



HARLEY OWNERS GROUP

ROC CHAPTER #8618

SAFE RIDER SKILLS TRAINING 2021



FIVE MOTORCYCLE SKILLS - VIDEO

<https://youtu.be/b2dwAtrpsE0>



PROGRAM



RIDING GEAR



OBSERVATION SKILLS



POSITIVE RIDING



MANAGING SPEED



LIFTING A DROPPED MOTORCYCLE



SLOW RIDING SKILLS



ADVANCED SLOW RIDING



RIDING AT SPEED



COUNTER STEERING



BRAKING TECHNIQUES



CORNERING TECHNIQUES



PRACTICAL SESSION



RIDING GEAR

FULL GEAR

Crash helmet. Get into the best one you can buy. It's the single most important piece of protective clothing you can wear on a bike.

Gloves are essential. It's your hands that hit the road first when you come off. Keep them covered with thick leather gloves for protection and better control in cold or hot weather.

Warm protective waterproof jacket. It costs a little extra but it could save your hide. There are safer ways to act cool.

Thick strong trousers. Protection against cold — protection in a spill.

Strong boots or shoes. These give more positive control of brakes and gears. And protect the feet.

FOOL'S GEAR

Bonehead

Hands au naturale. You could even say — in the raw.

Skinflint.

And you thought housemaids knee looked rough.

Footloose. Feels good and cool. Until you come off.



It's a state of mind.

SAFETY GEAR

- **Helmet**
- **Gloves**
- **Footwear**
- **Jacket**
- **Reflective gear**
- **Protection from elements**



HELMET



FULL FACE



MODULAR



OFF-ROAD



SKULL CAP

➤ SANS approved

❖ There are 3 standards governing helmets:

1. The US government DOT standard.
2. The Snell standard which is a private US organization.
3. The Economic Community of Europe (ECE 22.05) which is also applicable to helmets sold in South Africa



HALF



OPEN FACE

➤ Ventilation

➤ Snug but not tight

➤ Can it be easily removed when required

➤ Chin strap one finger tight

➤ **DO NOT!** Remove the helmet of a rider involved in an accident until it is verified that there are no head or neck injuries !



DUAL-SPORT

GLOVES

- Extra protection in exposed areas
 - ❖ Palms, knuckles, wrists
- Comfortable fit
- Seasonal



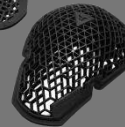
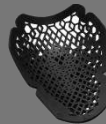
FOOTWEAR

- Can you safely and comfortably operate your controls?
- Sufficient grip
- Ankle protection
- Reinforced toes
- Low Heels



RIDING JACKET

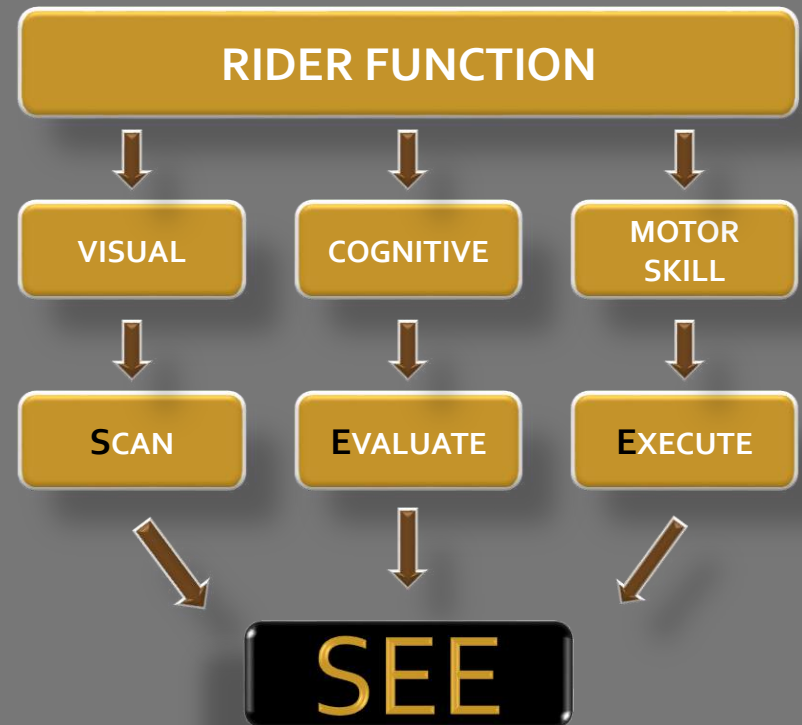
- Impact resistant
- Abrasion resistant
- Reflective
- Body Armour



- Construction and fit
 - ❖ Is it reinforced in the high risk areas ?
 - ❖ Snug fit
 - ❖ Ventilation
 - ❖ Protection from elements



OBSERVATION SKILLS





SEE - SCAN EVALUATE EXECUTE

Scan

Your goal is to visually recognize anything that could affect your control and safety.

- Look 12 seconds ahead - Approximately 5 car lengths
- Observe blind spots - Yours and other road users
- Identify possible hazards that you may have to react to:
 - ❖ Traffic lights, signs and road markings
 - ❖ Obstructions
 - ❖ Accidents
 - ❖ Children and animals
 - ❖ Vehicles
 - ❖ Road conditions



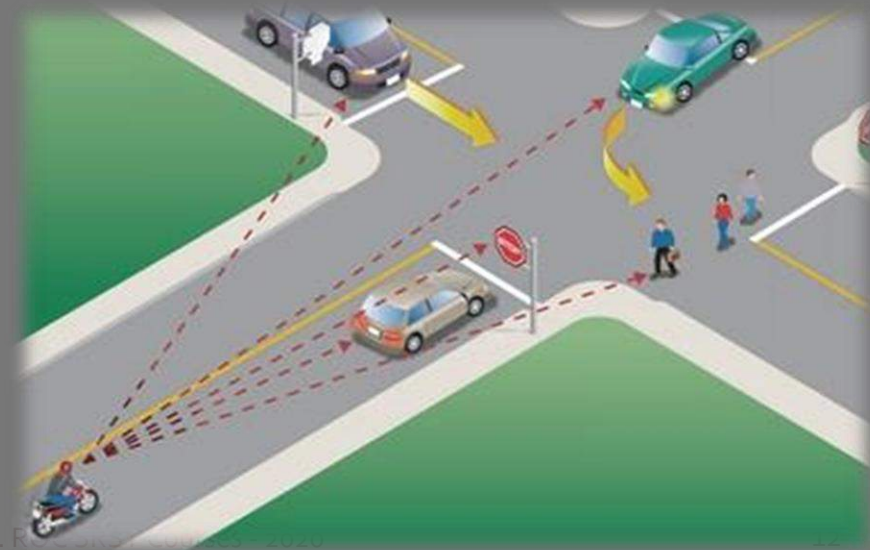
SEE - SCAN EVALUATE EXECUTE

Evaluate



To be assertive and proactive:

- **Process all visual information**
 - ❖ Anticipate and be ready
- **Calculate the hazard/risks if any**
 - ❖ To get the best results, predict the worst outcome
 - ❖ React or adjust as required



SEE - SCAN EVALUATE EXECUTE

Execute



At times you may have less than a second to react, being decisive is key.

- **Conduct the action in the safest possible manner for yourself.**
- **When encountering a risky situation, possible actions are:**
 - ❖ **Communicate** - You could honk your horn, flash your high beam or even wave if possible. This is your most passive option because you are hoping someone else will respond to you.
 - ❖ **Adjust speed** - Can you stop in time? If so, is someone riding your tail? Could you accelerate through and beat the threat?
 - ❖ **Adjust position** - Can you steer around the obstacle?
 - You could do this while accelerating, this is an on-the-spot judgment call

2-4-12 RULE



When Riding at Speed

- At least **2** seconds between you and the vehicle ahead

When Slow Riding

- **4** seconds between you and the vehicle behind you
- Scan the road **12** seconds ahead

- ❖ Traffic lights, signs
- ❖ Road markings
- ❖ Obstructions
- ❖ Accidents
- ❖ Children and animals
- ❖ Vehicles
- ❖ Road conditions



OVERTAKING SEE



When deciding to overtake.

- **Is driver aware of your presence?**
 - ❖ Can they see you in their mirror?
 - blind spot?
 - ❖ Did they pull slightly to the left?
 - Always a good sign that they are aware of your intention.
- **Check your mirror**
- **Indicate**
- **Shoulder check**
- **Action**
 - ❖ Get out of the blind spot as quickly and safely as possible
 - ❖ Revert to **SEE**



THE BLIND SPOT



THE BLIND SPOT



Blind spots are those areas around a vehicle where the driver or rider cannot directly see. All vehicles have blind spots, including motorcycles. Blind spots are even bigger for larger vehicles.

➤ **Common areas for blind spots include:**

- ❖ The area between what you see when looking forward and what is in your rear view mirror
- ❖ The area that is hidden from view because of your vehicle's bodywork when looking in your mirrors
- ❖ Different vehicles may have different blind spots based on their setup or design, such as blind spots caused by window pillars, head restraints or mirror settings.

THE BLIND SPOT



Some ways that motorcyclists can reduce the likelihood of being involved in a blind spot accident include:

- **Avoid riding in blind spots** – Ride in front or behind a vehicle, rather than to the side of the vehicle. A motorist's blind spots include to the left and right rear of a vehicle.
- **Drive defensively** – Constantly scan the area in front of you, back off to give yourself some extra space and try to anticipate the actions of other motorists
 - ❖ **Back off** – So that you have more time to react.
 - ❖ **Wear brightly coloured clothing** – Make yourself visible
 - ❖ **Keep headlights on** – Improve visibility by using your headlights
 - ❖ **Pass other vehicles quickly** – Ensure you are in a blind spot for as little time as possible



POSITIVE RIDING SKILLS

POSITIVE RIDING



- Head position – chin up, eyes level
- Look at where you want to go
- Arms loose and weight off the handlebars
- Avoid braking in corners
 - ❖ Use the power of the motorcycle
- Plan your lines

POSITIVE RIDING



➤ **Maintain traction**

- ❖ Avoid wet spots
- ❖ Look out for oil patches
- ❖ Watch for painted road markings
- ❖ Avoid gravel
- ❖ Manage your angle

➤ **Position yourself**

- ❖ Improve your chances of being seen
- ❖ Improve your view
- ❖ Give information to influence other road users



SPEED MANAGEMENT



MANAGING SPEED



If you must change speed; it is usually better to accelerate than to brake – but always use your own good judgement

- Constantly **S**can, **E**valuate, **E**xecute (**SEE**)
- Ride at the speed you are comfortable with
- Relax and be alert
- Head up, eyes level
- Be firm on the brakes and then release and tap
- Acceleration places weight to the rear
- Deceleration places weight to the front
- Don't change speed while cornering if you can avoid it



LIFTING A DROPPED MOTORCYCLE



HOW TO PICK UP A BIKE - VIDEO

<https://youtu.be/ndRF64N-PmQ>

Squat down low

-Use legs/butt

-Don't use your back





SLOW RIDING SKILLS



SLOW RIDING BASICS



Speeds up to 25 km/h

➤ Application:

- ❖ Practicing Motorcycle Control
- ❖ Tight Turns
- ❖ Slow Turns
- ❖ In Slow Traffic
- ❖ U Turns
- ❖ When parking
- ❖ On Gravel
- ❖ On Grass

SLOW RIDING TECHNIQUES



- **Friction Zone**
 - ❖ Clutch control
- **Three way Control**
 - ❖ Clutch/Rear Brake/Throttle
- **Head & Eyes**
 - ❖ Look up
 - ❖ Look in direction of intended travel
- **Do Not !!**
 - ❖ Use front brake
 - ❖ Look down



FRICTION ZONE



The friction zone is the section of the clutch lever's travel between the engagement point and the point where the clutch is delivering all the engine's power to the rear wheel. "Clutch Slip"

- Engage the clutch and put the motorcycle into 1st gear
- Position your foot on the rear brake pedal
- Begin by slowly letting the clutch out and begin gently feeding the throttle until you feel the motorcycle starting to move. Keep the clutch in that position and throttle up some more to maintain the friction zone
- Feather the rear brake so that it holds the bike back slightly

(Use of rear brake helps to stabilise the Motorcycle)

FRICTION ZONE



➤ **You now have 3 ways to control your motorcycle**

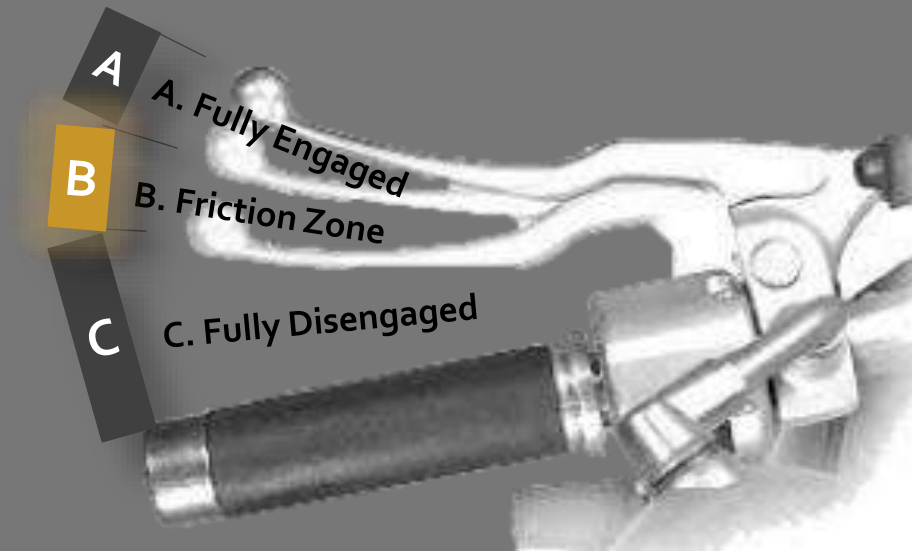
- ❖ The clutch
- ❖ The throttle
- ❖ The rear brake

➤ **Concentrate on the following**

- ❖ Keeping power to the rear wheel
- ❖ Stay in the friction zone
- ❖ Feed a little throttle
- ❖ Gentle on the rear brake

➤ **Exercise:**

- ❖ Slow Race



SLOW RACE



DO

- Go as slowly as you possibly can and focus your eyes straight ahead at least 1,5 metres ahead.
- Your speed should be less than 10km/h

DO NOT

- Look down at the handlebars or the ground in front of you
 - ❖ If you look down you may put your foot down and possibly drop your motorcycle

START



SLOW RACE



DO's

- **If you begin to lose your balance and feel your motorcycle may tip over**
 - ❖ Release the clutch a bit more and give it a slight bit of throttle
 - The motorcycle will straighten back up magically (Promise)
- **After regaining your balance**
 - ❖ Re-establish the friction zone (Clutch, Brake and Throttle)

START



SLOW RACE



REMEMBER!

- Three-way control
- Head & eyes up
- Do NOT use the Front Brake

START



SLOW TURN



- **Speed less than 25 Km/h but more than 8Km/h**
- **Steer with handle bars**
- **Three way Control**
 - ❖ Clutch/Rear Brake/Throttle
- **Head & Eyes**
 - ❖ Up
 - ❖ Towards intended direction
 - ❖ The further back your eyes, the tighter the turn
- **Shift Weight**

FRICTION ZONE REMINDER



Three Way To Control





ADVANCED SLOW RIDING



SLOW RIDING REMINDERS

REMEMBER!



- **Head & Eyes – UP and in DIRECTION OF TURN**
- **Three way control**
 - ❖ Clutch
 - ❖ Throttle
 - ❖ Rear brake ONLY
- **Steer the motorcycle**
- **Above 10Km/h**
- **Advanced Exercises**
 - ❖ Figure 8
 - ❖ The Intersection





RIDING AT SPEED



RIDING AT SPEED



The sense of speed generally seems much higher on a motorcycle due to the following:

- There is no dashboard, no roof over your head, no doors to block the view from the side and no windshield, it's you against the elements
- You have the realization that there really is nothing between you and the road and that makes just about any speed on a motorcycle feel faster and daring
- For motorcycle riders at 60Km/h there is really not that much wind, but on a highway at 120Km/h you will feel like you are in a wind tunnel.
 - ❖ Add a little gusty headwind to that, and the feeling is even more real.
- With experience, wind sensitivity goes away and possibly be something you will learn to appreciate.

RIDING AT SPEED



- **Don't fight the wind**
 - ❖ Stay relaxed with your hold on the handlebars
 - ❖ Keep from locking your arms and the motorcycle will adjust to the wind
 - ❖ If you are getting wind buffeting your screen/fairing may need adjustment
- **Practice your core riding skills until they are second nature**
 - ❖ Use the **2-4-12** rule
 - ❖ Use **SEE**
 - ❖ Head up and eyes level
 - ❖ Perfect your cornering techniques
 - ❖ Hone your braking skills
- **Ride within your capability**



COUNTER STEERING



COUNTER STEERING



- Use upward of 40km/h
- Push Right – to go Right
- Push Left – to go Left
- Head and Eyes - Up and in the direction of travel
- Brakes - **NO BRAKES IN TURN!** (Unless you know what you are doing)
- Practice your Counter Steering and Line Calculation
 - ❖ Enforce habits even at sub-optimal speeds

Trail braking is a riding technique where the brakes are used beyond the entrance to a turn (turn-in), and then gradually released (trailed off).



BRAKING



BRAKING ON ASPHALT



- **Motorcycle must be straight up and front wheel in line with rear wheel**
- **Front Brake 70% - Rear Brake 30%**
 - ❖ If you have Anti-Lock Brake System (ABS) use full force on both front and rear brakes.
 - NOTE : ABS does not generally activate under 25Km/h
- **Squeeze the front brake – do not grab, if you lock up keep tapping (squeeze and release)**
- **Gear down as you brake**
 - ❖ 70% front / 30% rear is difficult to gauge but gives the rider an idea about emergency braking and the need to apply more front than rear as the load on the tires shifts to the front under hard braking. If the front locks up, release and tap. If the rear locks up hold but release if you have to. i.e. if the locked up rear is causing you to drift uncontrollably or the back wheel is starting to "overtake" you. If the motorcycle remains upright then hold the locked rear brake.
- **If rear brake locks, release, engage and keep tapping**
- **Exercise emergency braking at comfortable speeds. Try upping the speeds as confidence grows**

EMERGENCY BRAKING ON DIRT



SEE

- **Rear brake first**
- **Motorcycle has to be straight up and front wheel in line with rear**
- **Avoid braking while turning**
- **If rear brake locks tap and keep applying front brake**
 - ❖ Locking up the rear wheel first & then applying the front break is the best as the front wheel can "wash out" from under you if you apply the front brake too hard first. Understand that the role of on-road and off-road tires are very different. Also note that under normal braking you do not need to use the rear first, only under emergency braking.



CORNERING



CORNERING



CORNERING - APEX

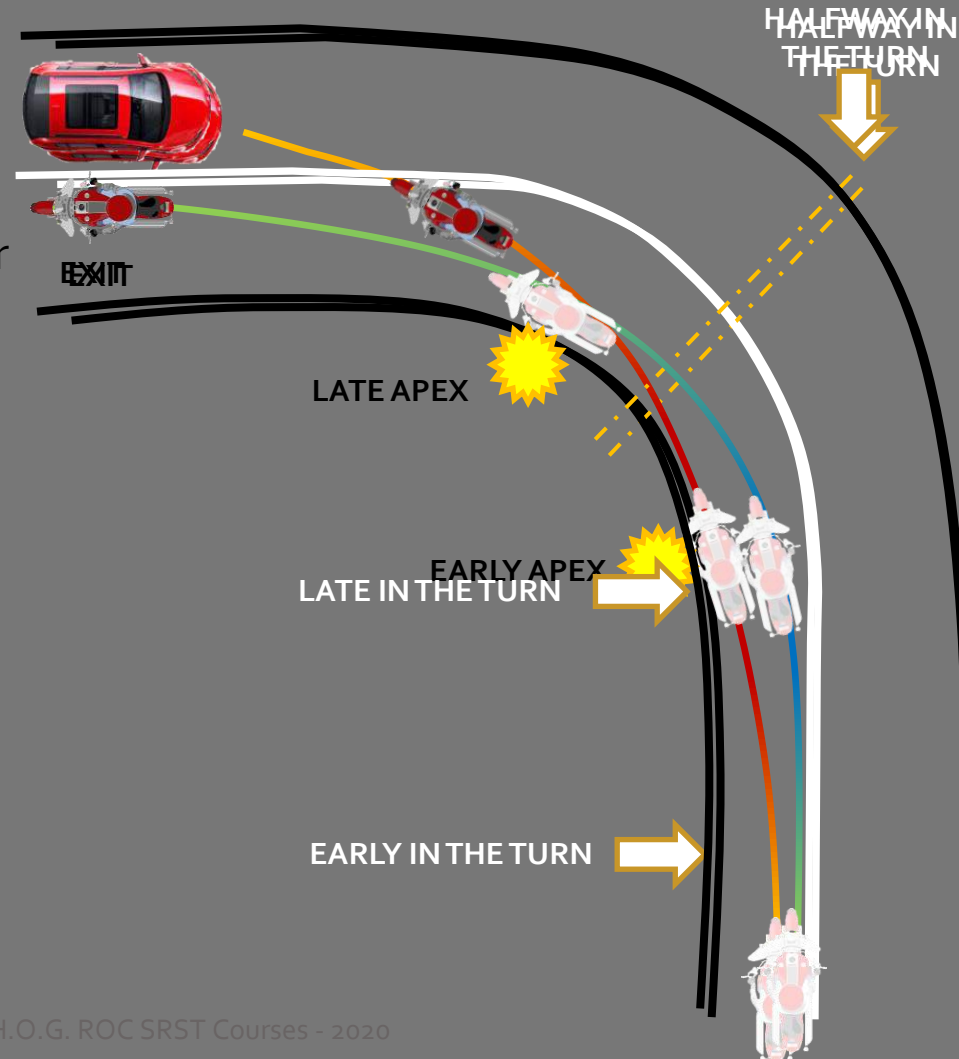


Early Apex

- **Turn too early**
 - ❖ Start too close to the inside shoulder
 - ❖ Run out of road
 - ❖ Overshoot

Late Apex

- **Late in turn**
 - ❖ Far to the outside
 - ❖ Perfect line
 - ❖ Good exit



CORNERING



Before you enter a corner be prepared.

- **Look for your exit**
 - ❖ Optimum out line, optimum sight line i.e. late apex
- **You should have the precise speed**
 - ❖ You should have braked enough, sighted and lined up for the **exit**
- **You should have switched to the correct gear.**
 - ❖ The correct gear is the one in which you ride through the corner easily and allows you to accelerate comfortably out of the bend
- **Counter steer**
 - ❖ Lean and push left handlebar to go left
 - ❖ Lean and push right handlebar to go right
- **Concentrate on the exit point of the curve**
 - ❖ Look as far around curve as possible towards the **exit** point of the curve

CORNERING



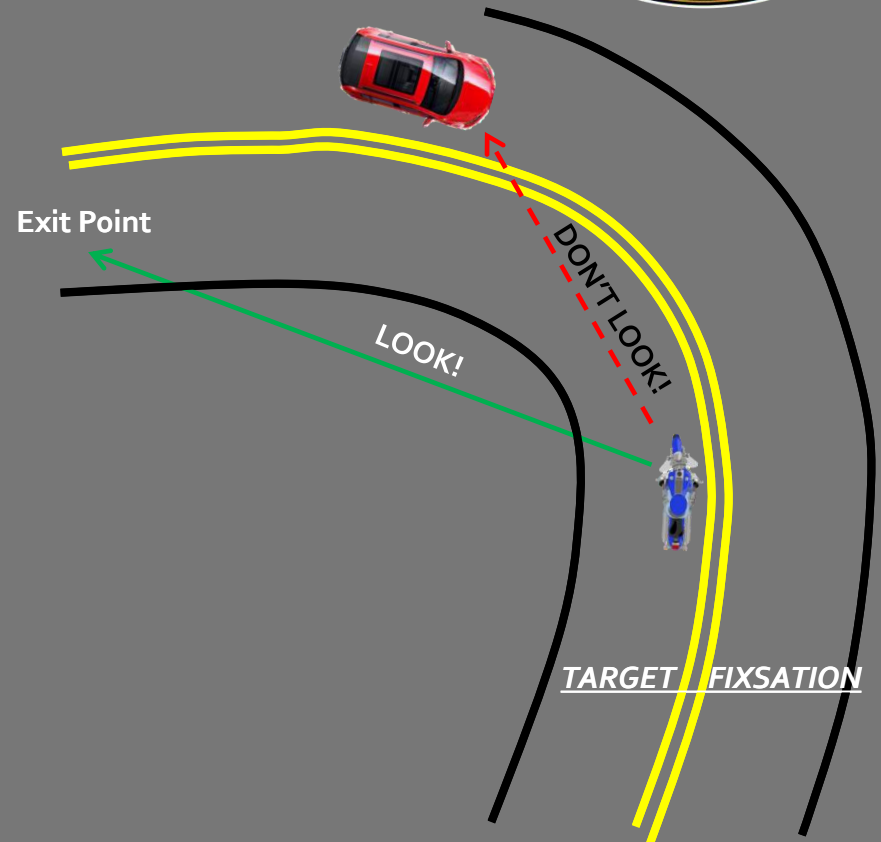
- **If you have to brake:**
 - ❖ Straighten bike before braking or
 - ❖ Lean harder into the bend and counter steer more
 - The harder you PUSH, the sharper you'll turn.
- **Deceleration forces the weight to the front of the motorcycle**
 - ❖ Instable while cornering
- **Acceleration forces the weight to the rear of the motorcycle**
 - ❖ Stable while cornering

EMERGENCY TECHNIQUES



Brake in turn

- **SEE**
- Bike in Balance
- Straighten first
- Do NOT brake whilst leaning!
- Look at where you want to be,
Target Fixation is real.

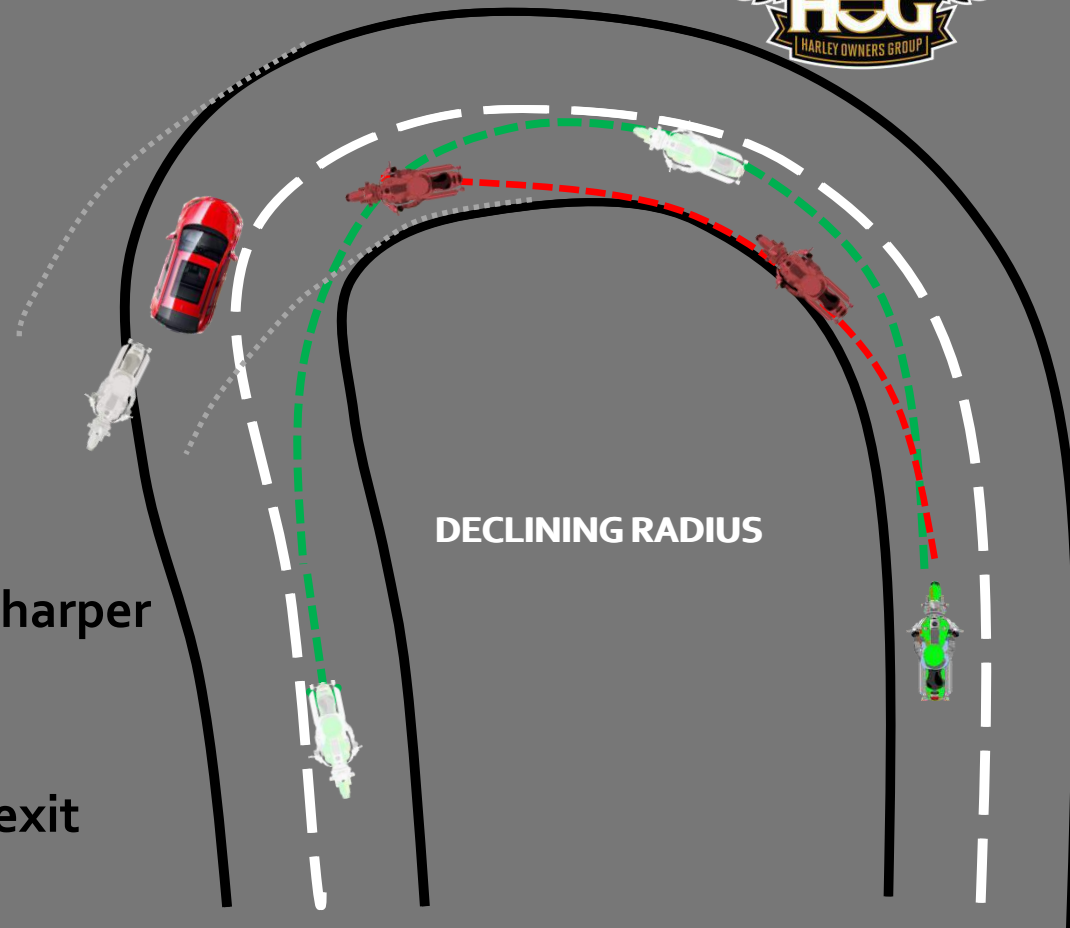


EMERGENCY TECHNIQUES



Sharper turn

- **SEE**
- **Bike in Balance**
- **Lean / PUSH more**
- **The harder you push, the sharper the turn**
- **HEAD & EYES toward the exit**



SAFETY TIP: Always know the road before attempting cornering at speed, some corners may have a declining radius and you may find yourself in trouble if you did not line up for the exit appropriately.



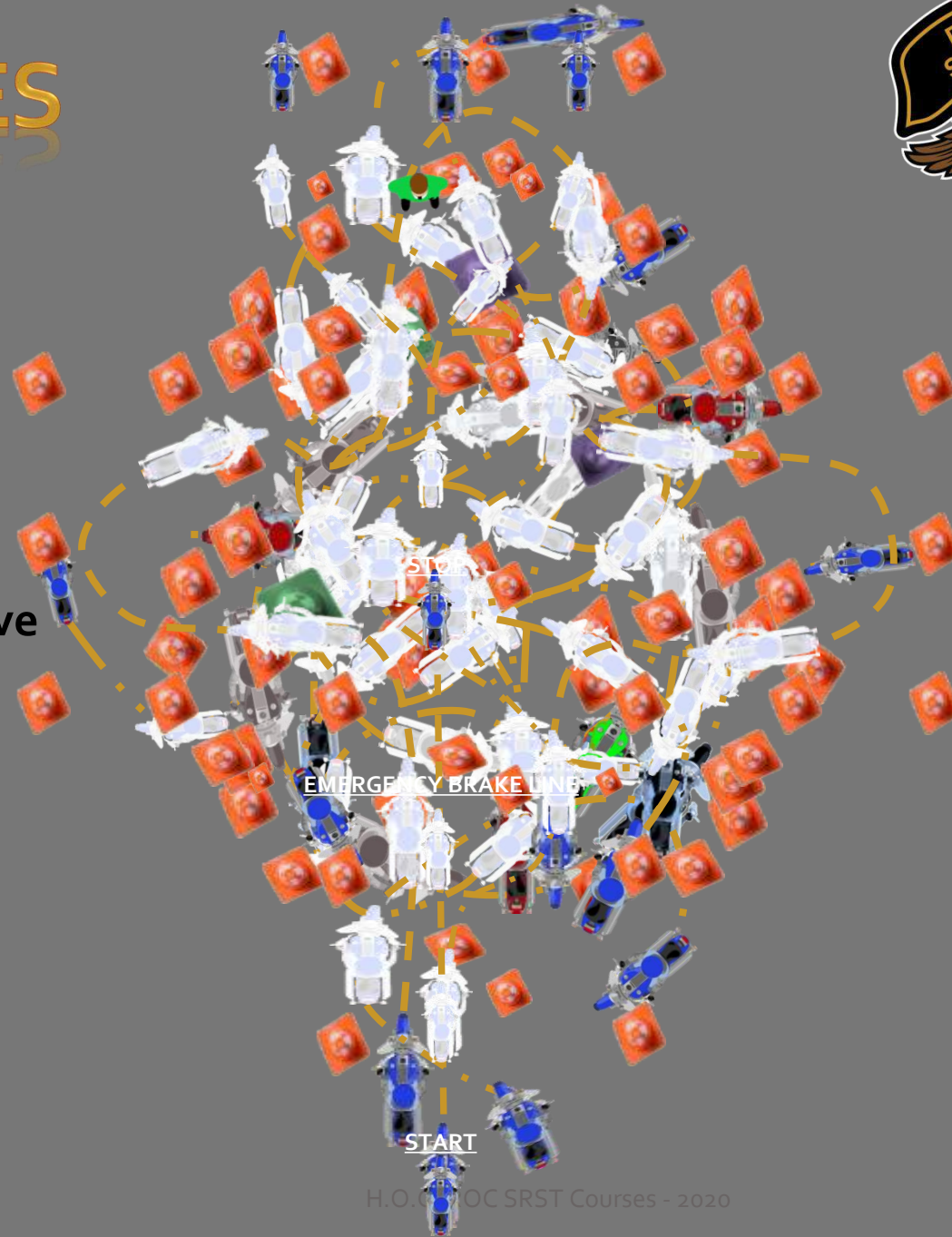
NOW FOR OUR PRACTICAL

STOP

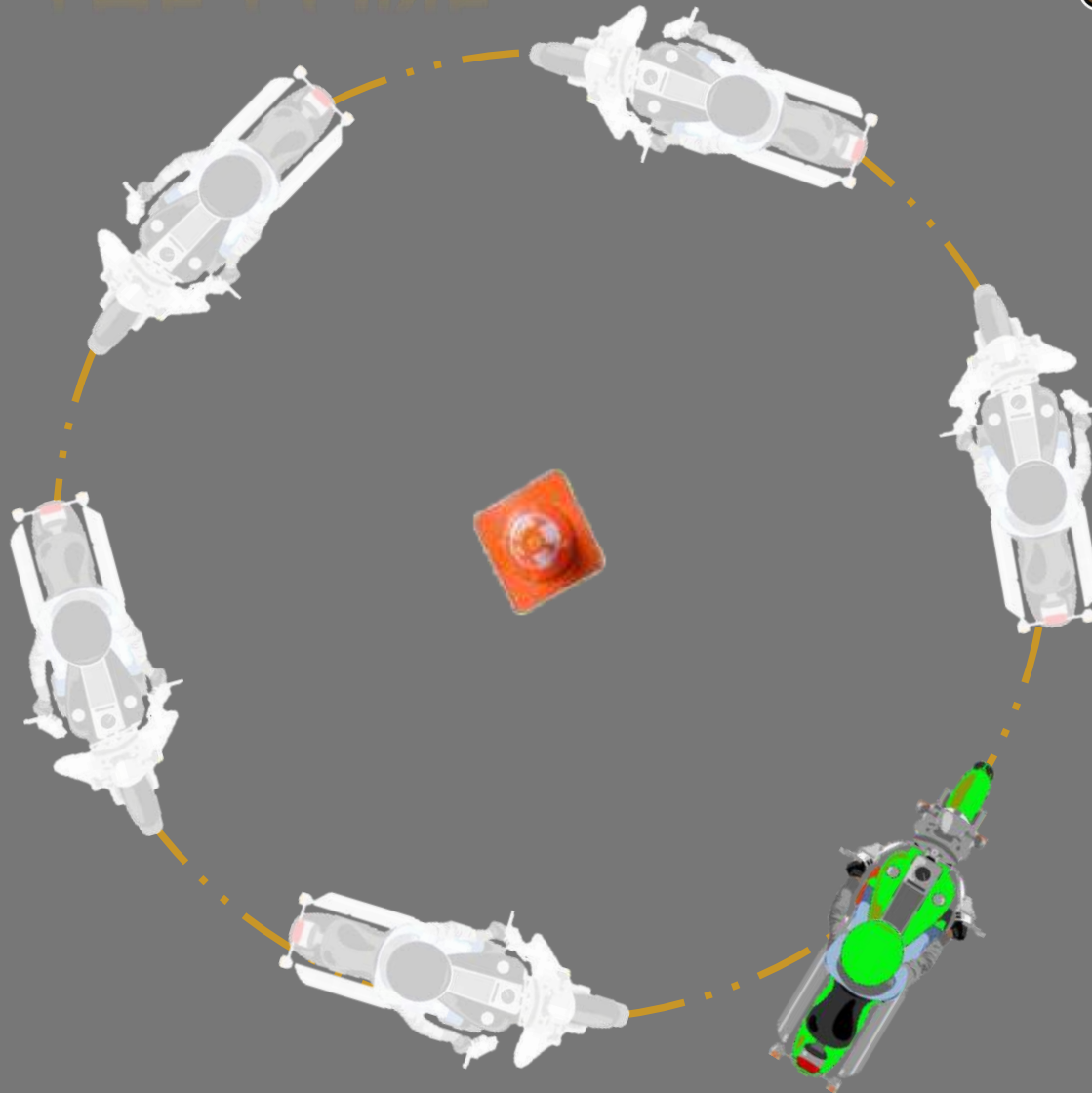


EXERCISES

- Circle the Cone
- Slow Cone Weave
- Circle
- Turn from a Stop
- U Turn
- Offset Cone Weave
- Figure Eight
- Intersection
- Brake and Escape
- Brake in Turn
- Fast Cone Weave



CIRCLE THE CONE



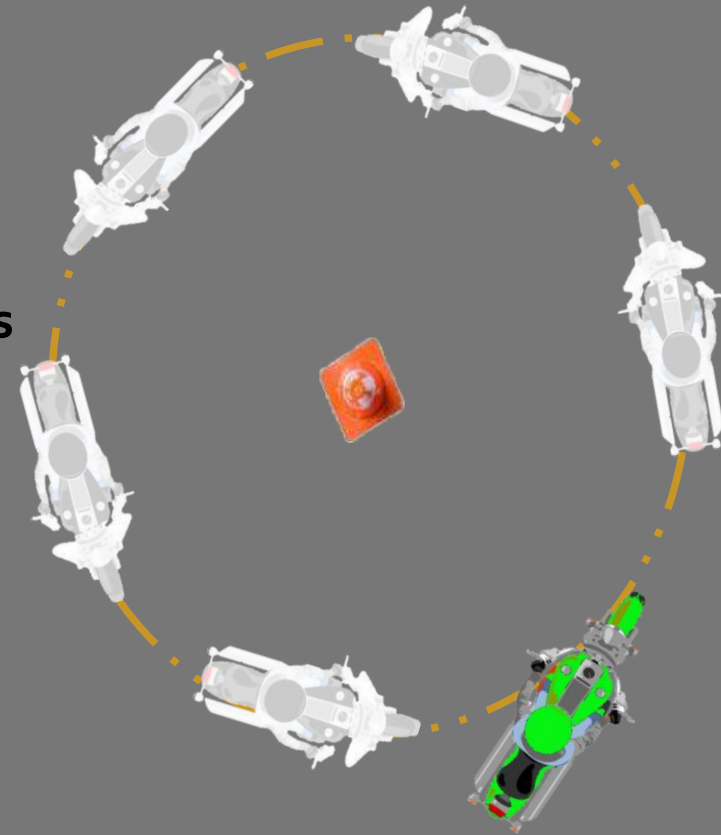
CIRCLE THE CONE

Circle the cone

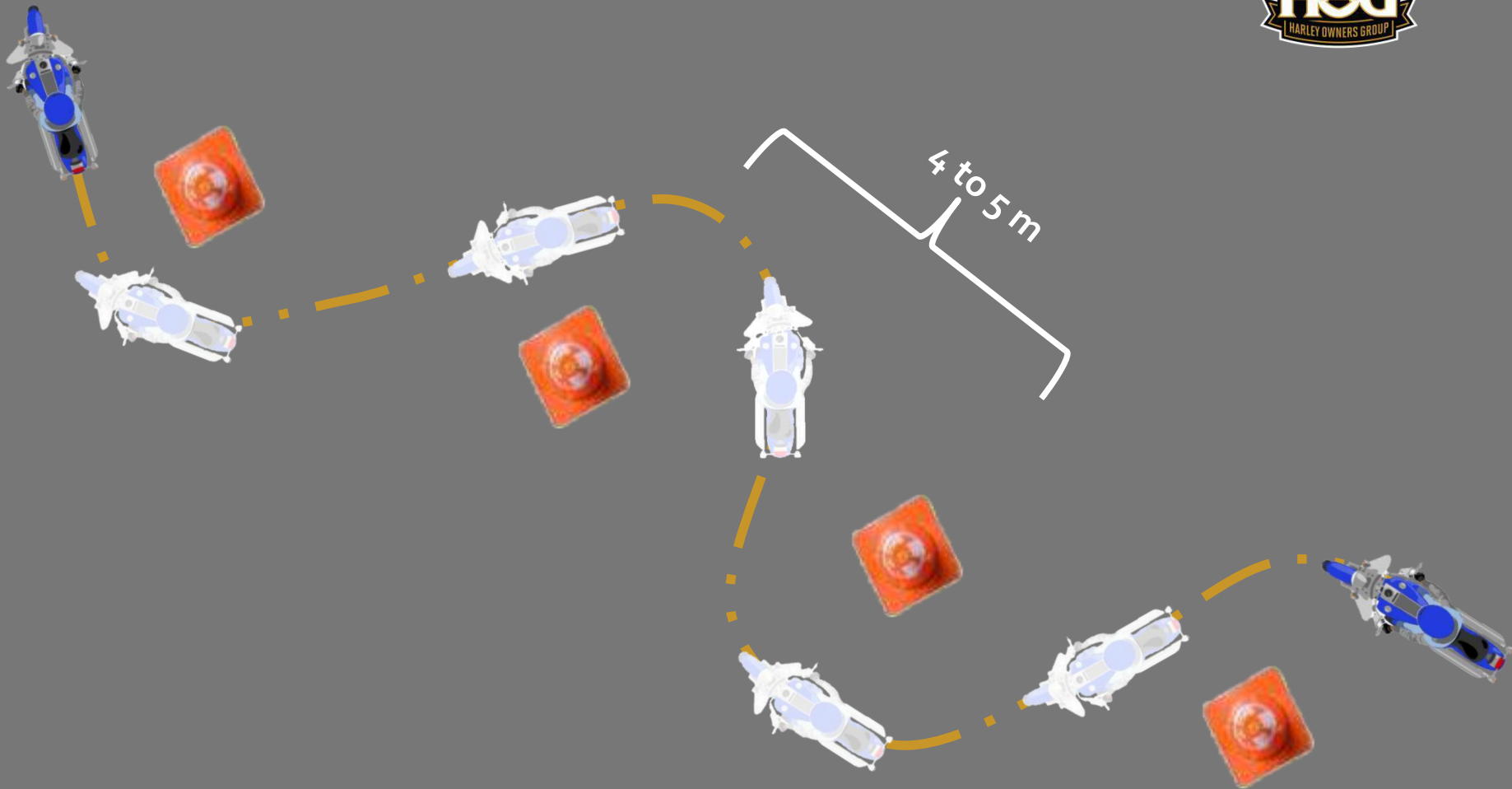
- Attempt to keep the radius equidistant
- Perform the exercise in alternate directions
- Keep as close to the cone as possible

Remember

- Stay in the friction zone
- Keep your head and eyes up
- Counter Balance (shift weight)
- **Do Not** touch the front brake while making these circles - it will pull you down to the ground like a magnet
- Keep “power to the rear wheel”
- If you pull the clutch in all the way, or release the throttle when turning, the motorcycle may go down



SLOW CONE WEAVE



SLOW CONE WEAVE

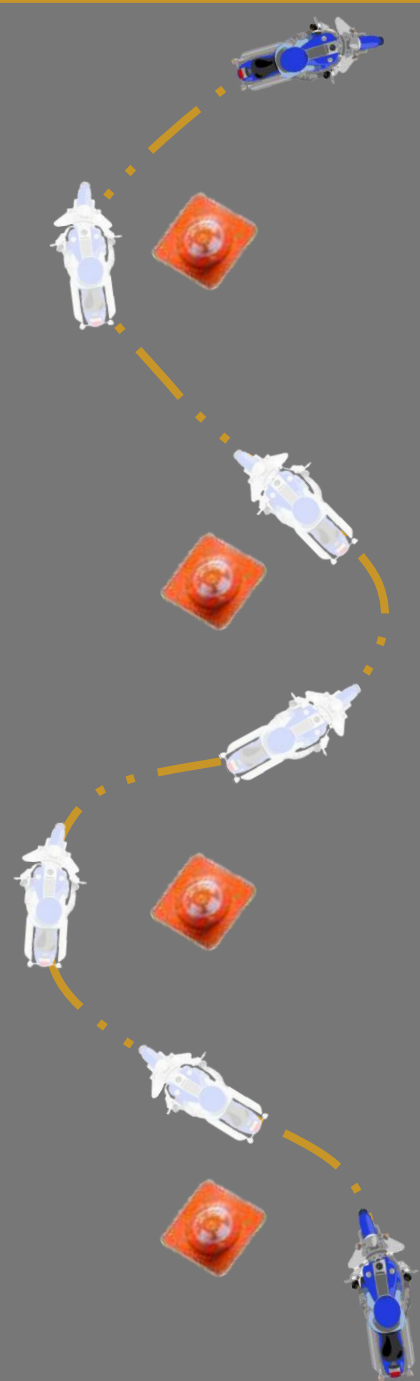


Weave through cones while in the Friction Zone

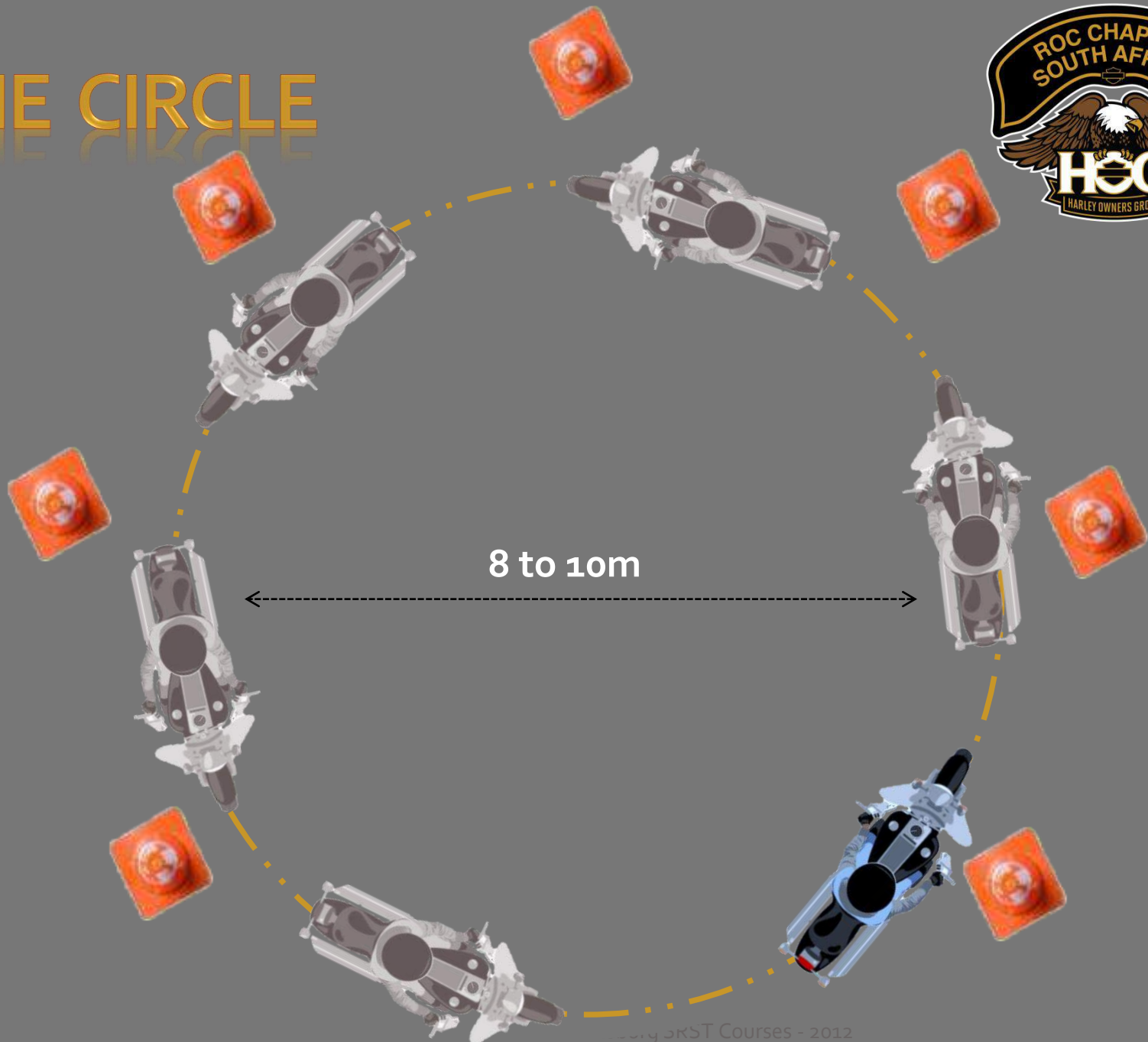
- **Start with setting up cones about 5 metres apart and then work down to 4 metres**
- **Technique to this exercise:**
 - ❖ focus at least 2 cones ahead
 - Use your peripheral vision to see the other cones
 - If you look down at the cones you will hit them or put your foot down
 - ❖ While the motorcycle is in motion, keep your feet on the floor boards or foot-pegs

SLOW CONE WEAWE

- Weave through the cones by pushing your handlebars back and forth (steering)
- Allow the bike to lean from side to side as you weave through the cones
- Stay in the friction zone
 - ❖ If you let the clutch out all the way, you may go too fast to manoeuvre around the cones
- Control bike with clutch, throttle & rear brake



THE CIRCLE



THE CIRCLE



First try attempting a 10 metre circle in one direction till comfortable and then in the opposite direction.

- Try working the circles down to 8m and practise in opposite directions
- If your pegs or floorboards start to scrape, don't panic, this is just a warning that you're approaching the limit of your lean angle
- Your speed in the circle should be around 15km/h
- Have someone stand in the centre of your circle, focus on their eyes or the top of their head

Tip: *The further you lean your motorcycle, the sharper the turn you will achieve.*

THE CIRCLE

Remember

- Stay in the friction zone
- Keep your head and eyes up
- Counter lean
- **NEVER** touch the front brake while performing a circle - You may go down!
- Keep power to the rear wheel
- If you pull the clutch in all the way, or release the throttle while performing this exercise you may go down.



TURN FROM A STOP



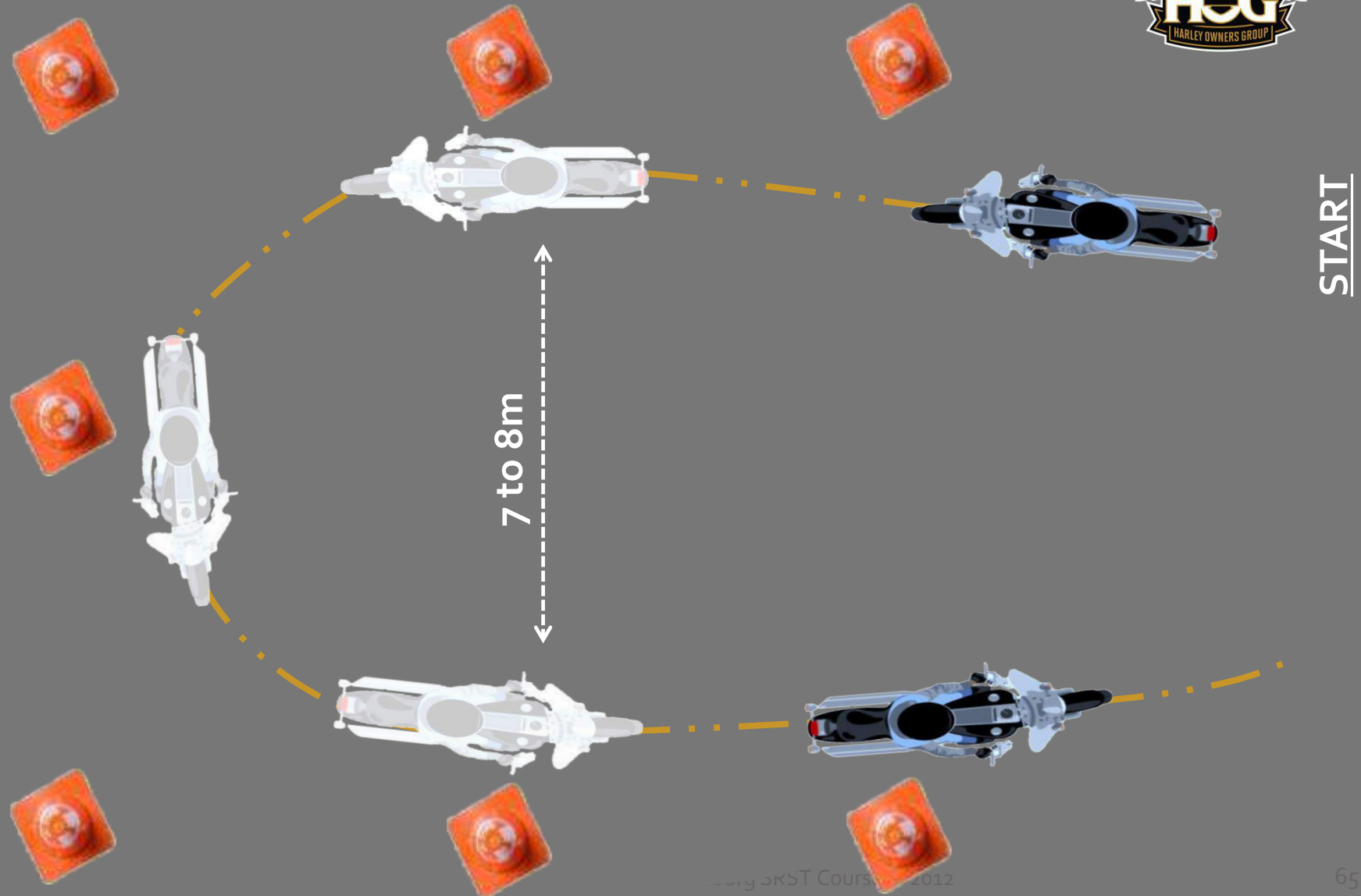
TURN FROM A STOP



- Pull up to the stop then STOP
- Direct head & eyes into direction of the turn
- Use three-way Control
 - ❖ Clutch/Rear Brake/Throttle
- Keep head & eyes up and in direction of turn
- The further you turn your head and eyes to where you're going, the smoother the turn will be



THE U TURN



THE U TURN



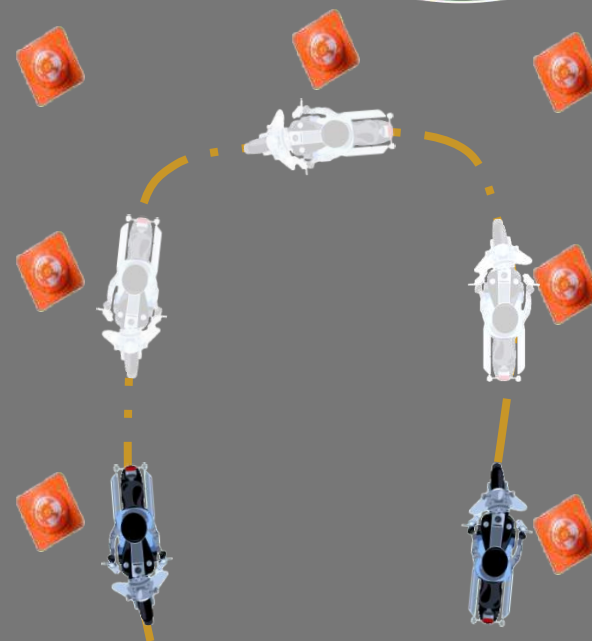
When practicing the U-turn, measure off an area of 8 by 8 meter for the U-Turn

- Complete the U turn space using in the friction zone with your foot feathering the rear brake
- The further you turn your head in the direction you wish to go, the tighter the U-Turn will be
 - ❖ With enough practice you should eventually be able to achieve the U-turn within 7 metres or less
- Practice the U-Turn in clockwise and counter clockwise to perfect this skill

THE U TURN

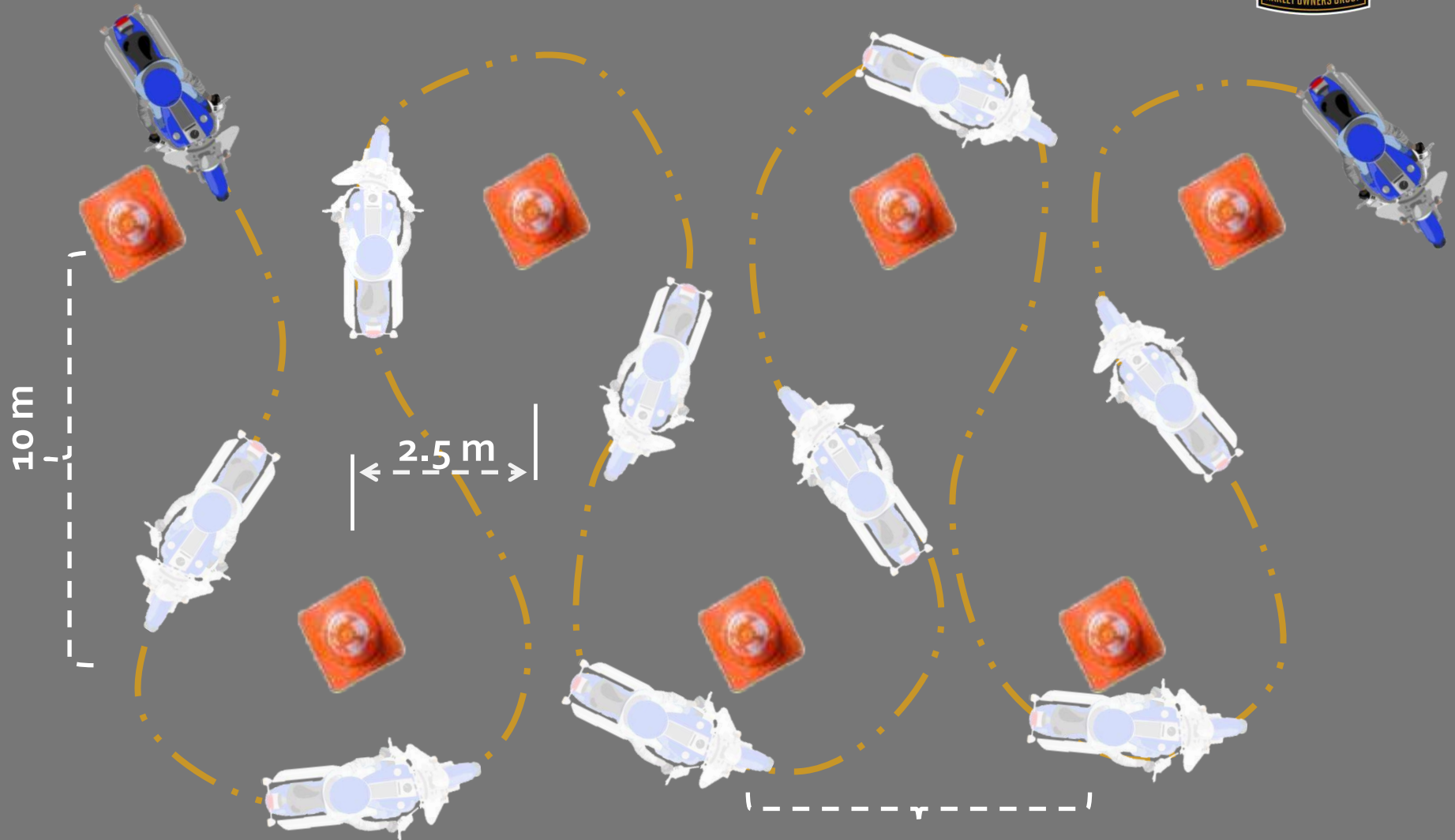


- Making a Left hand U-Turn
- Pick a point on the right side of the allotted space and aim your front tyre towards it
- Keep your focus 1 to 2 m towards the front
- Allow the bike to dip to the left as soon as you reach the turning point
- IMMEDIATELY turn your head and eyes to the left as far as you can
- Allow the bike to lean as much as possible



TIP: *Do not look at the opposite edge of your intended turn; even a second's glance in that direction, the bike will move toward the direction you don't want to go*

THE OFF-SET CONE WEAVE



THE OFF-SET CONE WEAWE



Setup 2 rows of cones, the 1st row in a line at 5 meters apart using 5 cones . The 2nd row also 5m apart, but will be offset from 2.5m from the 1st set and 10m apart (as per previous slide)

Exercise:

- Weave through the cones
- Stay in the friction zone
- Keep your head and eyes up and avoid looking down
- Keep power to the rear wheel
- Keep feathering the brake
- The further you lean the motorcycle the easier this exercise becomes

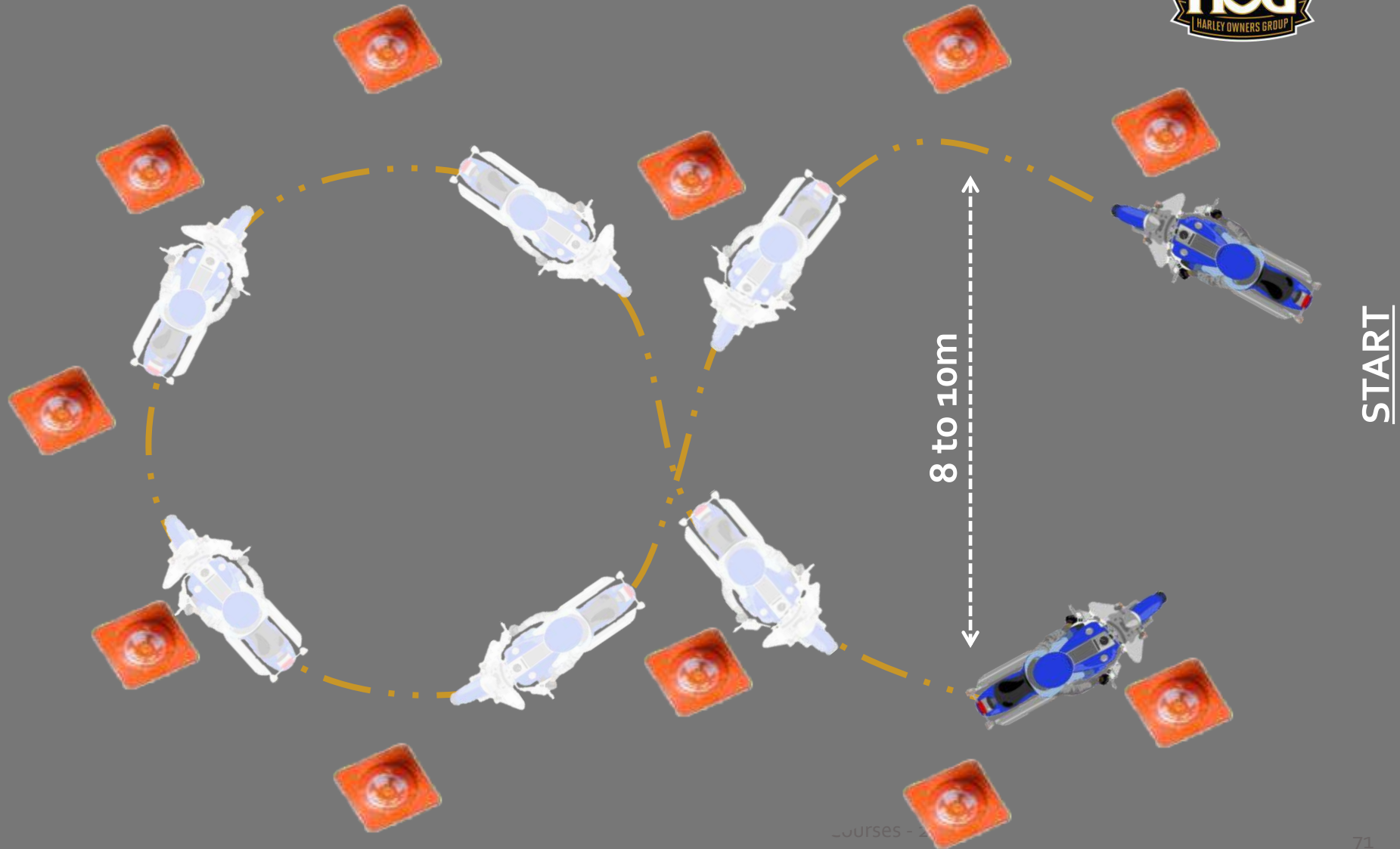
THE OFF-SET CONE WEAWE



- Make your 1st turn past the 1st cone, as soon as your rear tyre passes the 1st cone, turn your head & eyes to the left and focus on the next (green cone).
- As you reach that (green) cone, focus on the next (purple) cone, negotiate that cone and so on
- Turn your head, eyes and motorcycle from side to side negotiating the course
- Do not look down at the cones when you are approaching it
- Keep your focus at least 1 to 2 metres above the cone
- Head and Eye stabilisation and Friction Zone utilisation are EXTREMELY important during this exercise



THE FIGURE EIGHT



THE FIGURE EIGHT

The purpose of this exercise is to use all the skills acquired so far

- As you enter the figure of 8 your first turn will be to the left
- Looking at the halfway point of the left edge of the 1st circle (**Green cone**)
- As you approach the 2nd circle, you will be turning to the right
- You will first focus on the center portion of the left side of that circle (**Purple cone**)
- Next focus is back to the **Green cone**

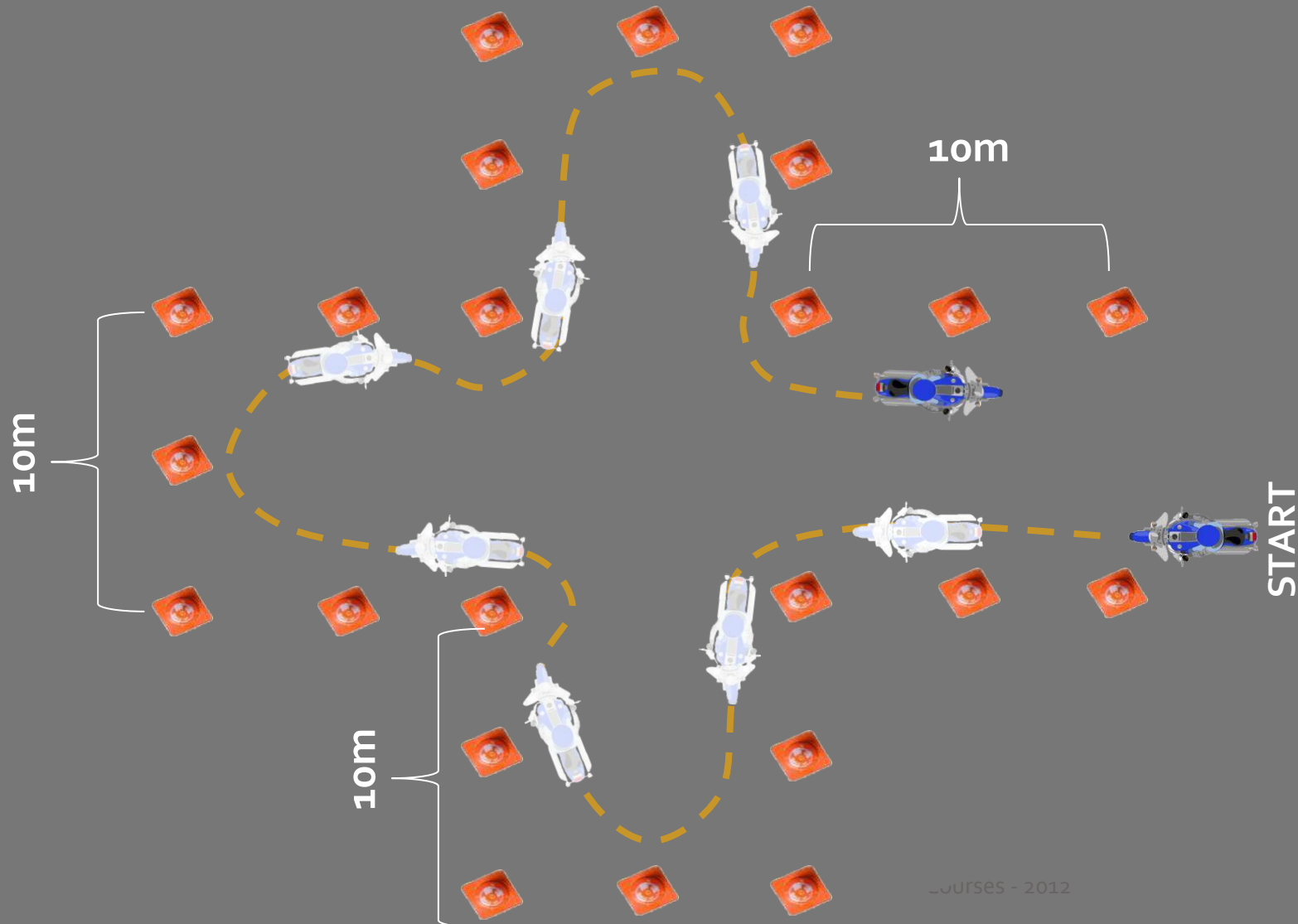


THE FIGURE EIGHT

- As you enter the second circle, you will turn your head looking at the half way point of the right edge of the second circle (Yellow cone)
- Let your front tyre track right along side the edge of the cones
- Concentrate on:
 - ❖ Head & Eyes
 - ❖ Three way control



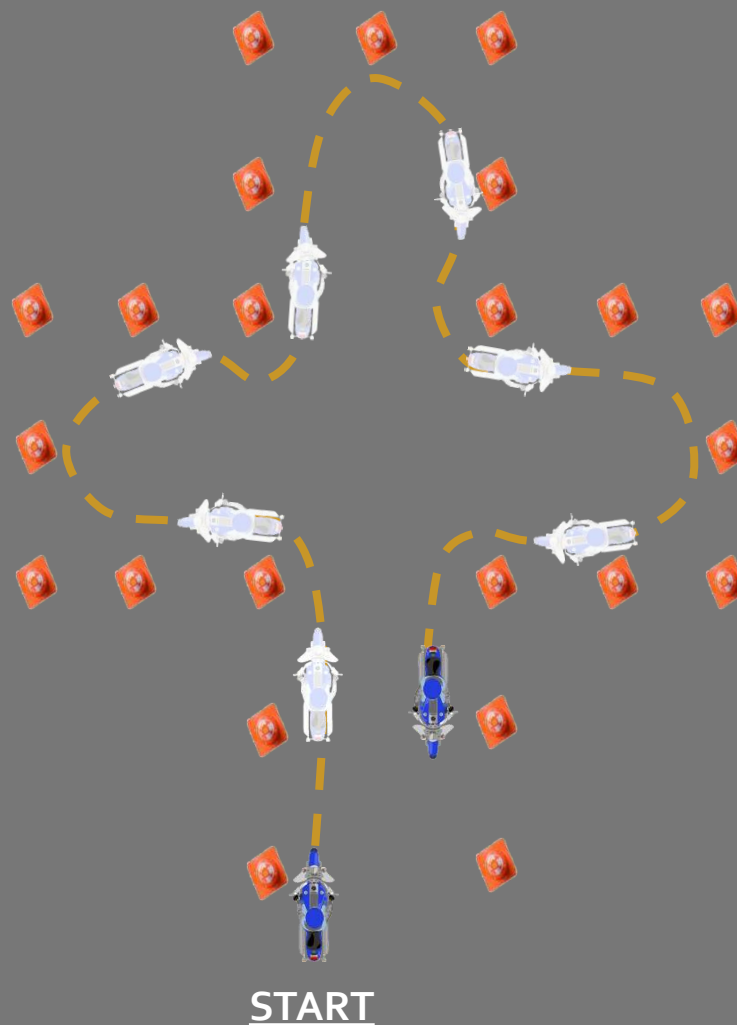
THE INTERSECTION



THE INTERSECTION



- Friction Zone
- Three way control
- Shift Weight
- Head & Eyes UP
- Look at END of turn
- **NEVER!!**
 - ❖ look down
 - ❖ use front brake



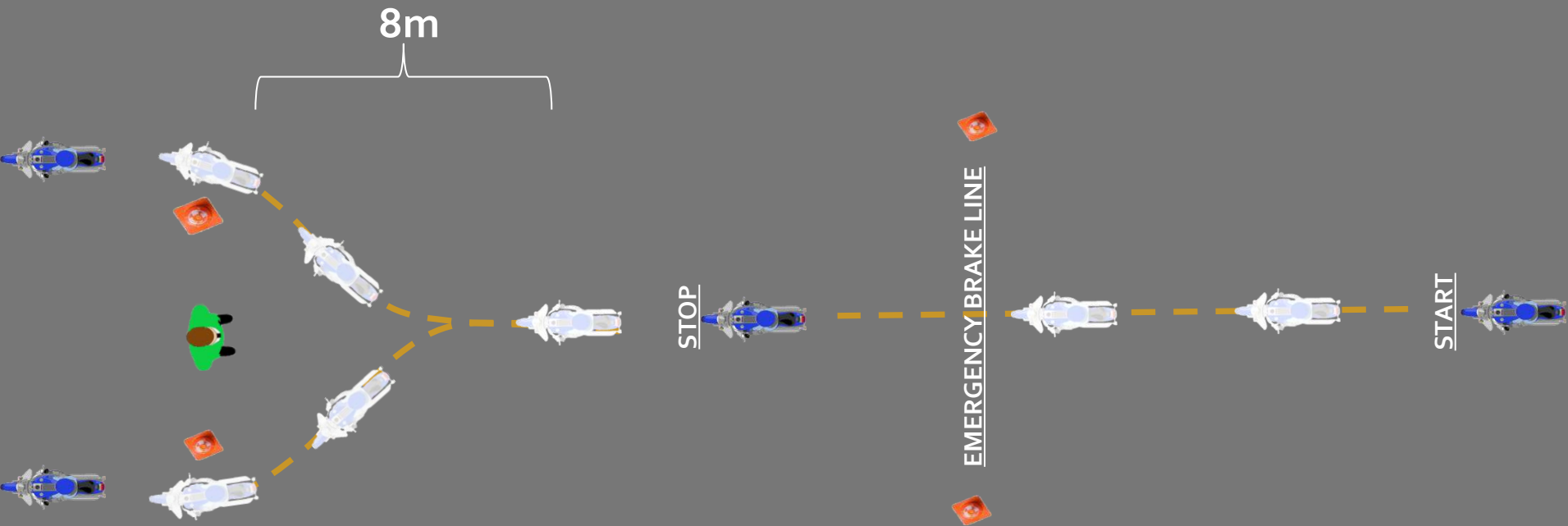
EMERGENCY BRAKING



- Travel at 60 km/h
- When instructed, perform emergency brake
- Front Brake 70% - Rear Brake 30%
- Squeeze – do not Pull
- Motorcycle should be straight up when braking
- If rear brake locks; tap in brake i.e. release and re-engage do not swerve
- If front brake locks up; Keep the motorcycle straight up, do not turn or swerve and tap the brake



BRAKE AND ESCAPE

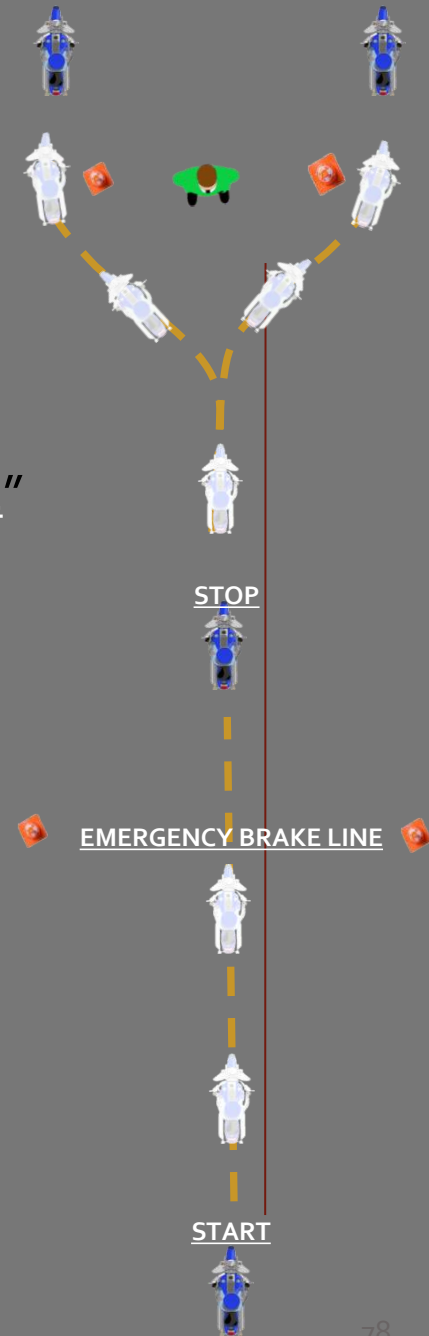


BRAKE AND ESCAPE

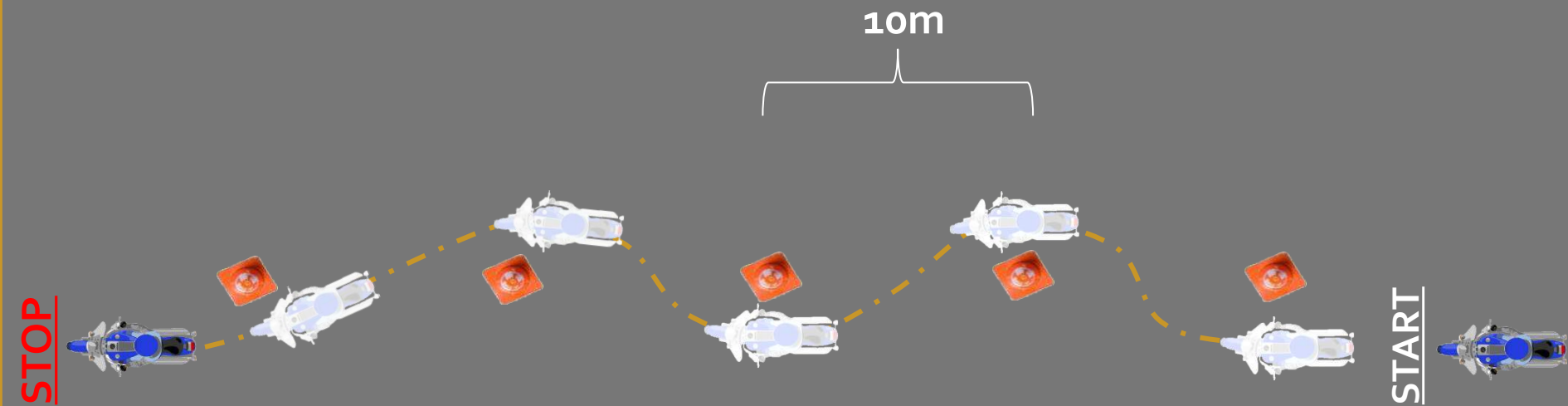
From the START point.

- Travel at 30km/h
- Do an emergency brake at the "EMERGENCY BRAKE LINE"
- Once stopped, feet down and ensure you are in 1st gear
- Drive at 20km/h toward the instructor.
 - ❖ The instructor will indicate the direction of escape
- Swerve in the direction indicated, pass the cone on either side and stop.

Do not brake while in the swerve

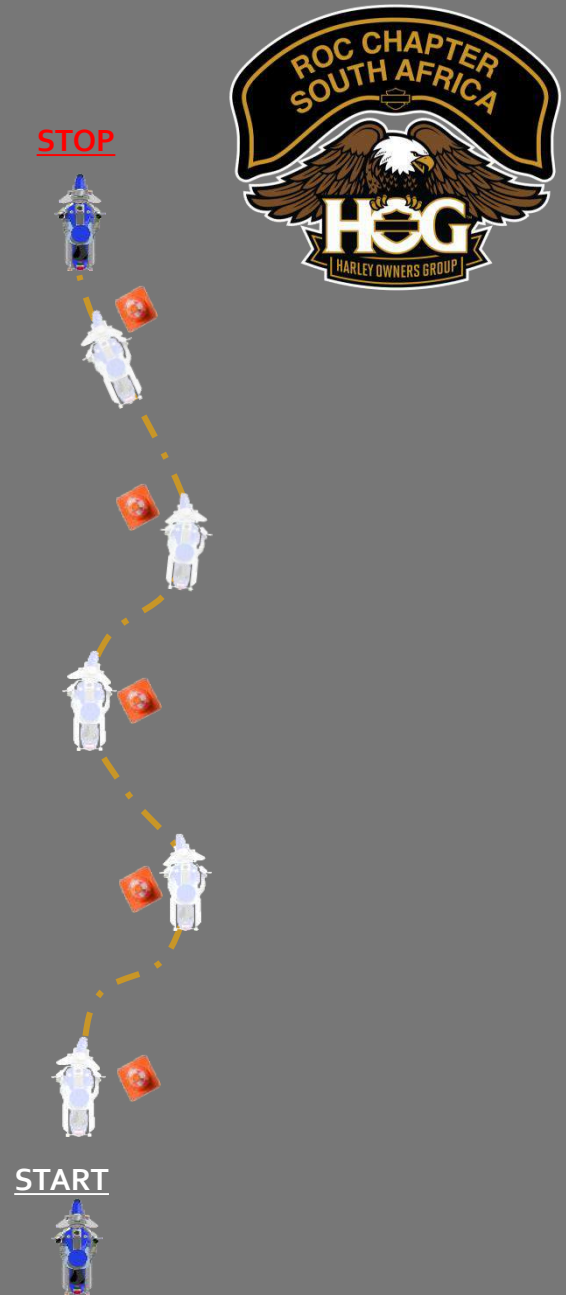


BRAKE IN TURN

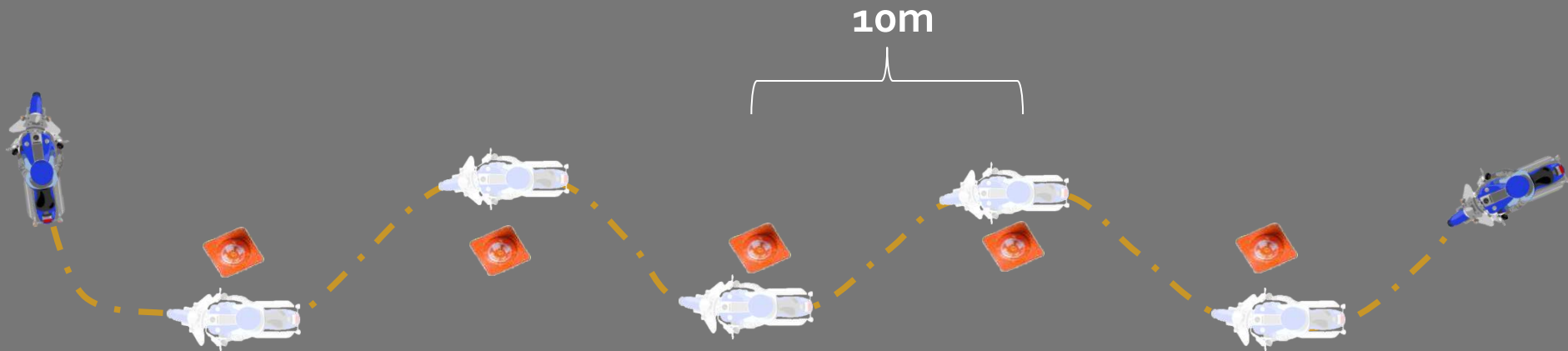


BRAKE IN TURN

- Travel at 30 km/h
- Weave through cones (push right....push left)
- After last cone
 - ❖ Straighten bike
 - ❖ Emergency Brake
 - Rear brake and then front



FAST CONE WEAVE



FAST CONE WEAVE

- Travel at ≥ 30 km/h
- Head & eyes UP
- Focus beyond last cone
- Peripheral vision
- Push Right – Go Right
- Push Left – Go Left



YOUR HOMEWORK



Exercise

- U Turn – 3 way control
- Counter Steering
- Emergency Braking

Remember....

- **SEE**
- Relaxed Posture
- Head and Eyes

RIDE TO LIVE



RIDE & BE SAFE

ROC ON!!