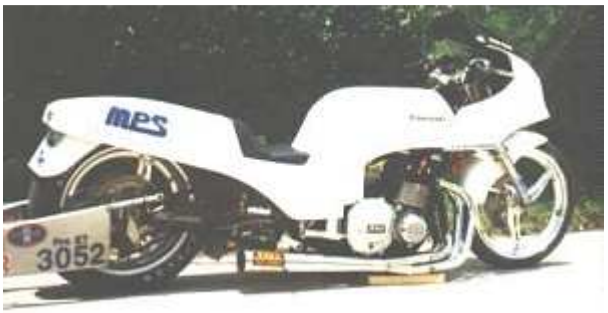


Back To The Bracket Racket

By: Dan Rudd
1996

This motorcycle sat in my shop for so long insiders were beginning to think it was welded to the floor. No kidding, the chassis was done by Chassis Only's Louie Lubliner in Daytona Beach over 4 years ago! So when I started working on it in earnest this January I got a mixed bag of reactions. Everything from an enthusiastic, "Is it gonna be ready by Gainesville?" to, "Your not really working on that rusty old thing in the corner are you?"

Those of you who know me, know I rode a borrowed bike in Pro ET at AMA/Prostar races in 1993 and 1994. Red, as it was affectionately called, served me pretty well earning the #2 plate in 93 and the #7 in 94. Both years having a legitimate shot at the championship right down to the World Finals. After coming so close to those elusive championships I realized that there were several things Red lacked that may help in the next championship quest. What you see here is my idea of the ultimate bracket bike. It took a lot of help and a little over four months of long nights to finish.

I chose a small tire chassis for one reason, high mile per hour. A small tire will run more MPH than a car tire given equal horsepower. Since I use a throttle stop, 60 foot consistency and tire life wasn't going to be a problem. The 68" wheelbase chassis is a pretty straight forward piece using a stock cradle, a backbone fuel tank, and a weld on rear swingarm section. The chassis presented a major challenge since I wanted to do all the tabs and mounting brackets myself. I now have a whole new appreciation for chassis fabricators. Deciding where to put the bearing support mounts, rear master cylinder, battery, foot pegs, coils, nitrous bottle, air bottle, air shifter, etc wasn't easy. All these things seemed to take an endless amount of time. I was constantly putting on parts just to take them back off again and again and again. I chose RC Component wheels because I think they are the best looking on the market. The front is a 1.85 x 18 and the rear is a 6.0 x 18. Gremeca brake calipers are hung on D&G hangers. The brake rotors are RC Component items as well. Chassis Only supplied the

fork crown to hold the Red Wing fork tubes. A D&G Chassis 5/8" offset bearing support with a 16 tooth sprocket pulls a 630 Tsubaki chain over a 40 tooth rear sprocket.

The plan called for NOS nitrous oxide to help with the high MPH so the motor needed to be strong. I had a old 79 Kawasaki LTD 1000 motor that I had bought some time ago up in the attic. So down it came. The crank was welded, the transmission was sent to R&D Motorsports in Clearwater, FL for a magnaflux and Pro Cut. Mark sent it back with a heavy duty second gear which I didn't request. When I called him to inquire, he said he knew my fat butt would need it. (not really what he said, but this is a family magazine) I didn't take offense at his comments after all I had overheard a rider once say before meeting me in the next round that he had Santa Claus next round. (I wore red & white leathers) I've since shed a couple of those pounds. Anyway, Mark didn't know how easy a throttle stopped bike launches and shifts to second gear so I had him take the heavy duty second gear off and put my stock second gear back on. The transmission operates through a MRE Lock Up Clutch with MPS plates. The cases were stripped with aircraft paint stripper and painted with PJ 1 satin black case paint. If you've never done this before the aircraft paint stripper is the hot set up as long as you don't get it on your skin. This I can tell you from experience stings and burns a lot! With rubber gloves the job went quickly with great results. APE heavy duty cylinder studs and a Tsubaki cam chain completed the bottom end.

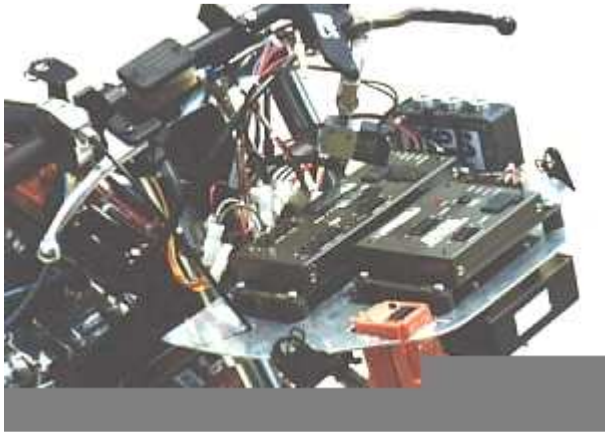
The cylinder is an MTC casting that had been laying around my shop for quite some time so I gathered it up and sent it to Star Racing for them to bore in some Wiseco 1325cc Pro Series pistons. They also surfaced the deck and o-ringed it to insure no leaks at the Cometic copper head gasket.

The cylinder head was to use GPz style stainless 38.5mm intake and 32mm exhaust valves. These valves are shorter than KZ valves and would require them to be sunk in the head much farther than KZ valves. This was ideal for my combination because it lowered the compression ratio and gave me more piston to valve clearance. Bruce Sauer at C&B Performance took total charge of the cylinder head. Bruce sunk the valves, ported the head, did a 5 angle valve job, and matched the MPS nitrous manifolds to the ports perfectly. When he returned it to me it had a .480 lift Web Cam intake cam and a .460 lift Web Cam exhaust cam all shimmed and ready to go. Bruce also installed a set of the latest greatest Star Racing valve springs. These are some serious valve springs. I had to stand on a work bench to push the cam down to start the bolts in the caps. I really can't say enough about the service all these companies gave me. All the work was done to perfection! I assembled this collection of parts checking for the proper clearances as I went. For carburetion I chose 40mm FBG Lectron carbs because after all what other carbs are there for drag racing? A old reliable Star Racing Pro Series header was installed to expel the spent exhaust gasses.

The MPS Nitrous Distribution Block (left) and The MPS Nitrous Manifolds (right)

Now with the motor combination well in hand. I started work on the nitrous system. I custom made my nitrous system to get exactly what I need for my application. I wanted to use a timed nitrous system for consistency. You can't press buttons and be as consistent as you need to be to win. I use a MPS Digital Timer started by the clutch lever switch to control when the nitrous comes on. A MSD Timing

Retard is also employed. The retard controls the ignition timing, retarding it 5 degrees when the nitrous is activated. A two outlet Pingel Guzzler fuel valve is modified by drilling and tapping the bottom to 1/8" pipe and installing a brass hose barb fitting. This is the cleanest way to get three outlets. The hose fitting is used to supply the NOS fuel pump mounted on the bottom of the rear inner fender panel. I like to mount this pump as low as possible to insure good gravity feed and a long supply line to help give adequate fuel supply. The pump feeds the fuel solenoid through an inline fuel filter. Both nitrous and fuel solenoids are mounted directly to the MPS Nitrous Distribution Block mounted behind the carbs. The distribution block serves to cool the fuel going through the block because the nitrous is coming through the same block. It is also very convenient and compact way to mount the solenoids with all the lines facing toward the NOS Fogger 2 nozzles. I usually use fairly small jets to remain on the safe side, either 18 nitrous - 21 fuel or 21 nitrous - 24 fuel. The nitrous bottle itself is mounted as low in the chassis as possible and in a vertical position with the siphon tube pointing to the rear.



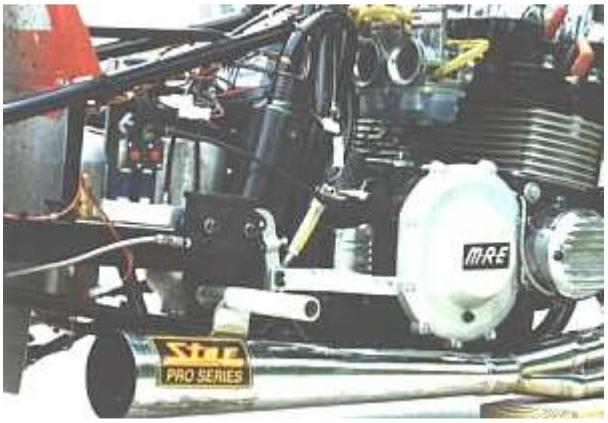
The Dedenbear Throttle Stop Controller mounts above the Dedenbear Crossover Delay Box. The MPS Nitrous Timer is to the right of the throttle stop controller, with the MPS Electronic Engine Kill underneath it. The box to the far left houses switches and relays for the Auto Shift, Throttle Stop, and Nitrous Oxide.

Mounting all the electronics took some thinking. I thought about a trailer, a backpack, or cargo box on the wheelie bar but ruled them all out as impractical. But seriously, there were a lot of components to put in a limited amount of space. I needed to spread them out, so the MSD MC-2 ignition wound up on the downtubes. The Dedenbear Crossover Delay Box and Throttle Stop Controller needed to be mounted where they could be seen and set easily. I fabricated a aluminum dash panel to nestle under the fairing to mount them to. The nitrous timer mounts beside the throttle stop controller. Under the dash panel is the MPS Electronic Engine Kill used instead of an air kill for reliability and ease of kill time changes. An MPS Auto Shift Control mounts behind the carb panel.

The purpose for all the electronics is a little deeper. I'll explain my reasoning for installing all the components I use here. The Dedenbear Crossover Delay Box is necessary to consistently cut good lights. The delay box simply delays the release of the MPS Air Clutch for a certain amount of time. This lets you react instead of timing the tree. Reacting is much more consistent. The crossover delay allows you to react to the first light on the tree you see whether it is yours if you are the slower bike or your opponents if you are the faster bike. To react to your competitors light is known as crossing over.

The MPS Air Throttle Stop is visible above the valve cover. The Throttle Stop replaces the original Lectron throttle cable.

The MPS Air Throttle Stop closes the carb slides .750" when the Dedenbear Throttle Stop Controller activates it, usually set at .10 seconds after the clutch is released. The carb slides stay closed for the amount of time adjusted on the Dedenbear Throttle Stop Controller, usually 1.5 seconds, then re-opens them back to full throttle. This will slow the 60 foot time and calm the bike down for added consistency and elapsed time adjustability.



The MPS Line Lock is seen as it is connected to the rear brake lever. Just to the left of the master cylinder is the MPS Air Pressure Regulator and special D&G air manifold.

A MPS Line Lock activates when the throttle is turned slightly. This locks the rear brake preventing the bike from creeping or rolling backward. This is very important because staging in different spots will alter both your reaction times and your ETs.

The MPS Auto Shift Control performs shifts at a certain RPM without having to press a button. Once again consistency is the goal.

Now your all probably wondering what the box with the three switches on top does. It houses a relay and the switches that turn on the nitrous, auto shift, and throttle stop. None of which you want on in the burnout. Rather than having to turn on three switches before staging I turn on just one that operates the relay in the box.

The bike's air supply comes from a DOT Air Bottle filled with 1500 pounds of nitrogen and fitted with a NOS Bottle Valve. An MPS Air Pressure Regulator is employed to deliver a steady 140 pounds of

pressure through a special D&G air manifold to all air operated components. This is a great system that lets you go several races without having to fill your bottle.

Last but not least a Custom FRP 1984 Ninja body and fairing covers the whole package. The pearl white paint came from R&D Auto Works in Debary, FL. They also handled the frame painting as well. It'll be coming soon to a bracket race near you so come by and check it out.