

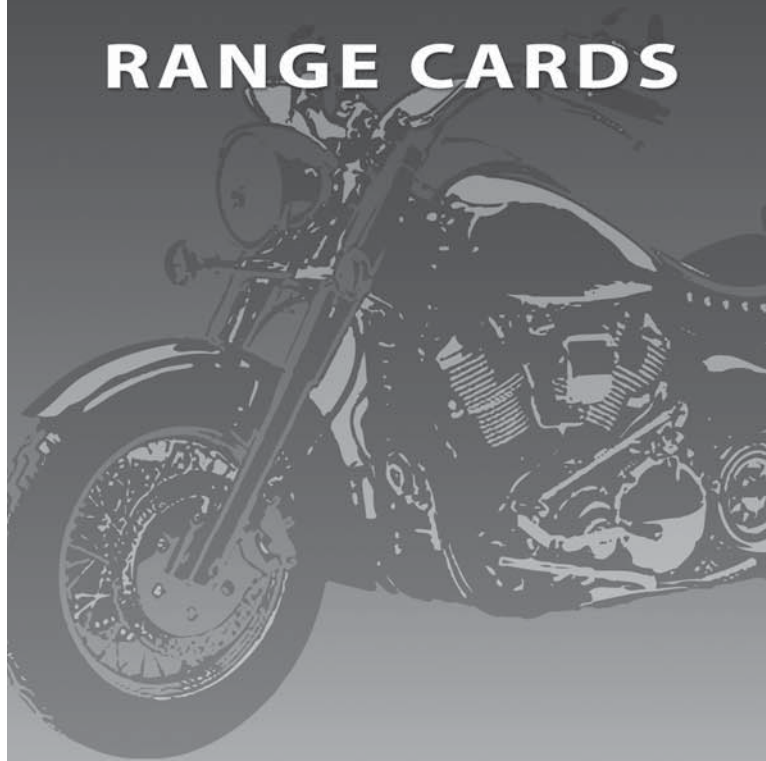
IDAHO STAR
MOTORCYCLE SAFETY PROGRAM

**CORNERING
SKILLS PRACTICE**

ENDORSED RIDER

CLINIC

RANGE CARDS



SKILLS TRAINING ADVANTAGE FOR RIDERS

INTEGRITY ★ SERVICE ★ EXCELLENCE

Contents and Range Prep

Range Day Preparation.....	2
Orientation.....	3
Ex. 1 – Weaving.....	4
Ex. 2 – Pressing to Initiate Lean.....	6
Ex. 3 – Riding through Curves.....	8
Ex. 4 – Straighten Then Brake.....	10
Ex. 6 – Pressing to Increase Lean	12
Ex. 6 – Negotiating Curves.....	14
Range Review.. ..	16
Range Completion Debrief.....	17
Static Practice.....	18
Reversal Procedures.....	19
Range Principles.....	20
Range Guide Legend and Markings.....	22

RANGE PREPARATION

- Cordon off range using large cones and/or banners.
- Clear range of debris and gravel.
- Set cones for Exercise 1.
- Place first aid kit, fire extinguisher, extra cones, water, and cups near staging, but off range.

RANGE RULES

- Don't practice without permission.
- Stay with each exercise as it's being practiced.
- Wear all protective gear when on the motorcycle.
- Do not "cover" the front brake.
- Always check around you – front, sides, and behind –before moving.
- Don't crowd other riders – leave plenty of space between you and them.
- Do not pass other riders/motorcycles unless instructed.
- If you have a problem, move out of the way and signal an instructor.
- If you hear a referee-style whistle, stop immediately and wait for directions.
- If you don't understand an exercise, ask the instructor for clarification.
- Notify an instructor if you are too uncomfortable to ride safely.

LATE ARRIVAL POLICY

- Students who arrive after the start of the first exercise are not allowed to join. Instruct them to contact the office at 1-888-280-7827.

First Idaho STAR Edition: OCT 2012

Orientation

STUDENT ORIENTATION

- Greet students as they arrive.
- Direct students to park in staging.
- Take care of administrative details (this can be done as they arrive - you do not need to wait to do this as a group).
- Collect completed and signed waivers.
- Inspect student motorcycles for obvious defects that could impair handling or create safety hazard:
 - Fluid leaks
 - Tire wear or underinflation
 - Broken spokes
 - Inoperable or missing controls such as:
 - Front or rear brakes
 - Engine cut-off switch
 - Sticky throttle
- Inspect students' driver licenses ("M" endorsement), motorcycle insurance and registration.
- Gather students together to complete orientation.

-
- Welcome class.
 - Inspect and approve riding gear.
 - Introduce Instructors.
 - Have students introduce themselves:
 - Name
 - Riding experience
 - Expectations
 - Identify purpose (*read*):
 - Running off the road in a corner is the most common motorcycle fatality crash scenario. This clinic is designed to improve cornering skills - especially looking where you want to go and countersteering
 - Identify clinic objectives:
 - Hone overall cornering skills
 - Head and eyes placement for cornering
 - Build confidence in leaning and cornering
 - Read Range Rules (opposite page).
 - Introduce and demonstrate hand signals:
 - Start engine
 - Stop engine
 - Speed up
 - Slow down
 - Stop
 - Staging
 - Identify referee's whistle - all stop.
 - Identify riding area and staging area.
 - Small cones define outside perimeter of range. Remain within 10' of the perimeter at all times. Do not ride off the range

RANGE
PREP

Set 20' weave cones and 2 cones for each gate. Place motorcycles in staging.

● - 18

OBJECTIVE:

You will ride around the perimeter and weave between the cones.

DIRECTIONS:

- Begin riding around the perimeter to the left in 2nd gear.
- When you reach the far side of the range, begin weaving between the cones.
- Ride to the right of the first cone, left of the second cone, and so on.
- Ride through the gates (*point out*) on the end of the range.
- Keep your head and eyes up, looking where you want to go, not down at the cones.

EVALUATE UNDERSTANDING:

- What will help you balance the motorcycle in the weave?
(*Speed, head and eyes*)
- How do you make the motorcycle lean?
(*Press on the handgrip*)
- Do you have any questions?

DEBRIEF:

- Was it easier going faster or slower?
(*Faster*)
- What happened if you looked down at the cones?
(*Went toward cones/hit cones*)

WHAT TO COACH:

1. Speed for stability. Coach only if they are wobbling/unstable.
2. Head and eyes up.

EXERCISE GUIDELINES:

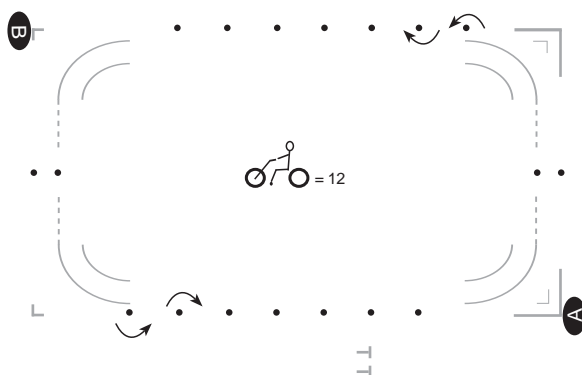
- Coach as needed.
- Allow students to countersteer on their own (it is not a 'What To Coach' item).
- One of the objectives of this exercise is to evaluate overall control. If the student cannot maintain control of the motorcycle in this exercise, they should be dismissed and encouraged to take a Basic course.

RANGE CONTROL TIPS:

- Keep speeds under 15 mph.
- Counsel any student who is unable to complete this exercise safely to take a Basic Course and dismiss from class. Advise student to contact **STAR** office.

TIME/REPETITIONS:

- Run this drill for 5 minutes.

RANGE/CONE LAYOUT:**STAGING:**

Instructor B give staging signal to riders in motion.

Exercise 2 | **PRESSING TO INITIATE LEAN**
25 MINUTES

Exercise 2

RANGE PREP

Strike previous setup. Set start gates (2) and turning gates (2).

★ - 8

OBJECTIVE:

You will cause the motorcycle to lean by pressing on the handgrip.

DIRECTIONS:

- Ride around the perimeter. Line up at the start gate (*point out*).
- Approach the cones in 2nd gear at about 15 mph.
- As you pass between the cones (*point out*), press left to initiate a left turn.
- Make a large U-turn and get back in line.
- Do not decelerate or use your brakes before or in the turn.
- Pause at the start point just until the rider ahead reaches the turning cones.
- When directed, repeat to the right.

STATIC PRACTICE: “LOOK AND PRESS” (PG. 18)

EVALUATE UNDERSTANDING:

- What causes the motorcycle to turn at speed?
(*Lean*)
- How do you initiate a lean?
(*Press forward on the handgrip*)
- What helps make the motorcycle go where you want it to go?
(*Looking where you want to go - directional control*)
- When will you proceed?
(*As soon as the rider ahead clears the first cones*)
- Do you have any questions?

DEBRIEF:

- Did you need to press the handlebar down or forward?
(*Forward*)
- What happened if you released your press?
(*Motorcycle straightened*)

WHAT TO COACH:

1. Press on handgrip.
2. Head and eyes.

EXERCISE GUIDELINES:

- Keep students moving. Students learn best with lots of practice.
- Part A: To the left – Instructor A coaches each student PRESS. Instructor B controls and coaches as needed.
- Part B: To the right – Instructors coach as needed.

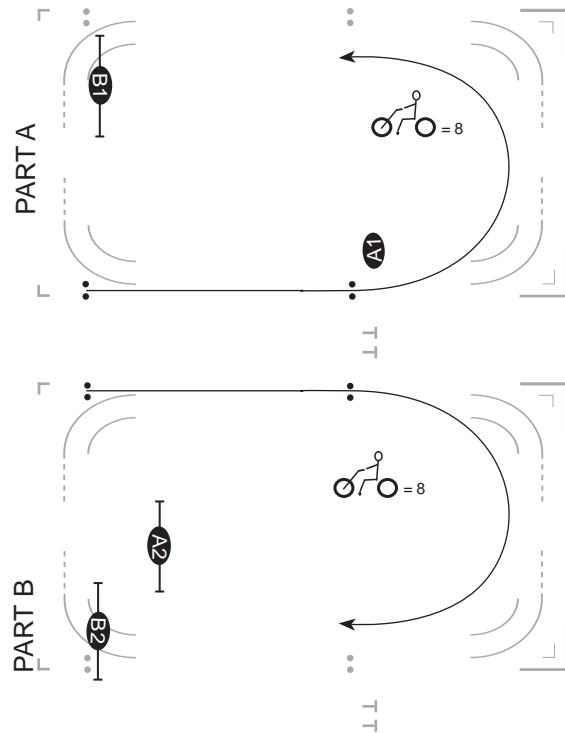
RANGE CONTROL TIPS:

- Maintain rider spacing to ensure safety and facilitate coaching.
- When changing from Part A to Part B, move all students together in an S-turn to the next start point.

TIME/REPETITIONS:

- At 15 minutes move to Part B.

RANGE/CONE LAYOUT:



STAGING:

Direct lead rider to make a wide S-turn and return to staging.

RANGE PREP	<i>Strike previous setup. Set 6 cones each to mark two curves. Set large pivot cones so that "SLOW" can be read by approaching riders, including reversal.</i>
● - 12	
▲ - 4	

OBJECTIVE:

You will ride through the curves demonstrating the "SLOW-LOOK-ROLL-PRESS" sequence of cornering.

DIRECTIONS:

- Begin riding around the perimeter to the left in 2nd gear toward the curves (*point out*).
- Speed up to 15-20 mph on the long sides of the range.
- As you approach the curve, slow to a suitable entry speed, then look through the turn.
- Apply throttle slightly before you lean, then press on the left handgrip to initiate your turn.
- Complete the curve and round the pivot cone. Repeat the technique at the opposite corner.
- After both groups have ridden to the left, you will repeat the exercise to the right. Continue to practice proper cornering technique and the outside-inside-outside path of travel.

DEMONSTRATION:

(Demo two laps to the left. Approach speed, 15-20 mph)

As this exercise is demonstrated, watch for:

- When the SLOW is completed.
- When the LOOK and ROLL begin.

EVALUATE UNDERSTANDING:

- When should you begin rolling on the throttle and why - what's the advantage?

(Before the turn - stabilizes the motorcycle by setting the suspension before the turn)

- How much throttle do you need to apply through the turn?

(Steady throttle is ok - or slightly increasing)

- Do you have any questions?

DEBRIEF:

- Was it smoother starting the roll-on before the turn or in the turn?

(Before)

- What is the best position for entering a curve and why?

(Outside - makes turn less sharp; conserves traction and ground clearance)

WHAT TO COACH:

1. SLOW (both brakes) and ROLL before the turn (steady throttle is OK).
2. LOOK through the turn.

EXERCISE GUIDELINES:

- Coach as needed.
- Ride left/stage/switch groups. Move curve cones.
- To the left; Instructor A coaches "SLOW/ROLL." Instructor B coaches "LOOK AT ME" or "ROLL" on same corner. Allow students to ride opposite corner without coaching. Observe entire range.
- After everyone has ridden left, Instructor B moves curve cones; Instructor A discusses line selection (outside-inside-outside) with riders in staging.
- Ride right/stage/switch groups. Instructor A coaches "LOOK AT ME" or "ROLL" as needed.
- To the right; Instructor B coaches students in staging. Observe and help Instr. A if needed.
- For classes with 4 or fewer students, you must still run this exercise in two groups.

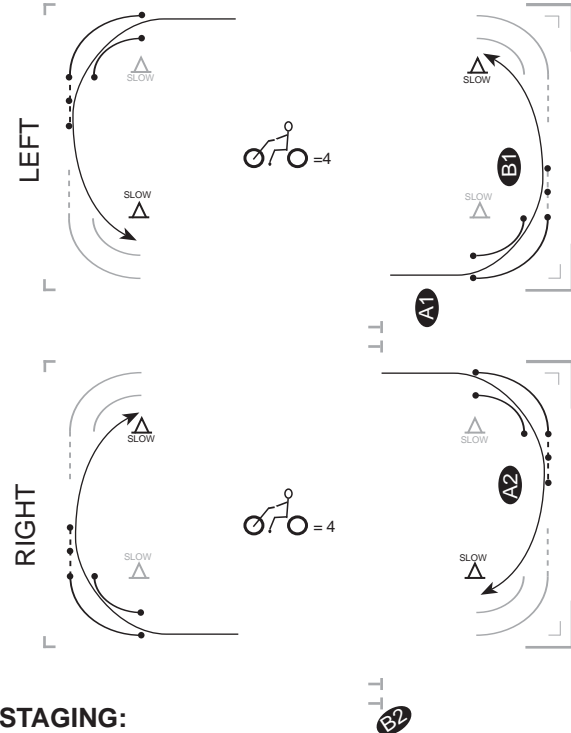
RANGE CONTROL TIPS:

- Give "SLOW" signal early enough for students to complete transitions before the curve.
- Instructor B give stage signal in motion (left only).
- Use R3 reversal (pg. 19) from staging (right).

TIME/REPETITIONS:

- Run each group 6 minutes in each direction.

RANGE/CONE LAYOUT:



STAGING:

Instructor A - stop riders on perimeter. Direct lead rider to make a wide S-turn and return to staging.

BREAK - 15 MINUTES

Range Guide

RANGE PREP	Strike previous setup. Set start cones and curve entrance/exit cones.
▲ - 4	
● - 4	

OBJECTIVE:

You will ride a curved path. On the instructor’s signal you will straighten the motorcycle then stop quickly.

DIRECTIONS:

- Begin riding around the large arc (*point out*) to the left in 2nd gear.
- When signaled (*show signal*), straighten the motorcycle, and then come to a rapid stop in a straight line.
- After stopping, move to the next starting point and continue the exercise.

DEMONSTRATION: (*Demo one complete lap to the left. Approach speed, 12-14 mph*)

As this exercise is demonstrated, watch for:

- Separation of turning and braking.
- Head and eyes on new path when motorcycle straightens.

EVALUATE UNDERSTANDING:

- Why is it important to straighten the motorcycle first?
(*Less traction is available for braking when in a lean*)
- How do you straighten the motorcycle?
(*Press on the outside handgrip*)
- When will you straighten then brake?
(*On instructor’s signal*)
- Do you have any questions?

DEBRIEF:

- What would happen if you over-applied the brakes while leaned over?
(*Lose balance, skid, fall over*)
- When you straighten the motorcycle, where should you look?
(*Straight ahead - not through the turn*)

WHAT TO COACH:

1. Separating turning and braking.
2. Stopping quickly.
3. Head and eyes.

EXERCISE GUIDELINES:

- Coach as needed.
- Coach the students to straighten the motorcycle before braking.
- To the left – Concentrate on separating turning and braking. To the right – Continue to coach separating, but emphasize stopping quickly.

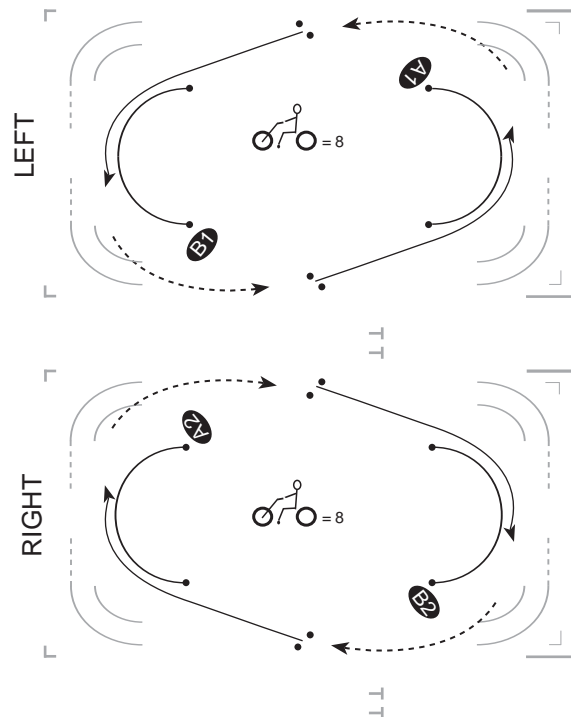
RANGE CONTROL TIPS:

- Send 1st 4 all the way around the range to line up at staging side cones. Send 2nd 4 to line up at far side cones.
- Position yourself at the end of the painted arc so they are looking at you for the signal.
- Use R6 reversal (pg. 19) to change direction to the right.

TIME/REPETITIONS:

- Run this drill for about 8 minutes each direction.

RANGE/CONE LAYOUT:



STAGING:

Return to staging by directing group nearest staging to make a wide U-turn and return to staging, then direct the other group to make a wide S-turn and return to staging.

RANGE
PREP
C - 13
★-1

Strike previous setup. Using 18" tall cones, set start gate (2), turning gate (2), arc (6), and exit gates (2) for Part A.

OBJECTIVE:

You will adjust your line mid-turn by increasing forward pressure on the handgrip.

DIRECTIONS:

- Ride around the perimeter. Line up at the start gate (*point out*).
- Approach the curve marked by the large cones in 2nd gear at 15-20 mph.
- When you reach the midway point in your turn, the instructor will signal you to ride through either the outside gate or the inside gate (*show signal*).
- Adjust your lean as needed by pressing forward on the handgrip.
- Do not decelerate or use your brakes before or in the turn.
- Pause at the start point until the rider ahead clears the midway point (*point out*).
- When directed, repeat to the right.

DEMONSTRATION

(Demo one pass through each exit gate. Approach speed, 15-20 mph)

As this exercise is demonstrated, watch for:

- How the rider tightens the turn by pressing more on the handgrip to ride to the inside gate.
- How the rider leans into the turn.

EVALUATE UNDERSTANDING:

- How do you tighten your line in the middle of a turn?
(*Increase pressure on the handgrip*)
- What helps your directional control?
(*Looking through the turn*)
- When will you proceed?
(*When the rider ahead clears the midway point*)
- Do you have any questions?

DEBRIEF:

- What happened when you increased forward pressure on the inside handgrip?
(*Increased lean angle and turn got tighter*)
- What happened if you released your press?
(*Motorcycle straightened*)

WHAT TO COACH:

1. Press on handgrip.
2. Leans body into the turn.
3. Head and eyes.

EXERCISE GUIDELINES:

- Coach as needed.
- Leans body into the turn - body is in line with the motorcycle or slightly to the inside. Correct students who are leaning out or away from the motorcycle/ground.
- Keep students moving. Students learn best with lots of practice.
- Instructor A gives signal to approaching rider at the second to last curve cone and does not coach from this position. Instructor B coaches as needed.

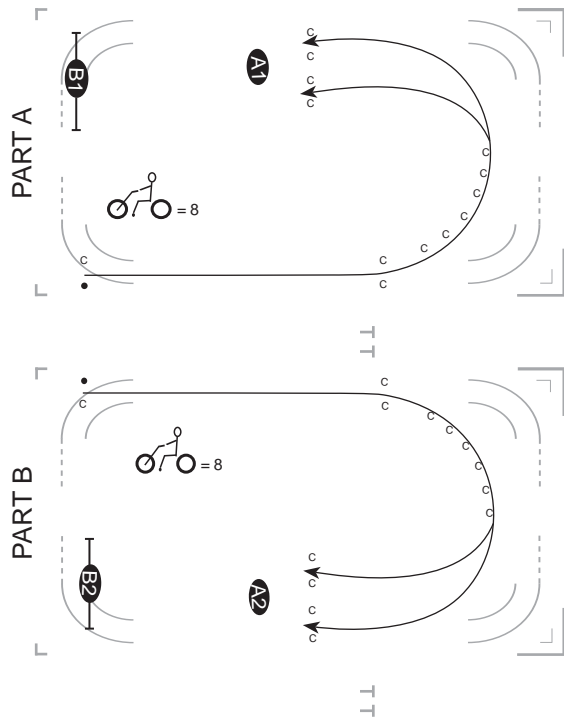
RANGE CONTROL TIPS:

- Maintain rider spacing to ensure safety and facilitate coaching.
- When changing from Part A to Part B, move all cones for Part B and move students together in an S-turn to the next start point.

TIME/REPETITIONS:

- At 10 minutes move to Part B.

RANGE/CONE LAYOUT:



STAGING:

Direct lead rider to make a wide S-turn and return to staging.

**RANGE
PREP**

Strike previous setup. Set 6 cones each to mark two curves. Set large pivot cones so that "SLOW" can be read by approaching riders.

- - 12
- ▲ - 4

OBJECTIVE:

You will ride through faster curves demonstrating proper throttle application and the "SLOW-LOOK-ROLL-PRESS" sequence of cornering.

DIRECTIONS:

- Begin riding around the perimeter to the left in 2nd gear toward the curves.
- Speed up to 20 mph on the long sides of the range.
- As you approach the curve, slow to a suitable entry speed and look through the turn.
- Apply steady or slightly increasing throttle before you reach the curve entrance. Maintain throttle application through the curve.
- Complete the curve and round the pivot cone. Repeat the technique at the opposite corner.
- Remember to complete all braking and apply the throttle before the curve entrance.
- Maintain a safe following distance.

EVALUATE UNDERSTANDING:

- When will you apply the throttle for the curve?
(Before reaching the curve)
- How much throttle should be applied in a curve?
(Steady or slightly increasing)
- Do you have any questions?

DEBRIEF:

- What happened if you were late turning your head or looked at a cone?
(Curve path was wide/drawn towards cone)
- What helped make your turns smooth?
(Braking completed and throttle applied early; early head turn)

WHAT TO COACH:

1. Complete braking and throttle application before curve.
2. Head and eyes for directional control.
3. Smooth and steady throttle application through entire curve.

EXERCISE GUIDELINES:

- Coach as needed.
- Coach students to achieve a steady throttle or slightly increasing roll-on. Discourage excessive throttle use.
- Roll-on should begin before the curve entrance and be applied throughout the entire curve.

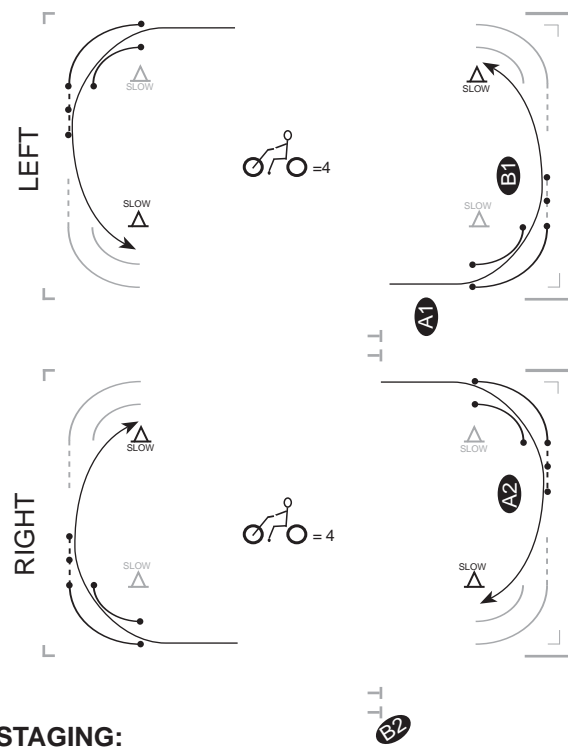
RANGE CONTROL TIPS:

- Instructor A coaches "ROLL" and "LOOK AT ME" as necessary.
- Instructor B coaches students in staging to identify throttle timing. Observe and help Instructor A, if needed.
- Instructor in staging can help keep track of time.
- Instructor A give stage signal in motion (left only).
- After everyone has ridden left, Instructor A moves curve cones and exercise is run to the right.
- Use R3 reversal (pg. 19) from staging (right).
- For classes with 4 or fewer students, you must still run this exercise in two groups.

TIME/REPETITIONS:

- Run each group 5 minutes in each direction.

RANGE/CONE LAYOUT:



STAGING:

Instructor A - stop riders on perimeter. Direct lead rider to make a wide S-turn and return to staging. Range Guide

“LET’S TAKE A FEW MINUTES AND REVIEW WHAT WE HAVE LEARNED AND PRACTICED TODAY.”

What do we do before we enter a turn?

- *(Slow with the brakes)*
- *(Look through the turn)*
- *(Start to roll on the throttle to stabilize the motorcycle)*

When should you start to apply the throttle (the “roll”) when cornering?

- *(Before you start to lean - the steady roll on of the throttle stabilizes the suspension of the motorcycle)*

What should you do if you start to run wide in a turn?

- *(Press forward MORE on the handgrip)*
- *(Keep the throttle applied - constant speed)*
- *(Do not apply the brakes)*
- *(Keep your eyes looking all the way to the exit of the turn)*

What is the biggest cause of motorcyclists running wide in turns?

- *(Failure to look far enough through the turn - also called “overriding your sight distance”)*
- *(Poor countersteering - not enough press)*

COMMON CORNERING ISSUES

The most frequently occurring fatality crash in Idaho is the rider running off the road in a corner. What do you think are some common cornering issues that lead to these kinds of crashes?

- *(Failure to look far enough through the turn - also called “overriding your sight distance”)*
- *(Ineffective pressing/countersteering)*
- *(Excessive speed)*
- *(Failure to respond appropriately or at all at the first sign of something wrong - obstacle in the road, turn gets tighter, etc.)*

RISK

How can you lower your risk of a crash?

- *(Seek knowledge then practice to build skills so that you can perform in the moment of truth)*
- *(Avoid alcohol and ride unimpaired)*

How does keeping your eyes up, scanning ahead and using a mental strategy to deal with hazards affect your performance and lower risk?

- *(Early hazard identification affects when you begin taking action to reduce likelihood of a crash)*

How can you reduce the severity of a crash?

- *(Wear good gear all the time)*
- *(Practice skills and take evasive action - change your line; reduce your speed; etc.)*

TOP 5 HABITS OF A SAFE RIDER:

- Uses visual scanning
- Practices good cornering skills
- Practices good braking skills
- Wears riding gear
- Rides sober

Taking this course is a good start - we encourage you to adopt the other four habits, too.

READ:

“Remember that you are not the only victim if you are injured or killed in a crash - your family and loved ones are victims of that crash, too. Don’t allow those circumstances to be the result of poor choices.”

“WHAT QUESTIONS OR OBSERVATIONS DO YOU HAVE?”

INDIVIDUAL DEBRIEFS

(ABOUT 45-60 SECONDS PER STUDENT)

- Identify strengths in their cornering skills.
- Identify areas in which they need more practice.

Instructor Note: Identify possible candidates

- Encourage participation
- Provide web resource

CONDUCT GRADUATION

- Distribute Completion Packets
- Distribute and collect student critiques
- Discuss other courses
 - Experienced Course
 - PRC (Precision Riding Clinic)
 - BSP (Braking Skills Practice)
- Thank students for participating

DISMISS

STATIC PRACTICE

(STUDENTS ARE MOUNTED; SIDE STANDS UP; ENGINES OFF)

EX. 2: LOOK AND PRESS

- Both feet down
- Turn head and look
- Press forward on handgrip
- Students repeat several times on instructor direction

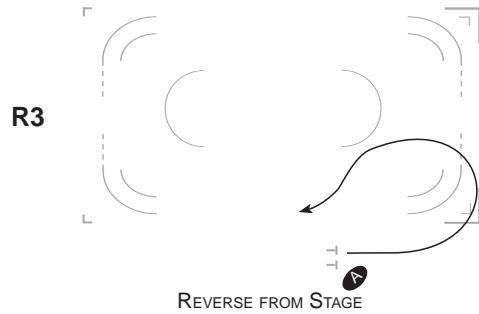
WHAT TO COACH

- Enough forward press to make the bike lean

REVERSALS

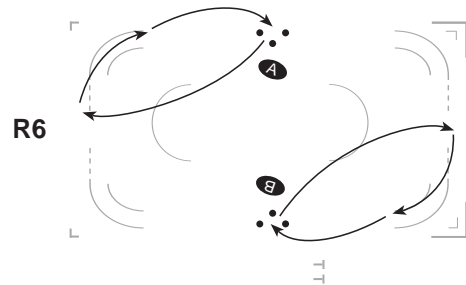
R3 reverse from staging:

- Direct lead rider to “ride toward end of the perimeter and make a sweeping left U-turn.”



R6 (Exercise 4 reversal)

- Both instructors walk to nearest start cones.
- Move start cone.
- Direct lead rider to “make a sweeping right turn and line up at the same start point.”



RANGE CARDS

- Read the **Exercise Title, Objectives,** and **Directions** for each exercise. Don't make additions.
- Directions and Debrief questions are read with students off the bikes and gathered together

DEMOS

- Show accurate technique and timing.
- Students observe demos from the staging area.
- POT (path of travel) matches what the students will ride. Reversals are not demonstrated.
- Limit narration during demos.

STATIC PRACTICE

- Both Instructors guide, evaluate, and coach static practice (no more than four students each).
- Guide these enough times to see each student succeed at least once. Coach as needed.

STAGING

- Always cut engine power once safely stopped, then turn ignition to OFF.
- Always alternate riders in or out; don't form or empty a line.
- Enter – Place first rider in the outside line (left), second rider in the inside line (right), allow the remaining riders to self-park.
- Exit – Direct the inside rider, then allow remaining students to exit on their own.
- Be in position to assist and direct the entry and exit if needed, but responsibility is given to the students.

VERBAL COACHING

- Prioritize for
 1. Safety
 2. Exercise main objective ("What to Coach")
- Limit to one or two items, presented in a positive manner.
- Brief and concise, typically limited to three to five seconds.
- Limit narration in staging during split exercises.

SIMULATED COACHING

- Large enough to be seen from across the range.
- Smooth motions.
- Consistent.
- Early enough that student can respond to signals.

EXERCISE TIME

- Run exercises for full time allotted.
- Exercise time includes:
 - Striking and setting cones as appropriate
 - Objective and Directions
 - Static Practice (when appropriate)
 - Demo (when appropriate)
 - Evaluation of Understanding
 - Exercise activity
 - Staging
 - Debrief
- Allow for 1½ to 2 minutes to stage and debrief.

RANGE CONTROL

- Students in front of Instructors at all times (unless otherwise specified).
- Students stay within 10 feet of perimeter at all times.
- Be aware of where all students are, all the time.
- No surprises for students.
- Coordinate with other Instructor regularly.

INSTRUCTOR POSITION WHEN INSIDE POT

- Place yourself so:
 - You can see/control entire range
 - If students must pass behind your back, it is only for a brief moment

INSTRUCTOR PROFICIENCY

- Instructors should routinely and independently ride exercises to reinforce timing, technique and performance.

SPEED


- Coach speed that is designated in the exercise directions, or if student is wobbly or unstable.
- If no speed is defined in the exercise directions, coach speed only if wobbly or unstable.


Range Guide Legend and Markings

Range Guide Legend

• - Small cones (2")


△ - Large cones (18")

 - Large cone with sign orientation

 = 8 - Max. number of students at one time

————→ - Primary Path of Travel

-----> - Secondary/Return Path of Travel

 - Instructor position: Where to stand & direction to face

 - direction to face

Range Markings

● - Small cone locations, Ex. 1, 3, 6

★ - Small cone locations, Ex. 2, 5

▲ - Large cone locations, Ex. 3, 6

▲ - Small cone locations, Ex. 4