

Understanding the Fox Trot

By Lee Ziegler, 2004

Ka-chunk, ka-chunk, ka-chunk, ka-chunk, you can hear the uneven, synco-pated beats of the gait before the horse comes into view. Then you see the rider's head, moving along on a level plane just above the horizon, as he approaches. Finally, you see the horse coming toward you, reaching out in front with a relatively low step, nodding his head and neck up and down as each front leg reaches forward, and bobbing his tail up and down in time with the motion of his hindquarters. No mystery about what gait this horse is doing - he is fox trotting!

This comfortable gait, long called "easy on the horse and easy on the rider" by old-timers in the Ozarks, is found in just about all gaited breeds. Called a fox trot in English, it has names in Spanish (trocha, or pasitrote, depending on which gait analyst in which breed you consult), Portuguese (marcha batida), Icelandic (brokk tolt) and even German (trab tolt). In each language, the name signifies **an uneven, four-beat gait, closer in look and timing to a trot than a pace.**

ADP Trot

There is a variation of the true trot in which the hind hoof of the diagonal pair of legs sets down a fraction of a second before the front diagonal hoof, giving a right hind, left front, left hind, right front sequence to the footfalls. This footfall sequence is sometimes confused with a fox trot, especially in older texts, which were written before the invention of slow motion photography. It is not the typical fox trot of the gaited horse, and is not what is commonly accepted as a fox trot gait. This type of disassociated trot is called the Advanced Diagonal Placement trot, and can be seen frequently in upper level dressage horses.



1 Walking transfer, 2 running transfer and 3 leaping transfer. Photos show how the front legs transfer weight from one side to the other.

Defining the fox trot

LIKE ALL GAITS, THE FOX TROT IS DEFINED BY MORE THAN ITS SOUND OR HOW the horse nods his head and bobs his tail. To understand the gait, and appreciate what sets it apart from the other easy gaits, it helps to look at it using the criteria that define all gaits: footfall sequence; footfall and pick-up timing; hoof support sequence; and how weight is shifted from one hoof to another.

Sequence: The fox trot, like all easy gaits follows the same footfall sequence as the walk -assuming you start the sequence with the set down of the same hind hoof, usually the right hind. This sequence is: right hind; right front; left hind; left front.

Timing: The fox trot is the only diagonally timed easy (or soft) gait. That means in the fox trot gait, the pick-up and set-down of the diagonal hooves (example: right hind, left front) is closer in time than that of the lateral hooves (example: right hind, right front).

This timing interval can vary a fair amount, ranging from a long interval close to that of the running walk (called "slick" in show ring Fox Trotter circles) to an almost simultaneous set down of the front hoof and diagonal hind, close to that of a true trot. The gait is usually more comfortable to ride if the interval between set-down of diagonal hooves is relatively long, and more "bouncy" if the interval is closer to a trot in timing. For practical purposes, if you can see the front hoof set down before the diagonal hind with the naked eye, the gait is likely to be smooth and pleasant to ride.

Support: At slow to moderate speeds, between 6 and 10 mph., the fox trot follows the same support sequence as the ordinary walk, and the flat walk. That is, there is an alternating support of three hooves, and then two hooves, in contact with the ground in the gait.

Example, starting with set down of right hind hoof (green is on the ground, red is in the air):

Support phase one: right hind on the ground, left hind on the ground, left front on the ground. (three hooves in support)

Support phase two: right hind on the ground, left front on the ground. (two diagonal hooves in support)

Support phase three: right hind on the ground, left front on the ground, right front on the ground. (three hooves in support)

Support phase four: right hind on the ground, right front on the ground. (two lateral hooves in support)

This same support sequence repeats as speed increases in the gait, until at some point, there is a split second when both front hooves are clear of the ground, giving a three-hoof, two-hoof, two-hoof, three-hoof support to the gait. As speed increases even more, there may also be a moment when both hind hooves leave the ground, changing the support to a one-hoof, two-hoof sequence. While there may be some disagreement among judges as to when the gait ceases to be a fox trot and morphs into a "fox rack" or "flying fox trot," most agree that when the gait loses the three hoof, two hoof support sequence, it is less desirable to ride.

Weight shift: There are three ways a horse can shift his weight between hooves. A walking weight shift is what happens when weight is transferred as both hooves are flat on the ground.



Pictured is a Paso Fino horse doing the trocha, or foxtrot, gait.



The two-leg lateral support phase is very short in this gait, while the diagonal two leg phase lasts a bit longer.

Understanding Fox Trot

A running transfer happens when one hoof lifts, leaving only the toe touching, just as the other sets down flat on the ground. Finally, a leaping transfer happens when both hooves are clear of the ground for a split second (creating a moment of suspension) in between the pick up of one and the set down of the other.

In the fox trot, at slow and moderate speeds, there is either a walking or a running transfer of weight between the front hooves, and a walking transfer between the hind hooves. With more speed, there may be a running transfer between the hind hooves as well. Very rarely is there a leaped transfer of weight between either the front, or the hind hooves. There will always be at least two hooves firmly planted on the ground at any phase of the gait. This is what gives the gait its smooth ride, and sets it apart from the true trot, in which there is a moment of suspension where all four hooves are clear of the ground. (bounce, bounce!)



Some fox trotters love cattle. Missouri Fox Trotter, Metronome, with some of her buddies on a crisp fall day.

Speed: Like all the easy gaits, the fox trot has a great range of speeds. At the slowest speeds, around 5-6 mph, it may be called a “fox walk” but the gait is essentially the same, with a walking

Comparing other gaits

THE TRUE FOX TROT IS NOT AS FAST AS a typical rack or saddle rack, or as long striding as a running walk. It is smooth, but a “different smooth” than that you may be accustomed to

a horse that fox trots wears out his hind shoes faster than one that does some other gait.

What is capping, overstride, and understride?

One way of determining how long a stride or step a horse takes with his hind legs is by examining the tracks he leaves on the ground. A horse is said to “cap his tracks” and have a moderately short stride in his hind legs when his hind hoof track falls directly on top of the track made by the front hoof on the same side. He is said to “disfigure his tracks” and have a moderately longer stride with his hind legs when the hind hoof track covers any part of the track made by the front hoof on the same side. He has “overstride” and therefore a longer stride with his hind legs if his hind hoof track is in front of the track made by his front hoof on the same side. He has “understride” and a very short step with his hind legs if his hind hoof track falls behind the track made by his front hoof on the same side.

weight transfer in both the hind and the front hooves. Most horses in the gait average 6-8 mph using a running weight transfer in the front hooves, but a walking one in the hind. At upper speeds of 10-15 mph the gait begins to lose form, and may be rougher to ride or start to change into some other gait. The best way to tell that the fox trot may be changing into something else is to look at the set down of the diagonal hooves; when you can't see the front hit before the hind with a naked eye, the fox trot has lost form.

in some of the other gaits. You don't have the “glide” feel in this gait that you might notice in the running walk, or the “eye of the hurricane” feel that is present in the rack. It is much smoother than any type of true trot, and less work for the horse, at moderate speed, than an equal speed hard trot may be.

Riding the fox trot

AT MODERATE AND SLOW SPEEDS, where the gait is most comfortable, the three-hoof, two-hoof alternating support sequence keeps concussion to a minimum for both the horse and the rider. In the saddle, the fox trot gives a slight front to back rock in the saddle, with a pleasant sensation of the horse rolling or pulling with his shoulders as his croup bobs gently up and down. You might also feel the hind hooves slide into place as they set down rather than setting

down abruptly, flat on the ground. This sliding motion can reduce concussion in the hind legs and make the gait more pleasant to ride. It also may mean that a horse that fox trots wears out his hind shoes faster than one that does some other gait.

Riding surefooted

THE FOX TROT IS A SURE-FOOTED GAIT, especially for horses that cap or slightly disfigure their tracks, because they only need two places to set down their hooves, not four as would a horse doing a gait with overstride. In rocky ground, that means there is less chance of the horse stepping down on a rolling rock with his hind hoof, if he missed it with his front. That sure-footedness, and the diagonal nature of the gait, also make it a balanced gait for the horse, allowing him to make sharp turns and quick stops in it. Horses that fox trot are often excellent cattle horses because of this. Western riders at one time would cultivate the gait even in horses that did not offer it naturally, and Frederic Remington mentions it as the “habitual gait of all plainsmen, cowboys, and Indians” which is “easily cultivated in (broncos) and (their) light, supple frame accommodates itself naturally to the motion.” From “Horses of the Plains” an article by Frederic Remington in *Century Magazine*, 1889.

However, the gait Frederic Remington was talking about, and the one that old ranchers like Brownie Wilson recalled in his *Memoirs of a Nautical Rancher*, is not quite the same as the one currently exhibited in the show ring by the one breed that specializes in the gait, the Missouri Fox Trotter. Demand for speed and flashy performance sometimes pushes these horses beyond the type of gait that could be ridden all day without fatigue to the horse or saddle sores for the rider. The “flying fox trot” of the performance show ring is still diagonal, and has some rhythm, but because it frequently has

“moments of suspension” both in the front hooves and in the hind, it is not the same sure-footed gait a pleasure rider would use on the trail. To see a gait more closely related to the type a rider would use to work cattle or ride for hours in rough terrain, a look at older films of the Fox Trotter, or at video of some modern versatility horses might be a good place to start.

Wives’ tales and myths

The gait is called for the “fox trot” after the dance.

No. The term fox trot has been around a long time, well before the dance was developed. One reference to horses doing the gait dates from 1872, while the dance was invented in 1914, by a the Vaudeville performer for whom it is named, Henry Fox.

The gait is named after the gait a fox does, because a fox will cap his tracks.

Not likely. Foxes do appear to have a smooth gait (although no one has ever ridden one to find out!) but they trot as any canid does, with diagonal legs paired in time in a true trot. And, if you have ever seen fox tracks in the snow, you will see that they do not cap their tracks any more frequently than dogs do when they are trotting. A better source for the English usage might be with the French origin “faux” meaning false or fake. A “faux” trot could indeed describe the gait, and might in time have altered into “fox” trot.

In a fox trot the horse “walks in front and trots behind”.

Not possible! A walk is defined as an even, four-beat gait, involving the lift and set down of all four hooves. If only two of a horse’s legs are moving, it is not really a walk. However, it is indeed possible for a horse to take a walking step with only his front legs if he transfers weight between them with both hooves flat on the ground.

As to “trotting behind,” by definition, a trot is a diagonal gait, involving the pairing in time of each front and its opposite hind leg. A horse can’t trot with only his hind legs. What might have led to this confusing statement is the appearance of “breaking at the hocks” of the hind legs and the slight up and down bob to the hindquarters of the horse as he moves in a fox trot.

In a fox trot the horse always nods his head.

Not really. Paso Fino horses that perform the trocha do not move their heads up and down in time with their shoulders. They maintain a steady head and neck, but are certainly doing a diagonal, uneven, four-beat gait that by all definitions of footfall sequence, timing and weight shift is a fox trot.

The horse will always cap or disfigure his track in the fox trot.

Again, not really. Some horses have overstride in the gait, others may exhibit understride. Using the definition of sequence, diagonal timing, and three-hoof, two-hoof support, both types are fox trotting.

You can recite “Hunk of meat and two potatoes” to the beat of the fox trot.

Maybe *you* can, but I can never make it come out even that way. It is a 1-2--3-4 syncopated sound, and the closest I can get to fitting syllables into it is “ka-chunk, ka-chunk.”

Once you ride a horse that fox trots, and find that lovely gait that is “in there” between the fast walk and the hard trot, you may be hooked on the gait. If you frequently ride over rough ground, or work cattle from horseback, the smoothness and balance of the gait could be just what you are looking for from a gaited horse. Try it, you’ll like it!

