



PHOTOS JP MOLNAR

# CAR CONTROL

## The **SKID CAR** can help officers develop & maintain driving skills

**A**dvances generally come in small increments in law enforcement training because for many years the industry has relied on the same general tools to equip its officers. Certainly, there have been advances in electronics and less-lethal weapons, but for the most part, police officer training has remained unchanged, focused on reaction, not proactiveness.

Think about it. Training for defensive tactics, arrest and control, firearms, building searches, and other critical subjects tends to focus on what to do after something happens. Very little time is dedicated to preventive measures because the nature of the job is predictably unpredictable. If the opportunity for effective proactive training were to surface, however, the benefits of learning skills designed to

prevent danger to officers would be multi-fold.

### European Influence

The Skid Car is one such opportunity. It provides officers the unique experience of learning to anticipate car-control problems before they occur. Skid Car is nearly 20 years young and first took form in Sweden, where driver

training concepts have been analyzed in much deeper form than anywhere else in the world. According to Dane Pitarresi, president of Skid Car in the United States, the Swedes began examining traditional driver training methods in the 1980s and discovered

▲ An officer puts the Western Nevada State Peace Officer Academy's Skid Car through its paces.

the entire focus was on developing reactive skill sets that were perishable by nature. This isn't that far off from what occurs in most emergency vehicle operation courses (EVOC) in the United States today. Academies attempt to teach cadets very precise

## The Skid Car educates users on **skid avoidance** rather than **skid control**.

skills in a very short amount of time.

Given enough time and practice (two things typically absent from academy schedules), students can begin to become somewhat proficient with basic car-control skills. What happens, however, after

they leave the safety of the academy environment? Unlike a firearm they can take to any range or defensive tactics they can practice in their living room, very few options exist for officers to fling a vehicle around at angles and speeds that allow them to practice car-control at the ragged edge. Another issue: The skill required to control a vehicle at the edge must be automatic and delivered with precision. It's only natural for these perishable skills to erode as time goes by.

The Swedes realized this and set out to develop a new philosophy on driving. They focused on teaching a driver to recognize the available grip and control of a vehicle before they got into a situation that required critical car control skills. The result? The Skid Car.

#### **The Control Curriculum**

To test the Swedish theories and evaluate the Skid Car as a training tool, I contacted Katie Durbin, commander of the Western Nevada State Peace Officer's Academy. Located in Carson City, Nev., Durbin's academy produces top-notch officers who are quickly scooped up by agencies throughout Nevada.

In keeping with her commitment to her cadets, Durbin, along with Richard Finn, director of the criminal justice program at Western Nevada College (WNC), has jumped headfirst into acquiring a Skid Car after hearing of its benefits. Now, to be fair, I am one of Durbin's EVOC instructors, but I can say the monetary commitment required to obtain a Skid Car setup is not one to be taken lightly. According to Pitarresi, a typical Skid Car system using a Ford Crown Victoria runs about \$45,000, plus the car. It sounds steep at first, but when considering what the Skid Car can do in preventing future accidents and lawsuits, it's a relative bargain.

As an EVOC instructor, I was given the opportunity to not only experience the Skid Car as a student, but also as

an instructor. Pitarresi personally insists all instructors be trained by him or his staff for a full week before teaching with it. This education includes the philosophy of the Skid Car, how to build it, how to take it apart, what to teach and how to teach it. It also features making multiple laps in the car to understand the nuances of car control the system can provide. I was joined by Douglas County (Nev.) Sheriff's Deputies Will Lynch and Brett Hicks, and WNC Officer Gary Webster.

After spending a week in the Skid

to remain proficient at highly technical car-control skills with only a few hours practice on a parking lot around some cones is completely unrealistic. The Skid Car, on the other hand, teaches students to feel skids and car-control issues before they become big problems, which in turn teaches them to think proactively to prevent larger concerns. In order to accomplish this, the Skid Car has enough "grip" that if the student drives it smoothly and proactively, a smooth, controlled experience will be the reward. If, on the other hand, a student is rough with the



**The academy's Skid Car comes in a manageable package is not difficult to assemble.**

Car, I can honestly say it's the best tool to come along in my 17 years of EVOC training. It teaches students to do something other EVOC training modules have trouble with—develop insight and be proactive. It does so because it educates users on skid *avoidance* rather than skid control.

Pitarresi says the problem with most driver training, even that found at traditional racing schools, is that it focuses on teaching skills even the best drivers have trouble with. As he notes, there's a reason NASCAR, Formula One and other professional drivers practice every week before a race—they have to. Even *their* skills begin to diminish after a few days out of the car.

So, to expect the average police driver

steering, throttle or brakes, carries too much speed into corners, etc., the Skid Car will prove very tough to drive.

As part of the curriculum, students first experience the sensations of no traction with both the front and rear ends of the vehicle individually. The instructor accomplishes this by using the control box to raise either the front or rear of the car to create little or no grip. This reduces fears students have about what might occur if they lose complete control while piloting the Skid Car. By experiencing a spin with a complete loss of rear traction, and then a complete loss of steering control with no front grip, students begin to concentrate on thinking proactively about ways to keep those situations



**Dane Pitaressi (top) and WNC instructors (below) assemble the Skid Car.**

from occurring in the first place.

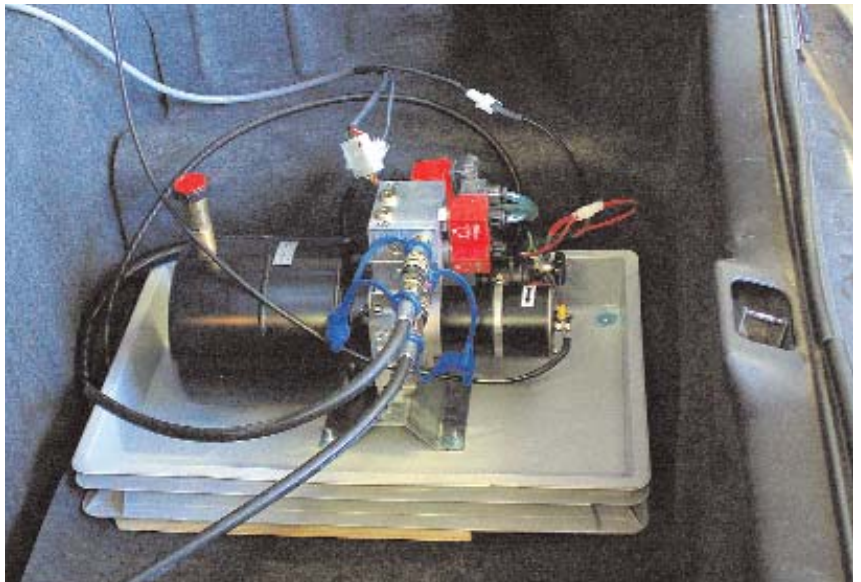
**Design Strategy**

Mechanically speaking, the Skid Car is

fairly simple. It uses a second set of wheels to raise and lower the vehicle's front or rear end. This minimizes the actual grip of the



**The front outrigger (left) and rear outrigger (right) are strong enough to hold the car completely suspended in the air.**



**The Skid Car's hydraulic pump assembly goes in the trunk. The pump raises and lowers the vehicle.**

vehicle's tires. A steel frame mounted to the lower control arms of the front and rear suspension accomplishes this. Attached to each end of the frame are two outriggers mounted perpendicular to the vehicle. At the corners of the outriggers are hydraulic piston assemblies with small wheels. Each outrigger also has a hydraulic line that leads to the trunk, where it's attached to a hydraulic pump assembly.

An electronic control line leads from the pump to the electronic control box inside the vehicle, aptly named "H.A.L." The box has several control options, allowing the Skid Car instructor to individually raise or lower the front or rear outriggers, which in turn

raises or lowers the vehicle's tires in relation to the road surface. The outriggers are strong enough to raise the entire vehicle off the ground.

The entire system is designed to be installed and removed by one person if needed. In my experiences throughout the week, the outriggers could easily be removed from the car, hydraulic lines and all, in about 15 minutes. Reassembly took approximately the same amount of time, so an agency that needs to transport its Skid Car on public roads can do so and still make the vehicle training-ready in a reasonable amount of time. Workmanship and attention to detail are at a level expected from Sweden, birthplace of



**H.A.L., the electronic control box inside the vehicle, allows a Skid Car instructor to individually raise or lower the front or rear outriggers.**

Volvo and Saab. The system is simple, straightforward and user-friendly.

### **Tailored Training**

A great attribute of the Skid Car system is that an instructor can literally tune it to the training surface. *Example:* Cool pavement in the morning will generally feature more grip than in the hot afternoon, when oil can surface. By utilizing the Skid Car's custom settings, an instructor can fine-tune the Skid Car so handling remains consistent throughout the day.

The system also can amplify problems produced by excessive throttle application, hard braking and turning, and other common driving errors. But the best part of the Skid Car system for law enforcement use is that it directly solves one of the biggest problems in EVOC training—the space issue. Because the car operates by adjusting grip available to the driver, it doesn't rely on speed. This means an instructor

can tailor the available grip to match the size of the training venue. If the area's small, you can set the Skid Car up to induce front- or rear-wheel skids fairly quickly. For large areas, you can dial in more grip to allow more speed.

The lot we used for our instructor class, and which also will serve for cadet training, measures only about 250x400 feet—postage size for most EVOC training. However, using the Skid Car, we can create any handling condition we want at speeds less than 30 mph and remain very effective. As Pitarresi puts it, the idea behind the Skid Car is to do the most with the available grip so you don't have to deal with the slip.

The Skid Car, as a learning tool designed to teach officers to think and anticipate car-control situations before they occur, is unparalleled. It forces a student to make adjustments to their driving behaviors in anticipation of a handling condition,

clearly punishes them for over-driving and rewards them for driving smoothly and anticipating. It's much easier to teach a student to think before acting than it is to teach them to correct a self-created problem.

In the driver training world, the Skid Car experience allows students to see car-control problems well in advance so they don't have to rely on car-control skills they simply don't possess or have time to perfect. The cadets at Durbin's academy definitely benefit from Skid Car training. It's something all departments should consider adding to their training regimen. A few hours in a Skid Car will go far in helping cadets and in-service officers get a real grip on anticipating the slip. **LOM**

**STATE TROOPER JP MOLNAR** has been teaching EVOC since 1991 for various agencies. He has also raced cars for 24-plus years, and has taught at numerous high-performance racing schools.