

# Group Riding Guidelines for Street Bikes, Part 2

## Hand Signals

Certain hand signals are optional in group riding: turn signals on the bikes ahead will usually advise a rider without a CB that a turn is coming up, for example, and hand signals in a turning situation may actually add to the danger for some. However, other hand signals are extremely helpful to the rider who has no other means to communicate.

The most important two hand signals for a non-CB equipped rider are these: pointing to an obstacle in the road, warning the rider to avoid it; and pointing to the tank. The rider who has no CB should be advised that, no matter what his reason, if he points to the tank on his bike, he will be telling those following him (especially the Sweep) that he needs to stop as soon as possible. This may be because he needs fuel; because he wants to make a “potty stop”; because he is having a mechanical or equipment problem; because his co-rider is uncomfortable; because he has a medical problem; because he is having a crisis of confidence; or for any other reason at all. Such a signal will be relayed to the Lead Bike. If a convenient place is available, the Lead Bike may orchestrate a stop by the whole group. If not, the affected bike can count on the Sweep to stop with him to try to help him.

Other hand signals may be useful to bikes not equipped with a CB during a group ride. These include:

- *Back off* -- Palm of left hand shown to group, pushing motion toward rear of bike
- *Ready to ride* -- “Thumbs up” high enough in air to be visible to Lead Bike
- *Single-file formation* -- One finger points to the sky on top of the helmet (sometimes entire flat hand at 90 degrees to top of helmet)
- *Slow down* -- Left arm is held out straight, then goes up and down
- *Smoky alert* (police or emergency vehicles) -- Hand taps top of helmet several times
- *Staggered formation* -- First finger and little finger point to the sky on top of the helmet (“Hook ‘em, Horns” sign)
- *U-turn* -- Left hand makes circle in air over head

## Universal 'Caution/Warning/Danger' Signal

Though it is not, yet, a universally agreed to signal, it should be. That is, whenever a rider observes a potential threat, or wants to announce that he may need to change speeds quickly, that rider is obliged to tap his front brake lever twice in rapid succession. Any rider following that bike needs to do two things when he observes that signal:

- slow down in order to widen his following distance

- repeat the signal to insure that bikes following receive the warning

In the event that no emergency or rapid speed change is needed or occurs within a minute or so of seeing that signal then all bikers can assume the potential emergency has passed and can resume normal speeds and spacing. Nothing was lost yet everyone took defensive postures, just in case. That, after all, was the purpose of the signal in the first place.

### **Exceptions to Normal Guidelines**

The often-heard rule, “Ride Your Own Ride,” means that any guideline for group riding can and should be ignored when it doesn’t make sense. Determining whether this is the case and acting prudently is each rider’s individual responsibility at all times.

Under normal circumstances, the Lead Bike will choose a lane, will determine the speed at which the riders are to travel, will suggest the formation which makes maneuvers most safe, and will navigate.

Common exceptions to these guidelines occur with a rider who is not yet experienced with group riding. If a maneuver looks too dangerous or awkward for the new rider to complete safely, he or she should do what he needs to do to protect himself and avoid an accident. This may mean passing up a turn or taking it very slowly, or parking somewhere not with the group, or going more slowly through a curve than the riders ahead of him.

### **Each rider commands his entire area within a lane and may move to left or right in it as required.**

Another exception: the Sweep may not travel in the same path as the rest of the group. If, for example, a two-lane road is narrowing so that a lane is about to be lost, the Sweep will frequently “close the door” by moving out of the group’s staggered formation into the lane which is soon to disappear. This is to prevent a four-wheeler from trying at the last minute to pass part of the group and then have to cut into it when the pavement runs out. Even if the riders near the back of the group observe that the Sweep is no longer in the position where he has been riding most of the time, they should maintain their own place in the group.

### **Rubber-Band (“Yo-yo”) Effect**

Reaction time for a motorcyclist when confronted with an unexpected threat is, on average, about one second. If the need to react is anticipated (such as when a turn has been announced), then riders can usually react within about half a second after the bike ahead begins to react. When a group of riders change speeds very gradually, however, it usually takes two or three seconds for a rider to recognize this and begin to change his speed to maintain his position in the group.

This doesn’t sound like much time, but experienced group riders manage their risks reasonably well with a minimum one-second interval between each bike and a minimum two-second interval between bikes that are traveling in the same track. When the group has more than six bikes in it, however, gradual changes in speed within the group can become tricky.

When a Lead Bike begins to accelerate, the second bike doesn't instantly start to travel at the faster rate. Instead, a gap grows between them while the second bike is reacting -- and it continues to grow until the second bike is fully up to the increased, stable speed of the Lead Bike. Clearly, once the speeds are the same, the gap will remain the same size. However, since most groups prefer to keep a one-second minimum interval between bikes (two seconds between bikes in the same track), the new gap caused by the Lead Bike's acceleration may be larger than is desired. When this occurs, the second bike must go faster than the first one for a brief time in order to "catch up."

If we assume that the Lead Bike speeds up from 60 to 70 mph over a period of two seconds, the second bike will have to ride at 75 mph for two seconds (after his reaction time passes) in order to close the gap. Then he will take another one second to decelerate back to 70 mph to create a gap of the proper size.

If there were only two bikes in the group, this example is easy to follow. But when the group is larger, and the bikes involved are riding further back in the pack, the "rubber band" effect can be especially dangerous to all bikes from the middle of the group to the Sweep.

For example, the third bike in the group has this problem: About two seconds after the second bike has begun to accelerate, the third bike responds. Now, however, the second bike is moving at 75 mph rather than at 70 mph like the Lead Bike. The third bike must use even more effort to catch up to the second bike than the second bike did to match his speed to the Lead Bike's new speed, if the gap is to stay relatively constant. He will have to move at 75 mph for four seconds, not two, to catch up. The fourth bike will have to accelerate to 80 mph!

In a group of only six motorcycles, the last one will find the gap between himself and the fifth bike has grown to 143 feet before it begins to close, once he starts to speed up, given these average reaction times. And it will be at least 11 seconds after the Lead Bike first began to accelerate before the sixth bike does so.

Now, imagine what happens in the group if, while this is taking place, the Lead Bike must apply his brakes! This rubber-band effect becomes extremely important if the Lead Bike happens to make an abrupt and major change of speed at certain critical moments, such as when approaching a sharp turn or a tricky curve.

The rubber-band effect can be reduced by following these guidelines:

- Lead Bike changes speed more gradually
- Lead Bike announces speed changes over the CB radio
- All riders watch farther ahead than just the bike immediately in front of them in order to notice and to react quicker to changes in speed
- All riders restrain the impulse to "crank it up" in order to quickly re-establish normal spacing

- Lead Bike does not increase speed within 15 seconds of entering a curve which may require braking or some slowing down to maneuver it safely
- All riders abandon the one-second spacing rule when riding twisties

This problem has been described with respect to the acceleration of the Lead Bike. When the rubber band effect is considered in reverse -- that is, when the Lead Bike is suddenly braking -- these tips on how to avoid the rubber-band effect can be even more important. Those who ride as Lead Bike for their group should be aware of the importance of avoiding sudden changes in speed if at all possible, so as to reduce the risks to those following.