



Product Review: AIM MyChron Light TG

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When MotorcycleUSA started doing sportbike shootouts, it became imperative that we include racetrack testing. Measuring performance on-track seems like a simple process in theory: the fastest bike wins. But deciding what "fastest" meant was much more difficult than we could have anticipated. Remember that we are dealing with variables like rider skill, tire compounds, track temperature, traffic and bike set-up. All of which can put the dreaded asterisk next to a bike's rating.

Lap times are the common denominator in racing and the same can be said for track-based comparison tests. We needed an efficient way to determine a particular bike's lap times in the hands of different test riders. The old school way of keeping track of lap times would be one guy sitting on the side of the track all day clicking furiously away on multiple stopwatches. But the stopwatch is quickly becoming a time-consuming relic of years past. Most of our time is taken up with bike prep, photo and video set-up, gathering performance numbers, riding duties and note taking. So adding stopwatch operation duties to the task list wasn't an option.

It was obvious that we needed to get accurate lap times, and we wanted a system that was fast, smart, reliable and hopefully cheap. Since we are on a tight budget and already had a GPS-based [Racelogic VBox System](#) on-hand, it made sense to use the VBox to record individual lap times. The VBox works by using GPS to measure vehicle performance, calculating distance and speed by tracking its movement by satellite. The system works very well for quarter-mile times (when you don't have a drag strip handy), mapping racetracks, top speed, g-force numbers and so on. It also calculates lap times because it knows when you've passed the same point on the map.

The VBox works fine for doing lap times but it's a bit of a pain to try to keep track of multiple motorcycles and riders. Ultimately we were forced to set aside time late in the test day for our fastest or most consistent rider to try to get times for each bike. The rider would wear a backpack with the VBox inside and the GPS antenna attached to the top of his helmet. He would go out on each bike taking one lap to warm up the tires and then trying to cut one or two fast laps for comparison purposes. In the pits, we would wait for him to return and reset the VBox to a different bike while keeping track of which bike got ridden when.

The problems happen when the laws of reality come out to play. You really only get one or two laps to get a decent time, and while that pressure doesn't phase Rossi, it's a little harder for mere mortals to crank off hot laps on command. If traffic balks the rider or he simply can't get into a groove, we may not get a valid time to compare to the other bikes. Both of which usually leads to the asterisk and a flood of reader emails ridiculing our less than professional efforts. And often our fastest riders felt their best times came earlier in the day when the VBox wasn't tracking. While that seat of the pants stopwatch can't be trusted it was hard to get rid of the feeling that we were missing something. The other thing we were missing was the ability to see how riders of different riding abilities did on the various bikes. Different test riders commonly have bike preferences that are wildly different and riders were always saying, "I know I went fastest on X bike," with little way to prove or disprove the statement.

We wanted to record all the lap times a motorcycle made during the course of a track test by individual rider. Then we could back-up the rider's opinions to accurate lap times and know who really went fastest on what. And by tracking all the laps, our fastest riders could simply ride the bikes throughout the day without having to set-up special laps specifically to gather lap times. Enter [AIM Sports](#) and the [MyChron Light TG](#).

After the [Supersport Shootout Track Test](#) earlier this year, we needed to do something quickly. The Superbike Smackdown was coming up and we couldn't afford to be without accurate lap times for the biggest shootout of the year. My racer buddies were swearing by their AIM Sports MyChron so I made a quick phone call to AIM for a recommendation. They directed me to their newest motorcycle lap timer solution, the MyChron Light TG.

The MyChron Light TG comes in two different versions, the 12-volt model and the 6-volt model. The only

difference is that the 12-volt connects to the battery power on the motorcycle which allows a cool blue backlight that the 6-volt coin-type battery-powered unit doesn't support. We opted for the 6V model because of our need to switch the units between multiple motorcycles. AIM packed up six units along with three beacons (one start/finish and two split beacons) along with a USB download cable and a CD containing the LightAnalyzer software.

When at the track, the MyChron Light TG works like this: you mount the timer on the motorcycle with the screen visible to the rider and the receiver pointing either right or left depending on the position of the beacon. We used industrial strength Velcro on both the screen and receiver for easy on/off and then secured it using zip-ties. Each beacon is mounted on a tripod and positioned around the track. We put the main beacon on the start/finish line and then positioned the other two split beacons so the track was divided into three parts.

The MyChron Light TG has many cool features, some we have tried and others we'll play with as we continue our tests. The most useful part of the unit is its large screen and easy-to-read display. While riding a motorcycle on the track at speed, taking the time to look down, find, read and make sense of a lap time is harder than it seems. But thanks to the large digits and 45-degree display angle, one quick glance gives you all the info you'll need. When using the split timing functionality, you can program the unit to display different measures at each split. Choose between accumulative, variation and sector split views. Accumulative shows the total time elapsed at the split, variation shows the difference between the current split time and the previous lap's split time, while sector shows the actual time for each split. We chose variation split time which displays a +/- and the time differential which gives a good reference from one lap to the next.

You can also change what AIM calls the unit's session mode between lap, qualify and race. Lap mode simply shows a lap counter on the display. Qualify mode displays the remaining time left in a qualifying session. Race mode counts down the laps remaining in a race. We left our unit in lap mode because it works best for our testing application.

Before getting the opportunity to play with the MyChron Light TG, it seemed reasonable to believe that most of the lap-time analysis would happen once the data was downloaded to a computer. As it turned out, we made use of the lap times after each riding session and while out on the track. Attaching the display to the top triple clamp using Velcro allowed the rider to register current lap times with one quick glance. Once back in the pits the MyChron makes it easy to quickly determine a session's fastest lap time or cycle through each time sequentially.

Because multiple riders are riding the test bikes during a track test it is important to differentiate the riders one from another. It's apparent that the MyChron Light TG is designed for one rider going to multiple tracks. It's possible (though tedious because of the four-button "keyboard") to input the name of the rider and add multiple tracks. For our purpose, we dropped the motorcycle name into the rider name field and the rider names into the track name fields. Before each rider went out, we would change the "track" name to the correct rider. While not ideal, it did allow us to monitor each rider's progress on the different motorcycles. We also used the new Picture Manager software to upload a cool MCUSA sprocket logo to appear onscreen.

One problem we encountered was getting the split timing beacons set in places where the unit could consistently receive the signal. The first time we placed the split beacons out on the Portland track during our Superbike Smackdown the units were not receiving the split signals. The main beacon placed at start/finish worked fine, displaying each lap time as the bike passed, but nothing happened when the bikes went by the split beacons. It turned out that one beacon was too far away from the track and the other was at a point where the bikes were leaned over at enough of an angle to not allow the receiver to pick up the signal.

Splitting the tracks into thirds and finding places to put the split beacons would turn out to be our biggest challenge with the AIM MyChron Light TG. Be prepared to get out on the track early with a truck or scooter to do some scouting. You'll need to find three locations (one for the main beacon and two more for the split beacons) that divide the track into somewhat equal segments. Remember that the beacons all have to be on the same side of the track and in spots that don't pose a hazard. You'll also want to be sure that the beacons have a direct line of site to the receiver mounted on the motorcycle. That means mounting the beacons on an extended tripod and placed where the bikes aren't leaned over too far when they come past. Since our testing sessions were taking place during a track day, it was all but impossible to move the beacons after getting the initial placement wrong.

At the [Seattle 100](#) we did a slightly better job getting all three beacons to read correctly. We mounted

two receivers up this time, one on my personal Honda CBR1000RR and the other on a test bike, the 2005 Kawasaki ZX6RR. The receivers were again mounted on the left-hand side of the motorcycles, on the fairing, below and slightly in front of the clutch lever. For whatever reason, the receiver on the Kawasaki beacon picked up main and split beacons every lap. On my CBR the second split beacon never picked up a time. Because we had the main beacon and first split beacon time, it was easy to calculate the second split time but obviously it would have been nice to skip the math. The most likely culprit was the lousy alignment of the beacon's beam to the receiver's optical eye.

While getting lap times on the fly is great, the real power of the MyChron Light TG is the ability to download the lap data to your computer for in-depth analysis. The optional USB download cable and LightAnalyzer software allow riders and tuners the ability to break down laps segment by segment and lap by lap. Keeping notes on conditions or tuning changes makes it possible to quantify your progress or lack thereof. We did most of our data analysis back at the office but now we're bringing along a laptop for on-the-fly data analysis.

Downloading the data to a computer is straightforward. Just fire up the LightAnalyzer software, connect the Light TG using the optional USB cable and click the Download button. The lap times are grouped as Runs in the software and the groups and laps can be loaded for analysis. Thankfully dates, days and time of day are recorded for each run so you have a general idea what you're looking at.

The LightAnalyzer software is a workable program but it does feel clunky and less than intuitive. The manual doesn't cover much beyond installation and basic functions, so you're mostly on your own to figure out the intricacies.

One problem we encountered was the software's unwillingness to record what track was loaded into the display unit. Because we used rider's names loaded as the tracks it was important for us to keep that info straight. The fix was to enter the rider's name into the notes field of each run in LightAnalyzer. While tedious, at least it was possible as long as you don't delete the data from the unit while downloading, which we did the first time.

Comparing the runs and laps is achieved by loading your selected runs and then going to Lap Times Analysis. This is where things get fun. After excluding the garbage lap times, you can look at one run compared to another and see lap differences broken down by total time and split times. Each run highlights the best lap time and each best split time along with a theoretical best lap time and best rolling laps by run. These theoretical best lap times are calculated by adding each of the best split times for a complete lap.

Using the Export to Excel feature allows the entire Lap Times Analysis data to be available in Excel. We used this often in order to create graphs and share data with users who don't have LightAnalyzer installed. Ultimately the LightAnalyzer software allows riders and tuners the ability to break down a day's worth of track riding in a variety of ways. It's up to the individual user to decide how much time to invest in order to put the information to best use.

While the LightAnalyzer software could use a few tweaks here and there, the MyChron Light TG unit is quite impressive and exactly what MotorcycleUSA needed to include reliable lap times to our tests. In the future we'll continue to put the Light TG to the test including adding lap times to dirt bike tests and trying to perfect beacon placement to get consistent readings. In the meantime, feel confident that MCUSA is giving you the most reliable racetrack lap times thanks to the MyChron Light TG.

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