How to run your MZ on a electronic ignition.

Why?

Electronic Ignitions have several advantages:

Fully programmable ignition timing

2 Different maps – change on the fly

Loose Weight off the crank rotating mass

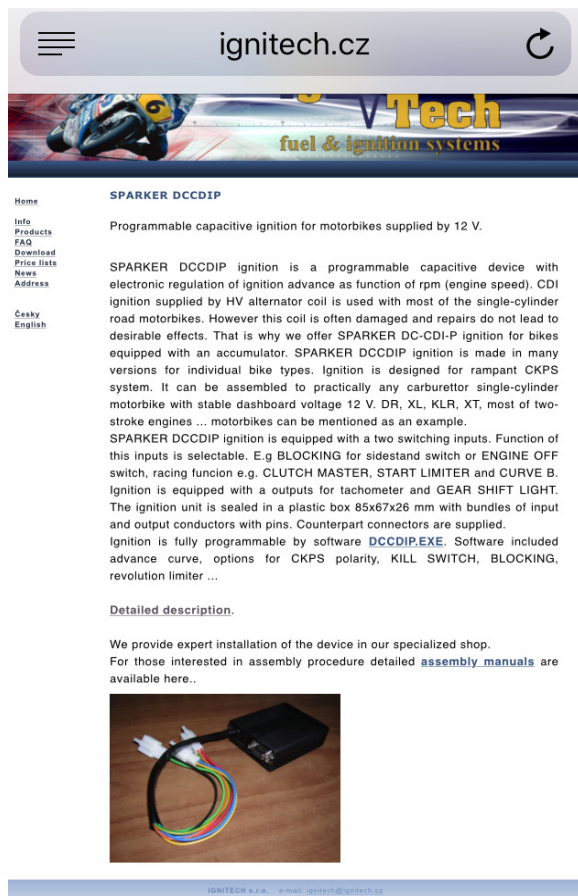Easier starting, due to allowing programming less advance for starting

Self Analysis for problems with a very simple computer program, for example if you want to check theres a spark, no running up and down the paddock, just the press of a button!

Also shift light, and with a battery your neutral light can work……..

How do I do it?

You require the below parts to change over.

1. Electronic Ignition Unit – Ignitech DCCIP Unit.

Ignitech are a Polish company who have been producing this unit for quite a while, the RD Forum has lots of these units used on RD350's to good effect, and proven mid range power gains.

Also seem to be quite robust, I crashed 4 times last year, and its still working like it should!!

Kill Switch can be programmed to one of its inputs, I have the other input set to be able to change the Map.

I use the standard DCCIP unit, as the race one just has more inputs / outputs that are not needed for a MZ (No powervalve etc…..)

Easy Wiring Diagram, you need the USB lead to program it.

See the next page for the price list.

programmable ignition units								
SPARKER TCIP4 (standard)	138	117	103	96	114,05	96,69	85,12	79,34
SPARKER TCIP4 (full version)	146	124	110	102	120,66	102,48	90,91	84,30
SPARKER HONDA TCI	142	120	106	99	117,36	99,17	87,60	81,82
SPARKER RACING 3	212	180	159	149	175,21	148,76	131,40	123,14
SPARKER DCCDIP, ACCDIP, ADCCDIP	150	128	113	105	123,97	105,79	93,39	86,78
SPARKER DCCDIP1 race	158	135	119	111	130,58	111,57	98,35	91,74
SPARKER DCCDIP2	158	135	119	111	130,58	111,57	98,35	91,74
SPARKER DCCDIP2 race	187	159	141	131	154,55	131,40	116,53	108,26
SPARKER DCCDIP4	187	159	141	131	154,55	131,40	116,53	108,26

2. Ignition Coil

The DCCIP unit needs a Low Ohm coil to work properly, apart from that just about any simple coil will do, I use the below coil from Electrex World, nice and cheap!

Online Catalogue I HT Coils I Yamaha XT600, XR500R, XL500R, XL500S, XL600R HT CDI Coil - (HT4)

Yamaha XT600, XR500R, XL500R, XL500S, XL600R HT CDI Coil - (HT4)

Price (excl. vat): £5.00 / €5.65

(£6.00 / €6.78 Including VAT at 20%)

HT Coil Measurements

Warranty & Returns

HT CDI Coil Fits:

Yamaha: XT600, XR500R, XL500R, XL500S, XL600R

Primary: 0.6Ω I
Secondary: 2860Ω I Hole Spacing: 1 hole I
Terminals: 2

OEM replacement - 2KF-82310-50

3. The pick up coil – I chose a coil for a similar 2 stroke which has more power and rpm than we will ever dream possible for a MZ! CR250 coil works well, and easy to setup.
    Also bought from Electrex World.

4. Battery – Yes you need to run a battery, but it can be quite small, the DCCIP unit only uses 1amp per hr! I chose to run a lipo remote control car battery, but a small standard 12v battery will also work but I have not tested a standard battery.
    Word of warning though, do not go any smaller Lipo than the one below, as it needs enough power to produce the correct spark, and smaller batteries lose effectiveness as they lose charge. I know this due to it starting to cut out on me with a smaller battery.

MODEL**SPORT**

Turnigy 2800mAh 4S 30C 14.8V LiPo Battery EC3 E-flite Compatible EFLB28004S30

GBP 29.99 🖨 FAST 'N FREE

> **Word of warning though**, do not go any smaller Lipo than the one shown, as it needs enough power to produce the correct spark, and smaller batteries lose effectiveness as they lose charge. I know this due to it starting to cut out on me with a smaller battery.
>
> Must be a 4 cell (4S) 14.8v Lipo
>
> 2800mAh or bigger.
>
> This one weighs about 320 grams.

5. Charger – Well it is total loss so you need to charge it.

Etronix Powerpal EZ-4 50w LiPo 2-4s
AC Charger ET0225

★ ★ ★ ★ ★ (3)

GBP 29.47 🚚 FAST 'N FREE

Est. Delivery **Tue, Mar 19 – Wed, Mar 20**

If you run a Lipo battery it needs a balance charger, that's capable of showing half charge and full charge, like the one below.

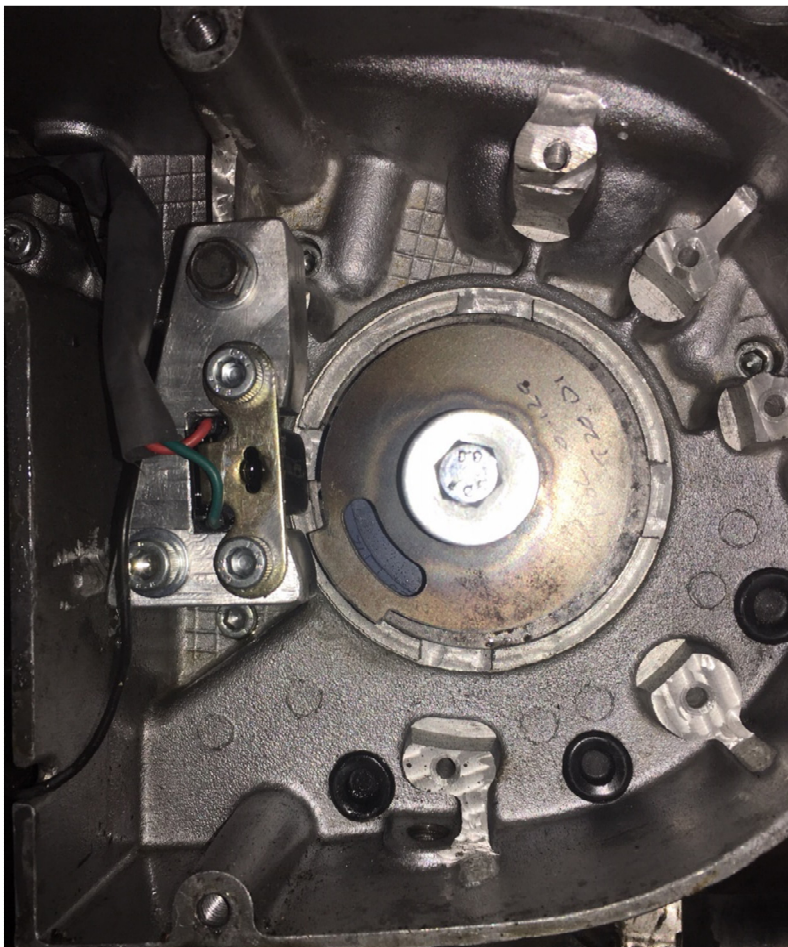It should also match the battery size, charge rate should be close to the amp hour of the battery.

6. Trigger Wheel – Ignitech sell the trigger wheels, cant remember the exact size but it was the largest one they do, 70mm approx.

The trigger wheel from Ignitech has pilot hole, which needs mounting to a taper mount for the crank.

I used the centre out the the old MZ ignition unit, machined down to 1mm above end of crank, and then opened out the centre of the trigger wheel to suit.

I also added a thread to it to be able to remove it, the same thread as the clutch thread so I can use the same puller (bloody clever I say!)

Then timed it up to the coil and welded it on 10Deg before tdc.

You can alter the timing in the electronics so a degree out at this point doesn't matter too much.

7. Pick up Mount – Say what you see…. It mounts the pick up at the correct distance from the trigger wheel, can be hacked out of some aluminium plate, and washers used to position correctly. Line up the centre of the pickup with the trigger wheel, and set the air gap between 0,6 and 1mm. Its shown in the pic on the last page.
I stuck to using the standard mounts for the pvl to position it, so I could still use a pvl if I ever needed to.

8. Lastly somewhere to mount the electronics, I mounted mine in a aluminium tunnel under the seat, to avoid any damage, and to keep most of the water off em. Found out since that it can practically be underwater before it would ever cause an issue.

Other Notes:

Standard Kill Switch can be used, and I used a second kill switch to be able to change maps.

Earth Wire is important to not damage the electronics, so make sure its at least 2.5mm wire and well connected.

The Software to change the ignition timing easy to use, and can be run on any windows laptop / windows tablet. Connects with a usb.