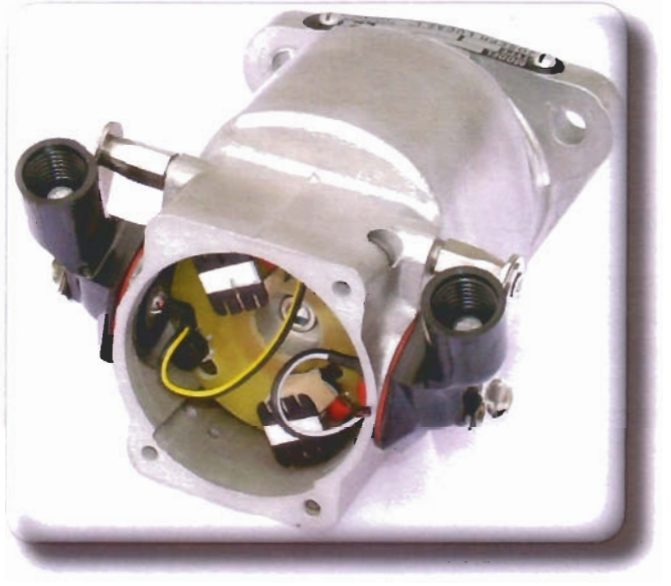
SRM's Electronic Ignition

Mag Kit 1



for Lucas K2F

BCS Part #331-30

K2F Boyer Micropower Magneto Conversion
Available from British Cycle Supply Company
http://www.britcycle.com

THE KIT COMPRISES OF:-

- MICRO-POWER ELECTRONIC IGNITION BOX
- DIGITAL IGNITION COIL, HT LEADS & PLUG CAPS
- SRM ELECTRONIC ROTATING PICK UP UNIT (COMPLETE)
- MODIFIED PICK UP HOLDERS AND LEADS
- BODY LOCKING PIN
- 7.5 AMP FUSE & HOLDER & SWITCH
- CONNECTORS & SPARE CABLE

FITTING INSTRUCTIONS

REMOVE MAGNETO & HT LEADS

REMOVE ORIGINAL MAGNETO ARMATURE

First remove the magneto points cover and remove the pick ups and earth brush.
Remove the points assemby by undoing the centre bolt.
Remove the end hosing by taking out the corner screws.
The spark gap screws are then removed,these are situated near the pick up holes.
Remove the original earth brush
The armature can be carefully removed.

FIT THE SRM ROTATING PICK-UP UNIT

Thoroughly clean the inside of the magneto body. The SRM unit has its own oil seals so it will operate with or without the original magneto end bearing outer race & oil seal fitted.

The SRM rotating pick-up unit is then carefully slid into the magneto housing with the red dot to the 12 o'clock position. When the pick-up unit is in position the red dot will be seen through the earth brush hole.
Fit the BODY LOCKING PIN into the Earth brush holder and screw this into the magneto body, this will lock the SRM rotating pick up unit firmly in place.
Shorten the Spark gap screws so they don't protude into casing and fit into magneto body.
Fit the modified pick-ups ensuring they are held firmly by the original pick-up clips or screws.
Push the bullet connectors on the wires into the central hole in the pick-up as follows:-
BLACK- WHITE lead to RIGHT pick-up
BLACK-YELLOW lead to LEFT pick-up
Make sure the bullet connectors are held firmly. (VERY IMPORTANT)

FIT MAGNETO BODY TO ENGINE

SET TIMING STATIC METHOD

THE TIMING IS SET IN THE FULLY ADVANCED POSITION

(a)SETTING THE SRM ROTATING PICK-UP UNIT

For CLOCKWISE rotating magnetos (viewed from pick-up end) ie BSA ,Triumph and Norton.

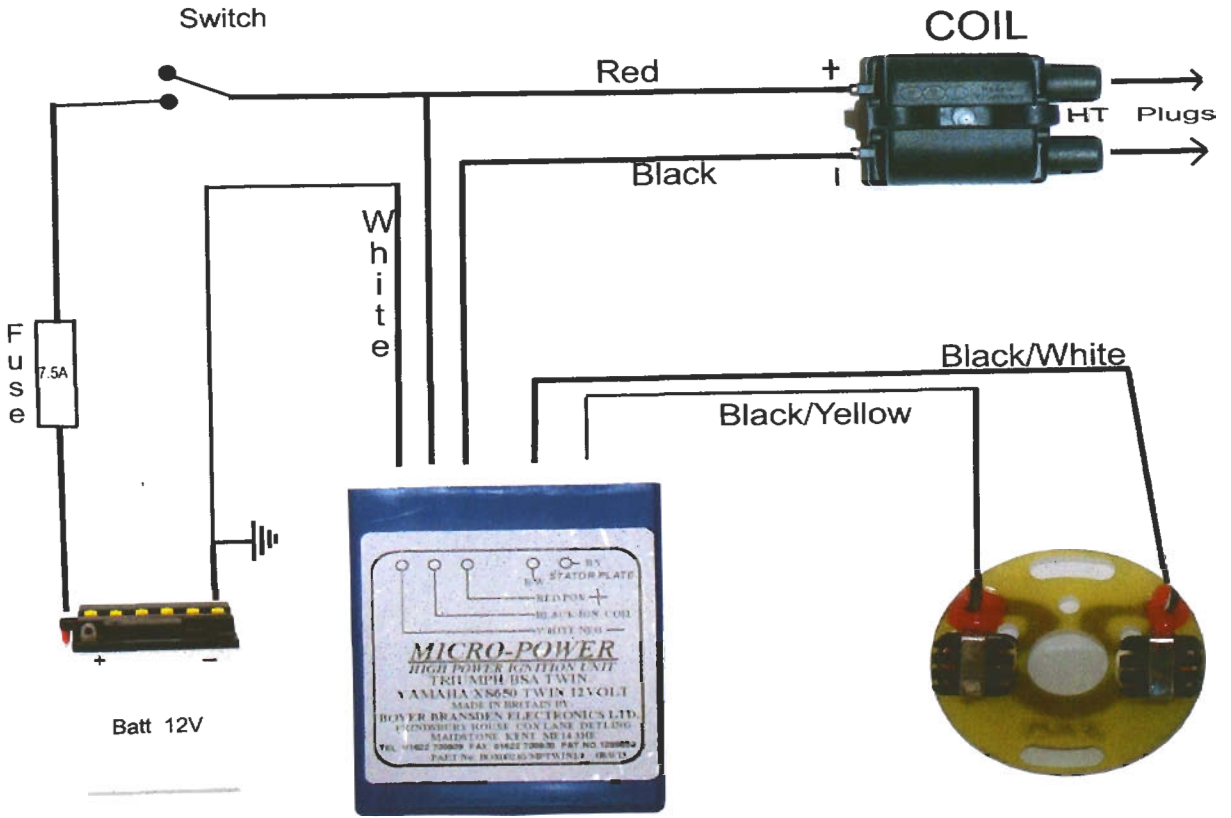
Look through the MIDDLE timing window situated next to the right hand allen adjusting screw and turn the electronic magneto shaft until the RED DOT is seen in the centre of the window

(b)TIMING IS THEN SET AS FOR MAGNETO

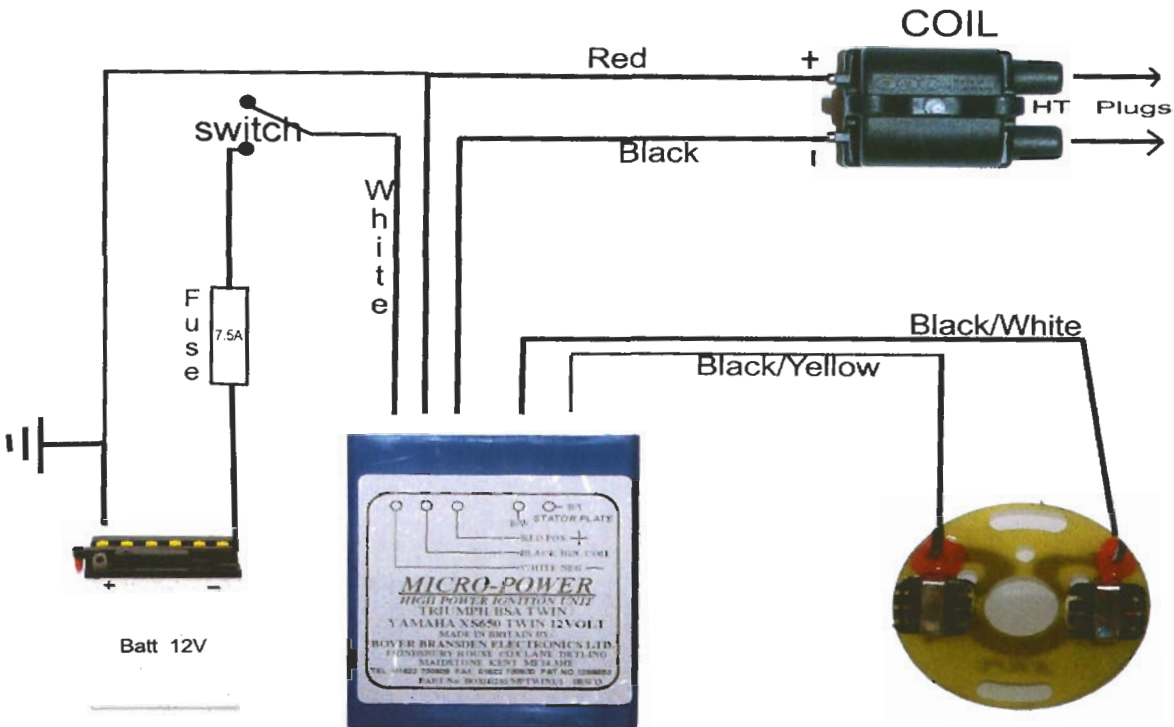
	From BSA	4 * LEAD Petrol	Unleaded Petrol
ie BSA A7 & A10	11/32" BTDC	35 degrees BTDC	33 degrees BTDC
	3/8" BTDC	37 degrees BTDC	35 degrees BTDC

For other makes and models using the K2F magneto consult the specifications to find the Full Advance setting (in degrees) BTDC. For Unleaded fuel subtract 2 degrees from this figure.

PLEASE NOTE:-Static timing the ignition will only give a starting point to get the engine running, the timing MUST then be checked using a STROBE & DEGREE DISC (mounted onto the crankshaft).



SRM's Twin Cylinder Negative Earth Wiring Diagram



SRM's Twin Cylinder Positive Earth Wiring Diagram

MAGNETO DRIVE GEAR

The electronics within the ignition unit provide the information for the ignition ADVANCE & RETARD,this means the AUTOMATIC TIMING GEAR is NOT needed
If you have MANUAL cable operated timing then you can fit the timing gear as standard.
If you have the AUTOMATIC timing gear (with moving "bob-weights") then this will have to be locked in one position or replaced with a "fixed" gear .(SRM Code No MAG032).

WITH THE PISTON SET AT THE CORRECT POSITION AND THE ELECTRONIC MAGNETO SET WITH THE RED DOT IN THE WINDOW,FIT THE MAGNETO DRIVE GEAR
(Use the allen bolt in the middle of the pick-up plate to help prevent the timing from slipping)

CIRCUIT DIAGRAM NOTES ON WIRING

Connect the parts of the kit according to the relevent wiring diagram ie POSITIVE or NEGATIVE earth.

The leads from the pick-ups (inside the magneto body) look like HT leads. Connect these to the ignition box, paying particular attention that the connections to the ignition box are correct.

Only 5000ohm(5k) SUPPRESSED PLUG CAPS are to be used.

The spark plugs are to be earthed whenever the ignition is 'live'. Failure to earth the leads can damage the Ignition Unit. This ignition system produces very high voltages make sure the system is turned off when handling any part of the wiring.

AS THIS IS A 'WASTED' SPARK SYSTEM (both plugs fire together) IT DOESN'T MATTER WHICH WAY ROUND THE HT LEADS GO

The system operates from a 12 volt electrical system. It is very important that the voltage is maintained (If the voltage falls below 11.5v this may effect the ignition timing).

Electrical systems powered by LUCAS 6v dynamos can be used on a 12v system (using a special convertor regulator available from SRM) or the dynamo can be rewound with 12 volt windings also available from SRM. **Please call for details**.

STARTING THE BIKE WITH THE ELECTRONIC IGNITION

Before starting the bike for the first time with the electronic ignition system fitted.

- Double check the wiring & connectors (poor connections will cause misfires or no spark).
- Check that you have a good earth to the frame.
- Check the battery is fully charged(if the voltage falls below 11.5volts the engine will misfire).

(a)SWITCH IGNITION ON

(b)START BIKE IN THE USUSAL WAY.

(c)IF THE BIKE DOESN'T START STRAIGHT AWAY--COUNT 1,2,3 THEN TRY AGAIN

The delay in counting 1,2,3 gives the ignition unit time to discharge and reset, if you carry on kicking the bike over in quick succession it will "kick back" due to the ignition being advanced. (If you have an ammeter fitted you will be able to see the ignition reset as the current drops to zero).

(d)WARM BIKE UP - CHECK & ADJUST TIMING IF NECESSARY.

To adjust the ignition timing, switch the ignition off, slacken the 3/16"allan screws holding the pick-up plate in the end of the magneto. Turn the plate the required amount, please remember that moving the pick-up plate 1 degree is equivalent to 2 degrees on the crank. If you are still experiencing problems - Check for a spark at the plug & Check all wiring and connectors - then check the timing as below.

WARNING

THE IGNITION SYSTEM PRODUCES HIGH VOLTAGES--MAKE SURE THE POWER IS TURNED OFF BEFORE WORKING ON THE SYSTEM.

(e)ACCUATE IGNITION TIMING

In addition to a STROBE you will need the following items:

- Degree disc
- Piston stop;
- Special primary drive crank nut: available for B31/B33, GoldStar, M21.

These are available as Part No SRM TIMKIT1.

For accurate ignition timing the engine will need to timed using a STROBE and DEGREE disc fitted to the end of the crank.

A PISTON STOP is used to accuately find TOP DEAD CENTRE with the degree disc.

The engine is then run and a strobe can be used to find the No of degrees before top dead centre when the engine fires on full advance.

This is the most accurate method of setting the ignition timing.

CHECK THE IGNITION TIMING is fully advanced with the engine speed at least 3000RPM

MOST OF THE PROBLEMS ARE CAUSED BY INCORRECT SETTING AND ADJUSTMENT OF THE IGNITION TIMING.

Terms & Conditions and Warranty

SRM Engineering warrants to the original purchaser that the SRM Ignition System Mag Kit 1 be free from deft in workmanship & parts under normal use for a period of 2 year from date of purchase.

Replacement parts are defined as item(s) not purchased as part of a complete ignition system. The SRM warranty extends to the original purchaser that these item(s) be free from defects in workmanship & parts under normal use for a period of one year from date of purchase.

Warranty

To make a claim under warranty, you must first contact SRM Engineering.If required, the product must be returned to SRM Engineering with a copy of your invoice. We require a detailed description of the problem and why you belive there is a fault within the ignition system. The Ignition system must be returned using a recorded mail service (paid by customer) Upon receipt we will thoroughly test the returned items and repair or replace any it found to be faulty and covered by the warranty.

Liability

In no event shall SRM Engineering's liability related to the product exceed the purchase price actually paid for the product. Neither SRM Engineering nor its suppliers shall in any event be liable for any damages whatsoever arising out of or related to the use or inability to use the product, including but not limited to the direct, indirect, incidental or consequential damages.

This warranty will be void if the product or parts have been altered, damaged, abused or installed incorrectly. Your statutory rights are not affected.