IIS - IGNITION SYSTEM 4.1

intelligent Ignition System with microprozessor controlled auto timing

General

For optimum operation of combustion engines an ignition system with auto timing is necessary. For easy starting up a spark is ideal in the upper dead point position of the piston. With increasing rpm a pre-ignition timing up to 30 degree is needed. This is achieved with our new system using a high precision rpm-check by two magnets built-in the hub of the engine. The hall sensor transmits the signal to the microprocessor, programmed with our engine characteristic.

Technical specifications

Temperature range: - 40° C / + 60° C ambient temperature

Voltage range: 4,8 - 8,4 V

	One - cylinder		two - cylinder	
Operating voltage	6 V NICAD / 7,4 V LiPo can be connected without voltage regulator			
Suggested battery capacity	1700 mAh		2400 mAh	
Open - circuit current	18 mA		18 mA	
Current - consumption	20-25 mA	0 rpm	20-25 mA	0 rpm
	80-100 mA*	1000 rpm	90-130 mA*	1000 rpm
	700-950 mA*	6000 rpm	800-1000 mA*	6000 rpm
	1000-1200 mA*	10.000 rpm	900-1300 mA*	10.000 rpm
Ignition Voltage	> 20 kV		> 20 kV	
Rpm. max	12.000 rpm		12.000 rpm	
Magnet red (North Pole)	upper dead point		upper dead point	
Magnet green (South Pole)	55° before upper dead point		55° before upper dead point	

*current consumption depends on the voltage of battery used with increasing voltage, current consumption goes down.

Like all other electronic devices the ignition box gets warm under operating conditions. For that reason a simple airflow has to be guaranteed. Therefore the 4 delivered rubber mounts have to be used for installation, insuring a one millimetre gap underneath the box.

Cable information

Sensor cable multi coloured (4 wires)	to sensor
Red / black long with socket	to battery
Red / black short with plug	connection for red LED, long contact -
Yellow / white with plug	connection for 3W tachometer and other options

Info about red LED

a) Ignition battery switched on: LED on

b) Propeller 2 turns (flip): LED off - ignition in standby

c) Propeller not being turned (flipped), after a few seconds: LED on, ignition in standby

This safety function has two reasons:

- The engine cannot be started by coincidence if somebody forgot to switch off the ignition
- Battery will be protected against incidental discharge

d) In case the LED will not get off when propeller is turned (flipped): hall sensor is not connected or other defect

Since June 2003 the operating voltage is 6,0V - 5 cells NiCd or NimH or 2 Lipo cells (2S) can be used without voltage regulators. Ignitions, wich were built before 2003 need 4,8V (4 cells). The IIS ignition system may not be attached to a voltage regulator. This is already integrated and regulates the input voltage to 5V. The Ignition is set by factory no adjustment is requiered.