

BMC (IMC) Basic Motorcycle Course

Permit Level Course



RANGE EXPECTATIONS

- **1.** Have fun! If you are not having a good experience, talk to your coach.
- 2. Be safe! Riding is dangerous and **you are responsible YOUR safety and others**. Ride to the comfort level of those around you. If you are not comfortable with the activity, talk to your coach.
- 3. Though basic, **try to apply the skills being taught** as opposed to just riding the cone patterns. Train like a pro (A pro trains with a purpose in pursuit of excellence).
- 4. Maximize our time by paying attention to instructions, especially to the path of travel being efficient during breaks and being geared up ready to ride at the end of briefings.
- 5. Only work on current drill, staying within the path of travel. Never ride on your own or out of the designated range area.
- 6. Ride to small end of large cones. Stop to left of a green & orange cone placed together. Cone placement is based on standard 12' road width. So staying within at least 6' of cones keeps you in the center of your lane.
- 7. No reckless riding! Taking unnecessary risk is grounds for immediate dismissal.
- 8. Do not pass unless directed.
- 9. If needed, move out of the path of travel & signal a coach.
- 10. Keep eye out for other riders, coaches and hazards. **Keep a safety cushion** at all times, giving yourself adequate space to adjust path of travel and stop.
- 11. If a rider goes down, stop where you are and let a coach help.
- 12. Secure all gear before mounting the motorcycle.

Required Gear:

Boots covering ankles

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4. Full-fingered gloves

2. Sturdy pants

5. Eye protection

3. Long sleeves

6. DOT compliant helmet

Range Schedule:

| Day 1 Drills | | Day 2 Drills | | | | |
|------------------------------------|---------------|---|-----------------|--|--|--|
| Intro & Gear | 15 Minutes | | | | | |
| Warm-Up Meet the Bike 30 Minutes | | (1 Day Permit Class - Run first three 5-minutes | | | | |
| Break | 10 Minutes | shorter to allow time for Intro & Gear) | | | | |
| 1. Clutch & Brake | 20 Minutes | | | | | |
| 2. Leaning | 20 Minutes | 9. Cornering | 20 Minutes (15) | | | |
| 3. Starts & Stops | 20 Minutes | 10. 90 Degree & U-Turns | 30 Minutes (25) | | | |
| Break | 10 Minutes | 11. Emergency Maneuvers | 35 Minutes (30) | | | |
| 4. Steering | 20 Minutes | Break | 10 Minutes | | | |
| 5. Stop in Lean | 20 Minutes | 12. Braking in corners | 20 Minutes | | | |
| 6. Shift & Stop | 25 Minutes | 13. Multiple Curves | 35 Minutes | | | |
| Break | 10 Minutes | 14. Skills Test Practice | 20 Minutes | | | |
| 7. Lane Change | 20 Minutes | Break | 10 Minutes | | | |
| 8. Uncontrolled Intersection | s 20 Minutes | 15. Skills test | 60 Minutes | | | |
| Total Tim | e 240 Minutes | Total Time | 240 Minutes | | | |



MEET THE BIKE

30 minutes – Static Practice, Walking Demo

Purpose:

Learn how to smoothly operate the critical controls

Static Practice: (Introduce bike in same progression as you would if riding)

- 1. Squeeze front brake, mount motorcycle, square bars, right motorcycle, side stand up (Cover brake pointer & middle finger extended over the brake lever)
- 2. Key, Choke if equipped, clutch in, neutral (show shift pattern if haven't had classroom)
- 3. Release front brake, **eeease clutch out**, add one degree of throttle with both feet on ground for stability (have student repeat clutch release, counting 1, 2, pause/hold clutch, 3, 4 as release clutch)
- Roll off Throttle as reach pointer & middle extended over brake lever, loading front then progressively squeeze, squeeze clutch prior to stall, adding rear brake (complete multiple reps ensuring students can successfully demonstrate process of starting & stopping)
- 5. Engage cut-off, key, side-stand ALL way down, bars left, motorcycle in first gear

Demo:

Walking Demo showing difference between smooth braking and abrupt braking, braking with bars turned - Load tire before work tire. **Chalk Talk of braking pressure**.

Take-Aways:

- 1. Student demonstrates multiple reps of blending controls
- 2. Pro's are slow & smooth with controls
- 3. Most crashes due to improper front brake technique
- 4. Importance of eyes on horizon (power of the look) & flat wrist

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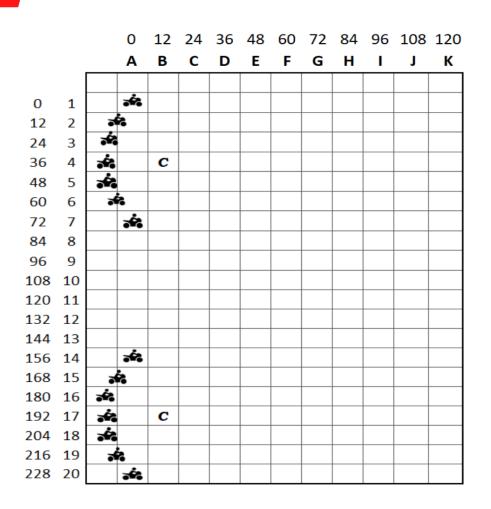
MEET THE BIKE

30 minutes

Notes:

Place motorcycles to see & be seen to facilitate movement to next exercise, consider splitting into two groups for classes 8+ students. Have class practice braking when walking bike into position for Drill 1 adding 1, 2, 3 points of brake.

Range:



10 Minute Break

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CLUTCH & BRAKE – Two Parts

20 minutes – Static Practice

Purpose:

Establish The building block of all good riding – smooth starts and stops.

Instructions: Part 1

- 1. Starting with your front tire at your designated cone, smoothly ease the clutch out while staying in traction zone adding a degree of throttle while keeping both feet on the ground
- 2. After traveling **two motorcycle lengths**, roll-off throttle with pointer and middle finger extend/resting on front brake lever, squeeze front brake, pull clutch before coming to a smooth stop
- 3. Repeat until reach your cone on far side of the range, striving for a **minimum of 10 stops** along the way
- 4. At end cone, find neutral or engage motorcycle cut-off, turn motorcycle around as instructed. Ok to hold feet to sides for stability & safety at slow speed

Instructions: Part 2

Ride to the far cone, putting feet on pegs once the motorcycle is stable, come to a **smooth stop** using both brakes.

Static Practice

- 1. Roll-off throttle as reach for front brake
- 2. Add front brake to load suspension & increase contact patch
- 3. Put mild pressure on rear brake (focus on front, more advanced can add in rear)
- 4. Progressively add degrees of brake as needed to slow/stop motorcycle
- 5. Squeeze in clutch
- 6. Have left foot ready, then left foot down, then right foot
- 7. Smoothly release brakes

Take Aways

- 1. Smooth starts & stops, maintain balance with feet on pegs
- 2. Goal is smooth, coordinated operation of clutch, throttle & front brake
- 3. Keep eyes up! Don't look at motorcycle, controls or your coach

Notes

Stage on long sides counterclockwise, add apex for next drill



| | | 0 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | |
|-----|----|-------|----|----|----|----|----|----|----|----|-----|-----|--|
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| 156 | 14 | •• | | | | | | С | | | | •• | |
| 168 | 15 | 0 | | | | | | | | | | 0 | |
| 180 | 16 | •• | | | | | | | | | | •• | |
| 192 | 17 | 0 | | | | | | | | | | 0 | |
| 204 | 18 | •• | | - | | | | | | | | •• | |
| 216 | 19 | | | | | | | | | | | | |
| 228 | 20 | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

LEANING – Two Parts (Reversal)

20 minutes – Prop Tire, Static Practice

Purpose:

Leaning to control direction (why we ride a motorcycle in the first place!)

Instructions | Part 1 Counterclockwise:

- 1. Ride the oval counterclockwise
- 2. Speed up as appropriate in the straights
- 3. Look THROUGH corner, scan back as needed for POT, eyes to exit Slow to an appropriate entry speed for the corner by leaving clutch out and rolling off throttle, **smoothly add brakes** if needed (majority of students will be in first gear, since we haven't covered shifting yet, so rolling off will likely be adequate to slow the motorcycle and get direction)
- 4. Slow to a suitable entry speed for the corner

Instructions | Part 2 Clockwise:

- 1. Stop students on the long side of the range
- 2. Have lead turn right at apex cone and ride down middle of range
- 3. Turn left at far apex cone and ride oval in the opposite direction

Demo:

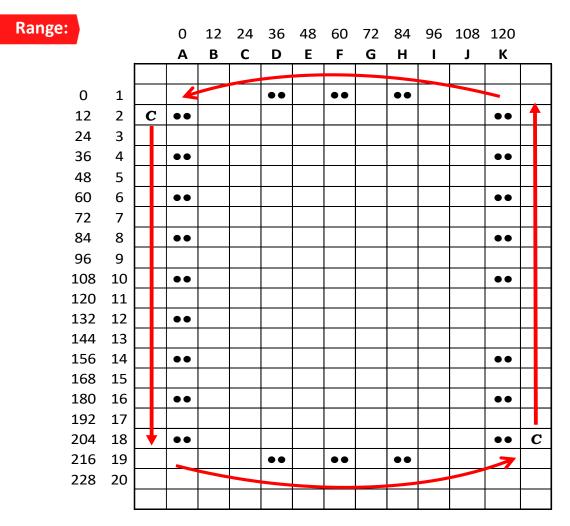
- 1. Using a prop tire, show properly loaded at lean versus abruptly loaded tire
- 2. Static practice Discuss proper way to set entry speed
 - 1. Look through the corner to the exit, set entry speed early prior to corner
 - 2. Leaving clutch engaged, roll off, smoothly adding brake if needed
 - 3. Press bar in the direction you want to go & lean into the corner
 - 4. Gain direction, maintain throttle, then smoothly add throttle as you reduce lean angle

| Drill: 2 | |
|------------------|--|
| LEANING | |
| 20 minutes 💿 =48 | |
| Take-Aways: | |

- 1. Lean motorcycle, eyes through corner, properly adjust entry speed (MPH = Radius)
- 2. Don't look at cones, eyes up (look at space you want to exit, not ground)!

Notes:

Keep discussion on point, let them ride! Stage clockwise on side of range





20 minutes – *Riding Demo*

Purpose:

Pro's are masters of synchronizing controls to be smooth at all times, which starts & ends with smooth starts & stops

Instructions:

Ride an oval Clockwise to the outside of all the cones, stopping to the left of every set of double cones on sides & at the apex. Imagine balancing a cup of **hot coffee on the gas** tank, don't spill it!

Demo:

Riding demo of a start in 1st gear with no throttle and 2nd & 3rd gear. Riding demo of path of travel with smooth stops at increasing speeds (demo with cone on helmet). Process doesn't change, squeeze just gets more progressive as speed increases.

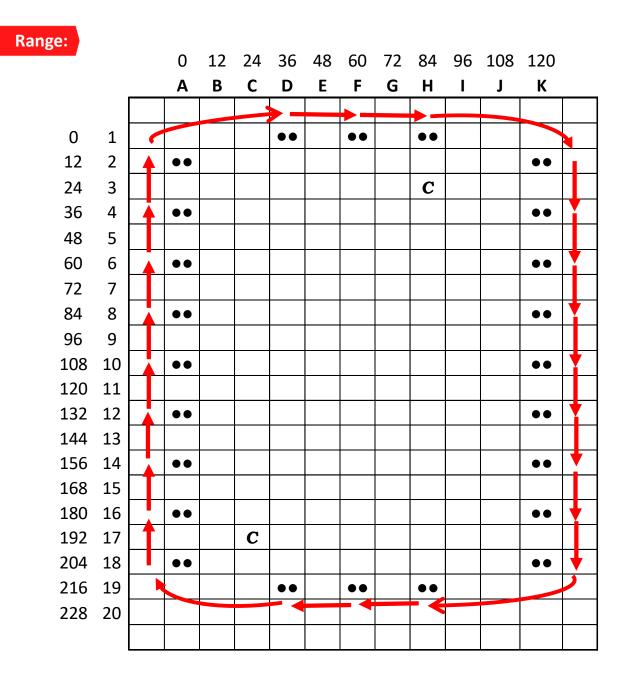
Take-Aways:

Is the student getting smoother? Watch for motorcycle to stay balanced. Consider giving stronger riders a cone to practice with.

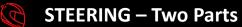
Notes:

- 1. Proper control here will continue to pay dividends as speeds increase. Stage clockwise on sides of range.
- 2. Pull student out of path of travel for any coaching.

Drill: 3 Comparison Starts & Stops 20 minutes = 48



10 Minute Break



20 minutes – Riding Demo

Purpose:

Control the direction of motorcycle with a combination of leaning and steering.

Instructions:

- Part 1: Ride the oval clockwise weaving around the double cones on the sides of the range beginning to the right of the first set of cones.
- Part 2: Ride the oval counterclockwise weaving around all cones on the sides of the range beginning to the right of the first set of double cones.

Demo:

Riding demo of **bodying position** & **change of steering inputs** between part 1 & 2. Show **clutch control** for managing speed in part 2.

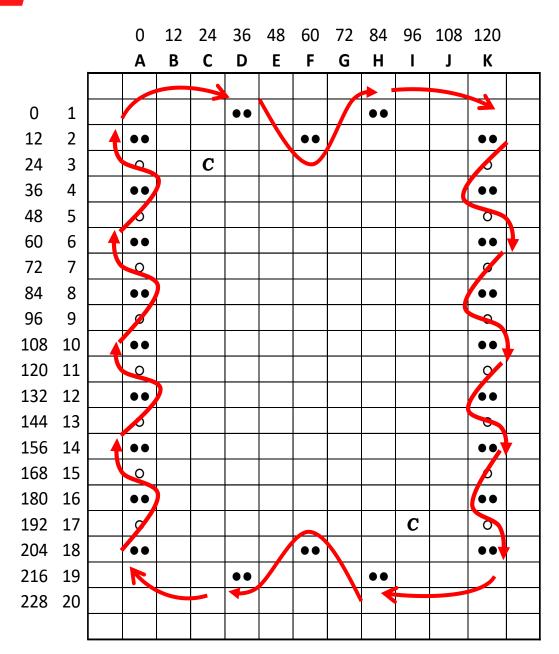
Take-Aways:

- 1. Eyes up! Don't look at cones, eyes on horizon, use peripheral vision to see cones
- 2. Smooth directional changes
- 3. Clutch control in part 2

Notes:

- 1. Encourage stronger riders to ride part 2 slower
- 2. Run Part 2 to establish path of travel & basic control (Repeated in Drill 5)
- 3. Stage on side of range. Place weave cone at top & bottom of range







20 minutes – Walking & Riding Demo

Purpose:

Gradually add brake as reduce lean angle

Instructions:

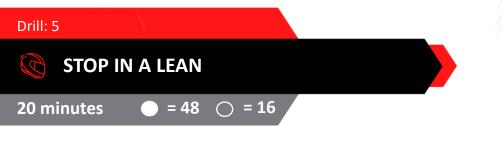
- 1. From a set of double cones, ride counterclockwise weaving around the single cones and come to a smooth stop at the next set of double cones.
- 2. Gradually reduce lean as add brakes, coming to a stop with motorcycle upright & bars square.

Demo:

- 1. Walking demo of progressively adding front brake as reduce lean angle, showing smooth compression of forks, ending with motorcycle and bars straight
- 2. Riding demo of path of travel

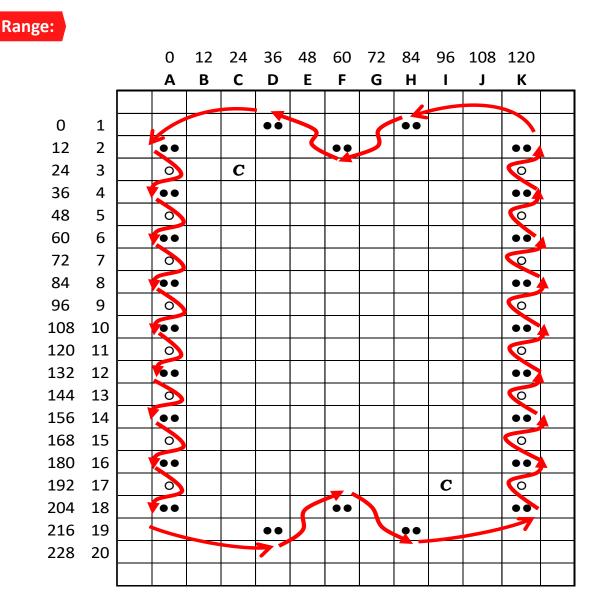
Take-Aways:

- 1. Smooth application of brakes
- 2. End with shoulder, bars and motorcycle square
- 3. Eyes on new path of travel, do not look at the cones!
- 4. What direction do you want the bike pointed when you come to a stop?



Notes:

1. Solo can be run with only far left side cones, having riders ride down middle of the range and return to the first stop cone. Stage at start of stop lanes for drill 6. Stop Drill when students are proficient or show signs of clutch fatigue.





SHIFT & STOP

20 min- Riding & Stationary Riding, Static

Purpose:

Upshifting to 2nd and downshifting to 1st as coming to a stop. Demonstrate same smooth braking technique in Drill 3 while stopping at higher speeds

Instructions:

- 1. From start cones in the middle of the range, proceed down the range once the stop area is clear, **smoothly shifting to second**.
- 2. Come to a **smooth stop** at the stop cones, shifting to first.
- 3. Turn to outside of range and complete weave around cones as in drill 4 (Can weave around each cone or just doubles, but every cone will be beneficial in skills test)
- 4. Turn to the shortest stop line, yielding/merging with cross traffic as necessary.

Demo:

- 1. Riding demo of normal stop. Show eyes up, relaxed arms, fingers extended, reach for front brake as roll-off, load front brake, add rear brake, progressively squeeze front brake, squeeze clutch while shifting to first with series of taps. Hold left foot off peg ready, once momentum is stopped, left foot down, ease off rear brake, right foot down. Control fork rebound with trailing brake pressure. Demo front brake only versus rear brake only.
- 2. Stationary riding demo of front brakes versus front & rear
- 3. Static Practice Roll-off, squeeze clutch, lift to second, ease out clutch, roll-on throttle

Take Aways:

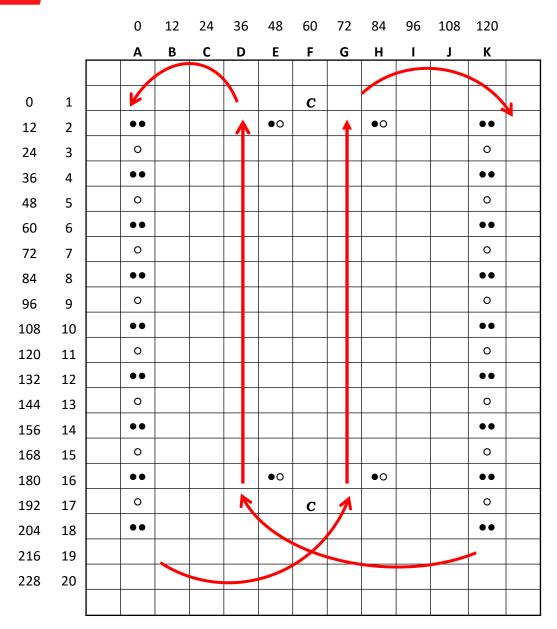
- 1. Smooth, progressive compression of front forks
- 2. Eyes up, upper body relaxed, knees into tank, elbows bent
- 3. Encourage struggling riders to focus practice on front brake application

Notes:

Only coach enough speed to allow motorcycle to shift to second gear



Range:



10 Minute Break

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Lane Change & Uncontrolled Intersections

20 minutes – Chalk Talk & Static Practice

Purpose:

Unique characteristic of motorcycles in navigating routine traffic controls.

Instructions:

- 1. Ride up middle of range, pausing to clear traffic at each uncontrolled intersection (yield cone)
- 2. Turn to the outside of the range
- 3. Complete lane change to left or right
- 4. Cross to the far yield cones, yielding/merging with cross traffic

Demo:

- 1. Discuss vison limitations of helmet & mirrors and importance of scanning 180 degree at every intersection. Position to see & be seen. Multi-tasking of riding requires planning ahead.
- 2. Static Practice of lane change
 - Check mirror for gap in traffic
 - Signal intentions
 - Life check (90 degree turn of head), eyes quickly return to new path of travel
 - Briefly accelerate into adjacent lane
 - Cancel signal

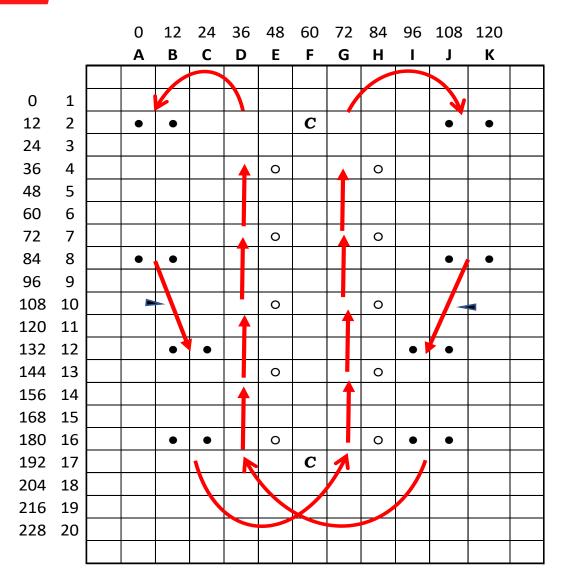
Take-Aways:

What is routine in car can present unique challenge on motorcycle, such as maintaining clutch control and balance as slow for traffic and checking blindspot & positioning motorcycle to see and be seen (distance motorcycle can travel when taking eyes off path of travel to scan for traffic, helmet limiting vision, juggling multiple controls on motorcycle)



Notes:

A large direction cone can be used to point direction for lane changes. Stage clockwise on side of range







Uncontrolled Intersections

20 minutes – Static Demo

Purpose:

Utilize good eye discipline and judgement to negotiate corners and safely interact with cross traffic.

Instructions:

- 1. Ride range in figure 8 pattern, **yielding for cross-traffic** at crossing point in middle of range. Corner at the top of the range is ridden to the left and corner at the bottom of the range is ridden to the right.
- 2. Just like on road, yield to traffic to right

Demo:

Static demo of looking through the corner, then clearing intersection looking both ways

Take-Aways:

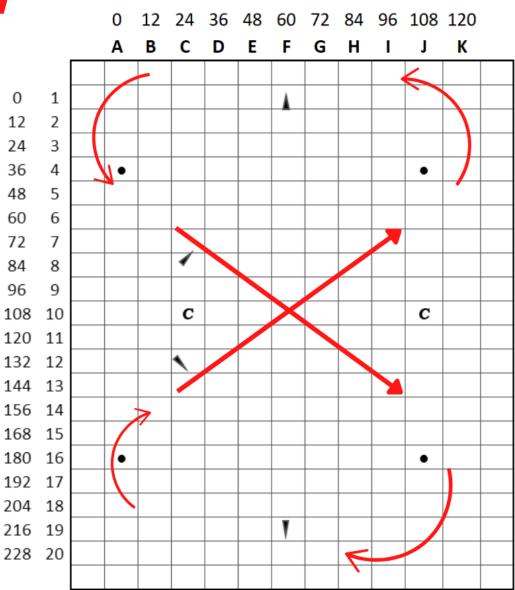
- 1. Eye discipline is critical for not only corners, but being aware of traffic and other hazards
- 2. Plan early and adjust to avoid last second maneuvers
- 3. Smoothly blend controls to adjust to traffic

Notes:

- 1. Use large directional cones to point direction for yield gates & apexes.
- 2. Pull riders out of path of travel to discuss issues with rider judgement negotiating the intersection & cornering.
- 3. Coaches should point out path of travel at intersection.









Purpose:

Scan through the exit to judge radius of corner, smoothly brake to a suitable entry speed

Instructions:

- 1. Ride up the straightaway, shifting into second, look through the exit, slow to a suitable entry speed, smoothly ride through the corner
- 2. Complete cone weave
- 3. Join the opposite line, merging with cross traffic

Demo

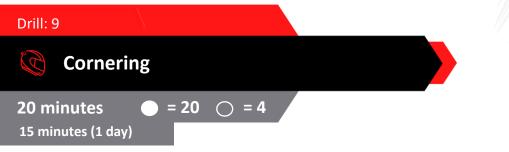
- 1. Riding demo of the path of travel (Speed up early, big head turn, show braking to set entry speed)
- 2. Static Practice of looking through corner (toe, hips, shoulders, head turned through exit)

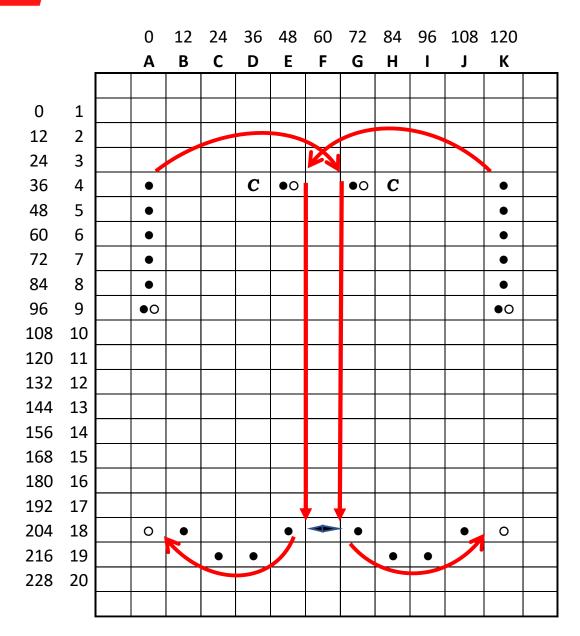
Take-Aways:

- 1. Eyes are the number one control! Look through exit to adjust entry speed
- 2. Smooth braking sets up a smooth corner

Notes

1. Shoot for maximum reps







Purpose:

Develop clutch control & counterbalancing for precise tight space maneuvers

Instructions:

- 1. Beginning at the top of the range, work your way down the range completing u-turns to the right of orange cones and left of green cones. Begin U-turn near closest cone and complete u-turn within the boundary of the far cone.
- 2. Complete cone weave & two 90 degree turns from a stop at far sides of range

Demo:

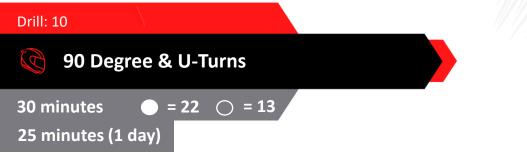
- 1. Riding demo of path of travel showing head turn, clutch control, counterbalancing and holding inside foot off the peg and above the ground as safety and counterbalancing technique
- 2. Walking demo of tightening radius as add motorcycle lean
- 3. Static Demo & Static Practice of body position for counterbalancing

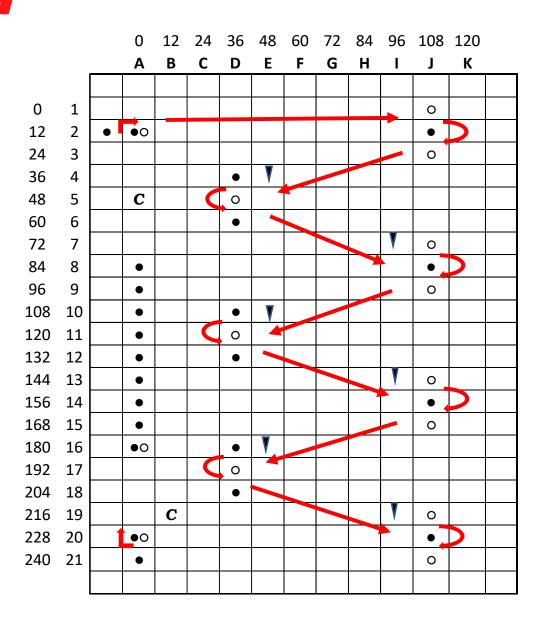
Take-Aways:

- 1. Full head turn to get eyes on exit
- 2. Control speed with clutch, much more precise than throttle
- 3. Keep shoulders vertical or leaned in opposite direction of motorcycle lean
- 4. Begin turn to the right from a stop with motorcycle already leaned and bars turned

Notes:

Use different color and sizes of cone to make path of travel clear.







Brake & Swerve

35 minutes – *Prop Tire & Riding Demo*

Purpose:

We scan for hazards and expect the unexpected so we don't ever need emergency maneuvers, riders prepares for every possibility.

Instructions:

- 1. From the start cones, proceed to braking area once clear, begin braking at cue cone. Work towards stopping in a shorter distance as comfortable. Use large cone to judge your progress
- 2. After stopping, turn to nearest start point on sides of range for swerve
- 3. Once clear, swerve at cue cones around obstacle to middle of range, then merge with traffic to opposite start point for braking practice

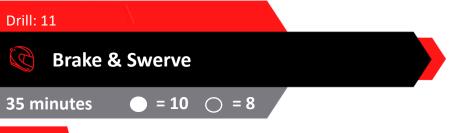
Demo:

(1-Day Permit: Discuss braking process Drill A & stationary demo Drill 6)

- 1. With **prop tire**, **demo smooth progressive braking** on loaded tire versus abrupt braking on an unloaded tire
- Riding demo, 1st run stopping past large cone, 2nd stopping at large cone, 3rd stopping short of large cone. Subsequent runs at shorter distance at increasing speeds from 12-20MPH
- 3. Riding demo of swerve, showing smooth press/press, shoulders remain upright as motorcycles leans independently, eyes looking through obstacle to the new path of travel at increasing speeds from 12-20MPH
- 4. Mid-Drill Static Practice Load, then increase rate of progressive squeeze as build friction

Take-Aways:

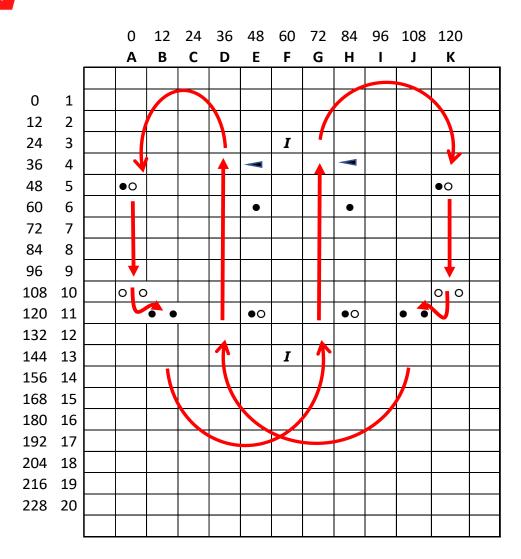
- 1. Keep eyes up
- 2. Smoothly load front tire, progressively squeezing as contact patch grows, most braking occurring at the end of the stop, smooth release
- 3. A good swerve doesn't disrupt the balance of the suspension



Notes:

Place 2^{nd} swerve entry gate cones 3' to inside of range of A10 & K10, 2^{nd} exit cones 6 $\frac{1}{2}$ ' to outside of B11 & J11.

Range:



10 Minute Break



Brake in <u>a Corner</u>

20 minutes – Walking & Riding Demo

Purpose:

Smoothly add brake as reduce lean angle

Instructions:

- 1. Ride to the outside of three curves, left, right and left
- 2. Keep path of travel within six feet of the cones marking corners
- 3. From the stop cones, proceed once the rider ahead reaches next entry cone
- 4. Stop at the stop cones at the exit of each curve, gradually adding brakes as you reduce lean angle
- 5. Return to start outside the large cone, staying to the far side of the range

Demo:

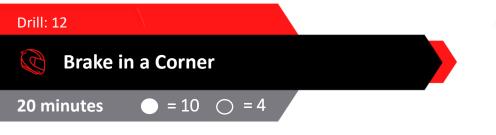
- 1. Walking demo of smooth brake to a stop with motorcycle leaned versus abrupt braking
- 2. Riding demo of stopping in curve, showing eyes looking through corner then straight ahead as approach stop keeping within 3ft of the cones.

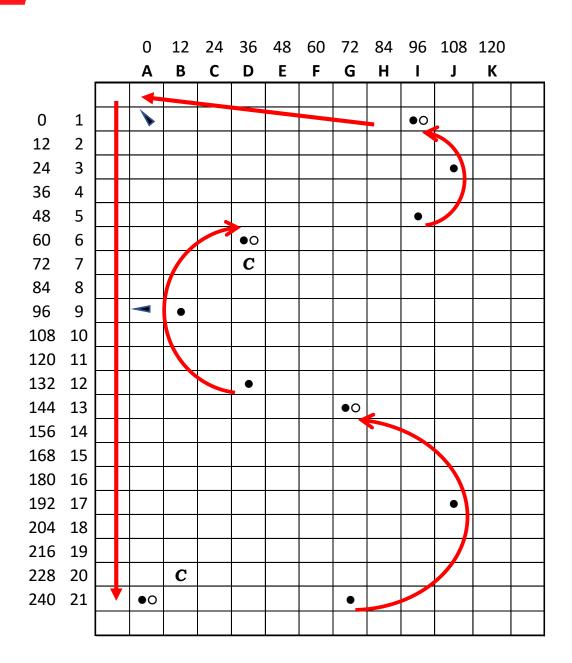
Take-Aways:

- 1. Traction is constant balance between lean and brake/throttle, as add one, you must give up an equal amount of the other
- 2. Braking while leaning, just must be done smoothly. Trading lean for brakes.
- 3. Coming to a **stop from a lean is the foundation of trail braking** (giving up brake pressure as add lean angle)

Notes:

Remove stop cones for drill 13







Multiple Curves – 3 Parts

35 minutes–*Riding & Static, Chalk Talk*

Purpose:

Scan for the next entrance/exit to adjust entry speed with smooth release of front brake & path of travel and utilizing proper body position to minimize lean.

Instructions:

1. Ride the same path of travel as in Drill 12, except this time ride all three corners as smoothly as possible without stopping.

Demo:

- 1. Riding demo of the path of travel (keep speed reasonable, but enough to countersteer)
- 2. After several laps, Chalk Talk to discuss speed equals radius, radius equals lean, lean equals risk. Riding demo of circle in constant lean, rolling off, braking, rolling on & proper body position. Discuss path of travel in multiple curves. Static Practice of looking through corner & proper body position (toe, hips, shoulders, head turned, chin in).
- 3. After several laps, **use prop tire to demo loading tire before tip-in & smoothly trailing off** as increase lean versus abrupt input changes. **Riding demo of all elements**, emphasizing proper body position and smoothly trailing off front brake.

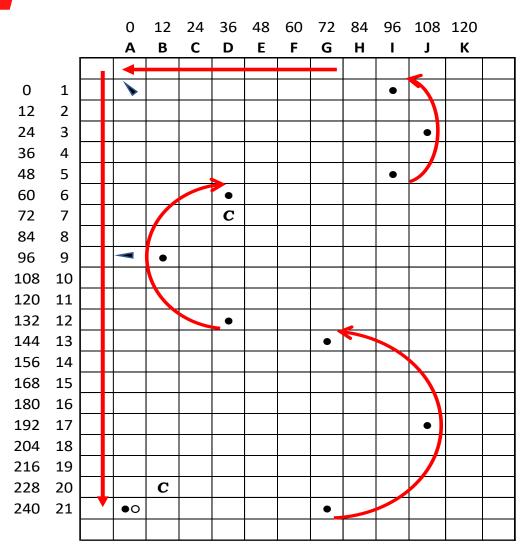
Take-Aways:

- 1. Speed equals radius, radius equals lean, lean equals risk
- 2. On a track, the slowest point of corner is where the lean angle is at the max. For street riding, the **slowest speed at entry allows for greatest options to navigate corner safely**
- 3. Proper body position Eyes, shoulders, & hips turned to exit, weight on ball of foot on inside peg, head moved down & in (chin to wrist) allows corner to be made at the same speed with less lean angle, which provides a larger safety margin to negotiate hazards
- 4. Introduce trail braking & value of braking past tip-in to increase contact patch & safety margin to negotiate hazards. The key is smoothly trailing off the front brake as you tip-in. In the endorsement class, we will work on this technique in more depth. Riding with a safety margin allows rider to adjust to constant variable path of travel on the road to tighten radius if needed. Options include increasing lean, body position & slowing, which is more manageable with smooth braking



Notes:

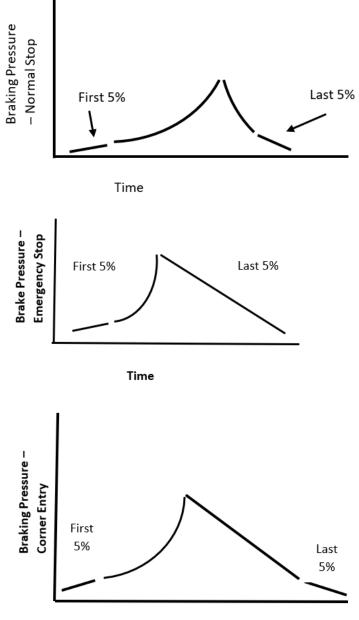
Stage for skills test practice



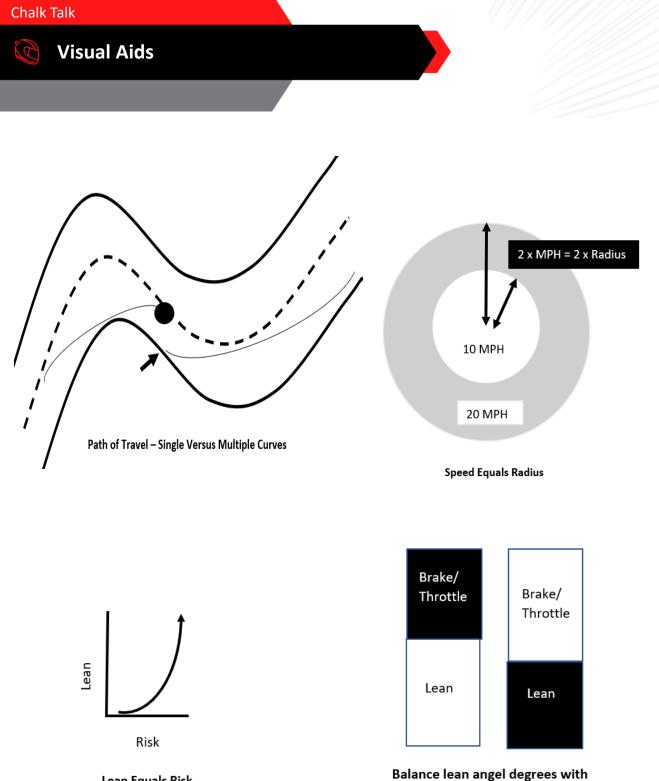
Chalk Talk

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Visual Aids



Time



Lean Equals Risk

brake & throttle

BMC Range Cards

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