



VELOCITYONE™ RUDDER QUICK FLIGHT GUIDE

Welcome to the VelocityOne Rudder, the world’s most advanced Universal Rudder Control System, designed and optimised to enable precision flight for a multitude of aircraft. Working seamlessly with VelocityOne Flight system on Xbox and all other flight sim set ups on PC, VelocityOne Rudder provides a range of flight simulation experiences for all home pilots. Please visit our knowledgebase at turtlebeach.com/support for additional information and notifications on product updates.

HARDWARE SETUP, CONTROLS & FEATURES

1. CHOOSE PREFERRED PEDAL SETUP

2. PEDAL CHANGE EXAMPLE (LIGHT AIRCRAFT)

3. CHOOSE PREFERRED PEDAL WIDTH

PC

4A. CONNECT CABLES

XBOX

4B. CONNECT CABLES

XBOX

5. ACTIVATE RUDDER ON VELOCITYONE FLIGHT

DOWNLOAD TURTLE BEACH CONTROL CENTER FOR FEATURE AND PERFORMANCE UPDATES ON WINDOWS AND XBOX



1 MODE SELECTION BUTTON AND LED INDICATOR

Press for three seconds to switch between PC and Xbox compatibility modes:

- **White LED** - Indicates the rudder is in PC mode.
- **Blue LED** - Indicates the rudder is in Xbox mode.

2 PEDAL ANGLE LOCKING TABS

Used to change the resting angle of the pedal in conjunction with the interchangeable pedal sets. Pull and hold the tab outward to release the pedal, tilt to the desired angle and release to lock.

3 DYNAMIC YAW SPRING CHAMBER ACCESS

Used to adjust the amount of resistance in the dynamic yaw mechanism. Using the supplied allen key tool, carefully open each chamber and remove the spring, replacing it with your preferred level of resistance:

- **80 N (Black)** - For more resistance, heavier feel.
- **60 N (Silver)** - For less resistance, lighter feel.

4 USB-C CONNECTION PORT

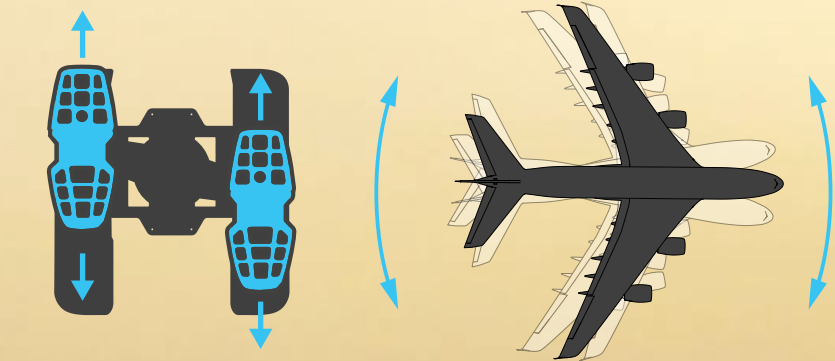
Used to connect to PC and VelocityOne Flight, enabling Xbox compatibility:

- **PC** - use the 2m USB-A to USB-C cable for direct PC connection.
- **Xbox** - connect to VelocityOne Flight as indicated in the diagram above using the 2.5m USB-C to USB-C cable. Connect VelocityOne Flight to Xbox to enable compatibility, following the connection procedure outlined above.

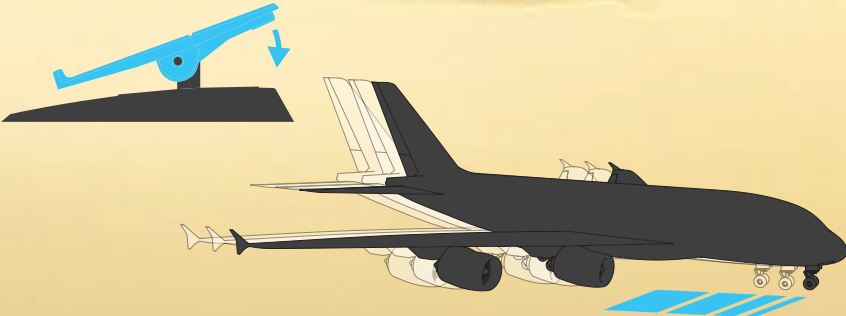


HOW DOES THE RUDDER AFFECT THE MOVEMENT OF AN AIRCRAFT?

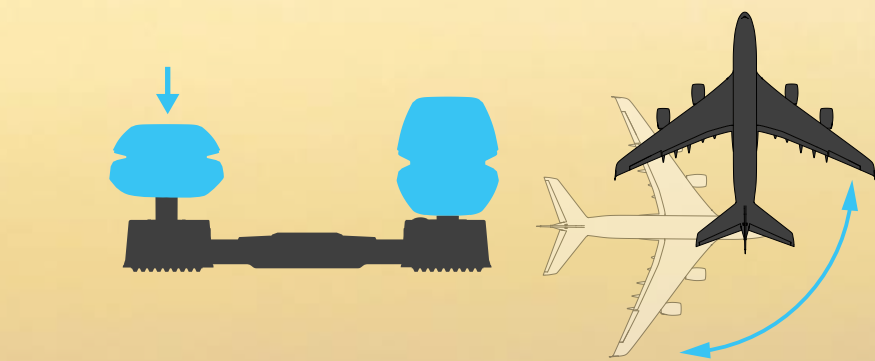
YAW - CONTROLLED BY SLIDING PEDALS



TOE BRAKES - CONTROLLED BY TILTING PEDALS



DIFFERENTIAL BRAKING FOR TIGHT TURNS WHILE TAXIING



BOX CONTENTS:

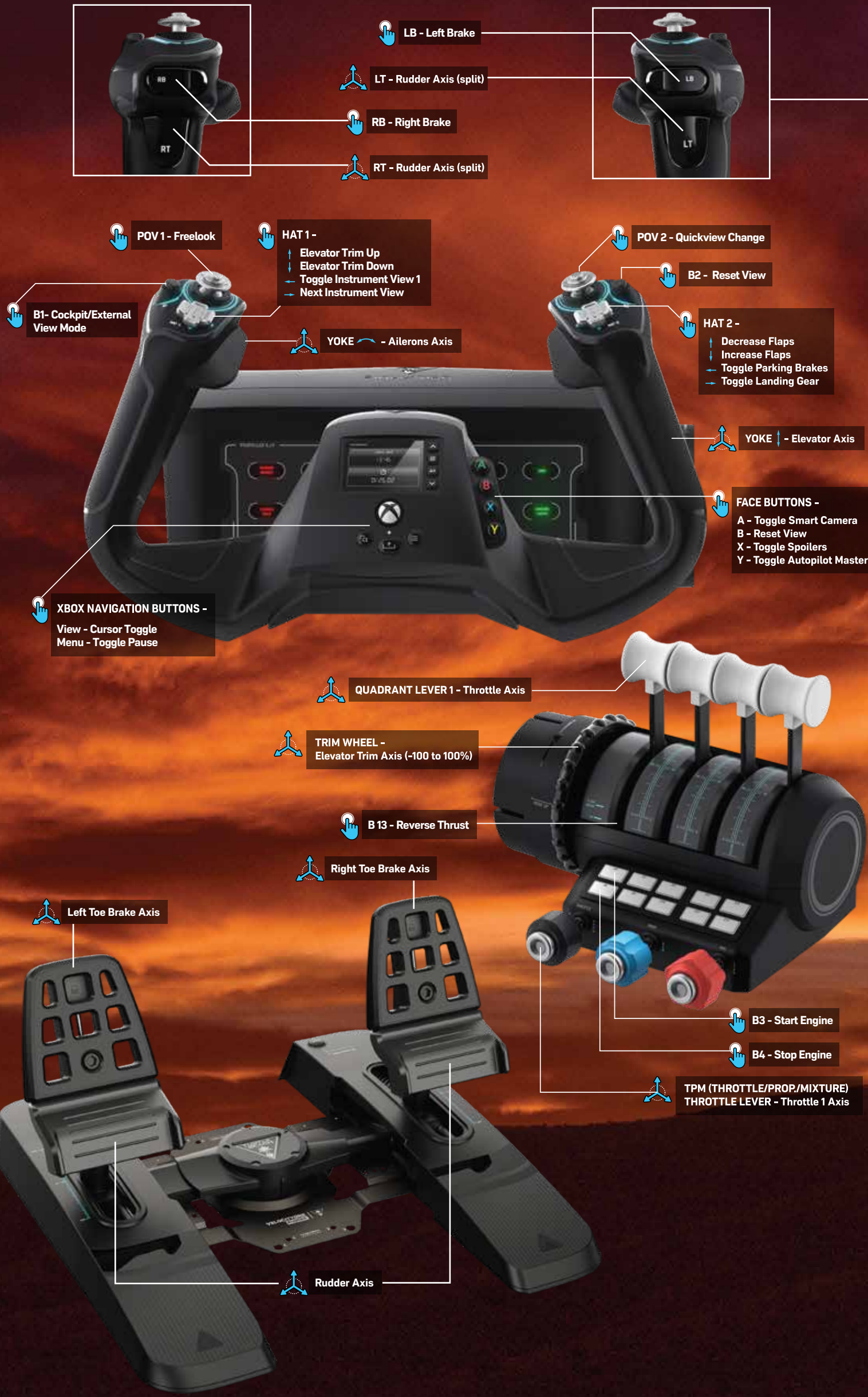


VELOCITYONE™ RUDDER QUICK FLIGHT GUIDE

Now that you have the Rudder hardware setup, we will cover off the basics to get you flying in Microsoft Flight Simulator.

DEFAULT FLIGHT SIMULATOR CONTROLS

If you are new to Flight Simulator, we recommend using the Default profile, and running through the Flight Training lessons. The Default profile contains everything you need to get flying, and will be active when you first connect the product and load the simulator.



VELOCITYONE RUDDER INTEGRATION INFO

In Xbox Mode, once the pedals are connected to the Yoke and enabled, the Yaw/Pivot axis will take over the Rudder Assignments in MSFS. You will need to manually assign Left and Right Toe Brake Axes to the correct pedals in the profiles you are using.

In PC Mode, once the pedals are connected to your PC, you will need to manually assign the Rudder Axis to the Yaw/Pivot of the Rudder. Next assign Left and Right Toe Brake Axes to the correct pedals.

In both modes you would be free to re-assign the LT/RT and LB/RB controls, on your VelocityOne Flight to other functions within the simulator.

ADDITIONAL PROFILES					
VELOCITYONE FLIGHT					
FLIGHT CONTROL	PC MODE	XBOX MODE	DEFAULT	SINGLE-ENGINE PROP	TWIN-ENGINE JET
Yoke	L-Axis X	L-Axis 4	Ailerons Axis	Ailerons Axis	Ailerons Axis
Yoke	L-Axis Y	L-Axis 3	Elevator Axis	Elevator Axis	Elevator Axis
LT/RT	L-Axis Z	L-Axis 2 or 12	Rudder Axis	Rudder Axis	Rudder Axis
Trim Wheel	Slider X	L-Axis 11	Elevator Trim Axis	Elevator Trim Axis	Elevator Trim Axis
Quadrant Lever 1	Slider Y	L-Axis 1	Throttle Axis	Throttle Axis	Spoiler Axis
Quadrant Lever 2	R-Axis X	L-Axis 5	-	Propeller Axis	Throttle 1 Axis
Quadrant Lever 3	R-Axis Y	L-Axis 6	-	Mixture Axis	Throttle 2 Axis
Quadrant Lever 4	R-Axis Z	L-Axis 7	-	Flaps Axis	Flaps Axis
Throttle Lever	L-Axis X	L-Axis 8	Throttle 1 Axis	Throttle 1 Axis	-
Prop Lever	L-Axis Y	L-Axis 9	-	Propeller 1 Axis	-
Mixture Lever	L-Axis Z	L-Axis 10	-	Mixture 1 Axis	-
A	Button 1	Button 1	Toggle Smart Camera	Toggle Smart Camera	Toggle Smart Camera
B	Button 2	Button 2	Reset View	Display Checklist	Display Checklist
X	Button 3	Button 3	Toggle Spoilers	Display Navlog	Display Navlog
Y	Button 4	Button 4	Toggle Autopilot Master	Display ATC	Display ATC
LB	Button 5	Button 5	Left Brake	Left Brake	Left Brake
RB	Button 6	Button 6	Right Brake	Right Brake	Right Brake
View	Button 7	Button 7	Cursor Toggle	Cursor Toggle	Cursor Toggle
Menu	Button 8	Button 8	Toggle Pause	Toggle Pause	Toggle Pause
B1	Button 9	Button 9	Cockpit/External View Mode	Cockpit/External View Mode	Cockpit/External View Mode
B2	Button 10	Button 10	Reset View	Reset View	Reset View
POV-1	POV-0	POV	Freelook	Freelook	Freelook
POV-2	POV-1	Buttons 15-22	Quickview Change	Quickview Change	Quickview Change
HAT-1	Button 13	Button 23	Elevator Trim Up	Elevator Trim Up	Elevator Trim Up
HAT-1	Button 14	Button 24	Next Instrument View	Next Instrument View	Next Instrument View
HAT-1	Button 15	Button 25	Elevator Trim Down	Elevator Trim Down	Elevator Trim Down
HAT-1	Button 16	Button 26	Toggle Instrument View 1	Toggle Instrument View 1	Toggle Instrument View 1
HAT-2	Button 17	Button 27	Decrease Flaps	Camera Modifier	Camera Modifier
HAT-2	Button 18	Button 28	Toggle Landing Gear	Rudder Trim Right	Rudder Trim Right
HAT-2	Button 19	Button 29	Increase Flaps	Systems Modifier	Systems Modifier
HAT-2	Button 20	Button 30	Toggle Parking Brakes	Rudder Trim Left	Rudder Trim Left
B3	Button 1	Button 31	Start Engine	Start Engine	Start Engine
B4	Button 2	Button 32	Stop Engine	Parking Brakes	Parking Brakes
B5	Button 3	Button 33	-	Fuel Pump	Arm Auto Throttle
B6	Button 4	Button 34	-	Fuel Valve	Arm Spoilers
B7	Button 5	Button 35	-	Decrease Flaps	Decrease Flaps
B8	Button 6	Button 36	-	Increase Flaps	Increase Flaps
B9	Button 7	Button 37	-	Autopilot Master On/Off	Autopilot Master On/Off
B10	Button 8	Button 38	-	Toggle Pitot Heat	Taxi Lights
B11	Button 9	Button 39	-	Landing Gear	Landing Gear
B12	Button 10	Button 40	-	Landing Lights	Landing Lights
B13	Button 11	Button 41	Reverse Thrust	Reverse Thrust	-
B14	Button 12	Button 42	-	-	Reverse Thrust: Engine 1
B15	Button 13	Button 43	-	-	Reverse Thrust: Engine 2
B16	Button 14	Button 44	-	-	-
VELOCITYONE RUDDER					
Rudder Yaw/Pivot	L-Axis Z	L-Axis 2	Rudder Axis	Rudder Axis	Rudder Axis
Left Toe Brake	L-Axis X	L-Axis 13	Left Toe Brake Axis	Left Toe Brake Axis	Left Toe Brake Axis
Right Toe Brake	L-Axis Y	L-Axis 14	Right Toe Brake Axis	Right Toe Brake Axis	Right Toe Brake Axis

EXAMPLE: START FLYING A SINGLE ENGINE PROPELLER AIRCRAFT (E.G. C172) IN MICROSOFT FLIGHT SIMULATOR

1. ACCESS THE CONTROLS OPTIONS TO CHECK DEFAULT PROFILE IS ACTIVE.

2. GO TO WORLD MAP TO SELECT YOUR PLANE AND FLIGHT PLAN.

3. HOLD THE AIRCRAFT USING THE TOE BRAKES AND SET CONTROLS FOR TAKEOFF.

4. DISENGAGE PARKING BRAKE.

5. LIGHTLY THROTTLE UP FOR TAXIING AND RELEASE TOE BRAKES.

6. TAXI THE AIRCRAFT USING THE RUDDER PEDALS TO TURN.

7. HOLD THE AIRCRAFT USING THE TOE BRAKES AND THROTTLE UP.

8. THROTTLE FULLY FORWARD, RELEASE THE TOE BRAKES AND KEEP THE AIRCRAFT STRAIGHT ON THE RUNWAY USING RIGHT RUDDER PEDAL.

9. GENTLY PULL BACK ON YOKE TO TAKEOFF.

8. RETRACT FLAPS AND GENTLY PUSH FORWARD ON YOKE TO LEVEL OFF.

MAINTAINING BALANCED FLIGHT USING THE G1000

The aim is to maintain straight, level and balanced flight, increasing fuel efficiency and passenger comfort.

The lower triangle is called the Roll Pointer. In addition to indicating the angle of bank on the roll scale, you can think of the Roll Pointer as representing the nose of the aircraft, and Slip/Skid Indicator underneath representing the tail. If the Slip/Skid Indicator is directly underneath the lower triangle, this indicates balanced flight.

Aircraft is banked 10 degrees left, with the tail slipping downwards into the turn. To fly in balance, use more rudder in the direction of the turn. In this case, push the left pedal a little more.

Aircraft is banked 17 degrees left, with the nose pointed into the turn, like a drifting car. To fly in balance, use less rudder in the direction of the turn. In this case, ease off the left pedal a little more.