

Red Returns!

By Dan Rudd
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Part 1

While shopping for computer books I got "the call". This call was about to change my plans for the next year. Beth was on the line and told me a blind gentleman named Moses Brown was at the shop and wanted to talk to me. I didn't know what to say. Totally shocked, I waited while she put him on the phone. He wasn't blind the last time I had spoken to him. It had been quite a while ago though. I heard the same pleasant voice I had always known on the other end. After a few minutes I had learned that he had Diabetes and had lost his sight several years ago. I had ridden Moses' bike at Prostar events in 1993 & 1994 earning the #2 and #7 plates respectively in Pro ET. Moses went on to tell me no one had ridden the bike since I had returned it to him in December 1994. He explained how just looking at "Red" sitting in the garage used to bring a smile to his face. Now, he was denied even this simple pleasure. I knew exactly where this was going by now. I told him I would come by the next day. Moses led me back to the garage exchanging memories along the way. There it was! I was amazed at how "Red" looked just like when I had seen it last, only a little dustier! I had no real plans to go racing again, but the wheels sure were turning now. My daughter is 17 now and can stay on her own. I have a wonderful girlfriend who likes to travel with me. The more I thought about it, the better it was all sounding. Yeah, Moses would love that the bike was restored and raced again. All you old timers know that I love to bracket race. So I paid him and loaded it up!



Since that day, I have learned that I dearly missed racing a bike! I was Inspired! I started stripping all the old electronics off and fabricating all new mounts for the new MC-4 Ignition, nitrous components, air bottle, air distribution block and all the air valves. After making sure all the new parts were mounted correctly, I tore the bike apart to the bare frame. I remembered how much of a pain in the ass the fiberglass fuel tank used to be and wanted to have a

backbone fuel tank installed. The nitrous bottle mount was not very nice and needed redone. The battery box wasn't equipped for the new FBG Pro Battery and was in need of upgrading as well. This called for a master fabricator. I called Dave Scaggs at D&G Chassis to check his schedule. He told me he could have a backbone tank and other modifications done in two weeks. I drove the chassis to Largo the next morning.



I figured I had a few weeks to get the other aluminum parts cleaned and all polished up. So, just in case you wondered what I did on my Christmas vacation. Now you know. I am not really that fond of polishing. But, the considerable effort yields a lot of cool shiny parts. Now the parts are all starting to look pretty good. I really like the double weld spoke rear wheel. I look at that wheel and see an awful lot of time. They were made with one 3.5" wide Akront wheel. The wheel was cut into three pieces then welded back together with a 1" band of aluminum welded between the bead and the spoke holes on each side of the wheel yielding a 5 1/2" wide wheel. All the aluminum parts were hand made back then too. Most were cut out on a band saw. Every effort was made to keep all the "retro parts" if they didn't effect the ability of the bike to win races.



Dave Scaggs called to let me know the chassis was finished two weeks to the day from the day I left it. So, off I went to D&G in the morning. Now the front end and wheels can be temporarily re installed. The Mickey Thompson rear 7" tire replaces the old Goodyear 3341 tire that had been mounted for ten plus years. The Mickey is a taller tire and requires re gearing as well as lowering the wheelie bar, which I couldn't do. I was out of the original adjustment range and needed to shorten the bottom wheelie bar supports. I added coil mounts and dzus

fasteners for the side covers. With those jobs complete it all could be disassembled again. The frame and bodywork is all taken to R&D Autoworks to be prepped and painted. The frame was painted basic black with a generous coat of clear and all the body parts are to be shot pearl white. The frame comes back from R&D Autoworks in just two days! Wow, that's service! Now it's time to start the final assembly. Stay tuned for the next installment.

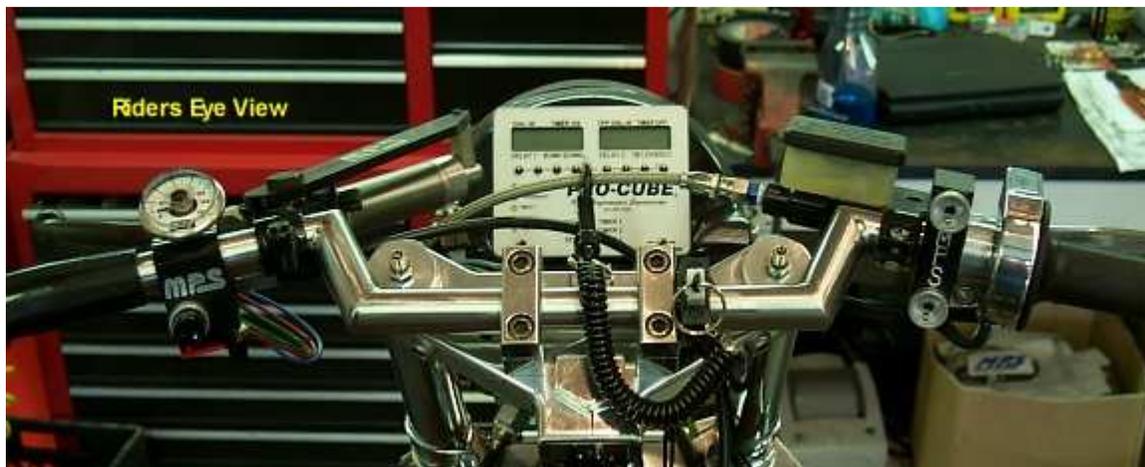
Part 2

With the frame back I can start the re-assembly process. I repacked the steering head bearings and re-installed the triple clamps and fork tubes. Next, I install the wheels and brake components. After bleeding the brakes it almost seems like a motorcycle already. At least it will stop now!



The next project is mounting the 3 timer [K&R Pro Cube](#) in the headlight. This is one bad ass delay box! It is the most advanced delay box/throttle stop controller out there. It will be the bike's co-brain in conjunction with the [MSD MC-4 ignition](#). The Pro Cube will control the [Air Clutch](#), [Throttle Stop](#), and Nitrous System. An interesting feature is the Pro Stage. Tapping the launch button activates a second throttle stop set to hold the bike at or near idle while you stage with the throttle wide open. Pushing the launch button in releases the second throttle stop and opens the carbs to the wide open position. On a full tree the Pro Cube is programmed to open the carbs a certain pre set time before release of the air clutch/rev limiter. This will keep your routine virtually identical whether racing a pro or full tree. It also keeps your "on the rev limiter" time down to a bare minimum. This virtually eliminates getting burnt down and left to rev limit for very, very, very long periods. I'll probably be racing 2 classes this time around.

So I really like the pro or full tree select feature. The Pro Cube stores all the delay, throttle stop, and nitrous settings as a group. One switch toggles between 2 complete groups of settings.



The handlebars go on next. Of course we use a [MPS Tether Kill Switch](#), [MPS Pro Pushbutton with Air Ports](#), and a [MPS Pro Dual Toggle](#) to control all of Red's functions. A [MPS Air Clutch](#) and [MPS Switched Throttle](#) are slid on the bars as well. The [MPS Line Lock cylinder](#) is installed on the rear brake to keep me from moving after staging. Pneumatics are the next order of business. To get a steady 140 psi at all the air valves all the time I use a [MPS Paintball Regulator Assembly](#). I used one of our [MPS Nitrous Distribution Blocks](#) to distribute air to the five air valves used on "Red." I put the air valves for the air shifter, line lock, and air clutch right on the block using [Earl's Fittings #4 AN female swivels](#) to save space. The two throttle stop valves are remote mounted for easy access.



The entire nitrous system is hidden neatly behind the carbs. We used a MPS Nitrous Distribution Block with push in fittings to face all the lines toward the [NOS Fogger Nozzles](#). A [NOS Fuel Pump](#) and [NOS Solenoids](#) were used as well.



[The MSD MC-4 Ignition](#) is the co-brain of the motorcycle. This ignition is like no other. Even the appearance is different. A red box with a serial port on the side. No adjustments, knobs, pots, etc! It uses a laptop or the optional [MSD Hand Held Programmer](#) to make all settings. The MC-4 ignition will control all the air shifter functions. It features the ability to shift each gear at a different rpm if desired. It also controls when to kill (no auto, 1-2 auto, and 1-2-3 auto) and how long. (20-99 milliseconds) Three separate rev limiter reside in the red box. The high rev limit to protect the engine, a launch rev limiter,

and a burn out rev limiter. Other timing retard features include a launch retard ramp, start retard, three step retard, gear selectable retards. It also includes a rpm window switch.



I guess this is it for this installment. All there is left is to wire it and do the motor. It needs some valve springs and a quick inspection of all the parts. The top end and pan need to come off. Maybe I can get it all done this weekend. Check back in a few for the completion of "Red."

Part 3

At the end of part 2, I thought all the motor needed was a quick set of valve springs. So much for a quick anything. A look at the head found a valve seal spring missing. It had found its way into one of the valve tappet bores which started to seize the tappet causing the valve shim to split into many pieces. This wasn't part of the quick valve spring plan.



The block was removed to reveal a scuffed up #2 piston skirt. Seems an old piece of clutch plate had tried to exit the engine through the combustion chamber. Not being able to squeeze by the piston thwarted its escape and scuffed up my piston. With these problems I decided I should disassemble the entire motor to be sure what was in there.



I didn't find any other problems after complete disassembly. So I re-assembled the motor with a new cam chain and a new MRE Lock up clutch to replace the age old Karata Glide.



Well to be totally honest I got really busy and put the rest of the bike together without taking pictures. So here it is getting loaded to go to the track for the first time.

