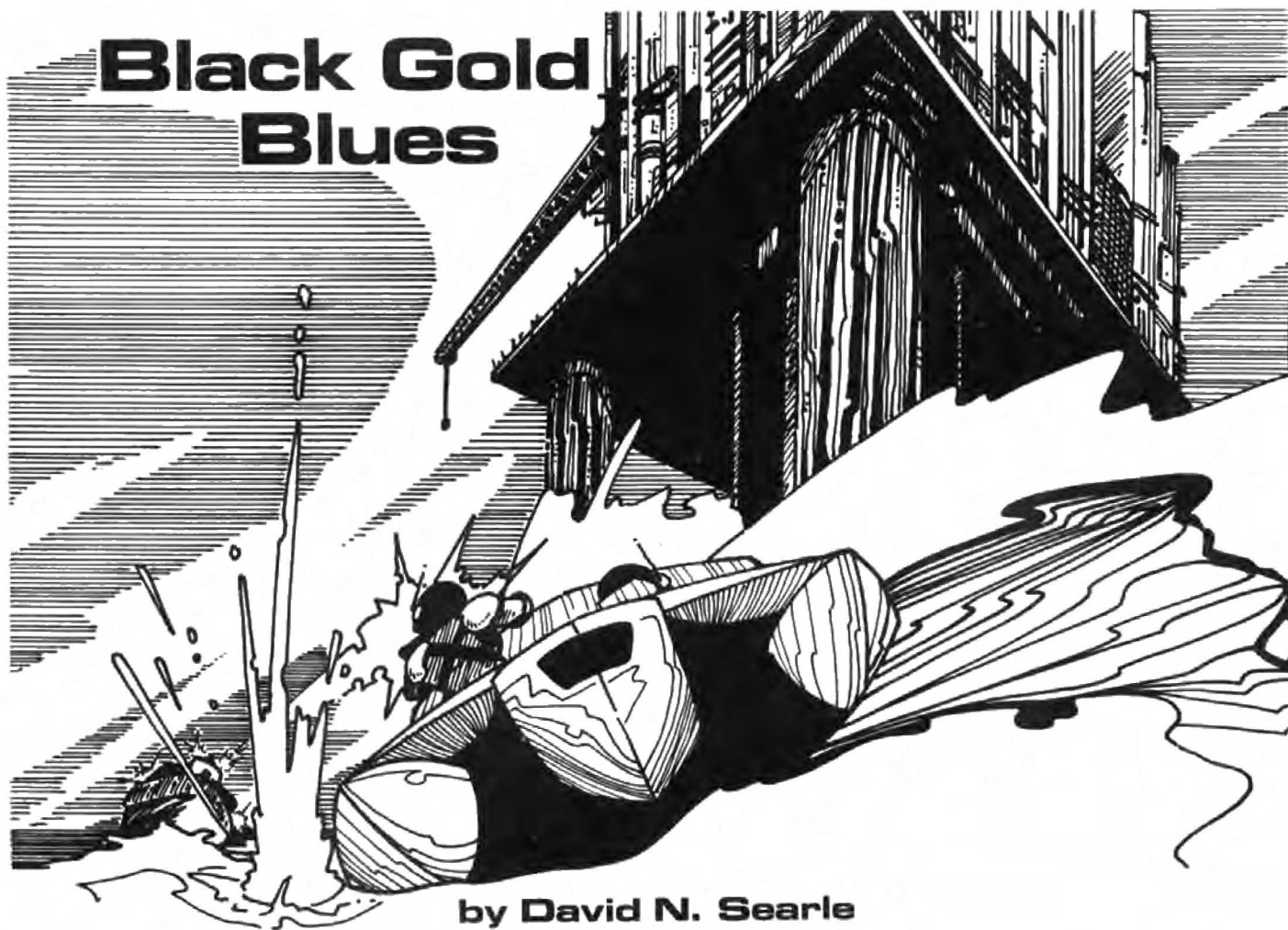
Jackhammer

Sometimes, it just doesn't pay to be subtle. When you want to completely trash your opponents, you can't do much better than Mike "Madman" Montesano's Division 25 favorite, reconditioned by our crack staff of mechanics for you! Ugly as it is, the 2037 Hudson Jackhammer has power, endurance, and an average damage output rating that sends its opponents scurrying for the exits.

Jackhammer - Luxury, x-hvy. chassis, hvy. suspension, large power plant with superconductors, four solid tires, driver, blast cannon w/extra magazine front, VFRP left, VFRP right, fire extinguisher. Armor: F35, R35, L35, B30, T15, U15, two 5-pt. wheelguards back, two 5-pt. armored hubs front. Acceleration 5, HC 3; 6,595 lbs., \$24,300.



Black Gold Blues



by David N. Searle

Introduction

Player one is the wealthy oil baron, Jacob Rovelli. Player two represents the forces of Japanese businessman Fumio Su Kim.

Part of Kim's business is gambling. After losing over one million dollars in a poker game with Kim, Rovelli went to his off-shore base to get the money. After reaching the safety of his converted oil rig Rovelli had a change of heart. He told Kim to just try and collect. Kim then took him up on the offer. This is a recreation of that bloody debt collection.

The Rig's Defenses

The oil rig is represented by the mall in the center of the arena. The black filled-in areas are all flat and navigable by rig personnel. The security bunkers are bunkers with hand weapon slots for firing through. They hold three men each, and the walls have 20(3)DP. Occupants have a full range of fire. They all are sealed as soon as the attack begins. The personnel inside them have Improved Body Armor and an Assault rifle; all are Handgunner-3 and Martial Arts-1.

Where the tunnels connect with the arena, there are catwalks 3" above the main rig level that connect with the building roof. Where they connect to the arena floor, there are ladders down to the water. The ramps that lead out to the arena are now boat launching ramps. All of the defense boats will be stored in a line here with the outer gates closed. It takes five seconds to open or close the gates. The

gates have 10 DP and require two breaches to collapse. The draft is 1" for the first 2" then decreases 1/2" every 2" until it's dry.

The areas marked as TV bunkers are now universal cupolas with twin-lasers in them. All the gunners are Handgunner-1 and Gunner-3. The cupolas have a 360° arc of fire, but cannot fire at boats in the rear 90° arc of fire, due to the height of the rig. They can fire at people on the rig.

The rig is considered to be three stories out of the water for purpose of targeting modifications.

There are currently 25 crew members on the rig, not including the security booth people or the cupola gunners. All the main oil-drilling equipment is protected in the concrete pillars and considered safe from harm. The pillars themselves cannot be damaged, and hitting the rig is not a good thing to do.

For the sake of simplicity, it is assumed that the supports for the rig itself are too close together for boats of any size to sail under.

The rig defender also gets \$5,000 per crew member (not including the cupola gunners or security men) to arm and armor them. Each crewman has 30 skill points to spend in any way.

Points may not be shared with other crew members, and any unused points are lost. He also gets four boats for the water defense of the rig. These must not total over \$40,000 in cost, with no boat costing less than \$7,000.

Rovelli

After positioning all the defenders on the map, replace one of them with Rovelli. Rovelli is a 70-point character; Pilot+1, Boat pilot, Gunner+1, Handgunner, Martial Arts+1.

The Attackers

Kim's forces have \$150,000 worth of attack vessels. A minimum of 6 boats must be purchased, with no boat costing less than \$10,000. Crew members cost \$2,000 each for Kim, and are 30-point characters.

The main objective is to dust any boat defenses; and then get on the rig and dispose of any crew aboard – mainly Rovelli. Rovelli is to be an example for everyone else.

Additional Notes and Victory Conditions

Whoever has the most points at the end is the winner. As soon as there are no more men on either side, the fight for control is over. Total up all the points and see who won.

Attacker victory points:

All defending boats destroyed	50
Oil rig boarded.....	30
Rovelli killed	20
Each defender killed.....	5
Each defender killed by sharks.....	10
For each turn the battle lasts after the 15th turn	1

Defender victory points:

All attacking boats destroyed.....	50
Oil rig never boarded	30
Rovelli alive at end	20
Each attacker killed.....	5
Each attacker killed by sharks.....	10
For each turn less than 15 that the battle lasts	5

Optional Rules

Jaws: Use the shark rules below. The goal of the on-board defenders is to shove the attackers off the rig to help feed/attract the sharks. Once the attack begins, the defenders can designate one or more crew to be chumming for sharks. A gunner who is beginning to miss a little too often can be shoved over the side . . .

Flipper Returns: To aid in the attack, Kim's forces have up to four trained dolphins with equipment on their side.

Davy Jones: The rig has 1d divers in the water ready for the assault. Each diver gets \$10,000 to spend on equipment, as well as 40 skill points to use as needed.

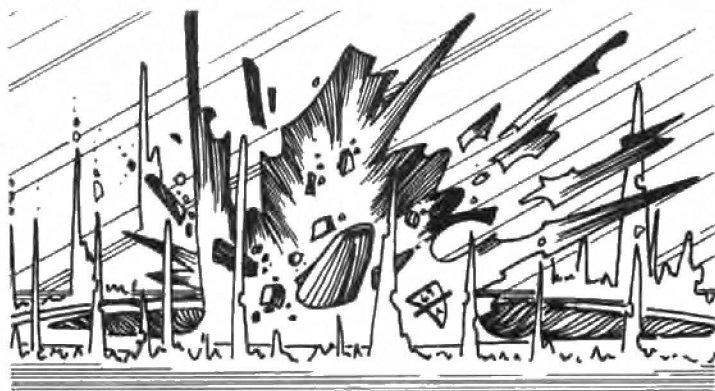
The DP for the shark is listed, the length determines counter size (The Bull shark was included with *Boat Wars*), speed/acceleration are treated normally. Damage done by sharks is just like that of hand weapons; full damage to pedestrians, and half damage to vehicular components. Keep in mind that only the Mako and the Great White will attack a boat. The hit roll is in normal *Car Wars* format.

Spaces is the number of spaces the shark would take up as cargo (for you big-game shark hunters). The targeting mods are due to the fact the sharks are streamlined and underwater. They cannot be targeted at all by boats and other above water weapons if the sharks are deeper than 1" below the surface.

Sharks and dolphins 15' or smaller can be spotted as a torpedo can on radar, while Great Whites are spotted as row boats, and the Whale Shark as a yacht.

Dolphins

Dolphins are friendly creatures of the sea. They can be captured and trained to place limpet devices on boats. The cost of the training is \$10,000, if you can find someone to train them. The harness for the dolphin costs \$200 plus the cost of the limpet device. It takes five minutes to put on or take off a harness on a dolphin, it only takes two turns to place another limpet in the harness. When the dolphin goes to put the device on a boat a to hit roll of 4 is needed. If the roll fails, the limpet sinks down to the bottom and is useless.



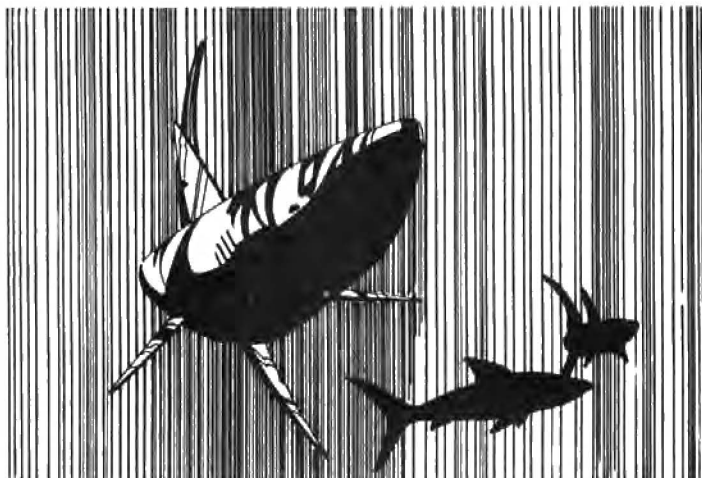
Local Fauna

Type	DP	TH	Acl	Damage	Length	Speed	Targeting mods	Spaces
Duck	1	-	2.5	-	-	5/25 flying	-5	1/3
Dolphin	12	5	10	2d	15'	60 mph	-1 side, -2 front	10
Bull Shark	8	9	5	1d	7.5'	50 mph	-2 side, -3 front	5
Hammerhead	12	7	10	2d	15'	35 mph	-1 side, -2 front	12
Mako Shark	15	6	10	2d	15'	45 mph	-1 side, -2 front	10
Thresher Shark	6	8	15	1d	15'	45 mph	-1 side, -2 front	7
Whale Shark	45	-	2.5	-	60'	15 mph	+3 side, +2 front	Flatbed only
Great White	18	7	10	3d	30'	40 mph	+1 side, +0 front	25

Dolphins, even untrained ones, have a natural attraction to humans. If there are sharks attacking a human, and a dolphin is nearby, it will attack the shark. The shark will attack a dolphin over any other target, except during a frenzy. Swimmers may "ride" a dolphin, thus expending no energy for moving.

Sharks

Both the Great White and the Mako will attack a small boat (raft, dinghy or row boat) if it gets too close. "Too close" is hard to define, but seems to depend mostly on bad luck. On the other hand, the only danger from a Whale Shark is a collision. The Bull Shark will go after moving targets (fish, pedestrians, ducks) just for food, but is likely to ignore something it perceives as dead. The Hammerhead and the Thresher are similar in their attack patterns; if it looks edible – eat it.



Feeding Frenzies

For every kill made in the water roll one die. On a 6, another shark appears 2d inches away from the kill point. Roll randomly to determine the shark type. Each turn that there is a kill in the water, roll two dice. If you roll less than the number of sharks in the water they go into a frenzy.

When in a feeding frenzy all sharks do double damage, and will attack *anything* close enough. This includes boats (even if they normally wouldn't), swimmers, torpedoes, floating mines, ducks, each other and anything else they *think* they could get a bite out of. The frenzy will last for 3d minutes, long after any duels that they start during will be over.

For those shark hunting, the same effect can be achieved for each turn of *chumming*. This is the process of baiting the waters with blood and meat scraps. Each turn spent chumming counts as one kill in the water; this is cumulative. Three turns of chumming will have the same effect as three kills in the water.

Sharks and dolphins can only attack adjacent targets in their front arc.

Shark skins are worth a large sum of money on the black market. Typical skin prices are: Bull, \$500; Hammerhead, \$900; Thresher, \$1,200; Mako, \$1,800; Great White, \$2,500. Dolphin and whale shark skins are worthless.

Miscellaneous Extras

Ducks, real and otherwise – Real ducks are mostly harmless and (for game purposes) serve as shark food. But even if it looks, moves and quacks like a duck, it might not be a duck . . .

Most major sporting goods stores now carry the Plastique Duck Decoy. The remote-controlled duck shell costs \$500; the price of the plastique is not included. A single decoy can hold up to two bricks of Plastique. When the ducks come within 2" of a boat or pedestrian roll 2d. The pedestrians will recognize the decoy for what it is on a roll of 9 or better. Any pedestrians or sharks in the water within 6" of an exploding decoy are affected as if a concussion grenade had gone off.

Speargun – \$200, 3 lbs., TH8, 1d damage, max range of 8". Spears cost \$20 each (\$25 with line), and weigh 1/3 lbs. each. It takes one turn to reload a speargun. For \$100 more, each spear can be tipped with an explosive charge, doing 2d damage. A spearpistol is available as well, costing \$100, 1 lbs., TH9, 2 pts. damage, max range of 6". Bolts cost \$5 each (\$10 with line), and weigh 1/5 lbs. each. Explosive tipped bolts cost \$50 more and do 1d damage. Both the pistol and standard speargun are silent from more than 2" away.

Blastick – \$75, 2 lbs., TH5, 3d damage, max range 7.5 feet. The blastick is a small baton carried by the diver to push away incoming sharks. Sharks that are getting too close can usually be pushed away without aggravating them, and without setting off the explosive charge. For those who prefer immediate results, the stick can be touched to the shark and the tip detonated. The stick can only be used once, and is usually used only in an emergency. It is destroyed after being exploded.

Articulated Armor – \$2,000, 100 lbs., adds 3 DP to its wearer. This suit uses closed circuit breathing to allow a diver to descend to greater depths than standard scuba gear (standard scuba gear allows diving to depths of 100 feet, while AA allows the diver to reach depths of up to 250 feet safely). The maximum speed of any swimmer is halved when in AA. AA will let a diver remain underwater for up to 12 hours. A heavy armored version that gives an additional 3 DP protection to the diver is available for \$5,000, and weighs 150 lbs. When a suit is punctured (loses all its DP) the diver immediately loses his air supply. He has only 1 minute to get air before he dies.



Don't Drink and Duel

by Craig Sheeley

A mini-scenario about DWI (Dueling While Intoxicated)

New Year's Eve, 2038 – A frontal system descended on Springfield, Missouri, bringing with it heavy fog that froze to the streets, glazing them with ice on one of the heaviest drinking nights of the year.

"I shtill shay, if he's dead, he shouldn't get the prizhe money!"

"Oh yeah? Well, whatabout his famly? Didja ever shtop to consider them? Huh?"

"Oh, heck with his family. He knew," Fred paused to collect his thought and take another long drink, placing the bottle among a dozen empties. "He knew what he was getting into."

Larry looked across the barroom table, with bloodshot eyes full of righteous indignation. "You heartless scum."

"Lissen, Mister Bleeding Heart. Do you wanna take it outside?"

"You got it, chump!" Larry shouted, standing up and listing slightly to port. Both duellists staggered for the door, angrily searching their pockets for keys.

Set-up

This mini-scenario requires only standard road sections – one at a time, because of the poor visibility. Leaving

the road piles the vehicle into a ditch – the appropriate side of the car takes ram damage at half the car's speed.

Each duellist is a 30-point character with a Division 10 car (\$10,000 limit). They start at opposite ends of a road section.

Special Rules

Fog. The fog is heavy and low – there is no visibility beyond 10" (50 yards). Only cars with IR or radar can see a car beyond this range, and then firing is at -2, as per Darkness rules.

Darkness. The time is after midnight, and the streetlights don't make much of a dent in it. The only reason visibility is up to 50 yards is because of streetlight illumination. There are no darkness firing modifiers within 10" (50 yards) of the target.

Intoxication. Both duellists are feeling no pain. They are at -1 To Hit and subtract 1 from all Control Rolls.

Ice. The streets are covered with ice, with appropriate penalties.

Victory Conditions

Considering the condition of the duellists, escaping without crashing could be considered a victory. However, the duellist who defeats the other is the winner.

Options

The Cops. The Springfield Police are on the prowl, looking for DWIs to bust (the city needs the revenue). A standard Patrol Cruiser (*DCW* page 61) with two patrolmen (Driver +1, Gunner, Handgunner) enters the fray, looking to capture the duellists or at least make them less of a hazard. The police will only shoot at tires and turrets.

Partygoers. Other celebrants drive through the area at irregular intervals, interrupting the fight. Roll 1d each turn. On a 1, another vehicle drives into the area. These vehicles enter from a randomly-chosen map-end at 1d+1 times 5 mph (10-35 mph). All crew are Driver and Gunner +0. Roll 1d on each table below to determine make and action.

Roll	Car	Roll	Action
1	Survivor-M (VG 2, 9)	1	Keeps on driving through
2	Dagger (VG 2, 12)	2	Keeps on driving through
3	Silver Star (VG 2, 18)	3	Fires while driving through
4	Longhorn (VG 2, 29)	4	Fires while driving through
5	Conestoga (VG 2, 26)	5	Fires while driving through
6	Shrimp (VG 2, 10)	6	Stays and fights until killed

Gang War – Chicago Style

Gang wars are uncommon in Chicago, but they still occur despite the enforced peace of the Chicago Transit Authority and organized crime. These three mini-scenarios chronicle the three chief engagements of one such gang war.

Part 1: Rumble

The Church of America-affiliated gang, New Americans, started the war with an armed clash at one of the hangouts of the North Stars, a South-Sider gang. It looked like certain victory for

the North Stars until the New Americans equalized the fight with greater firepower . . .

Setup

The battle takes place on *City Blocks* map #19, the Micro Arcade. Any counters moving off the map are assumed to have fled the battle and cannot move back onto the board.

The Micro Arcade is DP 5, except for the front side (the curved side) which is glass (DP 1). Pedestrians can be targeted through the glass.

The North Stars have 12 gang

members and \$2,500 of equipment. The New Americans have 6 gang members, \$2,000 of equipment and one tripod-mounted MG with one gunner. All gang members are Handgunner-1. Equipment purchase is limited only when buying weapons. The only weapons allowed are pistols, SMGs, shotguns and grenades.

The North Stars begin the scenario in the Micro Arcade. The New Americans begin the scenario at the edge of the small grass area across the street; the MG and its gunner begin the battle beneath the tree.

Victory Conditions

The battle is finished when one side has either fled the battle or had all its members killed.

Options

Surprise Lost. The North Stars have been informed of the New Americans' plans and can buy any weapons they wish with their \$2,500.

The New Americans attack with eight gang members.

The Back Door. The Micro Arcade's back door has been unlocked by a New American sympathizer. The back door is located at the back wall closest to the "R" symbol in the arcade. The New Americans may begin the scenario with up to four members at the back door, ready to enter.

Part 2: Hit

The North Stars retaliated for the Arcade massacre in time-honored Chicago fashion. A lone auto drove past the New Americans' favorite pool hall and destroyed it.

Setup

The mini-scenario uses map #20 (The Bunker Pool Hall/Crawdad Hole Cafe) and four two-lane road sections from *City Blocks*.

The Bunker Pool Hall is DP 7(10) – it's well-named. The Crawdad Hole Cafe is DP 4(8).

The North Stars get \$20,000 to construct one car, no larger than a luxury; all crewmembers have 40 skill points. This vehicle begins the scenario on any street on the map.

The New Americans have \$25,000 to build two vehicles and arm eight gang members. The gang members begin the scenario inside the Pool Hall; the vehicles are parked at the curb at any street side of the Pool Hall. Remember, to use the cars, the New Americans must get into them and start them up as per the rules in *DCW* (page 23).

Victory Conditions

The North Stars win by destroying the Pool Hall and escaping. Escape is accomplished by driving the length of the four road sections after leaving the map of the Pool Hall without being stopped or destroyed. The New Americans win by stopping them.

Options

CTA Interference. The CTA (and the organized crime bosses) disap-



prove of the gang war and intend to dissuade the gangs from fighting. To this end, a professional duellist hit-man has been sent to teach the gangs a lesson.

The CTA hit-man is driving a custom modal: Sedan, x-hvy. chassis, hvy. suspension, super power plant w/catalysts and superconductors, four steelbelted PR tires, driver, tuned turreted TwL, two HRs F (w/LGL), HRSWC. Sloped LR armor: F35, R30, L30, B25, T25, U10. four 10-point LR hubs. Acceleration 10, HC 3; 6,111 lbs., \$27,966.

The hit-man is wearing IBA and is armed with an Assault Rifle with underslung GL. He is Driver-3, Gunner-3 and Handgunner-1. His mission is to destroy all three gang vehicles.

Part 3: Assault

The CTA finally decided that the war had gone far enough and intervened. The North Stars decided to stop the war rather than face CTA wrath. The New Americans refused the truce offer.

The insult to the CTA could not be ignored – the CTA's offers were "offers that couldn't be refused." The word hit the streets: New American leader Tom "Ferretface" Collins was in trouble. Nightfall confirmed the rumors as dark cars rolled forth from hidden garages, headed for Collins' Amy City residence . . .

Setup

This mini-scenario uses the southern half of the *East Midville* map. Collins' house is the residence at the corner of First and Pine. The wall around the house is DP 8.

The Amys are prepared for trouble. They have ten gang members (30 skill points apiece) and \$25,000 of equipment in the neighborhood (the "equipment" may include vehicles

but no aircraft). They may set up in the warehouse (block 15), the house across the street (the house on the southwest corner of block 19, Collins' house, or anywhere on the street (outside of buildings). Collins' car, the Wild Weasel (a stock Warhawk from *AADA Vehicle Guide 2*) is in the private parking area of Jones' house. Collins may not start the scenario in a vehicle.

One of the New Americans must be designated as Ferretface. This designation is secret until his identity is discovered.

The CTA has six hit men (60 skill points apiece, no more than 30 skill points in any one skill) and \$60,000 of equipment. They enter from any map-side.

Special Rule

Each turn that Collins' counter is seen by an enemy unit, roll 2d. On a 10 or better the enemy has identified him. The identity of his counter is known for the rest of the game.

Victory Conditions

The CTA forces win by killing Tom Collins. The New Americans win if he escapes off the northern edge of the board. There are no other victory conditions.

Options

North Star Assault. The North Stars refused to stop the war and executed the assault on Tom Collins instead. They have twelve gang members (30 skill points apiece) and \$30,000 to kill the Ferret.

Free-For-All. Both the North Stars and the CTA showed up for the assault, with the forces listed above! The New Americans still win by having Tom Collins escape. The CTA wins by killing Collins and at least ten other gang members (either side). The North Stars win if Collins is killed and at least six

Battle of the Bass Boats

by Craig Sheeley

The time-honored Trout Master Annual World Fishing Contest has previously been restricted to unarmed boats; this year, armed craft are allowed. Despite the armament, the contest is still won by the boat having the most fish at the end of one hour. It may occur to players that if only one boat comes in, it will, by default, have the most fish . . .

The Battle of the Bass Boats is a mini-scenario for three or more players using the *Boat Wars* rules. Bass boats are cruiser-sized, shallow-draft vessels, designed for stability, and have the following stats: \$14,000, 5,000 lbs., max. load 12,000 lbs., 20 (+17) spaces, armor cost/weight \$30/15 lbs. HC 0. They may not have decks or hydrofoils but may use any other option. All boats must have an Armored Beer Refrigerator (see *Uncle Albert's 2039 Catalog Update*) to keep the fishers happy.

For the Fish-Off, each boat crew is limited to six crewmembers (pilot, gunner and up to four fishermen). More passengers may be carried to replace dead fishermen, but they may not fish unless they replace a fisherman downed by injury or illness. Each team has a budget of \$35,000 for boat and equipment.

Setup

Use one or both of the maps from *Boat Wars*. Place the contestants so that the boats are all at least 20" away from each other, in a circular pattern if

there are more than two boats. Place the Referee's Boat (see below) in the middle.

Fishing

The principal goal of the Fish-Off is to catch fish. The boat crew that catches the most fish within one hour is the winner.

Fishing takes place in five-minute turns while the boats drift or troll slowly. Each turn, each fisherman rolls 2 dice: On an 11 or 12, a fish is caught. If two or more fishermen in one boat catch a fish in the same turn, the boat is in a "hot spot" which extends for a 3" radius around the boat. Any fishermen in this radius catch fish on a roll of 9+ on two dice for the next three five-minute fishing turns.

Any firing interrupts the current fishing turn. All fish caught in that turn are lost. If the combat is resolved in five minutes (300 seconds), the next fishing turn proceeds normally.

Winning the Contest

As mentioned before, the boat with the most fish at the end of the hour is the winner. Of course, if only one boat survives with fish, it wins by default . . .

The simplest way to ensure winning is by destroying the other contenders. Since fishing speeds make for near-stationary targets, the first shot has a good chance of hitting.

However, the Referee's boat is present to curb hostilities, and will fire on the first boat to open fire.

The Referee's Boat

The Referee's boat is on hand to protect the bass-boaters from outside interference, and from each other. The referees will fire on anyone discharging a weapon and will keep firing at the first offender until the offender stops shooting. Fire will then be shifted to the nearest firer until that firer stops shooting, then to the next, etc. The referees will stop firing when their boat is destroyed or when all firing stops.

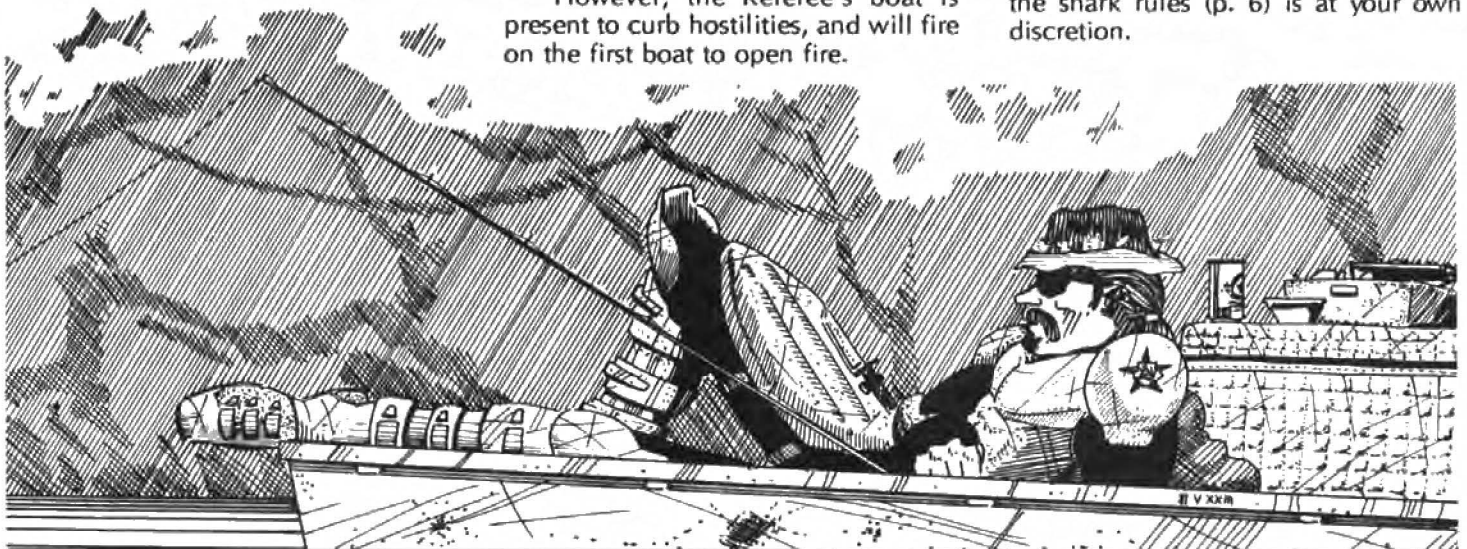
Referee - Speedboat, medium power plant, jet drive, half top, pilot, gunner, ITL and RL w/incendiary ammo in turret, extra magazine for RL (w/incendiary loads), standard torpedo left, standard torpedo right, link for both torpedoes, hi-res computer for gunner, radar, radar jammer, LR radio. Composite LR Metal/normal plastic armor: F5/20, L3/15, R3/15, B0/13, T0/20, U0/10. Accel. 10, top speed 60, HC 3, 7,000 lbs., \$38,165.

Tactics

Since bass boats have so much spare space, carrying extra passengers is an option. A couple of swimmers with Scuba gear and limpet mines can cause a great deal of trouble.

If you intend to start a fight, make sure your first shot is a good one, because the Referees will attack you immediately. Of course, you might trick your target into shooting first, adding the Ref's firepower to your own.

Use of plastic duck decoys or the shark rules (p. 6) is at your own discretion.

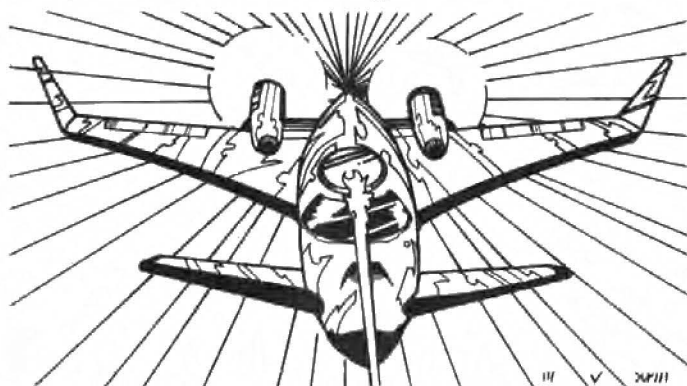


Microplanes

By Robert L. Hayden and Charles Oines

Editor's note: These are as close to official as a variant article in this magazine can get; i.e., not very. But they're fun, and they should go a long way toward satisfying those of you who have been clamoring for plane and jet rules. If we get good feedback, we might produce an aerial supplement for *Car Wars*, with these rules, airships, and anything else we can cram into a box.

Microplanes provide an inexpensive way to take to the sky and get that drop on an enemy that only a chopper provided before. Just remember, when you need to get there "as the crow flies" and can't afford a helicopter, a microplane is the next best thing.



Construction

Building a microplane follows the usual system; space, weight and cost should be foremost in your concerns. Like a helicopter, chassis and suspension cannot be modified. Microplanes can be sloped and streamlined, and streamlining is three times as effective on a microplane – it adds 30 mph to top speed.

Basic Design

Although a microplane looks like a normal airplane, it should not be confused with one. Microplanes are just that; very light, and not very durable. The basic design of a microplane includes an enclosed body that is armored and armed like a car, a motor or gas engine, one or more propellers, two wings and a tail assembly.

Unlike heavy-weight aircraft, microplanes are made almost entirely of high-grade carbon-aluminum frames (keep this in mind during collisions) and heavy-duty light-weight plastic.

Microplanes may use Improved Tail Assemblies. The small, medium, large and cargo microplane may use one pair of helicopter maneuver foils, the large cargo microplane can use two pair.

Wing Spaces are the maximum sizes of wing-mounted weapons allowed on each wing. The large microplane, for example, could mount a 1-space weapon on the outer edge of each wing, and a 2-space weapon (or two 1-space weapons) in the wing body; it could also mount a 3-space weapon (or three 1-space weapons) in the wing body itself. For the small and medium microplanes, the weapons can only be mounted on the outer wingtips. microplanes may be sloped and/or streamlined, and may use amphibious gear (from *Boat Wars*).

Microplanes may mount turrets and EWP's. For mounting purposes, treat a small microplane as a subcompact, a medium or large as a luxury, a cargo microplane as a van and the large cargo as a bus. They may mount as many turrets, rocket platforms etc., on the underbody as on top.

All microplanes require three motorcycle tires as landing gear. Cycle wheelguards are needed to reduce drag – planes will suffer a -10 mph to top speed per missing wheelguard. Microplanes may mount retractable landing gear.

Propellers

Microplane propellers – \$250, 100 lbs., 1 space, 4 DP. A microplane must have at least one propeller; up to three may be mounted on a single craft. Propellers may be mounted in several places; at the nose, tail, in EWP's or the wing mounts. If mounted in the wings, the microplane must have two of them (one on each wing), and both propellers must be facing the same direction (forward or back). A plane with acceleration 15 or better must have at least two propellers. If a plane has three propellers, its HC goes down by one. When a propeller is destroyed, the microplane suffers an immediate D4 hazard, and its HC drops by two until that propeller is replaced. Propeller armor costs \$5 and weighs 2 lbs. per point. Up to 10 points of plastic propeller armor can be put on a single propeller.

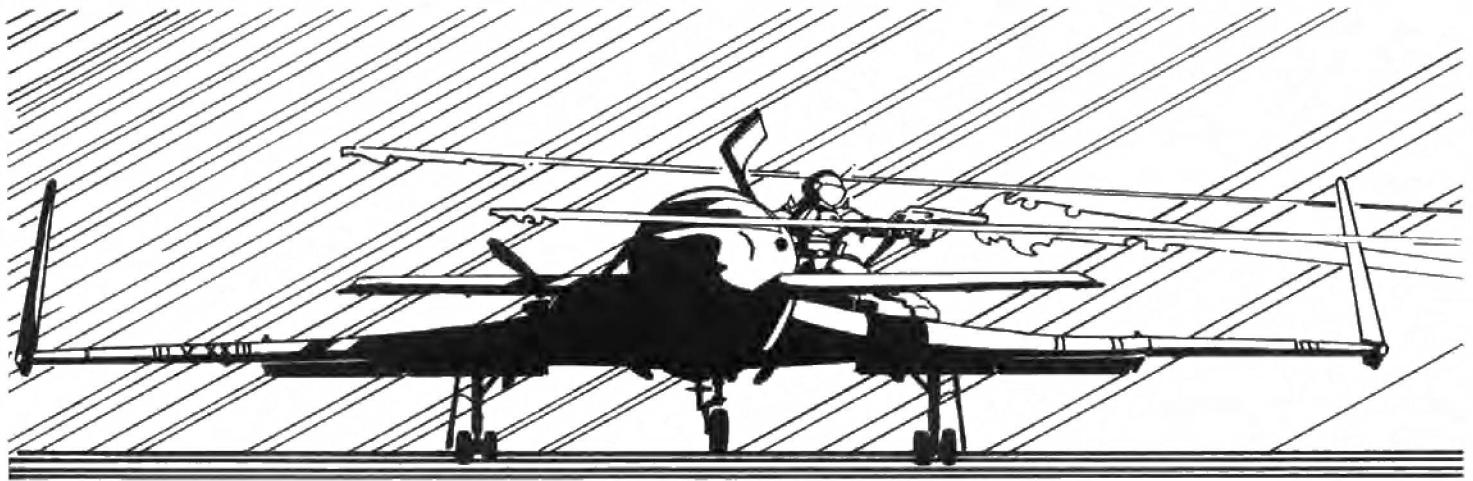
Firing on a microplane's propeller is handled exactly like firing on helicopter rotors.

There are two optional enhancements available for propellers:

Ducted cowlings – \$250, 20 lbs., no space, adds 2 DP to the propeller. Ducted cowlings increase the microplane's performance; when added to all propellers on a microplane,

Body Styles

Type	Cost	Weight	Max. Load	Spaces	Wing Spaces	Wing DP	HC	Armor cost/weight
Small	\$2,500	200 lbs.	3,000	7	1	5	4	11/5
Medium	\$3,500	350 lbs.	4,500	10	2	8	3	13/6
Large	\$5,000	550 lbs.	6,000	14	3	10	3	18/9
Cargo	\$6,500	600 lbs.	8,500	14(+8)	3	12	2	22/11
Large Cargo	\$8,000	800 lbs.	10,000	20(+16)	4	16	1	30/14



the engine's power factors are increased by 15% for purposes of acceleration, top speed and maximum load. Ducted fans are also larger than standard propellers, and easier to target.

Tilt-rotor – \$100, 75 lbs., 1 space each. Tilt-rotors must be mounted on the wings, facing forward. Tilt-rotors swivel up for takeoffs and landings, and face forward for level flight. Switching between the two is a firing action, taken during the acceleration phase. A Tilt-rotored microplane may have ducted cowlings. A plane with Tilt-rotors has its acceleration reduced by 10 mph while in VTOL mode. If acceleration in lift mode is 0, then the plane will not be able to achieve VTOL flight.

A Tilt-rotored plane with its rotors up has a maximum speed of 50 mph – if the rotors are switched to the vertical position, a Wing Check must be made, at +1 for every 5 mph above 50 mph. Even if the Wing Check roll is made, the plane must continue Wing Checks (once per turn and once per maneuver) until its speed is at or below 50 mph.

Wings

Wings have two purposes: To keep the aircraft in the air by creating lift, and to provide more places to mount weapons. The wings on modern microplanes bear few similarities to the wings of old – these wings are self-adjusting microprocessor controlled airfoils. The microplane bodies above assume standard wings, and give the wing DP. Wings are damaged in a similar fashion to metal armor, and are targeted at +1 from above or below, or -3 from the sides, front or back. If a microplane has an unequal load on its wings, it suffers a -1 to HC until that situation is rectified. A Wing Check must be made whenever a wing suffers two or more points of damage.

They cannot be armored, but they can be modified:

Heavy Lift – +10% of body weight, +25% of body cost. Allows a microplane to take off with a greater load, and reduces stalling speed by 5 mph and top speed by 10%. When figuring acceleration and top speed for a microplane with Heavy Lift wings, use 70% of the microplane's weight.

Delta Wings – +5% body weight, +25% body cost. Swept-back delta wings reduce drag on the microplane, and allow it to increase its maximum speed by 50%, but increases stalling speed by 10 mph. Delta and Heavy Lift may not be combined. Propellers mounted on delta wings must face backwards.

Power Plants

Microplanes use car power plants, and may use gas engines. A power plant's power factors must be at least ½ of the weight of the microplane, or it won't move. If the power factors are ½ to ¾ of the weight, the acceleration is 5 mph. If the power factors are ¾ of the weight but less than the weight itself, the microplane gets acceleration 10. If the power factors are equal to or higher than the weight, acceleration is 15. Top speeds for electric plants are doubled. Overdrive cannot be used. Acceleration is determined normally. Turbochargers, superchargers, etc. do *not* add their acceleration bonus on planes, although they do increase top speed. Top speed with internal combustion engines is figured using the formula $(480 \times \text{Power Factors}) / (\text{Power Factors} + \text{Weight})$.

Like most vehicles, it takes three seconds to power up a microplane.

A microplane power plant will go about 400 miles at 100 mph (150 mph with delta wings). With gas engines, they get twice the listed mileage at half the top speed.

Weapons

A microplane may mount any weapon within its body. A general rule for wing-mounted weapons on a microplane is "if it kicks, forget it." The following weapons may be wing-mounted on a microplane: MGs, VMGs, GGs, all rockets, all lasers, all dropped weapons, all FTs, FGs, GLs, bombs and RRs. No weapon may be mounted on the same facing as a propeller (i.e., a microplane with a nose-mounted propeller may not have any forward weapons in the body of the plane. If it had propellers facing back on the wings, wing-mounted weapons must face forward and vice versa.) Referees should use common sense regarding new weapons developments. Microplanes may mount turrets and EWPs. For mounting purposes, treat a small microplane as a subcompact, a medium or large as a luxury, a cargo microplane as a van, and the large cargo as a bus. They may mount as many turrets, rocket platforms, etc., on the underbody as they can on top.

Wing spaces may be used for weapons or propellers. Weapons may face forward or back. Wing-mounted weapons must be mounted and fired as linked pairs; the pairs themselves need not match (i.e., a plane could have an RR and SAM on each wing).

A new skill is needed to fly microplanes – Fixed-Wing Pilot. It is basically identical to Driver skill, but applies to fixed-wing aircraft like microplanes. If a person without the Fixed-Wing Pilot skill attempts to fly a microplane, he will be at HC -4, assuming he figures out how to get it started.

Take-offs and Landings

Take-offs and landings with Tilt-rotors are easy. Just follow the helicopter rules for vertical movements. When the tilt-rotors are facing up, the microplane's top speed is $\frac{1}{4}$ normal. Horizontal take-offs and landings are a little more complicated. To take off, a plane must start at one end of a long, flat field, road, lake (if it has pontoons), or other flat surface, accelerate until it reaches its stall speed (see below), and begin climbing.

Landing is basically handled like taking off, but in reverse. First, the microplane approaches the end of a long, flat area. Next, it begins a controlled dive at $\frac{1}{4}$ " per turn until it touches down (remember to stay at or above stall speed).

Flight

A microplane in flight maneuvers may drift or veer as does a helicopter. The difficulty of aerial maneuvers is doubled (so a 15° veer, which is normally a D1, would count as a D2, and a 45° veer or a $\frac{1}{2}$ " drift would be a D6). Microplanes using tilt-rotors in the up position use the helicopter rules, and may perform maneuvers just like helicopters.

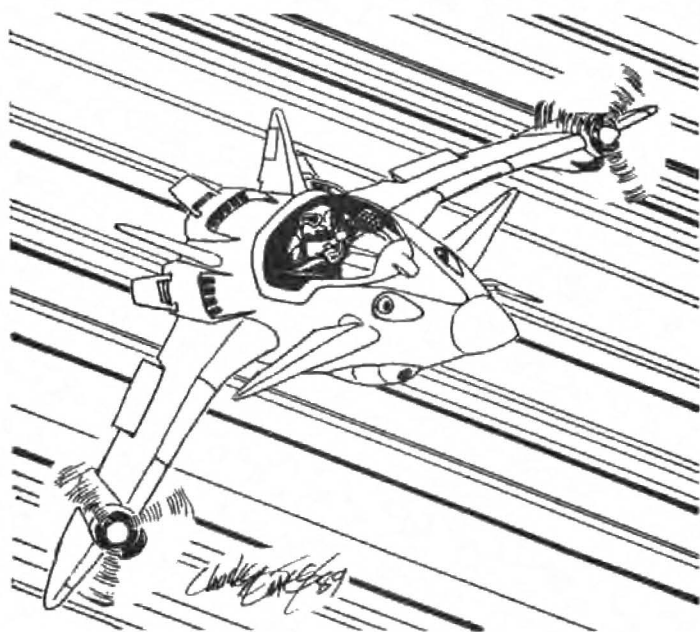
All microplanes may decelerate by up to 15 mph safely in straight-line flight.

Climbing, Diving and Rolling

In order to climb, a microplane sacrifices $\frac{1}{2}$ " of forward motion to climb $\frac{1}{4}$ ". That is, a microplane which has the option of moving 8" forward could instead move $7\frac{1}{2}$ " forward and climb $\frac{1}{4}$ ", or move 6" forward and climb $\frac{1}{2}$ ". This is announced during the acceleration phase. Unlike helicopters, a microplane's ability to climb is effectively restricted only by its present speed and its stall speed. While climbing, a microplane must still move forward faster than its stall speed. When it becomes important, the exact position of the plane can be found by gauging its climbing speed (which would be 65 mph in this example) on the speed chart, and adding those values to the plane's altitude at any given phase. When climbing speed exceeds forward speed, the Back firing arc is considered to face the ground, and the others move accordingly. A microplane may level off at no penalty after climbing, and its new speed will equal its old forward speed plus its climbing speed.

Example: A Sniper pilot is whipping along at 300 mph when a cliff face pops up out of nowhere (note that the Sniper does not have radar). He pulls up as hard as he can, trading 260 mph, or 26" of forward movement, for $6\frac{1}{2}$ " of altitude. After he has cleared the cliffside, he levels off at a new speed of 105 mph (40 mph forward speed during the climb, + 65 mph climbing speed).

A microplane may accelerate more quickly by diving. A too-steep dive can have disastrous effects, but a shallow dive can safely increase a plane's speed. A microplane must spend a full second diving, moving forward as many inches as its current speed indicates. The player specifies how much altitude will be lost during a turn, within certain



limitations (described below). For every $\frac{1}{2}$ " of altitude lost, the microplane picks up 5 mph of forward speed during the acceleration phase of the next turn.

A microplane must accelerate into a dive – the pilot can't simply go from level flight to a 90-foot dive and pick up 60 mph of speed, all in one second. A microplane can pick up 20 mph/turn of acceleration while diving, above and beyond the plane's normal acceleration. Keep track of how much speed is picked up through diving, as this will be offset when the microplane pulls out of the dive. When its dive speed exceeds its forward speed, the microplane's forward arc is facing the ground.

A microplane pulls out of a dive by applying some of its forward motion toward decreasing diving speed – with $\frac{1}{2}$ " movement lifting the plane $\frac{1}{4}$ ". However, a microplane that has been diving for speed must offset the dive rate before beginning to climb normally. The dive speed is reduced by 5 mph for every $\frac{1}{2}$ " of "climb," and a microplane may reduce diving speed up to 2" per turn.

Example: The Sniper Pilot, having narrowly missed the cliff, sails along blissfully through the fog at a leisurely 120 mph, only to encounter an airship directly in his path. He immediately panics and dives at the limit (2", or 20-mph diving speed) for three turns, gaining a dive speed of 60 mph and a forward speed of 180 mph. At the end of the third turn, he is losing 6" of altitude per turn. But he can't just "stop diving" – he has to gain altitude in order to offset the dive. A player with a diving microplane can only put 2" toward climbing out of the dive – thus, the plane can go to a 50-mph dive speed (and 160-mph forward) at the end of the first second, 40/140 at the end of the second turn, 30/120 at the end of the third, and so on until it is at level flight at the end of the sixth turn, moving at 60 mph, assuming no acceleration while pulling out.

Rolling is relatively easy; simply trade firing arcs. There is no innate D hazard for rolling; but a plane may only roll one facing (90°) per turn. Any maneuvers taken while sideways are at an additional +D1, and any maneuvers while upside down are at +D3. When an microplane is

flying sideways, its stall speed is increased by half; when upside down, its stall speed is *doubled*.

Flying sideways has one benefit: Veering in the direction you are facing is done without the doubling for level maneuvers. For example, if your top is facing right, a 15° veer to the right is only a D1. If you try to veer to the left while facing right, the difficulty of the maneuver is doubled normally. However, your speed is reduced by 5 mph for every 15° you turn if you are turning toward your top facing, or reduced by 10 mph if you veer in the opposite direction. This deceleration takes effect on the next turn.

Flying sideways also has a potentially severe drawback: Your wings are not generating lift. The net result of this is to add 10 mph of diving speed per turn, without the corresponding speed increase from intentional diving.

Example: The Sniper pilot above, instead of simply pulling up or diving, rolls his craft sideways (his Right firing arc now faces Down, Top faces Right, Left faces Up, and Underbody faces Left) and executes a continuous series of five D1 veers to the right, resulting in a free 25 mph deceleration next turn, and 10 mph diving speed.

Stalling

Each microplane has a specific *stall speed*, the speed at which the wings cannot generate lift. If the microplane is flying, and falls below this speed, it must immediately dive or accelerate in order to achieve a safe speed. The small, medium and large microplanes stall at 30 mph, the cargo microplanes stall at 50 mph. Delta wings add 10 mph to stall speed, and Heavy Lift wings reduce stall speed by 5 mph.

Losing Control

Microplanes check for control in the same way as other vehicles. Cross-index the handling status of the plane with *one-half* its speed on the Control Table. If a control roll is called for, roll the die. If you lose control, add the appropriate modifier from the Control Table and roll on the microplane Crash Table.

Hazards

Hazards affect microplanes immediately, as they occur, decreasing the plane's handling status.

Some sample hazards:

Colliding with another aircraft or vehicle: D4, and a Prop Check.

Enemy fire, doing 1-5 points of damage: D1.

Enemy fire, doing 6-9 points of damage: D2.

Enemy fire, doing 10 or more points of damage: D3.

One wing destroyed: D6, roll on microplane Crash Table each turn until the microplane hits the ground.

Both wings destroyed: Don't bother rolling. The microplane drops like a stone, decelerating by 10 each turn until it hits the ground (use the *Free Fall Damage Table* from *DCW*, p. 51, to determine landing damage, and remember that all microplanes have CA frames!).

Strong winds: D1.

Very strong winds: D2.

Tail assembly (back armor) destroyed: D4.

Loss of propeller(s): D4.

Pilot injured or killed: D2.

Flying alongside or below a copter, within 2'': D2.

Microplane Crash Table

-1, 0, 1 – *Involuntary drift*. The microplane does a drift maneuver in the direction it was moving toward, and gains or loses (roll randomly) ¼" of altitude. If it was flying straight, roll randomly for the direction of the drift.

2,3 – *Involuntary veer*. The microplane does a veer maneuver in the direction of its last maneuver (if flying straight, roll randomly for right or left), and loses ½" of altitude. Weapons fire is at -1 for the rest of this turn.

4,5 – *Severe veer*. The microplane executes a veer in the direction it was moving and loses 1" of altitude. Weapons fire is at -3 for the rest of this turn.

6,7 – *Diving veer*. The microplane executes a veer in the direction it was moving. The microplane loses 1½" of altitude, and checks for Wing Failure. No aimed weapons fire allowed until the next turn.

8,9 – *Spinout*. The microplane turns 90° to its flight-path at the end of the phase in the direction of its last maneuver. Check for prop failure. No aimed weapons fire allowed. Check for Wing Failure. On the next turn, the microplane does a Diving Veer (making another Wing Check).

10 and above – *Disaster*. The wings have been torn off, your prop flew away, your tail assembly is gone, or some other equally nasty event. The Wing Check automatically rolls a 12. Speed is reduced to 5 mph below stall speed. Consider ejecting soon . . .

Microplane Damage Allocation

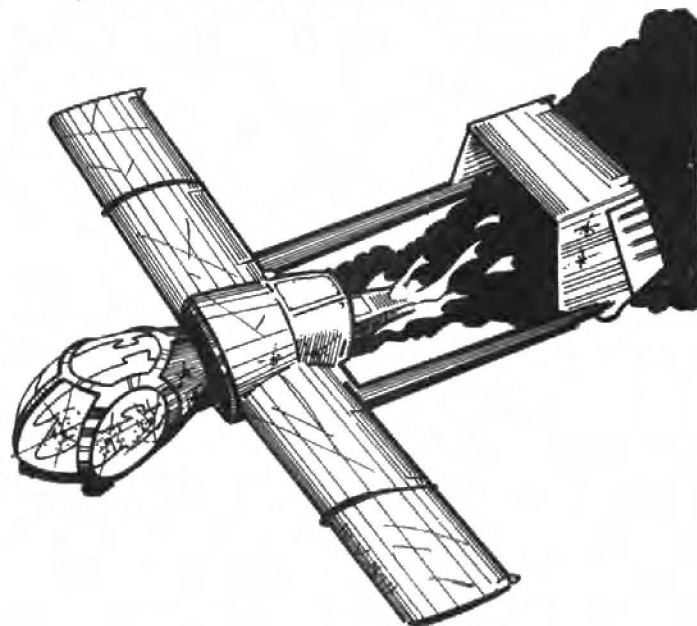
Front: Front armor, front weapons, (pilot, co-pilot/gunner, cargo, engine), back weapons, back armor.

Back: Same as front, except in reverse order.

Right: Right armor, right-firing weapons, (crew, cargo, engine), left-firing weapons, left armor.

Bottom: Roll 1 die, on a 1 or 2, a wing is hit (roll randomly). Wing hits have a 1 in 6 chance of hitting a wing-mounted weapon or propeller. On a 3-6, the body takes damage: Bottom armor, bottom weapons, (crew, cargo, motor), top weapons, top armor.

Top: Same as bottom, but in reverse order.



Targeting Modifiers

Small microplane: -1 from side, above or below, -2 front or back.

Medium and large microplanes: -1 front or back.

Targeting wings: +1 from above or below, -3 otherwise.

Heavy lift wings: +1.

Landing wheel: -5

Propeller: -6, -3 if it has a ducted cowling.

Tail assembly: -3. The tail assembly is destroyed when back armor is gone.

Wing Failure

During stressful maneuvers, there is a chance that one or both wings can fail. This entails breaking, becoming disengaged, snapping off, etc. When a Wing Check is called for, roll 2 dice and check the table below for each wing, taking into account any modifiers below:

2-7 – No effect.

8-9 – Wing damaged. HC drops by 1, stall speed increases by 5 mph per damaged wing (if both wings are damaged, HC is reduced by 2, and stall speed is increased by 10 mph). Roll on this table every turn thereafter during the acceleration phase until repaired or the plane lands, and consider any result of "Wing damaged" to be "Wing fails."

10-11 – Wing fails. The microplane takes a D6 hazard, and HC drops permanently by 4.

12 – Wing destroyed. Inflict 1d of damage on the side the wing was mounted as the wing structure rips itself off the aircraft.

Wing Failure Modifiers

Speed is 75-100 mph: +1.

Speed is 101-140 mph: +2.

Speed is 141+: +3.

Wing damaged by weapons fire: +2.

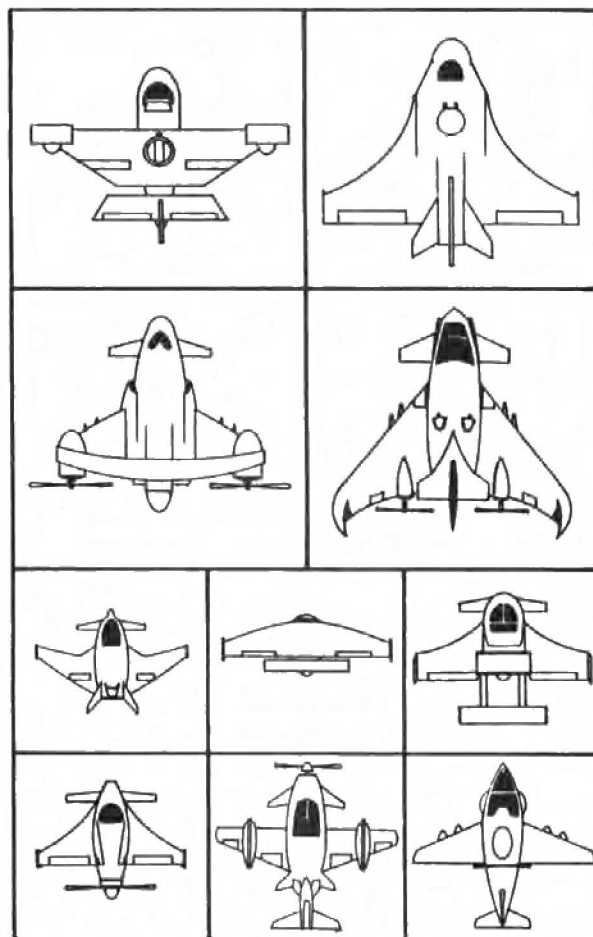
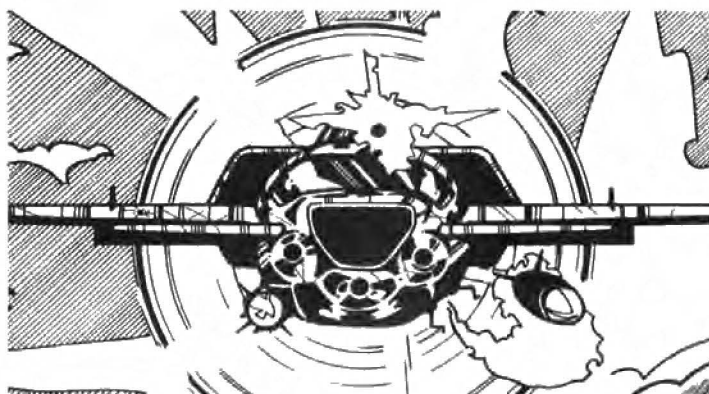
Sample Microplanes

Sniper – Small microplane, medium power plant, 3 PR cycle tires, 1 propeller mounted back, ducted cowling, delta wings, pilot, 2 linked MGs in wing mounts. Armor: F30, R28, L28, B27, T7, U20, 3 10-pt. cycle wheelguards. Acceleration 10, top speed 300, HC 4; 2,415 lbs., \$9,965.

Wraith – Medium microplane, super power plant with PCs & SCs, 3 cycle std. tires, 2 ducted tilt-rotors wing-mounted forward, pilot, universally turreted RR below, HRSWC. Armor: F20, R18, L18, B16, T4, U18, 3 1-pt. cycle wheelguards. Acceleration 15 (5 in VTOL mode), top speed 200, HC 3; 3,437 lbs., \$17,682.

Javelin – Large microplane, super power plant with PCs & SCs, 3 cycle solids, 2 propellers wing-mounted back, ducted cowlings, delta wings, pilot, 2 linked VMGs F, 2 RGMs back, 2 linked pairs of SAMs wingmounted forward, ITA, Radar, targeting computer. FP Armor: F25, R23, L23, B24, T4, U20, 3 10-pt. cycle wheelguards. Acceleration 10, top speed 300, HC 3; 5,149 lbs., \$39,210.

Bee – Cargo microplane, 300 ci engine, 25 gallon racing tank, 2 propellers wing-mounted back, heavy-lift wings, 3 cycle HD tires, pilot, HDFT under, 2 linked RLs wing-mounted forward, TL forward, LGL, radar, hi-res com-



puter, 8 spaces cargo. Metal/plastic armor: F8/30, R8/25, L8/25, B7/25, T4/17, U5/18, 10-pts. propeller armor each, 3 10-pt. wheelguards. Acceleration 15, top speed 215 unloaded, Acceleration 10, top speed 160 w/1,365 lbs. cargo, 7,135 lbs., \$41,505.

SX-Express – Large cargo microplane, 500 ci engine, 25 gallon duelling tank, 2 propellers wing-mounted back, delta wings, 3 cycle solids, pilot, 8 passengers, two linked VMGs in universal forward turret under, 3 linked pairs of SAMs wing-mounted F, link for all 6 SAMs, ITA, radar, hi-res computer, 5 spaces cargo (461 lbs.). Armor: B36, 20 on all other facings, 3 10-pt. wheelguards, 10 pts. propeller armor each. Acceleration 15, top speed 390, HC 1; 9,500 lbs. (loaded), \$63,055.

Encumbrance in *Car Wars*[®]

Ed snuck in toward the biker's camp. He was wearing his flak jacket; over that, he had on a loaded battle vest. When he came into range, he pulled a flash grenade off his vest.

And dropped it.

"Dagnabbit," he muttered. "Over my GE limit again!"

"You two," growled Sid, picking out two of his lazier employees, "fetch that micromissile launcher! I'm ready to install it."

Oscar and Bert walked over to the weapon stores and located the requested hardware, and stood by it, scratching their heads.

"Um, boss?"

"What?"

"We can't lift it. We don't know how many grenade equivalents it is."

Okay. That's it. The concept of "grenade equivalents" has gone too far. The whole situation has hit the stage of excessive silliness, and I'm going to deal with it by publishing an official variant. If you like it, use it. Otherwise, stick to GEs. Here goes:

A pedestrian can carry up to 200 lbs. of hand weaponry and other equipment. Several pedestrians can work together to carry heavier items (like tripod weapons) by dividing the weight among them. If you can get enough helpers, you can push your car back onto its wheels . . .

The amount of weight you carry affects your running speed:

Weight carried	Running Speed penalty
0-20 lbs.	None
21-40 lbs.	-1 square
41-60 lbs.	-2 squares
61-120 lbs.	-3 squares
121-200 lbs.	-4 squares*

*Anyone carrying this much weight must stop to rest every other turn.

In addition to weight, personal equipment is also classified as to how it's carried: No-handed (on a belt, clip, or otherwise attached to the wearer), One-handed (most weapons fall into this category), Two-handed (large weapons and other bulky items), and Backpack. A pedestrian can carry one two-handed weapon or accessory in his

hands at one time, or two one-handed weapons. Any number of no-handed weapons may be carried at one time. A pedestrian may only wear one backpack item. Backpacks are no-handed items when worn.

A weapon in a holster takes one turn to ready, while a slung weapon takes two turns to ready.

Backpacks cannot be worn while driving. Each backpack is assumed to take up ½ space when carried as cargo. It takes 1d turns to get an item from a backpack.

Backpack Items

Backpack	5 lbs.
Can hold up to 20 lbs. of one- or no-handed items.	
Laser rifle backpack	30 lbs.
Portable Field Radio	15 lbs.

One-handed Items

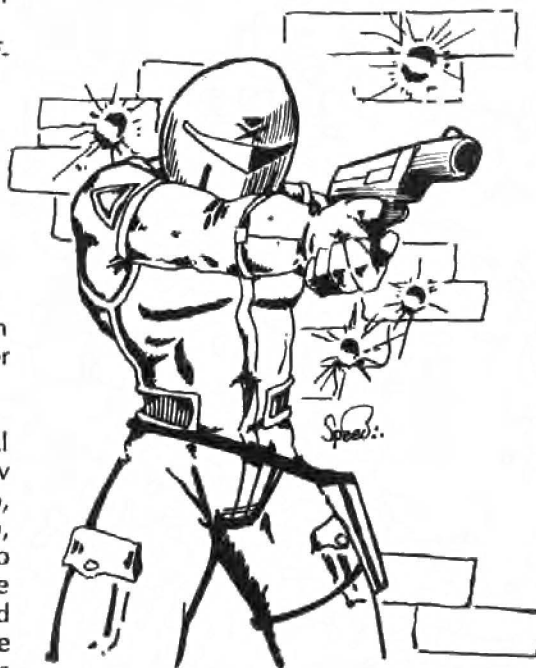
Derringer	.5 lbs.
Pistol	1 lb.
Heavy pistol	3 lbs.
Machine pistol	5 lbs.
Hand-held Flare Launcher	6 lbs.
Limpet mine/beacon	2 lbs.
Bowie Knife	.5 lbs.
Grenade	1 lb.
Riot Shield	25 lbs.

Two-handed Items

Laser Rifle	10 lbs.
(Not including backpack)	
Personal Flamethrower	50 lbs.
(includes backpack)	
LAW	20 lbs.
VLAW	10 lbs.
Grenade Launcher	11 lbs.
+ wt. of grenades.	
Folding stock	3 lbs.
Portable Fire Extinguisher	20 lbs.
AV Rifle	25 lbs.
Heavy AV Rifle	30 lbs.
Laser LAW	25 lbs.
Laser VLAW	18 lbs.
Man-Portable RL	35 lbs.
Man-Portable MML	30 lbs.
Gyroslugger	14 lbs.
Shells weigh 1 lb. each.	
Double-barrel GS	18 lbs.
Assault Rifle	12 lbs.
Stinger	30 lbs.
Bazooka	20 lbs.
Extra shells weigh 2 lbs.	
SMG	9 lbs.
Rifle	10 lbs.
Shotgun	8 lbs.
Speargun	5 lbs.
Tripod weapons	25 lbs.
+ ½ weapon's weight.	

No-handed Items

Laser targeting scope	1 lb.
Body Armor	10 lbs.
Improved Body Armor	25 lbs.
Spiked Armor	+1 lb.
Blended BA or IBA	½ wt.
Battle Vest	5 lbs.
Can carry up to 10 lbs. of one- or no-handed items.	
Flak Jacket	12 lbs.
Life Jacket	4 lbs.
Swim Fins	4 lbs.
Scuba gear	60 lbs.
Fireproof Suit	3 lbs.
Gas Mask	3 lbs.
Goggles (any type)	1 lb.
Silencer/Flash suppressor	
for hand weapons,	5 lbs.
for vehicular weapons	2 lbs.
Under-Rifle GS/GL	8 lbs.



New Skills for *Car Wars*[®]

by David N. Searle

Editor's Note: These rules are a variant only, and are not official. But don't let that stop you from using them.

Over the years, the main focus of *Car Wars* has been the cars. Pedestrians were inconsequential – even the driver and gunner were considered accessories to the vehicle. As the demand for more roleplaying aspects for *Car Wars* increased, more skills were added. Now, with more powerful personal weapons, a pedestrian can no longer be shrugged off. Since people are now dangerous to vehicles, it makes sense that players would like to know more about that pedestrian, or even play him in the next game. With descriptions like Driver, Handgunner+2, it's understandably hard to roleplay the pedestrian.

Then in issue 4/2 of ADQ, the roleplaying aspect of *Car Wars* came out. This taste of new skills filled out pedestrians, allowing for more pedestrian interaction.

The main idea to keep in mind when using the new skills, as well as the old ones, is that they have a broad definition. Meaning, a simple driving skill allows a person to do just about anything he wants in a car. Do not restrict the use of the skills too much. Points are precious in the game, and to waste them on skills that do not offer much would be foolish.

A brief description is given with the list of skills; again, this description is only a guide to what the skill can accomplish.

Unless specified otherwise, successful use of a noncombat skill requires a roll of 7 or better on two dice, with the character's skill added to the

roll. If a character doesn't have the skill (i.e., has less than 10 points in that skill), the roll is at -4. Other modifications to the roll should be based on circumstances and referee's whim.

At other times, it may be appropriate to use a *Contest of Skills*, ala *GURPS*. For any contest of skills, each character makes a skill roll as above, and adds any modifiers the referee feels are appropriate. If both players make their rolls, or both players miss, then the contest is inconclusive and may continue if the situation or common sense warrants. If both players make their roll, but one makes it by five more than the other, he wins. Obviously, if one makes the roll and the other fails, the first one wins.

Example. Two duellists, after a long and protracted road combat, sail into the protection of a ghost town. Larry (Driver+2), unwilling to give up the fight, spins through town attempting to find Curly's (Driver+1) car. Rather than play it out, the referee calls for a Contest of Skills. Both players roll two dice; Larry gets a 9 (7, +2 for his Driver bonus), poor Curly gets a 4 (3, +1 for his Driver bonus). Thus, Larry wins the roll, and gets the drop on Curly's vehicle. When the combat starts, Curly's car is placed in the center of an intersection, and Larry is free to place his car anywhere nearby.

General skill points can be used to improve these skills; so can any points earned by particularly successful or imaginative use of the skill itself.

Skill levels can get obnoxiously high if the old 10 points = 1 Skill Level is retained. So, instead, you may want to do this: Skill levels of -1 to +3 cost 10 points each, Skill levels +4 to +6 cost 20 points each, +7 to +9 cost 30 points each, and so on. This way, powerful characters don't advance at

absurd rates through a campaign, and one-trick (single-skill) characters will not be as cost-effective.

Area Knowledge: Used to get around in a particular city, state, duel circuit or patch of untamed wilderness. A successful Area Knowledge roll will let you answer questions about the area in question, and so on. All characters are assumed to have this at base level for their hometown. Improvements to the skill add more area at the referee's option.

Acrobatics: Gives the character the ability to jump farther, and do the more heroic moves like leaping for chandeliers and such. Every other level, starting with level 2 (4, 6, etc.) gives the character a -1 to be hit due to his agility.

Animal Husbandry: The care and handling of domestic animals, from gerbils to horses. Riding ability, training and some basic veterinarian knowledge of the animals is covered by this skill.

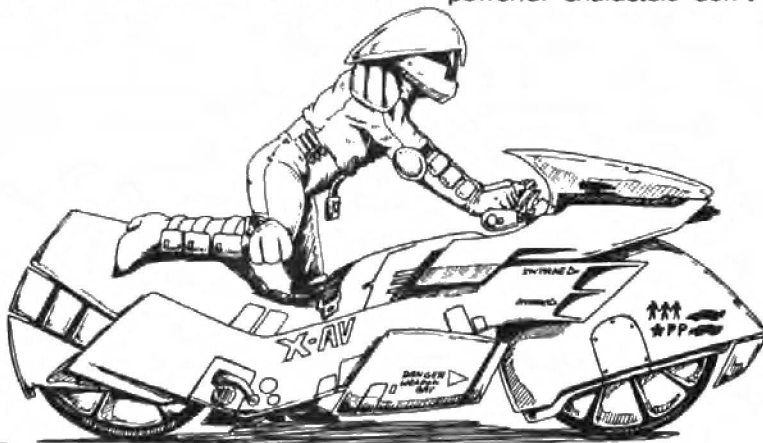
Blade: Skill with blade weapons like swords and knives, which no longer fall under hand weapons. Blade skill can be used to parry other blade attacks; the defender rolls against his own skill, as above, but subtracts the amount by which the attacker made his roll.

Climbing: Like Running, everyone gets this at base level. This can be used to climb trees, fences, some buildings, etc. Also useful when boarding another vehicle – your Climbing skill is added to your roll to board or drop onto another vehicle.

Communication: Anyone can use a radio. Communication covers both the use and technology of radios and similar equipment. The most likely game use of Communication involves jamming and breaking through jamming, etc . . .

Computer Tech: Programming, data retrieval (legal and otherwise), and other hacker-related functions.

Engineering: This skill covers design and construction of vehicles



and other equipment. Engineering can also be used for creating traps and other useful items from available materials. Requires Mechanic at least at base level.

Espionage: Smuggling, counterfeiting, organized crime, terrorism.

Fast-Talk: The skill of weaseling your way out of a situation. The subject Fast-Talked will later realize what has happened.

Hobby: Anything not covered by a skill, such as a musical instrument, woodcrafting, etc . . .

Journalism: Dealing with interviewers and reporters. Conducting an interview, data retrieval and use of journalistic equipment (videocams, editing equipment and the like).

Law: Knowledge of general law, local laws, chance of other areas ordinances. May specialize in one area for an additional +1 to whatever, such as marriage, murder or the like.

Leadership: The practical ability to command a group of people effectively.

Luck: Each level adds 1 in favor of the old "Roll 2 dice and pray."

Navigation: Using stars, charts, planets and modern tools, a character with this skill can plot courses, and find where he is when lost.

Politics: Bootlicking, social graces, knowledge of political figures.

Psychology: Mind and behavior study, may include modification.

Science: 1 area per skill, such as Biology, Genetics, Astronomy . . .

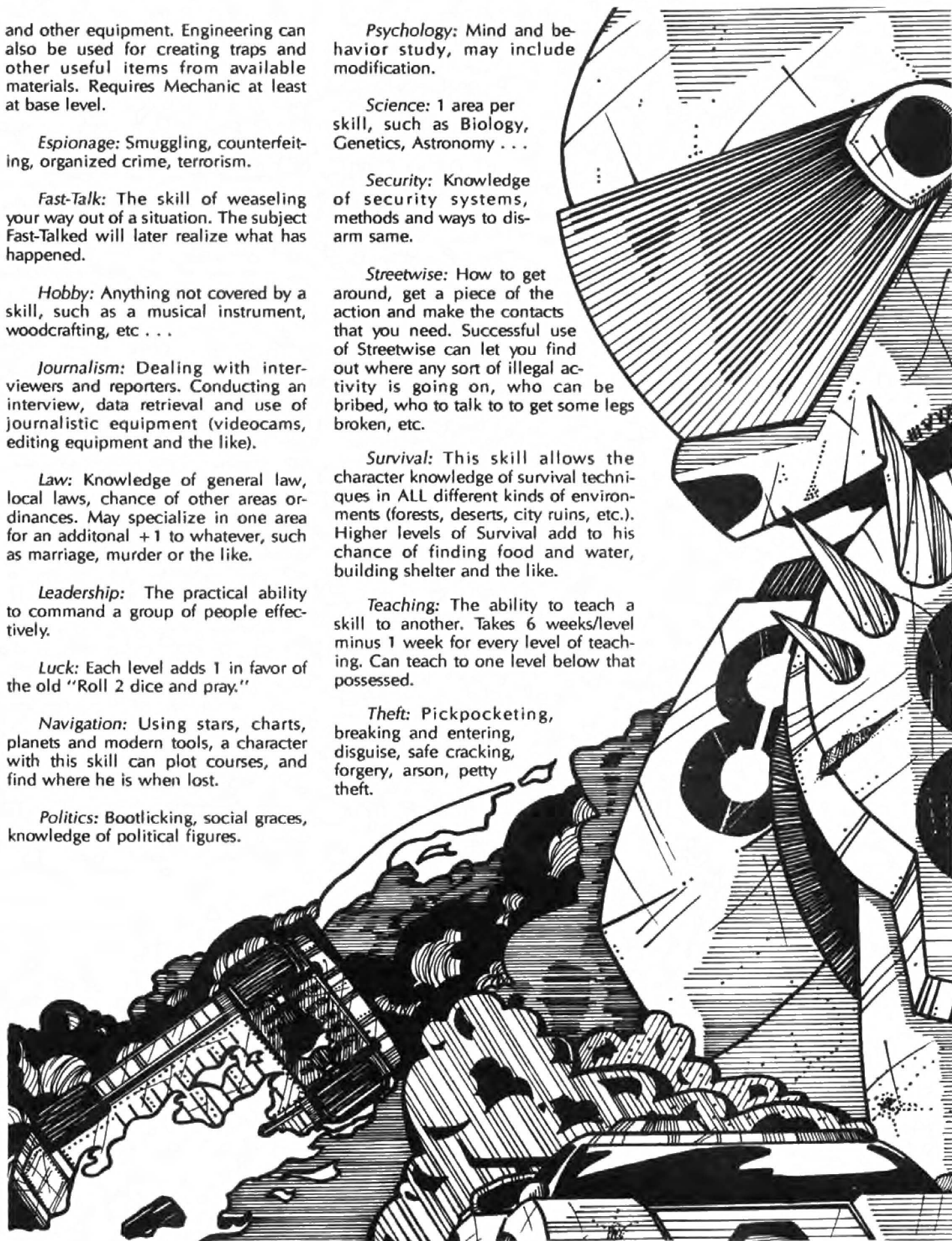
Security: Knowledge of security systems, methods and ways to disarm same.

Streetwise: How to get around, get a piece of the action and make the contacts that you need. Successful use of Streetwise can let you find out where any sort of illegal activity is going on, who can be bribed, who to talk to to get some legs broken, etc.

Survival: This skill allows the character knowledge of survival techniques in ALL different kinds of environments (forests, deserts, city ruins, etc.). Higher levels of Survival add to his chance of finding food and water, building shelter and the like.

Teaching: The ability to teach a skill to another. Takes 6 weeks/level minus 1 week for every level of teaching. Can teach to one level below that possessed.

Theft: Pickpocketing, breaking and entering, disguise, safe cracking, forgery, arson, petty theft.



The Mechanics of Cloning

by Craig Sheeley

The creation of a complete clone of a person is a two-part procedure. First, a clone body must be made from a cell sample of the donor and growth-accelerated to full maturity. Then, the mind-transfer must take place to give the clone mental functions higher than base life-functions.

The process begins with the donation of a cell tissue sample. This tissue is examined to assure DNA integrity, then put through a separation/replication process to make an embryo. The embryo is then accelerated in growth – a slow process at first, but speeding up once the clone reaches the physical stage of five years equivalent. Careful monitoring during the growth cycle insures against disease or deformation of the clone. Certain youth disorders, such as acne, can be avoided completely with an adjustment of the chemical growth mix.

The clone reaches maturity in approximately 1,000 hours, appearing to be 25 years old. At this point the clone's metabolic cycle is slowed to preserve the clone in a state of near-suspended animation, waiting for activation. In this state, the clone can be maintained at an aging rate of one hour per month.

Activating the Mind

A blank clone-mind must be programmed with a set of memories and reflex codes provided by the donor. The act of transferring a person's memories to a clone first requires the donor to transfer the memories to a temporary holding device, such as an MMSD or the storage units at a cloning facility. Special drugs allow full access to total memory, and the neural patterns are transferred to the holding device (less commonly directly to the clone). The transfer of mind to holding device takes only a few minutes. Mind-to-mind transfer or transferring memories from MMSDs takes 2d hours. Sometimes clones are activated with partial memories, the result of a mistake in the transfer (or just plain bad luck). Replacing these memories requires the initial set of stored memories, time and mental-implantation gear similar to micros.

The Experience of Being a Clone

When a clone first awakens, the first sensations are deadened by drugs to spare the patient the agony of discovering how nerve endings feel when suddenly perceived by the brain. This is to allow the patient to adjust to the new nervous system. There is disorientation while trying to reconcile the last known memory to the present. The new body must activate mental habits of input reduction (filter out background sounds, sights, etc., to avoid sensory overload). After a few questions to make sure the patient is in good health, therapy begins.

There have been cases of newly-cloned people who walked right out of the vats and into the world. Most of

these cases include a return to the cloning facility for extensive therapy and huge psychiatric treatment bills.

The experience of cloning is a shocking one. Intense mental and physical therapy is required to allow the patient to become familiar with the new body. This training starts when the patient leaves the vats. New clone bodies have no neural experience with muscle use – tasks as simple as walking are impossibly difficult. Only the drugs deadening the pain allow exercise at all.

The pain is caused by the complete lack of scars, callouses and physical use of the new body. Every nerve-ending is new and in perfect order; the patient must become used to the pain until wear and familiarity stop the sensation.

Conditioning becomes more strenuous over time, working on strength and coordination recovery. The first month out of the vats has been called "basic-training with teeth."

Mental therapy is also provided, assisting the patient to adjust to his/her new body. The adjustment becomes easier after the first cloning, but there is still a psychological barrier to be overcome; a shock coming from the lack of familiarity with the body (ranging from lack of muscle response to the sudden disappearance of scars and calluses). Consciously and unconsciously, the new body continually reminds the patient that it is new.

This newness can have serious mental effects on the patient, ranging from frustration-induced rage when the form doesn't respond as mentally predicted to identity crisis (is this really me? Everything's changed!). Practice and therapy are used to move the patient towards acceptance of the new form, with all its perfections (although many would gladly trade it for their old, less-perfect bodies during this time).

Eventually the patients become used to their new forms, confident that they will eventually gain full control of them as they practice. Some clones, endeavoring to make their new forms more familiar, contract for plastic surgery to replace some of their favorite scars and physical landmarks – many cloning facilities also have plastic-surgery facilities.

Game Effects of Cloning

The *Hospitalization* article in *ADQ 4/4* described some of the physical game-effects of cloning. Those effects are repeated here and new effects added.

A newly-activated clone is penalized in nearly every physical action. Reflex rolls are at -2. Gunner and Handgunner skills are at -1 (except where the skill is at 0 level, in which case there is no penalty). Martial Arts and Stealth skills are at -2. (Stealth is described in *ADQ 4/2*; if the penalty drops the skill below base level then the skill is temporarily lost.) Running speed is reduced to 10 mph.

The penalties are temporary and go away after six months of normal routine. Physical therapy following cloning reduces the penalty period to two months following one month of therapy.

Skill bonuses earned during the recovery period take effect normally. *Example:* A newly-cloned duellist with

Car Wars City Blocks

Tired of using the same old maps for your *Car Wars* battles? Here's a map you'll never get tired of. Each *Car Wars City Blocks* supplement has 32 separate blocks. These sturdy map sections geomorph and can be rearranged time after time. We've also included lots of obstacles and accessories.

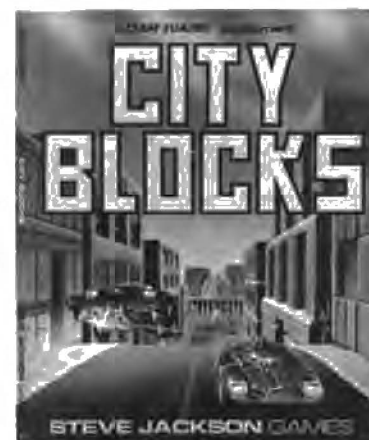
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All the *Car Wars City Blocks* supplements are fully compatible – and available at fine stores everywhere.



STEVE JACKSON GAMES

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Gunner +2 performs at Gunner +1 (because of the cloning penalty) for two months following therapy. During this time, the duellist earns enough Gunner experience for an additional Gunner +1. The new bonus takes effect immediately, making the duellist Gunner +2. When the two-month recovery period is over, the duellist has his full Gunner +3 bonus.

Therapy takes one month and costs \$3,000 (this includes living expenses). Therapy takes ten hours per day and cannot be interrupted for more than a day at a time. Interrupting therapy for more than four days of the month negates any benefits of therapy, unless the clone undergoes another month of therapy!

Cloning Complications

Mistakes can be made in cloning and in the process of adjusting to the new body. Roll 2d, subtracting 1 from the roll if the clone didn't undergo therapy: On a 3 to 12, the clone is in perfect shape and the person adjusts well to the situation. On a 2, there is a complication.

Complications can be physical or psychological. Roll 1d: 1 to 3 Physical, 4 to 6 Psychological.

Physical problems can often be corrected, although some remain dormant for a time before coming to light. Roll 1d: 1 to 2 – Minor and Easily Corrected – no problem; 3 to 5 – Major – a new clone body has to be grown. This takes a month and costs the same as any other clone body. Gold Cross contracts supply the new clone free if there are any defects. 6 – Dormant Problem – the body has some defect that shows up 1d months later. The extent of the defect is left up to the referee. Bad vision, spastic or unreliable nerve impulses, abnormal pain responses, headaches, impotence . . . the list is endless. Gold Cross contracts will award damages to clones flawed in this way if the damage is clone-growth-based rather than caused by wear (you can't sue them for nerve damage caused in a crash, etc.).

Psychological problems are harder to cure. Roll 1d:

1	Minor Quirks – no real problem
2	Fear of Being Cloned
3	Paranoid
4	Berserker
5	Pathological Coward
6	Catonia

Definitions:

Fear of Being Cloned – Self-explanatory The person fears the experience of being cloned and won't allow it to happen again.

Paranoid – Classic fear/feeling that everyone is out to get you.

Berserker – Attacks any opponent fearlessly in stress situations. If a Berserker even thinks someone is threatening, he/she will attack until the target is destroyed – survival is not an issue.

Pathological Coward – The person is afraid of everyone, especially if threatened. Cowards will not fight, opting to run away instead. If cornered, Cowards roll a die: 1 to 4 Surrender, 5 to 6 – Berserk.

Catonia – The person retreats from the outside world and sits motionless and sightless in stress situations (such as being threatened or fired on).

Curing psychological problems can take months of expensive therapy and counseling. Psychological help takes one hour per day and costs \$1,500 per month (\$50 per hour-long session). At the end of each month of psychological help, roll 1d. On a roll of 6, the psychological problem has been overcome and the patient is cured.

These rules are intended for use as variants. They make cloning a more time-consuming and hazardous process than it has been in the past, and properly so. Cloning isn't easy or cheap.

On the Road

Car Design Outside the Arena

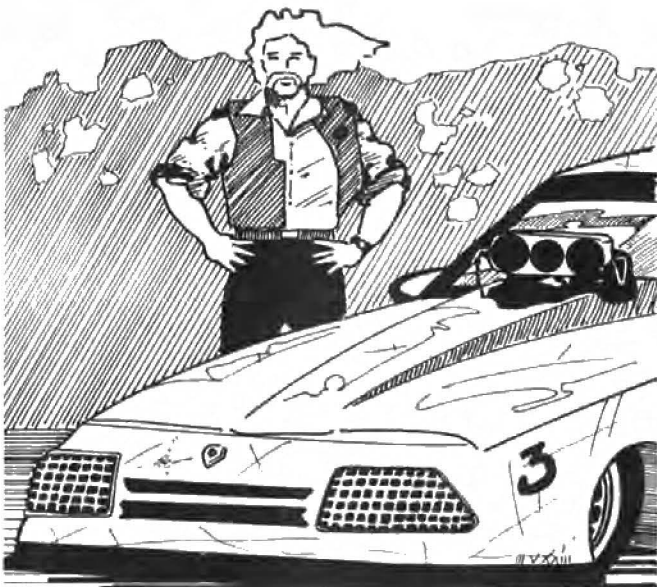
By Tim Ray

The task of designing *Car Wars* vehicles for the arena environment is relatively simple, despite the growing number of gadgets and weapons available. The budget is fixed; everyone is operating under the same constraints and arena ground rules. On the road, you may come up against anything from the lone, fanatic cyclist to a convoy of Q-trucks driven by Knights of the Brotherhood to (nightmare of nightmares) a helicopter or microplane attack squadron. The one concept common to vehicle design for the arena and the road is this. Since there is no perfect design for all situations, the most effective vehicles are those that specialize and perform one task very well. Three basic facts of combat on the road make vehicle specialization an attractive strategy:

1) No vehicle is perfect for all tasks in all situations – no luxury car can, for example, carry a ramplate for roadblocks, heavy underbody armor for mines, dropped weapons, direct fire weapons, a universal turret for air defense, and enough cargo to show a profit from its journeys.

2) There is safety in numbers – vehicles on the road tend to concentrate into convoys for mutual protection, and bandits tend to concentrate to break the convoys. A group of specialized vehicles can, to a degree, act as a single, very large, vehicle.

3) Road combat is almost always linear – that is, the combatants will be following one another. In a single combat, the front weapons of one will be facing the rear weapons of the other. In a convoy, the vehicles in front will be facing those in the rear of the opposing force. It behooves the rear vehicles of the convoy to specialize in dropped nastiness and rear armor while the front men need heavy front and underbody armor, the best tires, good forward weaponry and ramplates to deal with any roadblocks the convoy might encounter. The trick, then, is to create the situations for which the vehicles have been designed – but this is a matter of tactics, not vehicle design.



This article will deal primarily with the smaller vehicles found on the highways of 2039. The intercity streets and residential roads are outside the scope of this article.

Cycles, trikes, cars of all sizes and 10-wheelers can all be found on the road, going about their business. This is primarily small-time commerce, both legal and otherwise, though some is travel for pleasure. The distribution of available space and weight among common vehicle designs encountered on the road reflects the commercial nature of highway traffic. Most vehicles have some sort of cargo or passenger space, and many have almost their entire volume given up to deliveries. Even the vehicles that cruise the road, hunting for loot, must have some cargo capacity in order to carry away their prizes. On the highway, even more than in the arena, weight is the major limiting factor, for it must not only be devoted to weapons and armor, but to cargo as well. Let's take the design basics one at a time and see how best to adapt them for life on the open road.

Body Style.

Cycles and trikes survive because they aren't a significant threat when encountered alone. In large groups, they can pose a hazard even to a truck convoy. Even large groups of these vehicles are vulnerable to air attack because of the dearth of hard-hitting turrets, and the lack of top and side armor on cycles. Subcompacts, the last choice in the arena, are also the last choice among road cars, for the same reasons of insufficient space and weight capacity. Compacts, midsizes, sedans and luxuries are usually seen as convoy escort vehicles, or forming a convoy of their own for mutual protection. The phenomenal armor-carrying ability of the midsize is well-suited to the barricade-smashing role, while the lux, with up to 10 spaces available for dropped weapons, is ideal for the rearguard position. The pickup can carry more armor than any other normal vehicle, and this makes it the ultimate small barricade buster. The van at last comes into its own as a convoy anti-aircraft vehicle. Its thin armor is unimportant when insulated from direct ground attack by the rest of the convoy.

Chassis.

As in the arena, there is no good reason not to have an extra-heavy chassis on a road car.

Suspension.

Heavy suspension is also *de rigueur*, and off-road suspension is an attractive option for cycles, trikes and any other vehicle that depends on evasion for its survival.

Power plant.

Gasoline engines have become popular lately in arena duelling, but on the road, the electric plant is still king, due to logistics and space requirements. Even the greater possible range afforded by the fuel-injected gasburners doesn't make up for the fact that gas stations are usually *far* more than 400 miles apart. Also, that extra range is achieved at the expense of top speed and interior space, and at incredibly high cost. The situation is somewhat different in

Australia and the Free Oil States, where gasoline (and the money to buy it) is more common, but a convoy of gas-powered vehicles, while a fearful sight, is the stuff of legend for most motorists in 2039.

Tires.

The toughest that money can buy are the only choice for the road. It's significant that *all* truckers run on solids, steelbelted solids or metal tires; it seems almost like a religion with them. If the Brotherhood only feels safe driving on 18-point tires, then the rest of us have to take a hard look at solids or better for our vehicles. A good alternative is the steelbelted, fireproof PR tire. This wonder of technology weighs the same as a solid, has the same DP, costs only \$100 more and won't catch fire. Vehicles devoted to barricade busting should consider metal tires – barricades are often surrounded by mines. Some cargo space of any convoy should be devoted to spare tires.

Armor.

The key to staying alive on the road is tenacity, in both the offensive and defensive sense. The highway predators are much like those in nature – if their prey is too hard to bring down, they will wait until something more succulent comes down the pike. Half the battle is being able to take punishment, either from persistent predators or feisty targets. Most road combat is linear in nature, so strong front and rear armor is a must. Metal armor can be worthwhile on the rear, where most damage will come from weapon fire; but it's not so valuable up front, where it can be rammed into uselessness. An extensive dropped-weapon array can substitute for heavy rear armor, but weapons require space, subtracting capacity from the interior volume that small cargo carriers are loathe to give up.

Side armor need not be as heavy as front or rear protection, but should be heavy enough to absorb shots from an ambush. Roadside ambushes will probably only get one or two good shots at a moving target, but the armor must be able to stop those cold. Usually, these ambushes are set up by those with low mobility (i.e., pedestrians), or bandits planning an off-road getaway.

Top armor, skimped on in the arena, cannot be ignored on the road, where helicopters and oversized vehicles can get easy shots from above. Top armor should be at least as heavy as side armor on a road car – while a helicopter is able to easily stay with a vehicle, there aren't that many roaming the highways. The only other ways top armor can be hit are if the vehicle has a turret, or if an oversized vehicle *with* a turret (do you know any other kind?) gets too close. Turrets are far more common on the road than in the arena, for reasons explained below. As for the oversized vehicles, well, nobody *plans* to get shot at by a rolling, oversized death machine like a semi. If you do, it's usually your own fault.

The underbody is another area that deserves more protection than in the arena, where there is almost always room to go around dropped weapons. Think of the road as an arena four or five inches wide and infinitely long. A car moving only 60 mph at the proper angle can cover the road with such a swath of greasy, burning, spikey, gaseous goo that it can ruin your whole future if you go through it. A few points of metal on the underbody can ensure that you don't acquire a nasty burn modifier from the dropped stuff, and makes that part of the vehicle virtually immune to flame clouds and flaming oil.

Component armor, so widely used in the arena, is not as popular on the road. Each compartment of armor takes up another valuable space, so it is usually found around cargo or passenger space when encountered at all.

One final word about armor: It's worth your while to use laser-reflective armor when venturing out onto the road, because there are plenty of zapgunners knocking around out there with *your* name on their main tube.

Weapons.

The other half of becoming an unattractive target is the ability to shoot back. Likewise, a modern-day predator needs firepower in order to cull the weaklings from the herd. Weapon selection for the road is somewhat different than for the arena. A long arena match can last up to 30 seconds; a road duel can go for minutes, hours, or even days, depending on the persistence of the attackers and the condition of the defenders. Obviously, weapons with large ammo supplies (MGs, VMGs, lasers w/batteries, FGs, OJs and FOJs) and extra magazines are extremely useful. Those operating in a group have more leeway in their choice of weapons, for when they run dry, a comrade can take up the slack. A bandit group can even have some of its members stop to reload while others keep pressure on the quarry. Of course, gambling always has its appeal; some travelers load up with high-damage, low-ammo-capacity weapons, relying on a crisp, shocking riposte to deter attackers. Among those interested in salvage, flame weapons are decidedly unpopular. Flamethrowers are shunned by many because of their maximum range; it is too easy to hang back at 100 yards or so from the rear of a target and pick it to pieces, since the flamethrowers can't reach beyond 75 yards.

Dropped weapons really come into their own on the open road. Anyone attacking a vehicle or convoy from behind deserves what he gets . . . which will probably be a wrecked vehicle.

Perhaps the greatest difference between arena and road weaponry is one of quantity – road cars are likely to have fewer weapons than arena vehicles. A normal small courier, based on a lux, might carry a turret, three spaces or so of dropped weaponry and maybe a ramplate. This allows around six spaces for cargo or passengers in a luxury car – a surplus of space unheard of in the arena. Since fewer weapons are mounted and since helicopters are bound to be up there somewhere, universal turrets are very popular.

Accessories.

The most popular accessories by far are wheelguards and armored hubs. The second most common accessory on the road – the universal turret – is rarely used in the arena. First of all, in most tournament events, all the competitors are on the same level; there isn't even any need to have a great deal of top armor, since nothing will be shooting at your topside beyond the odd flame cloud. Not so on the road. Even if copters aren't considered, many ambushes are conducted from a high vantage point; cliffs, buildings and highway overpasses are quite popular. Second, most road cars carry lighter armament than arena cars of the same body style. Many only possess one or two offensive weapons. Turret mountings are ideal for road cars because they allow one weapon to cover all arcs of fire. Universal turrets are even better – they allow the vehicle to respond to threats from above.

Radar is also popular, as are radar-foiling electronics and infrared sighting systems. Certain safety-oriented acces-

sories such as roll cages, ejection seats, fire extinguishers and anti-theft systems are very common on road vehicles. As noted by Craig Sheeley in his *ADQ 5/4* article on road combat tactics, spoilers, airdams and heavy-duty shocks will increase your chances of surviving dramatically, even in the face of dropped weapons. False weapons are probably the most elegant way of avoiding trouble, unless someone calls the bluff.

Vehicle Design Strategy

As in the arena, the best way to approach car design is to pick a plan and stick to it. All the design formats from my previous article (*Tournament Design Strategy, ADQ 6/1*) work fine, with the addition of a turret here and there, but the special conditions of road combat call for a couple of new vehicular patterns.

Tail-end Charlie. This type of vehicle is a specialized dropped-weapon carrier. If designed correctly, one of these cars can cover the road with enough hazardous material in under a second to deter even the most determined pursuit. Even this vehicle should have a turret to contribute to anti-aircraft fire. And speaking of ack-ack . . .

Air Defense. This one stays close to the middle of the convoy, because its armor (at least on the sides) is very thin. It's usually a van or camper with a three-space universal turret loaded with SAMs in rocket magazines. An alternative load with RGMs is possible (though expensive), but a helicopter or microplane flying down the right vector can avoid RGMs easily. The fire from this vehicle, along with that from all the universal turrets of the convoy should drive off any attacking helicopters.

Probably the best car design for the emerging capitalist is a lux with a turreted weapon, a suitably nasty dropped-weapon suite, and enough cargo capacity to carry reasonably bulky items. Don't forget the accessories, and make the armor heavy. Conservative driving is the key to long-term success in the hauling business. For those of you out there crouched in your hideouts, waiting for another . . . customer to come along, there is this advice: Never travel alone, don't bite off more than you can chew, have the good sense to let go if you take on the wrong target, and use the heaviest weapons possible. Your best bet is to disable one or two vehicles, cut them out of the convoy, and loot them at leisure after their friends have left.

Electronic Warfare

by Tim Ray

Editor's Note: These rules are a variant only, and are unofficial.

In recent years, the proliferation of vehicular weaponry has only been matched by the increasing availability of vehicular electronics systems. These wonders of the modern age (targeting computers, radar detection and jamming systems, remote control and satellite communication rigs) can make or break the highway warrior of 2039. Yet these systems lack a certain flexibility. Why can't you "burn through" an opponent's radar jamming by using electronic countermeasures of your own?

Electronic warfare (EW) can be loosely defined as the observation and control of portions of the electromagnetic spectrum in order to confound your opponents. EW is customarily divided into two categories; active and passive. A radar detector is a passive system; so is StealthKote. Active systems transmit a signal of some sort: either one designed to "jam" or distort an enemy's signals, or a signal intended to somehow circumvent enemy jamming. Either form of EW can have a tremendous effect on a battle; in combination, they are devastating. Imagine an arena where your opponents are not allowed to talk to one another because their radios don't work. Of course, since it's your jamming, your radio is unimpaired.

When using these rules in a roleplaying setting, bear in mind that barrage jammers such as the Bollix are illegal in many areas, typically around cities and airports. The equipment will sometimes be impounded outright (it may or may not be given back when you leave), or it may simply have to be registered with the local authorities.

In *Car Wars*, three types of systems are susceptible to the effects of EW: Radio communication of all sorts, including remote control links; radar, including missile guidance radar; and laser guidance rigs for vehicular weaponry, including targeting and infrared targeting lasers only. Larger

lasers used to guide rockets cannot be interfered with, nor may they be used for target painting (see below). All EW functions are carried out at five-second intervals; at the beginning of the turn, just before speeds are set, all sides in the EW engagement roll to determine which side has control of the other for the next five turns, and to what degree. All EW combat is simultaneous. Laser-related functions are the exception. Target painting requires a firing action, and laser-guidance countermeasures are resolved on a shot-by-shot basis.

Radio

The portion of the EM spectrum used for radio transmissions is quite vulnerable to electronic tampering. The most fundamental kind of radio EW is *scrambling*. A scrambled transmission is unintelligible to any listeners who do not have a similar scrambler set to the proper code. An eavesdropper would hear noise, and know the length of the transmission, but not its content. A scrambler may be purchased for any vehicular radio, portable radio or walkie-talkie, costing \$600, no weight or space. A scrambled signal may also be decrypted, or interpreted, by a decoder (\$1,000, no weight or space). The first message from a given scrambler or net of scramblers "heard" by a decoder may never be decrypted; the gadget has to have some data on the signal to work with. The scrambler users will not know they are being monitored. Remember, if you don't know the setting for your friend's scrambler, his transmissions will be so much noise; and there are far too many setting combinations to simply flip through them and hope to get lucky.

Radio may also be jammed; this is an active function. In this case, jamming means distortion of your opponent's radio transmissions. There are two types of radio jamming; broad spectrum, or "barrage" jamming, which interferes

with all signals in a certain area (even friendly ones), and narrow beam, or "point" jamming which only affects the other guy's signals. Both sorts of jamming have a base range of three miles; a barrage jammer would affect all radio communication within three miles. A point jammer cannot be focussed on a target more than three miles away. Remote-control equipment is an exception to this. Because of the inherent encoded nature of RC transmissions, base range to intercept, jam or otherwise inconvenience such transmissions is only one mile.

Each type of jamming has its advantages and disadvantages. Barrage jamming is most effective against those who don't have EW equipment of their own, and it has the advantage of simplicity; just flick a switch and let 'er rip. The disadvantages are that it can be worked around ("burned through") by the right combination of equipment and skill, and it consumes more power than point jamming, since the jam is spread thin over the entire spectrum. Once a barrage jam is burned through, it is gone – any further attempts to jam from that equipment in that engagement will be countered automatically. Some duellists carry multiple barrage jammers to assure themselves of a constant jamming umbrella.

Point jamming must be aimed just like a weapon; it can miss, but when it's on target it is much more difficult to burn through. Since it's concentrated on a tiny portion of the spectrum, it takes less power to be effective. Point jamming requires a new skill – Electronic Warfare – and one or more members of the vehicle crew will usually be dedicated to operating the EW equipment. Once the target of a point jam burns through the interference, the jamming equipment must be recalibrated, a process which requires five seconds, during which the EW systems operator may do nothing else.

The basic roll to hit with point jamming is 8+ on two dice, modified as follows:

- +1 per level of EW skill.
- +1 per attempt after the first (up to +4).
- +2 if barrage and point are used on the same turn.
- 1 if under barrage jamming.
- 2 if using unattended point jamming.
- 3 if no EW skill.

All modifiers are cumulative.

Burning through an opponent's jamming is done with a roll "to hit" just like regular combat, modified by operator skill, sustained attempts, etc. The basic burnthrough roll is 8+ against barrage jams, or 10+ against point jamming, on two dice, modified as follows:

- +1 per level of EW skill.
- +1 per attempt after the first (up to +4).
- +2 burning through your own barrage jam.
- 2 if burning through unattended point jamming.
- 1 if under barrage jam.
- 1 if under point jam.
- 3 if no EW skill.

Again, all modifiers are cumulative.

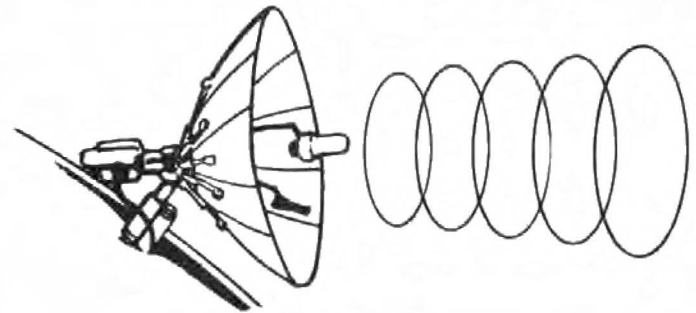
Equipment

Barrage jammer – \$2,000, 1 space, 100 lbs., 2 DP. Sets up a barrage jam in a standard three-mile radius. No to-hit roll. Drains 2 power factors per minute of operation.

Point jammer – \$2,000, no weight or space, to-hit 8. Jams a specific set of target transmitters if it hits; one attempt is allowed every five seconds. The jammer should be attended by an operator; if it isn't, it suffers the "unattended" penalties above. May not be operated by a computer gunner. Drains 1 power factor per minute of operation.

Jam breaker – \$2,000, one space, 50 lbs., 1 DP, to-hit 8 against barrage, 10 against point. If the to-hit roll is made, it breaks the jam. A broken point jam may not be re-established for five seconds. Drains one power factor per minute of operation. This device must be controlled by a human operator to be effective. Also gives range and bearing to the source of jamming once it burns through.

Radar and EW gear may be put in cargo space.



Radar

Radar EW is quite similar to radio EW. The main difference is range; the base range for intercepting, jamming or otherwise influencing a radar signal is one mile.

EW functions for radar are basically the same as they are for radio. Radar may be jammed, just like radio, and the jam may be burned through. Radar barrage jams operate exactly like radio barrage jams. Radar point jams are slightly different. Instead of looking for a particular signal and jamming it when it's found, the radar point jammer automatically interferes with radar impinging on the vehicle mounting the jammer (see Radar Jammer, *Uncle Albert's 2036 Catalog Update*, p. 23). If the jammer is not manned, roll a die. On a 1 to 4, go on with the to-hit procedure. On a 5 or 6, the jammer is not functional. If the jammer is manned by someone with EW skill, there is no initial roll; proceed with the to-hit roll. The basic roll to hit with a radar point jammer is 8 or better on 2 dice, modified by:

- +1 per level of EW skill.
- +1 per attempt after the first (up to +4).
- +1 if barrage and point jamming are used in concert.
- 1 if jamming long-range radar.
- 2 if unattended.
- 3 if no EW skill.

All modifiers are cumulative.

Burning through an opponent's jam requires an 8 for barrage or 10 for point jams, modified thus:

- +1 per level of EW skill.
- +1 per attempt after the first (up to +4).
- 1 if under barrage or point jamming.
- 3 if no EW skill.

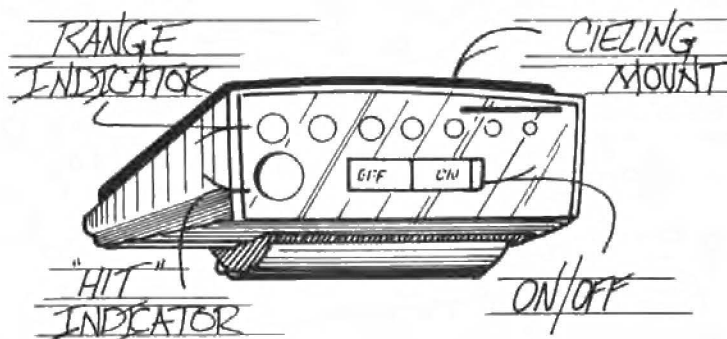
All modifiers are cumulative. As with radio, once a point jam is burned through, another one may not be established for five seconds. Once a barrage jam is burned, it's gone.

Equipment

Barrage jammer – \$3,000, 100 lbs., 1 space, 2 DP. Sets up a barrage jam in a 1-mile radius. No to-hit roll. Uses 2 power factors per minute of operation.

Point Jammer – \$3,000, no weight or space, to-hit 8. Jams any radar signals received by the vehicle, at the operator's discretion. The vehicle may not operate radar-guided weaponry (including ATADs and HARMs) of any kind while this is active. Drains 1 power factor per minute while active. (Note: These rules replace those for the radar jammer on p. 23 of *Uncle Al's 2036 Update*)

Jam breaker – \$3,000, 75 lbs., 1 space, 1 DP, to hit 8 against barrage, 10 against point. Uses 1 power factor per minute.



Lasers

Lasers are, inherently, very tough to jam. In fact, short of being out of line-of-sight, there really isn't any way to keep a laser from hitting you. However, one of the most useful functions of the laser in *Car Wars* is to guide rockets with deadly accuracy. Laser guidance is subject to jamming. Another function of the laser is *target painting*, where laser light reflected from a target is used to judge the range with high accuracy. The following text will be concerned with targeting lasers (TLs) unless otherwise specified.

Everyone knows how a limpet beacon or beacon mine works, right? You toss it on the road (or stick it to a car), and laser- and radar-guided weaponry homes in on the beacon on a 1 to 2 on one die. Said weapons are also at +2 to hit the beacon.

A system mounted on an automobile can be much more sophisticated (and more expensive, but it's *only* money). A vehicular anti-laser system uses data on impinging targeting-laser beams taken from the sensors of the laser-reactive web (see *Uncle Albert's 2038 Catalog Update*, p. 10) and feeds it to the jammer. The jammer then broadcasts laser light tuned to the pattern which the incoming rockets are homing on in order to force them to miss. Simple, right? The game effect:

Any TL-guided weapon's fire which hits a vehicle equipped with a laser jammer will miss on a 1 to 4 on one die. The system may also be set to affect laser-guided weapons fired at targets within or passing through a 4" radius around the vehicle; in this case, it's only effective on a 1 to 3. In order for the jammer to be effective, there must

be a functional LR web on the side facing the incoming rockets; if there is no web, that side is unprotected.

For those who still prefer limpet beacons, they may be made more effective by adding a *beacon tuner*, which also receives input from the LR web. This device takes data on lasers impacting the webbed vehicle and feeds it to the limpet beacons (or beacon mines). When the beacon is subsequently deployed, it affects laser-guided rockets on a 1 to 3 rather than on a 1 or 2. Lasers may have their patterns changed between battles; this is a Trivial job for a mechanic.

The third and most interesting function that a targeting laser may perform is "target painting." Painting with a laser is essentially shining it on the target for about a second. The reflected light is then picked up by a sensor (usually on another vehicle) and fed to a targeting computer which computes the position and speed of the target very accurately. The data is then used to train the guns of the vehicle on the painted target, all in about 1/10th of a second. The painting procedure is as follows:

1) The painting vehicle must score a hit on the target with a targeting laser modified for target painting.

2) Any vehicle firing at the target (from the same arc of fire of the target which the painting laser is striking) of the rest of the turn receives the paint bonus (see below) to that fire, as long as it has an LR web sensor that is facing the target, and has a targeting computer linked to the web.

3) A vehicle may paint for itself, but it must have at least two crewmembers on board (one to paint and one to fire) since painting lasers may not be linked to other aimed weapons. A computer gunner can operate a painting laser.

4) In order to be effective for multiple turns, the target must be repainted (or "touched up") every turn.

5) A single laser may only paint one target per turn.

The benefit of painting is that range *and* speed modifiers to hit the painted target are cut in half, rounding in the target's favor; a -5 speed modifier would be a -3 for a painted vehicle. In order to receive these benefits, the firing vehicle must have a LR web on the side of the vehicle facing the painted target, and it must be linked to the firing weapons. It must also have at least a targeting computer (not a SWC of either flavor, or the base targeting system which comes with any vehicle). A single TL may be used to paint and guide rockets, but not on the same turn. A normal damage-causing laser may not be used to paint, unless it's equipped with a laser switch.

Equipment

Laser jammer – \$3,500 (plus the cost of the LR web), 100 lbs., 1 space, 2 DP. A vehicle using this item may not have top-mounted turrets or accessories of any kind. The laser jammer doesn't work if the jamming vehicle is under the influence of a paint spray or paint gun.

Beacon tuner – \$1,000, 100 lbs., 1 space, 2 DP, 10 shots, CPS \$250, WPS 1. Loaded cost \$3,500, loaded weight 110 lbs. Loaded magazine costs \$2,550 and weighs 25 lbs. Tunes limpet beacons as described above, turns them on and drops them. May be set to drop one or two beacons at a time. Shows as a dropped solid for vehicle descriptions.

Painting laser – \$1,000 modification for targeting lasers. Allows target painting as described above.

Laser switch – \$1,000, no weight or space. Allows a laser to fire as any lower-powered model; a heavy laser may fire as a laser, medium laser, light laser, or targeting laser with this item. To function as a targeting or painting laser, the weapon must still be tuned at the appropriate cost.

Buying Your New Car

By Jim Kennedy

With the 2039 model-year cars now on the market, many people are considering the purchase they have been putting off. However, many people do not understand what goes into determining the price of a new car, or what other options they have, and often get stuck with a model that is either too expensive, or doesn't fit all their needs.

The *Car Wars* rules show how to calculate the value of any vehicle; simply add the prices of the individual components. However, it must be pointed out that the value and the price of a car are not the same thing. The value (in Detroit Standard Exchange Rates) is what the AADA is interested in when assigning Divisions; they don't care if you got a good price or if the dealer took you to the cleaners. While the price a dealer charges you is based on this value, it will seldom be identical to it.

For standard models, the price of a new car will be very close to the value, as described above. The difference is usually minimal, a few percent in either direction, and will depend on the popularity of the model, where the sale is taking place, how high up on the sales chart that particular salesman is, etc. It is up to the referee to decide whether or not a "standard model" exists with the features desired by a player; the *AADA Vehicle Guides* and the *Combat Showcase* make excellent references. If an appropriate model does exist, it could take anywhere from a few hours to a couple of weeks for delivery.

The next possibility is to modify an existing model that comes close to the specifications that the player desires. Some modifications are, of course, trivial, such as switching tires and ammo types. Others are still easy – adding spoilers or airdams, installing weapons links and other electronics, or changing the armor locations. These jobs can often be performed by any well-equipped backyard mechanic.

Other jobs should only be attempted by well-trained mechanics at qualified garages. These include replacing weapons with others that take the same space or less, installing a smaller power plant, adding rocket platforms, or removing gunner posi-

tions and excess weapons. Often, the new room from removed hardware can result in useful cargo space. In any case, remember that retrofitting will cost 10% and up for the new parts, plus an hourly fee (\$100 or more) for the garage, and that salvaged parts rarely fetch more than 50% of their original price.

More extensive, and more difficult, changes cost more and take longer. Exchanging a front-mounted weapon for a rear one or replacing a rear weapon and medium power plant with a large power plant could probably be done at any qualified garage. The problem, of course, is not one of finding the necessary space, but of finding it in the proper place.

Consider, for example, the problems faced by a mechanic who wishes to remove a small power plant (from the front) and a rear-mounted autocannon, and replace them with a super power plant (in the front). The space and weight requirements match exactly, but he still has to move many of the components of the vehicle back, rearrange many others, and move the firewall back about a foot before he can even begin to match up the power-plant linkages. That is why this sort of modification is done at a specialty garage.

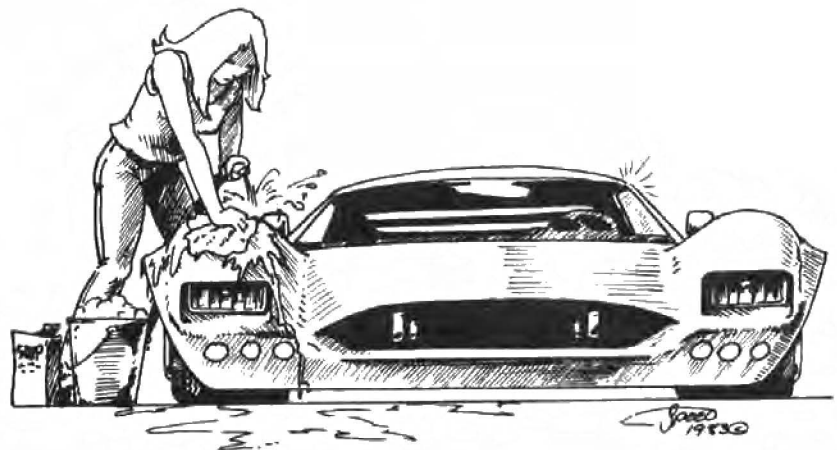
To calculate the cost of this rebuild, figure around \$1,500 for every "space" that has to be moved from one position to another, and then add the cost of the new components and a

50% retrofit cost, not to mention a good-sized tip for the head mechanic.

All of the above prices are figured before any discount for prestige of a character. Though prestige discounts are offered by some garages for word-of-mouth business, the specialty garages do not generally discount their work – nearly all of their customers are already in the top fraction of the profession. Also, it should be noted that the "value" is calculated exactly as before, by summing the prices of the individual components that are still in the car.

The last option, usually open only to very rich duellists or those with heavy corporate sponsorship, is to design a vehicle from scratch. Because of the standardization in today's bodies and components, a car can be made with almost any combination of size and options, within weight and space limits. This standardization has made the design task much simpler than it was 50 years ago, when months or years of testing were needed before a new model was released. Still, not just anyone can either draw up the blueprints or do the final assembly.

After contracting someone to do the design, blueprints will be available in two to three weeks. The cost of this service is around \$500 plus 5% of the car's value. The component cost will be around 250% of the vehicle's value; most of this extra money goes into tools, labor, and testing. Allow about six weeks for construction.



Challenge Night

by David N. Searle

Whew, that was close. Three, four . . . just one more left. Ah, there he is! Would be him, damn it. As if I wasn't having a bad enough day. Try and remember the stats for that car he's driving. Think, think!

"Yes, ma'am, that's right. I'd like to compete in an amateur stock-car event. You have an opening tonight? Uh, yes, I'm interested, but . . . That door? Thank you." I restated my desire to the guard outside the door.

The atmosphere of the halls did little to help my nervous state. Gray walls and bright lights, spaced at even intervals along the ceiling, giving an effect that almost perfectly aggravated the eyes.

He must have an extra load for that rocket launcher. I don't remember that in the specs. Lighter armor on that car, if I recall correctly. That sound of shells striking my armor is going to drive me crazy. I never should have said anything to him. Too late now for regrets.

"Just fill out these forms? All of them?" I took the one-inch stack of papers and went to a small cluster of desks and flopped down in one. They weren't desks, really; they looked as if someone had ripped the left arm off the chair and used the extra wood to build a small extension on the right arm.

Despite the fact that it was impossible to get comfortable in the chair in any position, I started to fill out the forms.

Lot of "In case of death . . ." questions. That helped my mood tremendously.

The maddening phweee-CRACK! of rockets slamming into my rear quarter is getting me worried. How much more can it take? Damage control sensors only tell you when it's breached. Too late at that point. Have to keep calm, don't lose it now. Try to get away from him.

"Duel number 23? That green door? Just hand her this form here or . . . oh, this one. Is it always this comp . . . yes, the green door. I'm going." Someone should change her batteries. Why did they all act so mechanical? Behind the green door was a high vaulted ceiling. Taking up the majority of the space in the room were six cars, one of which was mine. Also occupying the room were five almost identical-looking security guards and a rather plain appearing woman holding a clipboard. I judged the woman as the best bet.

"Hello, I . . .," I started.

"Form, please," she interrupted, with a voice so dry and cold I could almost see the frost from her breath as she spoke. She took the form from my hand and instructed me to examine my car for the duel tonight.

He's good. Can't be a true amateur. He's obviously had experience somewhere; BLUD, the highway, other aliases in other amateur nights, somewhere. Great. How is one class at offensive driving school going to help me take out a salted duellist? If only he would miss and that rain of shells would stop so I could concentrate. I have to become detached, it is so hard with that constant pounding in my head.

I don't know how long I sat in that waiting room, nor how many times I paced its length before someone walked in. He was young, very young. He couldn't have been over 19, probably lied about his age. He looked as frightened as I felt.

We sat in silence at opposite ends of the room, but I was thankful for the company anyway.

The incessant echoing of rocket fire fills me with terror beyond belief. Keep calm. Think. Use your head. No reason you can't pull this off. Who are you trying to kid? Bad attitude. Improve that self-image before it's too late. Make your move, start to set him up. He has you pegged as a scared kid.

Prove him wrong.

Several other competitors had entered and taken positions around the room. A track official entered and began calling off names. When he completed checking off his list he glanced at his watch and stood in the middle of the room. Just standing there, how could he act so calm, almost bored?

"Sir, how long till it starts?" I asked quietly. For some odd reason I felt like a fifth grader asking permission to use the washroom.

A quick glance at his watch and he answered my question. Not once looking at my face, it was just as if I had pressed a button.

That's it, make a plan. No one is perfect. Force him to make a mistake. He has to be just as afraid of death as I am. Think back to class, what were the best techniques against a superior foe? Think! Do you want to die?

There will be no second chance - make it count, make it count!



Speed
560

All I did was accidentally knock this guy's helmet off the bench while struggling with my combat boots. Suddenly I had this six-foot behemoth in my face trying to start a fight. I apologized, for the 30th time, and for the 30th time he shoved his finger into my chest and started another stream of obscenities.

Through the whole encounter not one other duellist moved to break us up. I don't think I saw one move at all. I was saved by the entrance of two track officials into the locker room. Though the action cooled down, I knew his temper hadn't. That's all I needed, a personal enemy out there in the arena.

What else could go wrong?

Remember what you were taught. Tap the down shift, turn the wheel one quarter turn right. Spikes on automatic. That's it, keep cool. Do everything mechanically. Maybe that explains the way all the arena personnel act, it may be the only way to survive in this environment. Not only stay cool, but become cold. No feeling. If it wasn't for the perpetual beat of that weapon of his!

Force it out of your mind, ignore it, but don't forget it.

Slowly checking each strap and clip on my body armor, my mind insisted on drifting back to the threats received in the locker room after the officials had left. I tried to submerge myself in the laborious task of searching my rebuilt Indra's armor for any signs of structural weakness. Each weapon was opened and examined. I rethreaded the ammunition belt twice. My heart kicked at my ribs, trying to escape this lunacy. I backed away from the car and looked it over, trying to slow myself down. A five had been painted on my doors and hood. Hope it's my lucky number.

Doesn't he ever miss? Too close to die now. Only one winner. Look! Find a way. A controlled skid around a former competitor to break his line of sight, yeah, that should work. God, help me. Touch the brakes, jerk the wheel left, now right. Accelerate! Ha! Thought I was going to be an easy kill, huh? I got news for you! At least I won't be easy.

I found the nearest track official and asked how long till staging. As he turned I realized, with more than a little embarrassment, that he was the same official I had asked earlier. With no hint of emotion or recognition he told me. Are they all robots? I went back to the chore of checking my car. I slowed my breathing down. Picturing the checklist shown to me in class, I checked all the instruments. I kept telling myself, "miss one, just one, and you may not live to check it later." Keeping myself sober with that thought, I went through the checklist a second time.

Spikes empty. Bring the left flamethrower to bear. Keep your head. Don't get anxious, make it count. No telling how many shots you'll get. Fire! That's funny – fire. Keep focused on the duel or you will die! A hit. The smoke should keep that recoilless off me for a bit. Have to keep the good armor facing him.

There he is again. Eat napalm, buddy.

Putting the car in gear, I followed the dark blue line that was assigned to me. The lines were the only color in the place. It was all so dismal, like a concrete tomb, which I guess it was. I slipped the car out of gear as I sat in front of Gate Three. The light tree was red. Well, at least it was color.

Methodically, I put on my helmet and double checked all the straps. Set on survival, I tugged the six-point harness, pressing me even tighter against the seat. I then remembered to breathe again.

Analyze and compensate, just like the instructor said. Two solid hits from my flamer must have weakened that side's armor. With all that ammunition he can't have thick armor. Thank the high powers that metal isn't allowed.

He pulls around, smoking, and rocket fire fills my ears. My front armor is still solid, it looks grim. Only one real chance left. One is better than none.

My stomach tightened as a buzzer went off and the light turned yellow. Time for the last system checks. A track official rapped on my window. If it wasn't for the harness holding me down they would have peeled me off the roof of my car. I gave him the thumbs up and he walked off, presumably to check the other drivers. I tried to ease my nerves; there would be hell to pay if I tried to duel in this condition. Everything checked out fine, it was time to focus on what I was here for.

Let's see him follow me through this mess. Interesting. That car isn't handling very well at all. Now there is a useful bit of information. Now work around the bunker . . . good. Got him! Click on the machine gun – every little bit helps, and floor it. Nowhere to go, my friend. Just tag his smoking side and it should be all over. Don't let him get away. The Indra's wheel suddenly struggles with me, my right corner dives for the asphalt. Where did that come from? Damn, forgot all about that six-shooter! He nailed my tire!

Can't be too much longer now. Unless there is a bad wreck to clean up. Then again, how many good wrecks are there? Don't think about it. No fear, no fear, no fear.

Get control! Damn, what a stupid mistake to make. Out of sight, out of mind. I knew the blow-through patch was there, I knew it! Where is he? Well at least I am going to hit that son-of-a-

Another buzzer sounded and the light turned green. I shifted the car into gear and started forward towards the opening gates. No backing now. I kept accelerating as I moved past the already closing gates. Show time.

Backfire

Continued from p. 34

I like the idea of running a racing event at GenCon enough that I'm going to do just that. But it won't be on the same par with the AADA Worlds; more likely, it would be a one-shot tournament like most of the events at GenCon. Naturally, it will get a short writeup here.

This year's World Championship final round will be Division 15 (see AADA News, p. 35). The idea of running separate championships for each division staggers the mind (not to mention my organizational abilities).

–CAO

Micro Training

by Craig Sheeley

Mind-language studies of the late 20th and early 21st centuries produced a major breakthrough in the field of mental behavior. The synaptic code used by the brain was deciphered. The two most visible results of that discovery are mind-transfers for cloning and Microsimulations, or, more commonly, Micros.

It was discovered that a series of electrodes could be used to pump sensory information directly into the cerebral cortex, bypassing the senses. This involved the user in an intense "dream" with all the apparent reality of dreams. Applications in the entertainment industry were obvious. With the right software you can do anything without risk to life and limb!

Today, micros are an extremely popular form of entertainment. A micro player costs about \$500, and includes a bulky, lightweight sensory helmet (\$300 separately) and a master player which can handle up to four users at once. The micro adventures themselves cost about \$2 per real-time minute; the usual program is ten minutes long. Games are also popular; when hooked to a high-quality home computer, anything imaginable can be simulated.

Micros are popular among the duelling crowd, too. Many use them as a form of escapist entertainment, and micro arenas are especially popular – the Morgoth Memorial, complete with magical effects, spells and the occasional dragon, is a challenge for even the most proficient duellist. With a microduel, all the hazards and excitement of duelling are reproduced without any physical risks – microduels make wonderful "warm-up" sessions. The high reaction-response of many professional duellists is often due to a pre-combat warmup duel inside the duellist's brain. Micros can also be used for familiarization and training.

Familiarization and Training

Familiarization is the process of getting used to a car, weapon or some other unfamiliar device. Ten minutes of micro training results in the loss of the penalty modifiers for using unfamiliar



devices (see *GURPS Basic Set* and *GURPS Autoduel* for more details). For example, if you're only used to driving compacts and need to handle an off-road van, the micro session will familiarize you with how the van handles.

Training takes longer and requires more equipment. Micros inject information directly to the brain, but lack the muscle feedback necessary for true co-ordination of the actions placed into memory. Actual physical stimulation is required for complete training. To supply this, micro training centers add gymnasium-like training rooms (for foot practice) and extensive simulators to provide the negative feedback required.

A micro-training session takes place in ten-minute intervals with a rest and evaluation period between each session. During the micro experience, the trainee is monitored by professional trainers as he goes through the workout. Paramedics stand by to assist the occasional trainee whose clumsiness results in injury.

The process takes place in real-time (one minute of micro time is the same as one minute of real time) due to the tremendous amount of detail being generated, and is exhausting. The trainee is experiencing the situation as real and reacting accordingly. The rest and evaluation period is necessary to allow trainees to steel themselves for the next bout with micro "reality."

Proficiency takes hours of training time but is usually less expensive than real crisis situations. The military uses micro training to educate soldiers in combat behavior. Thanks to multiple-user setups, entire platoons can be

maneuvered in simulated outdoor exercises.

Micro training can be a valuable supplement to actual experience. Life may be the best teacher, but micro training is the next best thing.

Game Effects on Micro Training

Familiarization micros have the same cost as normal micros: \$20 per. Use of a proper familiarization micro will remove any negative modifiers for using or working on unfamiliar machines – a mechanic with the right micro could work on a vehicle he's never seen before; a micro on wire-guided missiles would allow a soldier to fire a ground-mounted WGM without penalty. Remember, using a micro takes ten minutes of real time!

Micro training requires facilities, trainers, time and money. Fees are usually \$50 per hour, with a maximum of two hours per day. Group micro training costs \$30 per hour per trainee – a 90-man company's micro costs are \$2,700 per hour.

Experience gained from micro training is 1 skill point per (skill level – 1) × 6 hours – minimum time of 6 hours. This can become expensive, since one successful arena duel can net up to 5 or more skill points; a feat taking 25+ hours in micro training, costing \$1,250 or more. In addition, the highest a combat or DX-based skill can be raised via micro training is +3 (or *GURPS* skill level 14) – above this level, the trainee's reactions begin to outstrip the microsimulator's ability to calculate the results of those actions.

Drawbridges in *Car Wars*[®]

by Christopher Burke

The tug is coming. The lights are flashing. You're lined up for the ultimate game of chicken.

Many of the old drawbridges are still working. Some prevent unauthorized entry into territory, while others provide daredevil excitement. In some cases, the rivers have dried up and there is no need to have a bridge that opens at all . . .

There are several types of drawbridges. The most common kind opens up in the center of the bridge. At the end of the turn after the lever was pulled, the bridge raises or lowers at a rate of 10° per second, up to a maximum of 60°.

When opened at 20°, 30° or 40°, the bridge can be jumped like a ramp. The only difference is the distance the car will fall if it comes up short on the jump. The driver better hope that the river is still flowing below.

At 50° or 60°, a vehicle approaching the open bridge will crash into it as if it were a wall. Additionally, if a vehicle is actually on the bridge at that angle, it will lose 5 mph of speed per second until it leaves the bridge, one way or another.

If a car makes it over the edge of the bridge, trying to jump at 50-60°, the distanced jumped will be ¼ that of a normal jump. The car will most likely fall in unless it's moving extremely fast.

When the bridge is only at 10°, there is not much of a gap between the bridge ends. This gap cannot be jumped, but is treated as a D2 hazard. For a gap large enough for a cycle to fall through, the bridge would have to be *big* – about 450 feet (30'') from end to end.

Jumping Distances

If the bridge is 15' (1 game inch) on both sides, consult the following chart. It can be scaled up or down to suit your needs. The numbers are based on trigonometric tables and have been fudged to more workable numbers.

Angle	Distance	Height
10°	½'	3'
20°	2'	5'
30°	4'(1 square)	7.5'
40°	7'(2 squares)	10'
50°	11'(3 squares)	11.5'
60°	15'(1 inch)	13'

Most bridges would not be longer than 60' (4'') from end to end, but there are always exceptions. All drawbridges have (or had) automatic barricades (7 DP) that drop across the road when the bridge is activated. They remain down until the bridge is reconnected, raising at the end of the next turn.

Each bridge will also have a control booth. Usually, this is to one side of the bridge. In dangerous territories, the control booth will be in a more remote, hidden position.

Other Types of Bridges

Some drawbridges only rise on one side. When trying to jump a drawbridge, the distance across is halved. The

height remains the same, but there is no landing ramp so a car will take some falling damage. The hazard for 10° "jumps" is still D2.

The big difference with one-sided bridges is that a car that approaches from the wrong end while the bridge is up will probably go to a watery doom. If the opening is 5 feet above level for cars and smaller vehicles, 10 feet for vans and midsize trucks, or 15 feet for anything larger, the vehicle will drop through. Otherwise, there is a collision with the bridge and the car stops, hanging on the edge of the bridge, but not falling in.

Lift bridges simply lift the entire central section – there are no ramps, and both ends are treated as the wrong end of a one-sided bridge. Jumping off the central platform is done using the free-fall rules from the *Arena Book*.

The last type of bridge is rare, but still encountered. Instead of raising the bridge at one end or in the middle, the road retracts on a dolly system beneath the rest of the road at a rate of ¼" per second on each side. In this case, a vehicle cannot jump – there's no place to go but down!

When the bridge retracts, everything on it is moved with it. Anything in the center, on both sides at the same time, stays in the same place. A vehicle can attempt to cross the gap, taking a D2 hazard per ¼" distance, so long as part of the vehicle is on both sides of the bridge at the same time. Use common sense for odd situations.

Final Notes

All wheeled vehicles suffer a -1 to HC when on a drawbridge (open or shut) because the road isn't paved – if it were, it would be too heavy to open. A Hovercraft attempting to cross the bridge grating will ground out immediately, decelerating by 15 mph per turn, and taking 1 die to each skirt each turn until it stops moving. Conversely, the hazards for bad weather, oil or ice on the road will never be worse than +D1 because no puddles or ice will form – the grating will just freeze or become slick. Flaming oil will not ignite, since most of the oil will just drop through the grating. Holes cannot be blown in the bridge, either – most of the damage will be shunted through, harmlessly.

If a vehicle is directly over the center of a bridge when it opens, the vehicle's underbody will take 1d of damage. It remains over the edge of the side it is mostly on. If it is directly over the center, it will take an additional point of scraping damage each turn it remains there until it moves or falls through.

If someone fires an ejection seat while on the drawbridge, there are two possible ways to handle it. First, take out any good physics textbook and use the formulas for the basic parabolic-motion equations. The second idea is to take the physics book and whomp the bejeebers out of the guy who suggested the first idea, and then assume that the ejection seat has some form of miraculous gyroscopic balance that immediately returns it to straight vertical flight directly over the vehicle in question.

Finally, a drag chute will not work to stop your fall should you miscalculate. So be quick, be aggressive, and jump offensively!

Final Ballot for the
Origins Awards 1988

Presented by the Academy of Adventure Gaming Arts and Design

1. **Best Historical Figure Series, 1988**
 - 1200 AD Aztec Army, Ral Partha Enterprises
 - Biblical Period Chariot Miniatures, Stone Mountain Miniatures, Inc.
 - Blandford Warriors, Citadel Line, Games Workshop, Inc.
 - Riel's Rebellion, 25mm, RAFM
2. **Best Fantasy or Science Fiction Figure Series, 1988**
 - Citadel Plastic Kits, Games Workshop, Inc.
 - Julie Guthrie's Fantasy Personalities, Grenadier Models, Inc.
 - Renegade Legion - 25mm Circus Imperium Figures, Ral Partha Enterprises
 - TSR's AD&D Series, Ral Partha Enterprises
 - Warhammer 40,000, Games Workshop, Inc.
3. **Best Vehicular or Accessory Series, 1988**
 - BattleTech Mechs, Ral Partha Enterprises
 - Blood Bowl, Games Workshop, Inc.
 - Napoleonic Villages, 15mm Hovels Line, Stone Mountain Miniatures, Inc.
 - Rhino Armored Assault Vehicles of the 41st Century, Games Workshop, Inc.
 - Siege Equipment, RAFM
4. **Best Miniatures Rules, 1988**
 - Barbarossa/25, Command Decision, Game Designers' Workshop
 - Combined Arms, Game Designers' Workshop, Inc.
 - To the Sound of the Guns, Johnny Reb, Game Designers' Workshop
 - Warhammer 40,000 Chapter Approved, Games Workshop, Inc.
 - Warhammer Battle, 3rd Edition, Games Workshop, Inc.
5. **Best Role-Playing Rules, 1988**
 - Ars Magica, Lion Rampant
 - Bullwinkle and Rocky Role Playing Party Game, TSR, Inc.
 - Cyberpunk, R. Talsorian Games, Inc.
 - GURPS Basic Set, 3rd Edition, Steve Jackson Games Incorporated
 - Space Master: The RPG, Iron Crown Enterprises, Inc.
6. **Best Role-Playing Adventure, 1988**
 - Battle for the Golden Sun, Star Wars, West End Games
 - Castle Greyhawk, AD&D, TSR, Inc.
 - Harkwood, GURPS Fantasy, Steve Jackson Games Incorporated
 - Kell Hounds, Mech Warrior, FASA Corp.
 - Orion Rising, Top Secret/S.I., TSR, Inc.
 - Unnight, GURPS Space, Steve Jackson Games Incorporated
7. **Best Role-Playing Supplement, 1988**
 - Cthulhu Now, Call of Cthulhu, Chaosium, Inc.
 - Field Guide to Monsters, Cthulhu, Chaosium Inc.
 - Freelancers, Top Secret/S.I., TSR, Inc.
 - Gamer's Handbook of the Marvel Universe, Marvel Super Heroes, TSR, Inc.
 - GURPS Space, GURPS, Steve Jackson Games Incorporated
 - Kara-Tur Trail Map, AD&D, TSR, Inc.
8. **Best Graphic Presentation of a Role-Playing Game, Adventure or Supplement, 1988**
 - Bullwinkle and Rocky Role Playing Party Game, TSR, Inc.
 - Field Guide to Monsters, Cthulhu, Chaosium Inc.
 - Gazeteer Series, D&D, TSR, Inc.
 - Kara-Tur Trail Map, AD&D, TSR, Inc.
 - Tatooine Manhunt, Star Wars, West End Games
9. **Best Pre-20th Century Boardgame, 1988**
 - Enemy in Sight, The Avalon Hill Game Company
 - Gettysburg, The Avalon Hill Game Company
 - Grand Army of the Republic, Task Force Games
 - The Horse Soldiers, S&T #119, 3W
 - Indian Mutiny, S&T #121, 3W
 - Lee vs. Grant, Victory Games
 - Manchu, S&T #116, 3W
 - Zulu War, Battleplan #7, 3W/DTI
10. **Best Boardgame Covering the Period 1900-1946 for 1988**
 - Great Patriotic War, Game Designers' Workshop, Inc.
 - Kremlin, The Avalon Hill Game Company
 - Open Fire!, Victory Games
 - Raid on St. Nazaire, The Avalon Hill Game Company
 - Tokyo Express: The Guadalacanal Naval Campaign, 1942, Victory Games, Inc.
11. **Best Boardgame Covering the Period 1947-modern day for 1988**
 - Chieftain, Assault, Game Designers' Workshop
 - Desert Falcons, Air Superiority, Game Designers' Workshop
 - The Hunt For Red October, TSR, Inc.
 - Seventh Fleet, Victory Games, Inc.
 - Sniper Special Forces, TSR, Inc.
 - Test of Arms, First Battle, Game Designers' Workshop
12. **Best Fantasy or Science Fiction Boardgame, 1988**
 - Assault on Hoth, West End Games, Inc.
 - Buck Rodgers Battle for the 25th Century Game, TSR, Inc.
 - Dragonlance game, TSR, Inc.
 - Mertwig's Maze, TSR, Inc.
 - Sky Galleons of Mars, Game Designers' Workshop, Inc.
13. **Best Graphic Presentation of a Boardgame, 1988**
 - Assault on Hoth, West End Games, Inc.
 - Blood Bowl, Games Workshop, Inc.
 - Buck Rodgers Battle for the 25th Century Game, TSR, Inc.
 - The Hunt For Red October, TSR, Inc.
 - Sky Galleons of Mars, Game Designers' Workshop, Inc.
14. **Best Play-By-Mail Game, 1988**
 - Continental Rails, Graaf Simulations
 - Feudal Lords, Graaf Simulations/ Flying Buffalo, Inc.
 - Heroic Fantasy, Flying Buffalo, Inc.
 - Kings & Things, Andon Games
 - Mobius I, Flying Buffalo, Inc.
 - World Wide Battle Plan, Flying Buffalo, Inc.
15. **Best Fantasy or Science Fiction Computer Game, 1988**
 - Bard's Tale III: The Thief of Fate, Electronic Arts
 - BattleTech, Infocom
 - Heroes of the lance, Strategic Simulations, Inc.
 - Neuromancer, Interplay Productions
 - Pool of Radiance, Strategic Simulations, Inc.
16. **Best Military or Strategy Computer Game, 1988**
 - Battlehawks 1942, Lucas Films
 - Battles of Napoleon, Strategic Simulations, Inc.
 - Decisive Battles of the American Civil War, Volumes 2 & 3, Strategic Studies Group, LTD.
 - F-19 Stealth Fighter, Microprose, Software, Inc.
 - Red Storm Rising, Microprose Software, Inc.
 - Universal Military Simulator, Firebird
17. **Best Screen Graphics in a Home Computer Game, 1988**
 - Battlehawks 1942, Lucas Films
 - BattleTech, Infocom
 - F-19 Stealth Fighter, Microprose, Software, Inc.
 - Heroes of the lance, Strategic Simulations, Inc.
 - Pool of Radiance, Strategic Simulations, Inc.
18. **Best Professional Adventure Gaming Magazine, 1988**
 - Challenge, Game Designers' Workshop, Inc.
 - Dungeon Magazine, TSR, Inc.
 - Gateways, Jaf Publications
 - Polyhedron, TSR, Inc.
 - Strategy & Tactics, 3W
19. **Best Amateur Adventure Gaming Magazine, 1988**
 - ETO, Bill Stone
 - Midwest Wargamer's Association Newsletter, Hal Thinglum
 - Savage & Soldier, Lynn Bodin
 - Sorcerer's Scroll, Tori Berquist
 - Volunteers, The Newsletter of Civil War Gaming

Signature: _____

Address: _____

These are the final nominees for the Origins Awards for 1988. Vote for only one nominee per category by checking or marking the line preceding your choice. Fill in your address and sign your ballot. Mail the completed ballot to: Origins Awards, 950-A 56th ST., Oakland, CA 94608.

The deadline for return of the ballot is June 10, 1989. Ballots post-marked after the deadline will not be counted. The Origins Awards will be presented at Origins '89 in Los Angeles, June 28-July 2, 1989. The awards ceremony will be Saturday, July 1st at 8pm. Members of the Academy of Adventure Gaming Arts and Design will receive a final ballot in the mail. If you have any questions concerning the ballot or the Academy, please write: Origins Awards, 950-A 56th ST., Oakland, CA 94608.

Combat Showcase Errata

Compiled by Scott Mercer

- P. 4. *Flicker*: Top speed is only 140 mph.
Quicksilver: Remove 5 points of armor, \$4,420.
- P. 6. *Cannon*: Replace wheelguards with wheelhubs, slope armor, remove 39 points armor. \$4,977.
- P. 8. *Rat*: Remove 1 pt. from sidecar wheelguard, sidecar costs \$2,190, combination costs \$8,000.
- P. 9. *High Noon*: \$9,325.
- P. 10. *Rhino*: \$9,871.
- P. 12. *Kali*: \$11,588.
- P. 13. *Quarterstaff*: \$11,855.
- P. 14. '37 *Bullseye*: Remove 25 points of non-ramplate plastic armor, ramplate includes 10 points of metal armor. \$14,770.
- '37 *Scrapper*: Remove 2 points of sidecar armor. Sidecar costs \$8,845, combination costs \$15,023.
- P. 16. '37 *Tomahawk*: 5,744 lbs., \$14,988.
- P. 17. *Challenger*: Replace with: Luxury, x-hvy. chassis, large power plant w/superconductors, hvy. suspension, 4 steelbeltd PR tires, driver, 3 linked RLs front, SD w/explosive spikes & 8-round extra magazine back, link between RLs and SD, 10 pts. CA around driver, plant, and SD, 47 pts. metal armor. Accel. 5, HC 3; 6,560 lbs., \$15,000.
- P. 20. *Nightstick*: Replace with: Compact, x-hvy. chassis, medium power plant, hvy. suspension, 4 solid tires, driver, turreted MG w/AP ammo, extra AP magazine, 2 linked FGs front, 4 6-pt. wheelguards, 156 pts. FP armor. Accel. 5, HC 3; 4,197 lbs., \$18,836.
- Lightning Bolt*: 4,146 lbs.
- '37 *Swordfish*: Replace with: Compact, x-hvy. chassis, medium power plant w/platinum catalysts, hvy. suspension, 4 solid tires, driver, TwL front, IFE, HRSWC, 153 pts. LR sloped armor. Accel. 5, HC 3; 4,410 lbs., \$19,987.
- P. 21. *Manslaughter*: Drop 15 pts. of armor. \$19,960.
- P. 22. *Salamander*: Cargo capacity is 138 lbs. \$22,635.
- P. 23. '37 *Copperhead*: Add linked LL in turret. \$23,977.
- P. 25. *Draconian Special*: \$19,850.
- NCCTA Mk IV*: Remove 1 pt. from all guards and hubs, add 2 pts. armor. 5,760 lbs., \$24,170.
- P. 26. *Australia V*: Remove 6 pts. armor. \$20,230.
- Paradox*: Replace side HRs and rocket platform with 2 linked HRs & TL in turret and 2 1-spc. rocket magazines (HRs), add 43 pts. armor, add superconductors, make armor LRFP, \$25,775.
- P. 27. *Phalanx 30*: \$27,842.
- Diamondback*: 3,499 lbs., \$24,714.
- P. 28. *Enforcer*: Replace with: Luxury, x-hvy. chassis, large power plant w/superconductors, hvy. suspension, 4 solid tires, driver, 2 linked ACs F, HRSWC, SD w/explosive ammo back, spoiler, airdam, 10 pts. CA around driver, power plant, and SD, 2 10-pt. wheelhubs, 2 10-pt. wheelguards, 33 pts. metal armor. Accel. 5, HC 3; 6,595 lbs., \$29,000.
- Jupiter*: Cargo capacity is 185 lbs., Accel. 5, 7,165 lbs.
- P. 29. *Trident*: \$30,660.
- P. 30. *Vlad the Impala*: Replace with: Luxury w/CA frame, x-hvy. chassis, large power plant w/superconductors, hvy. suspension, 4 steelbeltd fireproof PR Radial tires, driver, passenger, 2 ACs linked F, RR back (AP Ammo) linked to HDFOJ (HT ammo) back, spoiler. FP Armor: F50, R40, L40, B40, T15, U30, 4 10-pt. wheelguards. Acceleration 5, HC 3; 6,600 lbs., \$53,500.
- Shiva*: \$34,041.
- P. 31. *Ice Pick*: Remove 1 pt. from all wheelguards and hubs, move HDIDs to side mounts. \$35,525.
- P. 32. *Pathfinder*: Replace super power plant with large plant w/superconductors, remove 1 point armor, replace WGM w/4 WGMs, add 3 links (GG to FOJ), all WGMs, WGMs to FOJ), replace airdam w/spoiler, add 2 5-pt. hubs, add 2 5-pt. guards. 6,595 lbs., \$43,455.
- P. 33. *Nemesis*: \$43,980.
- P. 36. *Roustabout*: Cargo capacity 306 lbs., 2,496 lbs.
- P. 37. *Mirage*: \$15,146.
- Hercules*: \$17,770.
- P. 39. *Tsunami*: \$19,600.
- P. 40. *Gray Cat*: Remove 5 pts. armor. \$21,740.
- P. 41. *Devastator*: Remove 1 pt. from guards, cargo capacity 151 lbs. 5,609 lbs., \$25,334.
- Cobra*: Replace with: Midsize, x-hvy. chassis, super power plant w/platinum catalysts & superconductors, hvy. suspension, 4 solid radial tires, driver, passenger, laser in universal turret, laser battery, tool kit, radar, spoiler. FP Armor: F35, R30, L30, B30, T25, U12, 4 10-pt. wheelguards. Accel. 10, HC 3; 5,756 lbs., \$33,284.
- P. 43. *Desperado*: Add platinum catalysts, add 10 pts. armor. 7,735 lbs., \$46,050.
- P. 44. *Beer Blaster*: Add x-hvy. chassis, cargo capacity is 1½ space, 110 lbs. 835 lbs., \$2,152.
- Pillbox*: \$6,105.
- Gravedigger*: Replace with: 6' van trailer, x-hvy. chassis, 2 solid tires, gunner, turreted MG w/HD ammo, HDID back, MD w/proximity fuses under, two links (MD to HDID, MG to dropped weapons). Armor: 168 pts., 2 10-pt. wheelguards. 3,356 lbs., \$11,720.
- P. 45. '37 *Shocker*: Remove CA around back ACs, add 5 pts. CA around second gunner, add 10 pts. armor. 5,640 lbs., \$35,738.
- Aztec*: Add 31 pts. armor, add 10 pts. CA around gunner. 8,633 lbs., \$70,650.
- P. 47. *Bulldog*: Cargo capacity 1 space, 30 lbs. 870 lbs., \$1,142.
- Doberman*: Cargo capacity 1½ spaces, 234 lbs.
- Foxhound*: Cargo capacity ½ space. 766 lbs., \$8,330.
- P. 48. *Intrepid*: Add fake GG on fake turret, cargo capacity 10 (+2) spaces, 1,550 lbs. 4,090 lbs., \$10,645.
- P. 49. *Dreadnought*: Remove FOJs, add 2 concealed HDFOJs R and L, add 10 pts. CA around gunners, add 17 pts. armor. 5,635 lbs., \$44,143.
- Flamand*: Move FCEs from corner mounts to mounts right and left. \$27,054.
- P. 52. *Vanguard*: \$27,800.
- P. 53. *Ninja Hi-Tek*: Remove 5 pts. armor. 5,640 lbs., \$32,120.
- P. 54. *Foreguard*: Remove 1 pt. of non-ramplate armor. 7,791 lbs., \$26,095.
- Fore-Crasher Deluxe*: \$52,530.
- P. 55. *Gate-Crasher*: \$34,377.

BACKFIRE

ADQ 6/4 is probably the best issue since the back-to-back issues 4/4 and 5/1! Keep up the good work!!!

—Josh Kirkpatric, Walnut Creek, CA

Probably? Only probably? Grrrr . . .

—CAO

Whenever we “rules lawyers” come up with a really good loophole (my favorite pastime), like component armor on cyclists, or Armor-Piercing Fireball Specials, you accuse us of treating this game like a lawyer treats the law. However, when it comes to publishing more Oops, Son of Oops and Mr. Fixits than you had rules to start with, you put them wherever, and good luck to us to find them. I feel like a lawyer researching a case when I build a vehicle, so why *shouldn't* I argue like one?

When will we see you make a comprehensive Second Edition rulebook that you *can't* fit an Ogre through?!

—Donald O. Spragg, Esperance, NY

P.S. What about putting a cluster bomb in an option I ejection seat?

Comprehensive rulebook: I'm working on it. Cluster bombs in ejection seats: Not while I work here, you won't.

—CAO

I would like to add my opinion to the continuing debate over X-ray lasers and the effects of their lethality on autoduelling.

X-ray lasers' tremendous price ensures that they will very rarely be seen either on the road or in the arena. And besides, an X-ray laser isn't really that much more deadly than, say, one of Uncle Al's new Blast Cannons or two linked VMGs. Linking two autocannon provides even more firepower than a heavy X-ray laser, for less cost. Yet there is no yelling and screaming about BCs or weapon links.

I think the furor over X-ray lasers is probably “much ado about nothing.” Their high prices will severely reduce the degree to which they are seen, and their lethality is not that much greater

than other new weapons or linked sets of older weapons.

—Robert Eikel, La Jolla, CA

Since the publication of ADQ 6/4 I have come up two more variations for Route 'Em.

Since it is a solo adventure, it does takes a limited amount of schizophrenia to play both the gang members and the ranger to their limit. During playtesting of the scenario the only time it becomes *impossible* for the ranger to win is when playing the *Innocent Bystanders* option. To play the bad guys to their worst, I started to have the biker shoot the bystanders. This takes points away from the ranger. It is an evil thought, but a fun one at the same time.

The second one is for those that have played the scenario as much as I have. Every once in a while, I replace the Mad Dogs with a gang of Elvis impersonators and T. J. as a music critic.

On a more serious note, in ADQ 4/3 ADQ&A Scott Haring totally messed up on answering a question from Matthew Johns. I'll repeat the question:

Let's say a vehicle calculates his HC as 4, rounds it down to 3, since it's the highest allowed. Then he loses a wheel. What is his new HC?

Scott replied: *The permanant HC penalty (-3) is deducted from the original HC of 4, not the rounded-down HC of 3. So the new HC is 1. See, there is a reason for raising your HC above 3!*

Now that blew away my understanding of the whole idea of having a maximum HC at all. I wrote Scott and asked him why even have a maximum HC of 3 if all penalties are subtracted from the original HC. He said, “for game balance.”

Obviously I am looking for a better answer. Any ideas? I think the car's new HC should be 0. That original HC is worthless.

—David N. Searle, Antioch, Illinois

You want a better answer, you've come to the right place. Suppose, for the sake of this argument, that we replace “game balance” with a pseudo-reality check and assume HC

3 grants you about 1G cornering ability (I have no idea whether this is so, but it's close). If your car can pull 1 G on the skid pad, adding wide street tires (Radials, in game terms) won't significantly raise this amount. However, once some bozo zaps your expensive tire out from under you, and assuming you maintain control, your radials will make a difference – and that's what Scott's ruling takes into account. Play it the other way if you want; I'm comfortable with the rules as they are.

—CAO

Congratulations on your editorship. Good Luck. By the way, while *Dodges & Dragons* was obviously not a *serious* autoduelling article, it was well thought out, well written and a lot of fun to play. Those are the main reasons I subscribe to ADQ . . .

At GenCon/Origins last year, I spoke to Steve Beeman and Ben Ellinger about the possibility of a major tournament, on the scale of the World Championships, held annually at GenCon. The subject arose due to my complaining (whining, actually) about not being able to attend Origins, and, thus, the Worlds, every year.

Many duellists (and gamers in general, of which I am one) have room in their budgets and schedules for only one major convention, and since Milwaukee is within driving distance of Louisville, my choice has to be GenCon.

We discussed a couple of possibilities for such a tournament:

1) The Autoduel Grand Prix. Basically, a World Combat-Racing Championship, using the *Dueltrack* rules;

2) Div. 15 World Championship. Since the Worlds are usually held at Div. 30, hold a separate convention with a lower spending limit. While I realize that it may seem strange to have two World Champions, in the world of 2039 there are presumably ten, one for each division. This is the type of setup I'd prefer, though any tournament large enough to be covered in ADQ would be great (yes, I'm a glory hound, I admit it).

—Jeff Wilder, Louisville, Kentucky

Continued on p. 29

Good news! After the fallout from ex-president Bill Wendland Prime's untimely demise, the AADA is pulling itself back together. The old groups are coming back, and new ones appear all the time. In total, the AADA now consists of 30 clubs – not bad for a full restart. Bill's clone (who hates being called that) is still feeling a bit tender, but is expected to take over his old post within the next few weeks.

As we were shuffling through Bill Prime's office, we stumbled across a hidden cache of old ADQs, which had been presumed lost. So we now have a limited quantity of back issues for ADQs 3/1, 3/2 and 3/4 available at the usual price.

For the record, here's the current list of AADA Chapters eligible to participate in the 2039 World Championships. If your club isn't on this list, then hurry up!

Berkeley Autoduelling Association
President: Leslie Fish
6331 Fairmont, #335
El Cerrito, CA 94530

Big Red Death
President: Bruce A. Moyer
RD #1 Box 186A
Emmaus, PA 18049

Coalition of Oregon Duelling
Establishment (CODE)
President: Dimitri Ashling
4065 N. Mississippi
Portland, OR 97227

Driving Tigers/Road Wolves
President: Christopher Burke
156 11th Street
Brooklyn, NY 11215-3816

Flaming Lakers
President: Paul Schwartzberg
2728 Upton Avenue South
Minneapolis, MN 55416

Frozen Northern Outlaw Road
Duellists (FNORD)
President: David N. Searle
1104 Bishop St.
Antioch, IL 60002
Sponsored by: DELETED FOR
SECURITY REASONS

JADE East
President: Christian J. Alipounarian
727 Chestnut Street
New Milford, NJ 07646

Lex Talionis
President: Pete "Havoc" Hallenberg
9647 Wenzel St.
Fairfax, VA 22032

London, England Autoduel Assoc.
(LEADA)
President: Phil Radley
12 Wordsworth Close
Romford, Essex
RM3 7PD, England

LEADA Nubile Virgin Whipped Cream
President: Ian Brotzman
153 St. Anthony's Drive
Chelmsford, Essex,
CM2 9EJ
England
Sponsored by LEADA

LEADA Turbo Wicked Scary Nutter
Bastard
President: John Davies
17 Garry Way
Rise Park
Romford, Essex
RM1 4YU, England
Sponsored by LEADA

London's Dark Knights of Destiny
President: Greg Seales
261 Rainham Road,
Rainham, Essex
RM13 7SH
England
Sponsored by LEADA

Missouri Autoduel Division (MADD)
President: Craig Sheeley
1619 South Broadway
Springfield, MO 65807

New Omaha Vehicular Association
(NOVA)
President: Norman McMullen
2201 Joyce Circle
Bellevue, NE 68005

North American MONDO and Duellist
Society (NOMADS)
President: Joe Rudynski
2013 W. 245th Street
Lomita, CA 90717

NOMADS After Six
President: Amn. MacDonald, Sean
c/o A1C McCoy, Craig
PSC Box 1407
Hill AFB, UT 84056
Sponsored by NOMADS

NOMADS, North Division
President: Tom Stuckel
4160 N. Buhach
Merced, CA 95340
Sponsored by NOMADS

Northern Outrageous Renegade
Autoduellists (NORAD)
President: John Hill
122 Lodge Pole Dr.
Hinton, Alberta
CANADA T7V IE4

Ramblin' Wreck Autoduel Association
(RWADA)
President: Keith Graham
P.O. Box 33468, GA Tech
Atlanta, GA 30332

River City Autoduel Association
President: Tim Ray
8910 Research, #C-2
Austin, TX 78758
Sponsored by Republic Motors
One Republic Square
Austin, TX 78748

Riverside Organized Autoduelling
Society (ROADS)
President: Eric Gregory
1255 Nicola Drive
Riverside, CA 92506

Royal Autoduel Association of
Great Britain
President: Mike Wyvill
3/B Richmond St.
Hull, N. Humberside
HU5 3JY
England

Southern HQ AutoDuelling
Organization (SHADO)
President: Jay Eskridge
2700 Peterson Pl. Apt. 62-B
Costa Mesa, CA 92626

S.P.L.A.A.T.
President: Fred Dobratz
7549 - 29th Ave. NW
Seattle, WA 98117

SKULLs
President: Jason Wallace
6342 Rhea
Reseda, CA 91335

Southern Pacific Autoduel Elites
(SPADE)
President: Mike Smith
9620 Graceland Way
San Diego, CA 92129

Tennessee River Autoduel Society in
Huntsville (TRASH)
President: Jesse Hamner
2916 Barcody Road
Huntsville, AL 35801

Unbalanced Force
President: Kirk Utterback
7906 Rollingwood Blvd.
Columbia, MO 65202

Warmongers from Hell
President: Craig Kember
3717 Middlefield Road
Palo Alto, CA 94303

Woodinville Auto Rangers (WAR)
President: Gavin Shearer
6620 197th Avenue NE
Woodinville, WA 98072

So far, we've got three club champions to report: Ben Ellinger of the RCADA, Pete Hallenberg of Lex Talionis, and David Searle of FNORD. Anyone else out there? Let me know about it.

JADE is hosting the Northeast Regionals at Gamecon on April 8. Contact Cathryn or William at Gamemaster, Ltd. Village mall, Lower Promenade, Bergen Mall Shopping Center, Paramus, NJ 07682 for further details.

MADD is hosting the Midwest Regionals at NameThatCon 2, April 21-23. Contact Craig Sheeley of

MADD (address above), or the NameThatCon 2 staff at P.O. Box 575, St. Charles, MO 63301.

Regional Championships

Regional championship events (taking place between March and June) will only count if there are 20 or more AADA members in attendance. A club champion, for this purpose, counts as 5 members. So a Regional event could have four club champions participating, or twenty At-Large members, or any combination of the above. There can be *more* than twenty participants, if your referee doesn't mind.

Also, one other stipulation: You have to tell me about it, allowing plenty of time for me to notify nearby clubs of your event. If I don't know about it, it didn't happen.

The regional events should follow the Qualifiers and Eliminations rounds below, unless all participants agree to use another arena and game format.

World Championship Event Format

The format of the championship season was discussed in *ADQ 6/4* and has not changed. This is a description of the arena events themselves.

First round – Qualifiers, Division 5, Double Drum

The first, qualifying round of both the Regionals and the Worlds will be the same. The competitors (any number up to 8) will start out behind the gates at any speed up to 40 mph. The event is over at the end of the *phase* in which any participant has four or more points; this person is declared the winner, and second and third place finishers (if required) will be determined on the basis of points scored up to that time. Points are scored in the following manner: For eliminating the maneuverability of a vehicle, 1 point; for eliminating the vehicular firepower of a vehicle, 1 point; for losing your own maneuverability or firepower, -1 point each. Killing (or losing) the maneuverability of a vehicle that never had weapons is worth double.

2nd round – Eliminations, Division 25, Dumbarton Slalom

The second round of the Regionals and Worlds will also be the same. All participants will start out at the same end of the arena, and the first to loop around the two obstacles at the far end of the arena and cross the starting line will be the winner (the race will continue to find second- and third-place finishers if necessary). There are three restrictions on this event: 1) No vehicle may be fired on until it has passed the pylons in the second section of the arena, 2) No gas engines or gas tanks will be allowed, and 3) Dropped weapons may only be fired as single shots (i.e., no automatic fire).

3rd round – Semi-Final Eliminations, Division 10, Gladiator Arena

This will be a point-based event, with point awards for kills and laps. The specific details will be available during Origins – just ask at the Steve Jackson Games booth in the dealer's room. All entrants in the Semi-Finals must also have their Division 15 designs ready for the final round and turn them in when the third round begins, so that they can be checked before the final event. The Gladiator map can be found in *The AADA Duel Circuit: L'Outrance*.

Final Round – Division 15, Stardust Memorial Racetrack

The final eight competitors will finish each other off in the Stardust Memorial (*L'Outrance*, p. 10). The victory conditions will be based solely on points, awarded for completing laps, making kills and other accomplishments. As above, the specific details will be available during Origins.

AADA Rules and Regulations

The following restrictions will be in effect for all of the above duels:

1. Each participant is limited to a single vehicle per event, and that vehicle must be a motorcycle (with or without sidecar), trike or car. No flying vehicles, oversized vehicles, trailers or hovercraft may be used.

2. The vehicle is limited to a maximum of two crew: one driver, and (optionally) a gunner. No passengers will

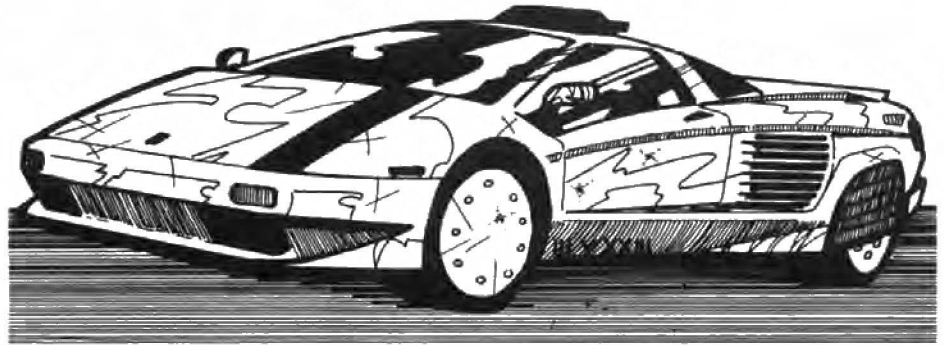
be allowed. Each character is to be built on a maximum of 50 points, with no more than 30 points in any one skill.

3. All official equipment and gadgets published up to 1 month before the event may be used, with the following exceptions:

Extra gas tanks, Spare tires, Racing bodies (Formula One/Indy, Can-Am, Sprint or Dragster), Cargo safes, Mini-Safes, Armored Beer Refrigerators or minifridges (sigh), Car-Top Carriers, Remote Control Guidance Systems, Searchlights, Armored Searchlights and Portable Searchlights, Anti-Theft Systems, Computer Gunners, Autopilots, ATADs, Weapon Timers, Bollixes, Kamibombs, Plastique and other shaped explosives, Stealth, Bulk Ammo Boxes. Vehicles with cargo space may *not* put component armor around that cargo space.

In addition, vehicles that use gas engines *must* have enough gas to travel 200 miles at their base MPG, in order to balance them with electric power plants.

In the interest of speeding up play



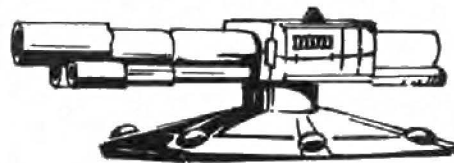
during the World Championship, this *optional Five-Phase Movement Chart* will be used. It works just like the standard *Movement Chart*, with a couple of exceptions: Dropped weapons that formerly took two phases to ignite (FOJs, etc.) now ignite on the next phase, and a vehicle is allowed to maneuver during any single inch of its move in any given phase. Spinouts, rolls and skids take effect in the first inch of movement for every phase.

In close situations where both players are moving at high speeds, they may alternate 1" moves.

Five-Phase Movement Chart

Speed	1	2	3	4	5	Ram
0						0
5			½			1d-4
10			1			1d-2
15		1		½		1d-1
20		1		1		1
25		1		1	½	1
30		1		1	1	1
35	1	1	1	½		2
40	1	1	1	1		3
45	1	1	1	1	½	4
50	1	1	1	1	1	5
55	2	1	1	1	½	6
60	2	1	1	1	1	7
65	2	1	1	2	½	8
70	2	1	1	2	1	9
75	2	1	2	1	1½	10
80	2	1	2	1	2	11
85	2	2	1	2	1½	12
90	2	2	1	2	2	13
95	2	2	2	2	1½	14
100	2	2	2	2	2	15
105	2	2	2½	2	2	16
110	2	2	3	2	2	17
115	2	3	2	2½	2	18
120	2	3	2	3	2	19
125	2	3	3	2	2½	20
130	2	3	3	2	3	21
135	3	3	3	2½	2	22
140	3	3	3	3	2	23
145	3	3	3	3	2½	24
150	3	3	3	3	3	25
155	4	3	3	3	2½	26
160	4	3	3	3	3	27
165	4	3	3	3½	3	28
170	4	3	3	4	3	29
175	4	3	4	3	3½	30
180	4	3	4	3	4	31
185	4	4	3	4	3½	32
190	4	4	3	4	4	33
195	4	4	4	4	3½	34
200	4	4	4	4	4	35

He's Back . . .



Just when you thought you knew about every possible *Car Wars* weapon and gadget, Uncle Al brings you a new assortment. Here are 91 of the hottest new weapons for cars, boats and hovercraft. Look for the outrageous orange cover.

All the Uncle Albert's Catalogs are available at fine stores everywhere.

STEVE JACKSON GAMES

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I have a few questions for the ADQ&A Staff:

1. How do you figure the damage for a car stopped in a flame cloud? Also, how do you figure the damage for a car going through several flame clouds? It seems to me that in reality, a car going 100 mph would take less damage than one going 10 mph.

2. Can you use High-Temperature Flamethrower Fuel for Flaming Oil ammo? (for Oil Guns)?

3. Since regular body armor doesn't protect from falls and collisions, will it be salvageable after a person falls?

4. What do you do for control rolls when a car is traveling faster than 300 mph?

5. When you fire a flare into the air, how do you figure targeting modifiers? What happens when you miss? How long does the light of a Starshell Launcher last, and at what radius?

6. Imagine there is a Laser-Reactive web on the right side of a vehicle, and that side is hit with a laser which is guiding some rockets. If that side has a right front corner-mounted smoke-screen linked to the web, will the smokescreen block the laser so the rockets have no chance of hitting?

7. If a WGM is fired on turn 1, for instance, and it reaches its destination in the middle of turn 2, can the person who was controlling the WGM fire another weapon before turn 2 ends? Are the distance modifiers figured for a WGM based on the distance it actually travels, or the distance between target and firer when the WGM is fired? What about sighting penalties (smoke, paint, etc.)?

8. By the way, this is a brand new printer ribbon!

-Chad Trujillo, Oak Park, IL

1. Damage it once the first time it enters the cloud, and once at the beginning of the next turn (if the cloud is still burning). Damage it the instant it enters each flame cloud.

2. Sure.

3. I guess so, but I wouldn't want to clean it out.

4. The Control Table in *Dueltrack* follows a fairly normal progression

once you get above 225 mph. Simply extend the table as far as you need to.

5. You don't. You can't. 5 seconds, and 20".

6. Yes.

7. No. The distance it actually travels. Visibility modifiers apply normally.

8. Glad to see it!

-CAO

1. Carbon-Aluminum Frames: Is the cost of chassis and suspension improvements based on the regular body type, or the cost of the expensive CA type?

2. Assault Rifles: Can they use AP and AV ammo? How many GEs are spare clips?

3. Does a vehicle equipped with an IR sighting system suffer any penalties for firing through smoke, paint or chaff? How about hand weapons aimed with an IR laser scope?

4. Solar Panels: Can any vehicle mount one? Can some vehicles mount more than one, and if so, are the effects cumulative? Could you mount one on a trailer that you were towing?

5. Why can't small ten-wheelers use car gas engines (ADQ&A 6/1)? In *Dueltrack* (p. 3), it says, "any size engine may be placed in any type of vehicle." It shouldn't unbalance play; referees are supposed to make gas engines rare with a capital "R," and any car engine big enough to move a ten-wheeler is sufficiently expensive, and it'd only be small ten-wheelers. So why not?

6. What is the HC of a subcompact with a light suspension? An OR suspension?

-Phil Radley, England

1. The cost of the CA frame.

2. Yes, 1/2 GE.

3. Smoke, paint: Yes, it suffers the normal penalties. An IR laser targeting scope is worthless - you can't see where the beam falls.

4. Yes. You can mount one solar panel for every turret position on a vehicle. The effects are cumulative. Yes.

5. That's what oversized gas engines are for.

6. A subcompact with light suspension has HC 2, one with OR suspension has HC 3.

-CAO

1. Can a vehicle's primary power plant be mounted in cargo space?

2. Can a power plant be mounted partly in cargo space (for example, could a van mount a super power plant with 4 spaces in cargo and two in the main part of the vehicle)?

3. Can an X-Ray laser use high-intensity optics, and, if so, at what cost?

4. Is it legal to disqualify duellists for being rules lawyer jerks (like the one who made all these questions necessary, for instance)?

-Ben Pierce, Washingtonville, NY

1. No.

2. Absolutely not.

3. Sure, at the same costs as regular lasers.

4. Of course. In fact, I heartily recommend it. If you don't like being *that* grossly unfair, there are other ways to deal with the scum:

a. Every time he brings up an argument that really gets under the referee's skin, alter the victory conditions so that taking him out becomes more attractive; i.e., +1 point for anything done to him, cash bonuses (I recommend starting with \$500 and doubling it as needed) or even skill bonuses for the one who gets the kill.

b. Activate a hidden beacon in his vehicle. Preferably one that transmits his location and speed to everyone else's computers, giving them a +1 to hit the offender. If he points out that the above rule doesn't apply to people without computers, slap a +2 on him.

c. Continue with the duel and don't let him know that you hate him. Next time you play and he weasels his way into the game, collect up everybody's vehicles and pass them to everyone else, giving the weakest design to him, and his design to another player (if possible, the one who hates him the most).

d. Don't let him play until he wises up.

-CAO

Can an RGM's targeting radar be used to illuminate a target without firing the missile? This would be useful to check for jamming, radarproof armor or chaff dispensers linked to a radar detector.

-Ian J. Brotzman, England

Yes.

-CAO

1. What is a helicopter's electronics bay, and what happens when it is hit?

2. Under Superconductors in Uncle Albert's 2038 Catalog Update, it states that either power factors or maximum load can be increased by 10%. Is the bit about being able to increase max. load correct?

3. Can a zero-space turret be targeted?

4. Can a bazooka use a laser targeting scope?

5. Does Impact Armor come in midnight blue?

-Andrew Fraser, Inverness, Scotland

1. The electronics bay is located immediately behind the power plant (if a helicopter has one at all), and is considered to house the electronic components that take up space (cyberlinks, long-distance radar, sound enhancement, etc.). When it is hit, one component within the electronics bay takes damage, and the rest passes through to the next component in line.

2. The increase benefits both power factors and maximum load. The max. load note is for oversized vehicles.

3. Sure, just like any turret.

4. Yes.

5. Depends on where you get it.

-CAO

1. Say that a car has four bumper triggers (mounted L, R, F, B) linked to a turret, and a car hits the trigger. Does the turret fire in the direction that the weapon last fired, or does the weapon fire in the direction of the bumper trigger that was triggered?

2. In *Uncle Al's 2036 Catalog Update*, it states that antipersonnel ammo doubles damage to pedestrians. What does it do to other targets?

3. Is the logic unit for LR webs in *Combat Showcase* still official?

4. Is it possible to link a VMG in a turret to one in the front with a smart link, and put a cyberlink connected to the turret? Can you fire both with the +3 bonus?

5. You have stated that submitted arenas must fit on a single 21" x 32" *Car Wars* map sheet. I have designed an arena that I would like to submit. One problem, though. It will fit on a *Car Wars* map - with a little cut here, some tape there . . . will that work?

-Brian Futrell, Zebulon, North Carolina

1. It will fire in the direction it was last pointed.

2. Normal damage.

3. No.

4. Sure.

5. Sounds interesting . . . I'd have to see it to make sure, so send it in.

-CAO

1. How do these #!%@?! tire options work, anyway?

2. How do these #!%@?! body modifications work, anyway?

-A lot of people, everywhere

1. Sorry, my fault. Here's the order of modifications:

A. Take a tire (std. HD, PR, or solid).

B. Steelbelt it, if desired (+50% cost, +50% weight, +34% DP).

C. Add Radial (+150% cost, 20% weight, -1 DP) or Off-Road (+20% cost, +5 lbs. weight, no DP change) modifications.

D. Fireproof it (+100% cost).

E. Put it on a cycle (-50% weight).

Thus, we could take a solid tire (\$500, 75 lbs., 12 DP), steelbelt it (\$750, 112.5 lbs., 16 DP), make it Radial (\$1,875, 135 lbs., 15 DP), and fireproof it (\$3,750, 135 lbs., 15 DP). Expensive, but worth every penny. In case you're interested, a set of four of these will set you back \$15,000 and weigh 540 lbs.

2. Here's how to get your custom body put together:

A. Get a vehicle body.

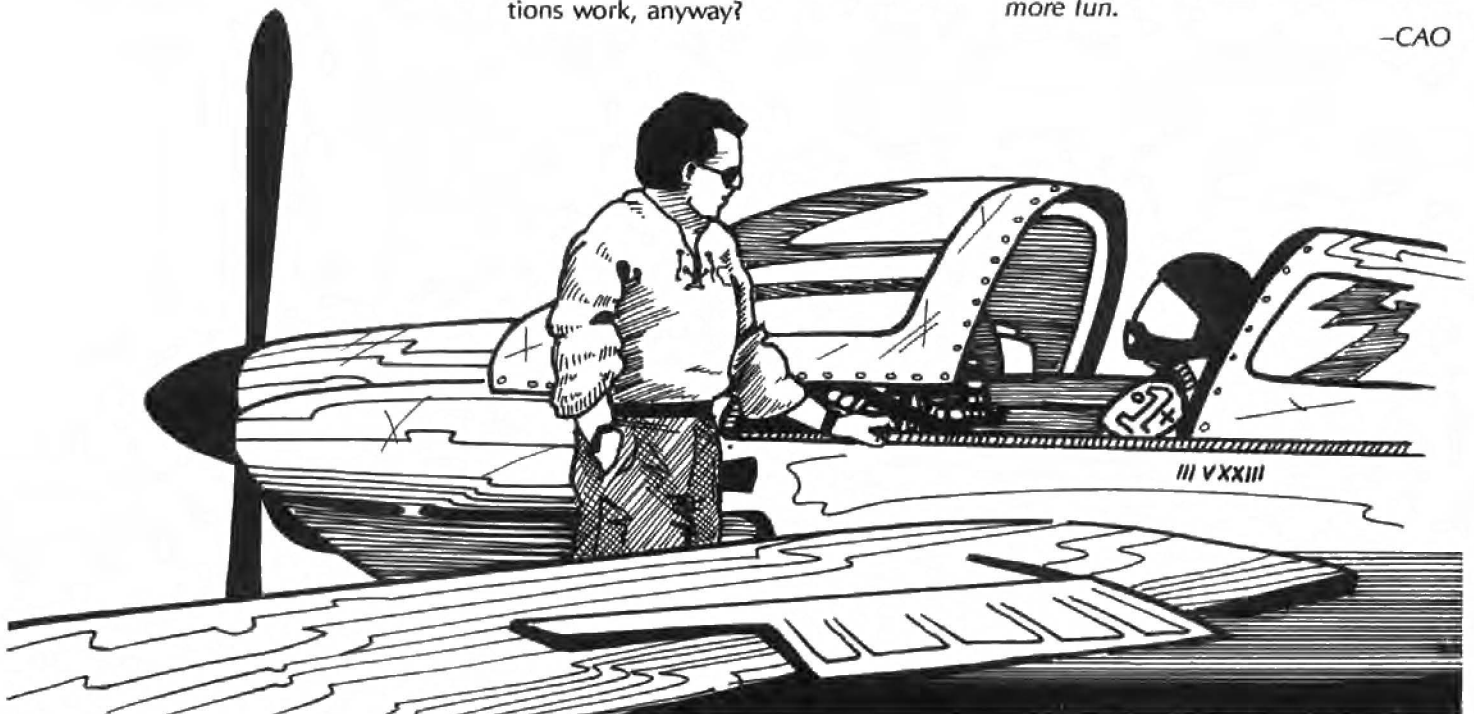
B. Make it a carbon-aluminum frame, if desired (+300% cost, -50% weight).

C. Take your favorite chassis and suspension mods based on the price found in B.

D. Streamline it (+50% cost, -10% spaces, rounded up), based again on the price in B.

Kind of like doing your taxes, but more fun.

-CAO



ADQ CLASSIFIED

ARE YOU LONELY? INTROVERT? Nervous? Insecure? Ugly? Humourless? Then don't join LEADA. Don't write to Phil Radley, 12 Wordsworth Close, Romford, Essex, RM3 7PD, England.

ANYONE OUT THERE? HELP!!! Duellist in Salt Lake area wanting to start or join a club. Contact Peter Mackinnon, 430 Princeton Dr., Midvale, UT 84047

ATTENTION: ALL DUELLISTS IN the Tyler, Smith County area please contact Phil Pearson: 5315 S. Broadway, Tyler, TX 75703. I am seriously trying to resurrect autoduelling in Tyler and the surrounding areas. My club is unofficial, but with your help, there should be no problems. Thank you.

I AM LOOKING FOR DUELLISTS and biker scum in the Camas/Washougal WA area wishing to fight and possibly form a club. Contact Scott Shoemaker at M.P. 0.03R Laurel Lane, Washougal, WA 98671

MINDLESS CONFLICT AND MORE! I want to start an Autoduel club in central Illinois. Anyone in Galesburg, Quad Cities, Peoria or Bloomington-Normal area, please write: Van B. Mahany, R.R.1 Box 69, Lafayette, IL 61449

LOOKING FOR DUELLISTS TO FORM a new AADA Chapter in the Caribbean Federation. Also looking for pen-pals to swap gadgets and designs. I'm also interested in Best of ADQ Vol. 1 and an ADQ 5/2 in good condition. Contact: Danial Cotte, Box 22039 U. P. R. Station, Rio Piedras, Puerto Rico 00931.

WANTED: ANY DUELLIST IN LUB-BOCK county and surrounding areas to form an AADA chapter. Also anyone to swap ideas and tactics. Contact: Wes Williamson, 4313 33rd St., Lubbock, TX 79410



DUELLISTS IN LOUISIANA AREA: If someone is looking to form a chapter or exchange designs, contact: T-Bone Washington (a.k.a. John Williams), 110 Great Plains Drive, Lafayette, LA 70506.

NEBRASKA/IOWA DUELLISTS wanted to join the Midwest's brightest chapter, NOVA. Get a free NOVA Newsletter, the Nightmessenger, just by sending a letter to NOVA, 2201 Joyce Cir., Bellevue, NE 68005.

LOOKING FOR DUELLISTS IN UP-state New York (Clifton Park). Please contact: John Binner, 6 Reed Lane, Clifton Park, NY 12065.

ATTENTION: ANY DUELLIST IN THE Framingham Mass. area. New 'kid' in town interested in meeting, competing, playing and campaigning with any autoduellist. Contact: Paul Haggard, 12 McPhee Rd., Framingham, MA 01701.

WOULD PAUL KIM PLEASE WRITE to Matt Tundo at: 37930 Moravian, Mt. Clemens, MI 48043.

WANTED: DUELLISTS TO FORM A chapter in the Renton area. To join or challenge the best in Seattle, contact: Dave Hans, 11606 SE 192 St., Renton, WA 98058.

THE MONOLITH IS LEANING TO THE left. Repeat: LEFT. Also, I'm looking for opponents. Presently, mine are laser dweebs. Contact: NECRON99, 13919 160th Ave. NE, Woodinville, WA 98072.

KANSAS CITY DUELLISTS COME forth! If you want to duel, contact me to join KAMAL (Kansas And Missouri Autoduelling League). John Seaton, 6936 NW Chapel Woods Ln., Kansas City, MO 64152.

BOSTON, MASS HAS NO AADA chapter! Contact Bruce Kane, 36 Chapel Street, Norwood MA 02062. Also: E-mail on InterNet at "bkane@lynx.northeastern.edu"

FOR SALE: AADA ROAD ATLASES and Survival Guides Volumes One through Six. Perfect Condition. \$40. Contact: James Maruschak, 243 Sweetmans Lane, English-town, NJ 07726.

WANTED: AUTODUELLING PEN-PALS FROM overseas (England, Australia, Europe or Japan). I would be more than eager to exchange ideas and information. Write to Timothy D. Jacques, 118 Hillside Dr., Bellevue, NE 68005, USA.

P.S. Aardvark, where are you? Your fellow freedom fighters await!!!

I AM LOOKING FOR OPPONENTS IN the Eagan/Apple Valley/Burnsville area. Also looking for a pen pal (send SASE, first few will be responded to) at high-school age and up. Also willing to trade vehicle designs and gadgets. Write: Dan Bailey, 4468 Cinnamon Ridge Circle, Eagan, MN 55122.

LOOKING FOR A FEW GOOD MEN. Dabron's Demons abandoned in Korea by Japanese backers, Planning run to catch ship home. Target rich environment. Excellent salvage opportunities, top rates for those with own vehicles. Mechanics needed desperately. Contact: Allan Seyberth, B co. 304th Sig #291; SF APO 96397.

AUTODUELLISTS OF THE CITY is a new AADA chapter mainly for San Franciscans. For full membership, you need to be a native or 10-year+ permanent resident (proof required). Write to: Philip L. Wing, P.O. Box 2379, San Francisco, CA 94126-2379.

WE STILL NEED MORE DUELLISTS to add to the midwest's hottest new duelling club, the Unbalanced Force. If you are interested, contact: Peter Schauer, RR2, Box 266, Boonville, MO 65233.

TWO DUELLISTS SEEK TO FORM or join a club in the Fox Valley area. Write: Todd White, 320 Maple Lane, Batavia, IL 60510

BADASS WANTS YOU! ANYONE in Contra Costa County (or anyone with the means of getting there) please call Josh Kirkpatrick at 415-932-2413 or 415-937-2585.

CAR WARS[®]

COMPENDIUM

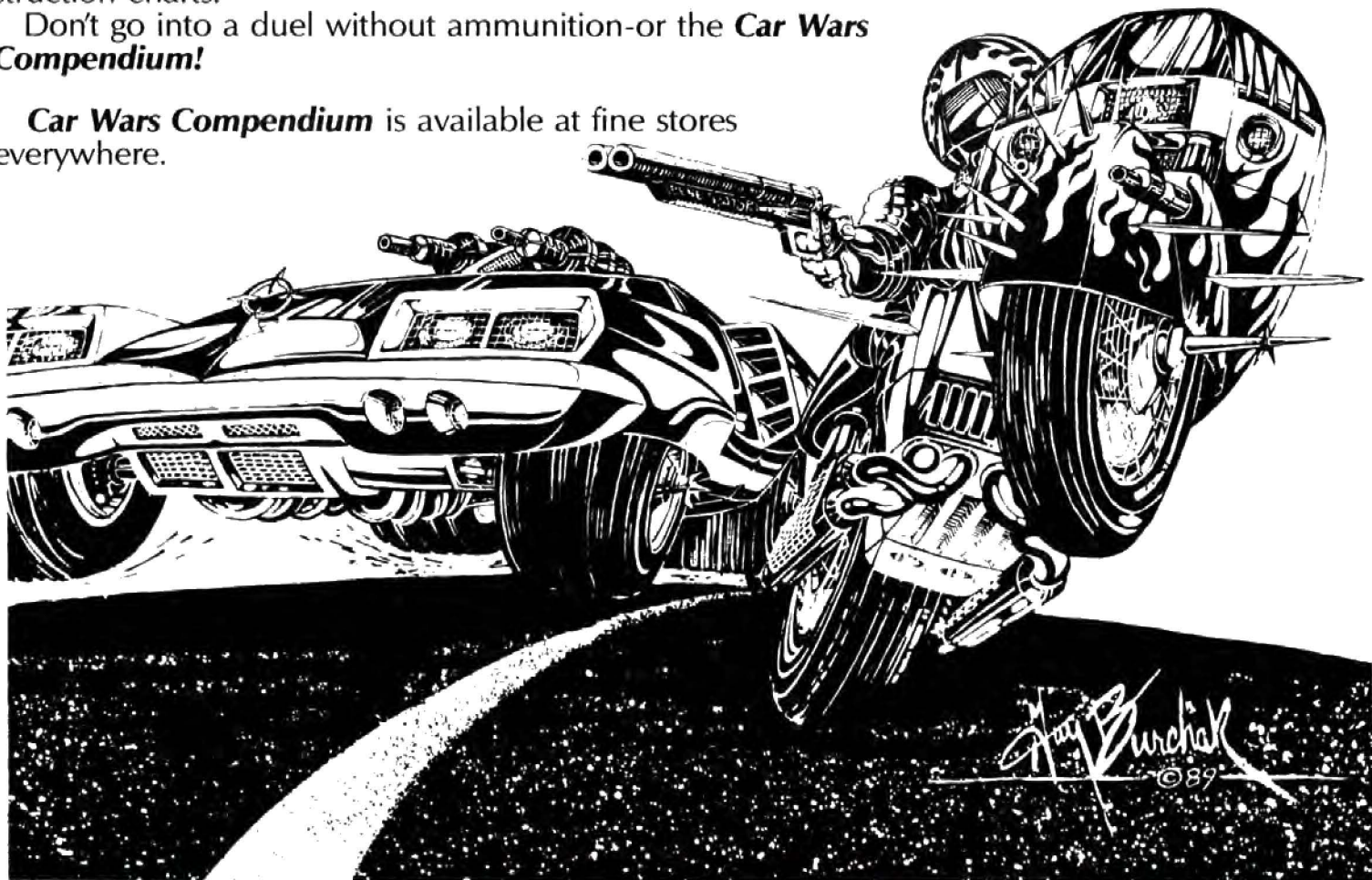
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