

ROSS PANTERA TEST!



Keeping on the berm is one way to keep the Pantera's wishy-washy front end from washing out.



Jumping the Ross proved the chassis to be rigid enough to resist flexing on harsh impacts.



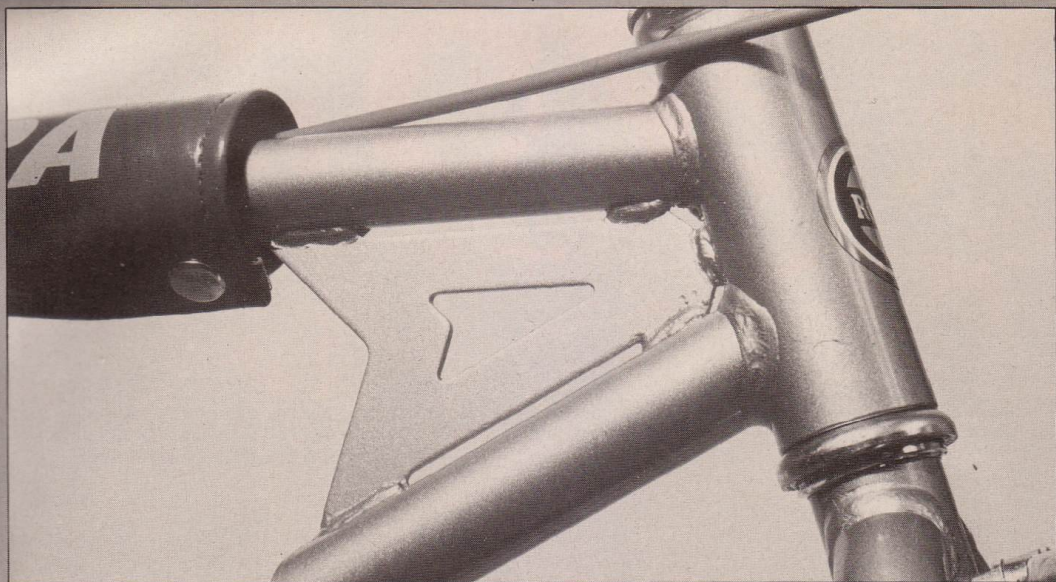
Pushing the Pantera's geometry to the limits takes caution. The bike does not feel very stable at higher speeds.

Ross has been making a complete line of bicycles for over fifty years. In 1976 they decided to market a selection of low-priced bikes through their network of authorized dealers. Their objective was to make available to shops bikes that would be price competitive with department store bikes. Which brings us to the Ross Pantera, the top bike in the Ross BMX line. It is priced at around \$200. Obviously it's not in the same category as a Mongoose or Red Line.

The Pantera uses the same mild steel frame and fork found on Ross's lower priced Snapper and Slinger models. The upgrading from model to model is accomplished by utilizing higher quality components. The front triangle is welded together in an automated process. Then the rear triangle is brazed to the front triangle. The welding is done neatly, all things considered, and it reflects the type of construction you'd expect to see on a low-price-frame.

During the routine breakdown and reassembly a couple of design flaws in the frame became apparent. The first is the placement of the caliper brake mounting tube. It is welded too far from the rear wheel to allow a reasonable amount of rear wheel adjustment. With the rear axle only two thirds of the way back in the drop-out, the brake shoes had to be fully extended in the adjusting slot of the Dia-Compe 1080 calipers in order to properly reach the rim. Keep in





The head-area welding is typical of many lower-priced, mass-produced bikes.

mind that with an average reach of 96mm the 1080 Dia-Compe is the longest brake made! If a frame is properly designed for a particular size caliper the brake shoe adjustment will normally coincide with the position of the rear axle in its slot. In other words, if the rear axle is near the front of its adjusting slot then the brake pad should be too. Ross would be better off moving the caliper mount closer to the rear wheel and going to a shorter caliper brake, such as the Dia-Compe 890 which has an average reach of 78mm. That would also eliminate the flex associated with longer calipers. Many BMX bikes already use the 890 as standard equipment. It is only the poor placement of the brake mount that makes the 1080 necessary.

The second flaw is only minor but it deserves mention nonetheless. The chain stays bend out sharply about two-and-a-half inches away from the crank hanger. This bend places the chain stay very close to the chain ring. The standard 44-tooth gear fits with no problem but if you plan on changing to a bigger chainring then some spacing would be needed. Unfortunately, spacing can create chain alignment problems. Fortunately the Pantera uses a Shimano free hub in the rear. This allows you to experiment with rear sprockets small enough to reach just about any desired gear ratio.

We checked with Ross to see what type of testing had been done before releasing the bike. Apparently, the

only tests that were done were for strength and not handling. This became quickly apparent in our test. The bike proved to be sturdy but the handling characteristics left much to be desired.

The problem can be traced to the head angle. At 66 degrees it causes the front wheel to steer with a chopper effect. Standing up and pedaling with your weight over the front end gives you a feeling of instability. This instability causes a feeling of insecurity in turns. In tests Kirk had problems keeping traction in the front end, especially in flat turns where front-end geometry is crucial. Viewing the rest of the bike's geometry leads us to believe that the head angle is the cause of the Pantera's handling ills. A steeper angle, somewhere between 69-72 degrees, would bring the handling around to an acceptable degree.

The components on the Ross are pretty much standard for a bike in this price range. Steel V-bars and a forged Ashtabula stem keep the price down yet provide reasonable durability. The cranks are heavy-duty one-piece units with a Takagi quick-change spider and chainwheel. The wheels use an anodized Shimano Freehub rear and the matching front hub laced in a three-cross pattern to Araya 7C rims. As mentioned earlier the rear brake is a 1080 Dia Compe. The front brake is a 1020 Dia Compe. The tires are Kenda 2.125 in the front and a 1.75 in the rear.

The Pantera is held back by its handling. It is one of those things that is simply not justifiable. It's one thing to fault a bike for inferior quality or poor components, but when it's a matter of bad head angle, even the best welding and top components won't help. Hopefully Ross can make the changes needed to put this bike in the ballpark.

Specifications:

- Serial Number: 048118898
- Head Angle: 66 degrees
- Seat Post Angle: 68 degrees
- Wheelbase: 36.25 inches
- Bottom Bracket to Rear Axle: 14.75 inches
- Bottom Bracket Height: 12 inches
- Top Tube Height: (without reflectors or chainguard)
- Weight: 28.75 pounds (stripped).

Components

- Bars: Steel
- Stem: Ashtabula
- Headset: Ross
- Bottom Bracket: Ross
- Seat: Mesinger
- Seat Post: Steel
- Rims: Araya
- Sprockets: 44/18
- Front Hub: Shimano
- Rear Hub: Shimano free hub
- Pedals: Union BMX

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Note the placement of the brake shoes in their slot in relation to the rear axle in its' slot. The brake mount should be lowered.