

# Ultimate Riding Skills

## Part 1—What Motor Officers Learn That Could Save Your Life

by Steve Larsen

### Week 1

It's dark and cold a few minutes before 6 a.m. waiting for Sergeant Mike Hein outside the Phoenix Police's South Central Avenue Station. As I begin to wonder if I'm in the right place, head motorcycle instructor Dan Nochtka comes out and buzzes me through the two security doors, offering coffee while we wait for Sgt. Hein to finish his phone call.

Hein is one of three training sergeants overseeing the Phoenix Motor Officers, the police term for officers patrolling on motorcycles. I'm here to join the three-week motor officer training class.

Several weeks earlier, I explained to Hein my desire to test two theories; first, are motor officers the most skilled riders on the road today? Second, if true, what does it take to get them to that state? I also wanted to know what they teach to new prospective officers, who can sign up and how hard is the class? Hein guided me through the department's public affairs group, eventually obtaining permission for me to attend this training class for prospective motor officers.

All officers wishing to join the motor detail must complete this class and pass a qualification test. To apply, you must have been a police officer for at least three years, have a clean record and pass a written test. Each applicant takes an oral interview and test. Only a few are invited to attend the training. This session has six students.

### The Bikes

Shortly after 6 a.m. we all sit down in a classroom for introductions and an overview of the coming three weeks. There are six recruits, Nochtka, two veteran instructors (Jim Morrison and Ricky Harbaugh) and one new instructor (Billy Sampson) and myself. After an overview of the three weeks, tips on what it will take to succeed and some expectation setting, it's out to the garage where instructor Jim Morrison gives an in-depth briefing on the standard Kawasaki 1000 Police Motorcycle (Photo 1). We quickly learn these shiny, well-equipped



Photo 1: City of Phoenix official police motorcycle—the Kawasaki KZ-1000.

bikes are *not* for us. Instead trainer bikes are assigned (Photo 2). These are police bikes retired from street use with fairings, saddle bags, sirens and lights removed to prepare them for the abuse they will take at the track. "We finally [decided to] put our mechanics through the same training our officers go through. Before, they couldn't understand why the bikes returned to the garage each night so beat up. Now they do," Jim Morrison explains.

As motor officers come in at the completion of their shifts and new officers leave the motorcycle garage to begin shifts, Nochtka talks to the recruits about riding in a police capacity. "Motor officers do a lot more than ride from Point A to Point B safely," Nochtka says. "It's chasing speeding cars, pursuing suspects across sand, mud, over bridges and down stairs and through culverts. We go where officers in cars can't." Veteran officer and instructor Harbaugh explains that the



Photo 2: Six training bikes await the first day's lessons at dawn. These bikes have been retired from active patrol duty and are stripped of the sirens, lights, windshields, fairings and heavy saddlebags full of radio equipment that standard police bikes have. Training will be hard on them.



Photo 3: The Phoenix Police Driver Training Facility occupies 17 acres and features a half-mile test track, an 80' x 1200' asphalt pad, and challenging dirt inclines and hilly areas. It's located between two cattle feed lots and the city's waste treatment facility and often smells like it.



Photo 4: Dropping bikes becomes increasingly more frequent as students struggle to get the "Bump and Go" exercise right and frustrations mount.

key to succeeding in the class is to listen and pay attention to the instructors. "Stay on what is being trained and master it," he says. "We teach in a 'stair step process,' everything builds from one step to the next. You can't miss a step, and the better you learn the early maneuvers, the faster you'll master the more difficult exercises later."

### Class Begins

Moving to the parking lot, we begin by learning proper techniques for mounting and dismounting. Right away, differences from civilian riding become apparent as factors such as keeping oncoming traffic in sight and your gun hand free enter the equation. Motor officers are most vulnerable when getting on/off. Phoenix Police mount from the left, like most street riders. However, AZ Highway Patrol officers mount from the right. We learn both methods. The Highway Patrol method has advantages when working on busy highways.

After lunch it's riding the parking lot. Much like a beginning MSF class, students learn the controls one at a time. It is similar to the MSF class in that the exercises (accelerating evenly, braking smoothly with one foot down, rapid stop, etc.) are the same. But it's vastly different in regard to the student/teacher ratio, the degree of personal attention and the number of times an exercise is repeated; that and a requirement for each student to be able to complete the exercise *perfectly*, every time.

Of the six students, two have never ridden a motorcycle before. Three have some limited experience (mostly off-road as kids) and one has nearly ten years experience and owns his own motorcycle.

"Prior riding experience can be good or bad," Nochta explains to me. "Sometimes

the best riders coming out of the class are brand-new to motorcycles; sometimes it's the ones with experience. More important is having the right attitude, listening and trying to do what the instructors tell you. Students need to accept that everyone progresses at a different rate. The biggest obstacle in this class is each student's frustration with their own progress, especially early in the program."

The high quality of this training class and the professionalism of its instructors have resulted in a national reputation. It also has a reputation for being difficult. Nochta admits to occasional injuries and a less-than-100% pass rate. He sees his role and that of each instructor as doing whatever they can to help students successfully make it through the course and do it safely. That said, if the instructors do not feel someone is 100% qualified, they will fight to keep them off the motor officer squad. "I'd rather have someone hate me for years and have them alive, than pass someone marginal and have them get themselves or someone else killed," Nochta explains.

As we conclude the first day, students are comfortable with mounting and dismounting, righting a downed bike, using the side and center stands, backing a bike up a grade, starting and stopping and rolling power on through a turn. Before dismissing the class Nochta reviews what is to come: expect to be bruised and expect aching muscles, especially the first few days.

"The nature of this program requires you take the motorcycle to 100% of its capability," he says. "It is essential for you to know exactly what your motorcycle will do; how far it will lean, how fast it will stop, how rapidly it will accelerate and how quickly it will fall."

Tomorrow it is off to the test track. We are told to bring protective clothing, including knee pads, elbow pads, vests, gloves and eye protection. Students are not to bring guns to the field, but must remember to bring a lunch. Each bike has been set up and adjusted for each student and serviced. They will be responsible for it the next two weeks.

### Day 2

The morning begins at 6 a.m. at the garage. Bikes are fueled and warmed up. Gear is checked and students are placed into a staggered formation which will be used for all future on-street riding. The track is a 45-minute ride from the station. This first day, instructors escort their charges across troublesome intersections, keeping the pack together. The training is held at the Phoenix Police Training Site (Photo 3), an extensive facility used for training officers on all police vehicles. This 17 acre facility features a half mile test track, an 80' x 1200' asphalt pad, a steep incline area and other dirt and hilly challenge areas. It's located between two cattle feed lots and the city's waste treatment facility and often smells like it.

At the track, the first exercise is the mandatory fall. We are told there is a strong probability of a fall during this class (a vast understatement), and learning the proper way to fall is important. After instruction (keep feet on footboards, hands on handlebars, lean away from the direction of the fall, keep your elbows in, let it drop and roll away, collect yourself, get back to the bike and turn off the ignition, then right the bike), Instructor Billy Sampson demonstrates the fall, roll and recovery by turning the bike into slower and tighter circles until it falls. Then each student is required to do the same.



**Photo 5:** The "Peel Off" exercise has students riding between two cones into a wall of cones, and introduces the concept of a "teardrop" turn to utilize all available space, and to avoid hitting cones with the rear wheel.



**Photo 6:** The "Double Circle" exercise combines two 360° circles. Students learn to "look where you want to go" to make this exercise work.

Of course, the desire to stick a foot out is difficult to overcome, but soon all pass.

### Falling

As it turns out, the mandatory falling exercise is highly useful, as students end up dumping their bikes at least 20-30 times each during this first track day. One of the first places this happens is the Circle in the Square Exercise (Figure 1). This exercise helps students learn coordination of brake, clutch and throttle while turning the bike in a small circle. As the students attempt to ride a 360° circle within the painted lines they begin to hear what will be oft-repeated calls from instructors; "keep your head up, look where you want to go, use all of your available space." The exercise is nearly one-on-one as the four instructors give highly personal attention to each of the six students.

### Learning to Lean

Next up is scraping the foot boards. This exercise is designed to not only get you to lean the bike all the way down, but to have fun keeping it there. Each student rides in a left circle, gradually leaning the bike and adjusting speed and rear brake, until the foot boards begin to scrape. The goal is to keep the boards scraping for a majority of a 360° circle, before switching and doing it in the other direction. Tentative at first, riders soon generate scraping sounds and sparks as foot boards grind away on the asphalt.

Next up is the "Bump and Go Exercise." Easy enough to describe, it takes much longer to master. The exercise combines steering input and bike lean while maintaining balance as you turn and accelerate from a near stop. A single cone is placed on the track. Students ride up to the cone at low speed, make a hesitation stop and gently touch the cone with the front wheel.

Then, without putting a foot down, the rider drops a shoulder in one direction or the other, while turning the front wheel in that direction, engages the clutch and makes a 90° turn away from the cone. Dropping bikes becomes increasingly more frequent as students struggle to get this exercise right (Photo 4).

Around 2 p.m. an exhausted and somewhat frustrated group of riders heads back to the Central Avenue garage.

### Day 3

After servicing the motorcycles and riding in formation to the track just after 6 a.m., Day 3 begins with an hour of review and practice of day-two exercises. We also lose our first student. One officer injured himself on Day 2 and, while hoping to continue, realized on his ride from the garage to the track, that he could not—now we are five.

As it turns out, being able to do yesterday's Bump and Go Exercise is fundamental to the next set of exercises (Figure 2—Peel Off and Figure 3: 90° Cornering). Turning a motorcycle left or right in a confined space is an evasive maneuver and a skill much used by motor officers. Whether for avoiding collisions or chasing suspects, effectively making 90° turns is a critical skill.

The first exercise, the Peel Off (Photo 5) has us riding between two cones into a wall of cones directly ahead. The objective is to quickly turn the bike to one side, then the next, without killing the cones in front of us or the ones to the back as we turn. This exercise also introduces the concept of a "teardrop" turn to make use of all available space. A teardrop turn is accomplished by first turning the motorcycle in the opposite direction of the way you wish to go. This changes the path of the rear wheel. Because the motorcycle is an articulated vehicle,

hinged so to speak, this allows maximum use of the available space by minimizing the trail over the rear wheel. Failure to execute the teardrop promptly wipes out the cone you are trying to go around. Once the Peel off is working at least part of the time for most students, it's on to 90° cornering.

The last exercise of the day puts the two exercises into a mini course. This requires a series of peel offs and 90° turns. As the students circle the course, instructors watch and call out encouragement, "Look where you want to go." In addition, instructors want to be sure to catch and stop bad riding habits early, such as counter leaning, over gripping the throttle, putting a foot down or extending the knees outward.

### Day 4

After arriving at the track from the garage, the day begins like each previous track day with an hour of riding the previous day's exercises. While instructors review notes and feedback on each students' previous day's efforts, students ride on their own. Occasionally they get help from each other or call an instructor over for help.

The first new exercise today is the 360° circle -- with cones (Figure 4). It begins with cones placed in an 18-foot diameter circle. As the students progress, the cones are moved in to 17 feet and finally to 16 feet. These are large cones that appear to attack hapless riders navigating between them.

Just when the single circle begins to feel comfortable in both directions, it's on to the Double Circle Exercise (Figure 5). The double circle combines two 360° circles with cones and emphasis is placed on "looking where you want to go." Students learn that head and eye position are key to making this exercise work (Photo 6).

As in all exercises, the four instructors



Photo 7: The 180° turn, or "J Turn" demands riders reverse direction in a confined space and provides plenty of exercise picking up dropped bikes.



Photo 8: The author scatters cones attempting a left-hand J-Turn. The instructors are unanimous that this is the most difficult exercise.

call out critiques and encouragement. "See, you looked at that cone, didn't you? And you hit it."

Morrison has been teaching the class for 15 years and says, "Every once in a while something surprises me, but not often." The double circle exercise is one that will be included in the qualification course at the 18- and 17-foot dimensions.

### J-Turn

Next up is a 180° or J-Turn (Figure 6). Motor officers must be able to turn in highly confined spaces, such as a single traffic lane or a median. The average lane on a city street is between 12-feet and 14-feet wide. This exercise begins with the student stopped at the short side of the exercise cones. They ride into the exercise and make a 180° turn and straighten out to avoid making a 360° turn and wiping out the cones. This exercise provides plenty of opportunity for instructors to reposition cones and students to repeatedly pick up dropped bikes (Photo 7). As it turns out, the key technique to mastering this exercise is the teardrop turn maneuver learned yesterday. When entering the left 180° U-turn, for example, the student begins in the very center track and then slightly turns the bike to the right, before lowering his shoulder to the left and bringing the bike around through the turn. One's natural inclination—to begin on the far right edge to give you the most room—does not work.

The amount of individual instruction and coaching given the ratio of four instructors to five students is not only helpful, but probably essential. This exercise sees several students reaching a high degree of frustration as they fail repeatedly. Nocht explains to me that every student has a "light bulb day." However, it rarely happens until after the J-turn exercises.

"You never know when it will happen,

but it does for everyone who passes the course," he says. "Suddenly things just start to work, and it actually becomes fun. They relax and from that point on, they have the genuine confidence to complete the class." It's pretty clear it hasn't happened for this writer, as I scatter cones wildly while coming out the back side of the left hand J-Turn (Photo 8). It is only later that I learn the instructors are unanimous in calling this the most difficult exercise in the class.

### Running Figure Eights

Just at the height of frustration we leave the J-Turns and move to the Running Figure Eights. This exercise turns out to be both helpful and lots of fun. It builds on the J-Turn's left and right-hand turning skills, but there are far fewer cones to worry about. The need to put the turns back-to-back and watch your timing makes it fun. The hint of utilizing all of the available space reminds me of the box routines I ride with the Arizona Motorcycle Precision Drill Team. Pretty soon everyone is smiling. As you weave figure 8s through the cones, the depth of the exercise remains constant, but the width of each turning area begins to decline. Starting at a dimension of 14 by 18 feet it moves in to just 14 by 12 feet at the end.

To really spice things up, instructors put two students into the exercise at the same time, starting one slightly ahead of the other. Competitive juices kick in and we race to catch the bike in front of us or stay ahead of the one behind. The exercise ends with sweaty, grinning exhausted students and bikes with steaming clutches and spongy brakes.

### Day 5

As the last day of the week begins, I'm more convinced than ever that motor officers represent, as a group, the best, most proficient riders on the road. Not to take

anything away from track day racers, but racers have far less to worry about; everyone is going in the same direction, the road is free of debris and other riders on the track, while not totally predictable, have a level of riding proficiency and awareness you can count on. Motor officers, like most of us who ride the streets on a regular basis, face inattentive drivers who can't see us, road hazards and unpredictable weather. While riding the same streets we do, motor officers carry out their jobs—patrolling our streets, listening and responding to requests over their radios and reporting on accidents.

### Formal Evaluation

As we get to the track on Friday morning, all of the previous day's exercises are set up and the morning is filled with drilling and practice on all of them. Classes this first week were all about developing mastery of the motorcycle at low speed, and students and instructors work to make sure they have each exercise down.

On this final day of the first week, the afternoon is spent with instructors meeting individually with each student and reviewing an extensive written evaluation they've prepared. Detailed notes and formal evaluation forms have been kept on each student's performance for each exercise during the week. In individual meetings, they are given a candid appraisal of their progress, their strengths and weaknesses, and what they will need to work on in week two.

### Next Month

Next month we cover higher speed maneuvers, uneven surfaces, driving off a cliff and the first qualification testing. Only students who pass the timed qualification exercises on the training bikes are allowed to continue to Week 3, where the training moves to the street and from training bikes to fully-equipped police motorcycles. 🍀

