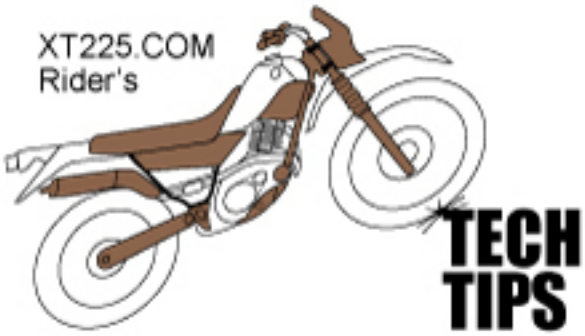

Bulletin 020
Log Crossings

July 2009

By The Muniac

LOG CROSSINGS, ONE RIDER'S THOUGHTS:

INTRODUCTION:

This tech bulletin presents one rider's thoughts on getting over logs. For those that ride a more technical style I hope you will find this of value. Although technical riders are in the minority, I'm thinking there are a few out there that enjoy the challenging aspects of obstacle oriented trail riding. Perhaps this bulletin will help you discover a new skill or two to keep handy in your rider's tool kit. There are a zillion different log crossing situations and an equal number of ways to get over them. In wooded alpine riding conditions, log crossing can occur, ranging in size from 4" to 18" with upward occurrences between the 15 and 20 mark. Not being comfortable with managing these obstacles detracts from the enjoyment of the ride and dilutes the feeling of "self satisfaction" when the ride concludes. For me if you're going to ride around obstacles what's the point of trail riding in the woods. There are few absolutes when it comes to skills based technical maneuvers and crossing logs is no exception. If you already have a comfortable approach to the log crossing problem then go with what's safe, works and gets the job done. I wouldn't recommend any of these techniques for the big adventure bikes. If log crossings are an infrequent occurrence on your local trails perhaps there isn't much point to investing time in acquiring this skill when time could be better used elsewhere.

This article will develop the log crossing technique from a more "trials style" approach. For me it's the most comfortable approach and is easily adapted to many log crossing situations. "Trials style" crossings are also more difficult to learn and require practice to get them dialed. If you are unwilling or unable to invest time in dedicated practice the value of this article will be marginal at best.

LOG CROSSING TYPES:

To start, it will be helpful to identify a collection of the more common log crossing situations. First a log that has been built up on either its entrance, exit or both isn't a true log crossing. These is referred to as log "pile ups" or "build ups". Crossing this type of obstacle is a different situation than a crossing that results from natural blow down. A tree trunk or large branch "blown down" on the trail very rarely has any entrance or exit perks. I say very rarely because some trees will fall near a rock or other timber which may provide a boost. This is rare so plan your obstacle management techniques on the more common worst case situation. Large diameter logs require more skill to cross and error penalties are higher in this situation. Don't try to be a hero when it comes to obstacles. Don't ride obstacles alone

either. Know your limits and ride within your ability. Increase your limits by practicing on easy stuff first and working your way up as skill is gained.

1) **Straight Log** - This log is basic and lies in such a way that it can be crossed at 90 degrees to its axis. Little to no space exists between 6 O'Clock and ground.

2) **Angled Log** - Same as #1 but can't be managed straight on.

3) **Air Log** - A #1 or #2 log situation with an air space between 6 O'Clock and ground. Crossing height is increased independent of log diameter.

Most naturally occurring obstacles tend to be somewhat nonlinear and irregular. Log crossings are no exception. Subtle angles, reliefs and crowns will affect how the bike will respond when its tires (and frame) collide with the log. Inclines and declines will alter how the front wheel lofts and must be compensated for. Whether the log is secure should also be determined by inspection before crossing it. The same can be said for traction variations. Know the terrain before during and after the log crossing. Wet logs with no bark are like ice and should be handled with extreme caution. Dead or rotted logs may contain huge bee's nests inside. Bees don't take kindly to a motorcycle slamming into their home. When temperatures permit insects to fly, be on your guard for this situation. It's all part of the package when riding in the woods.

A WORD ABOUT KICKER JUMPS:

A kicker jump is a mound of sorts whose width is less than the wheel base of your bike. This means as the front wheel begins to move down the exit edge while the rear is just starting or soon to start up the entrance edge. The bike is in essence straddling the mound. Kicker jumps, if ridden flat, will impart a forward roll to the bike. This happens as the front moves down, the rear moves up and the rear shock unloads as the rear wheel clears the summit of the mount. This will cause the rear to kick up abruptly hence the name kicker jump. If severe enough you can get spanked by the seat and over the bars you go. Bikes with large suspension travel and a rider mass in the seat can reduce this effect. The XT isn't a big suspension bike so consideration must be given to kicker jumps. As you may have surmised logs fit into the kicker jump family. The forward roll effect can be offset by holding the front wheel up with proper throttle control. Imagine a flat imaginary line coming off the apex of the jump. Using the throttle, roll the front wheel out onto that line and hold it there until the rear wheel crests. Both front and rear should come down at the same time or rear first then front.

LOFTING THE FRONT WHEEL:

Being able to loft the front wheel is a mandatory skill for "trials style" riding. Since the XT tends to have a heavy front end and Spartan power, lofting the front wheel requires more than just

stabbing on the throttle. I don't recommend clutch dumping techniques either as they create HUGE stresses in the drive train. Repeated clutch dumping will certainly shorten your drive train's life expectancy. A softer approach is to use your body weight to preload the front forks. As the forks unload, pull up and back on the bars. At the same time shift your weight rearward and roll on some throttle. This will work well in 1st or 2nd gear. Using 14:45 or 15:58 sprockets will help improve low end torque which makes lofting a tad easier. You need to be on a surface that provides good bite for the rear wheel. **If you're doing this over log pile ups make sure entrance logs won't roll out under rear wheel torque.** To get started coordinating preload, weight shift and throttle you can pop the front wheel up by riding over a speed bump or something similar. Practice this until you can get it dialed. As you improve, work on holding the front wheel up for several feet. This isn't a wheelie so there is no need to get close to the balance point. For safety I suggest you stay well below the balance point so the front can be dropped immediately by rolling off the throttle. Developing the skill to loft the front wheel is a prerequisite for "trials style" log crossings. There are no short cuts or quick and easy methods for front wheel lofting techniques.

CROSSING A LOG:

A "trials style" log crossing is a very dynamic move requiring good throttle punch, preload, timing and weight shift. It doesn't rely on excessive suspension travel or speed to suck up the obstacle. The idea is to kiss the front tire off the log's 10-11 O'Clock point then drive the rear tire straight into the log while holding the front up with the throttle and weight shift. Accurate and precise throttle control are necessary to keep the front above the horizontal during the move. When the back tire hits, the rear suspension loads and the bike decelerates suddenly. This will tend to cause the front to dive. If the front is in proper position it will dive to just above horizontal which is perfect. This holds the rear wheel in contact with the log as it drives over and off the top. When the rear shock unloads the bike will come back to level or just slightly rear wheel low. You are then in good position to land both wheels at once or do a rear front touch down as you drive off the log. You are driving off the log not over it at this point. Done properly the bash plate never hits. This is a beautiful move when done correctly and the bike will float up and over the log effortlessly. Very little speed is required. If you're slamming, banging or getting tossed around you're not doing something correctly. Remember to practice 1000 times for best results.

For logs that are on an angle (can't be crossed at 90 degrees) you need to minimize front wheel contact. An angle tends to force the bike to shift right or left abruptly which is felt as a strong pull on the handle bars. The more front tire contact you have the stronger this pulling effect is. It tends to throw your balance off. In extreme angle cases (or very slippery logs) the front wheel will shear down the log and down you go.

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Often times the rear wheel will slide sideways too as it crosses. You need to ride this skid out by steering with it and maintaining balance. Practice on small angled logs first to get the feel of it. Practice on both sides to avoid developing a weak side. It may be best to set the bike's bash plate on top of the log and use a forward foot push to complete the crossing. This isn't pretty but on slippery or severely angled logs it many be your only safe option.

Air logs are tough and can resemble a limbo bar if they are high enough. The problem with air logs is their center is more than radius high. This means the log contact point may be above the center axle height of the rear wheel. This tends to kick the rear wheel back and down instead of up and over. Air logs that are too high can't be crossed without gobs of suspension travel and an aggressive attack. This is risky for the amateur sport rider. If you think the log situation will kick your rear tire back and down it's best to find a route around this particular air log. If you can get the front wheel up and over your can set the bike down on its bash plate

Trials style log crossing about 75% complete. Drive rear wheel into log while holding the front wheel up. Bash plate does not hit log during this maneuver.

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and teeter tooter over it. Make sure not to get kicked up and over the bars.

Keep in mind lofting the front wheel is easier going up hill and more difficult coming down hill. Remember this when crossing logs on inclines and compensate for it. It's a good idea to keep the sense of your weight up hill. Again practice log crossings on hills to gain the required adjustments and posture. Start small and work your way up to going big. I hope this helps you

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Courtesy Muniac @ XT225.com

If you're doing this over log pile ups make sure entrance logs won't roll out under rear wheel torque.

Cleaning a kicker jump made from logs. Holding front wheel up with throttle allows for a controlled crossing and avoids the back end of the bike from being kicked up. Stay centered over bike and maintain a straight line of attack.