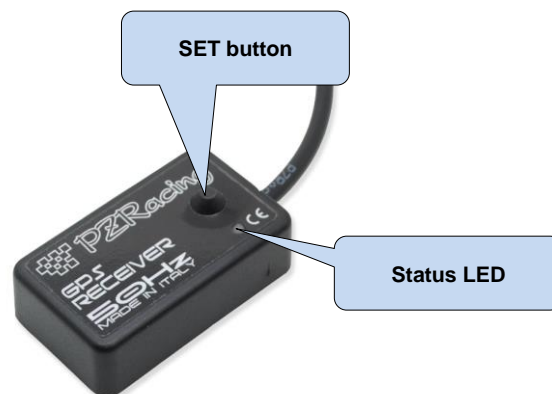


## KT170 Lap timer module – 50Hz

This 50hz GPS lap timer as manufactured by **PZ Racing** has been pre-wired for direct plug and play operation onto our BMW race switches, replacing the manually operated ‘flash’ function.

**Automatic function** : There is a built in library of over 150 race circuits worldwide, if you are within 6km of one of these you will get a ‘rapid ‘double blink’ of the LED followed by the gap. In this case, just start the lap timer as defined by the BMW manuals then ride.



Whenever the bike is with a 12.5m radius of that finish line location a signal to trigger the lap timer is sent to the bike via our LIN interface module.

**Manual function** : If you are at a track that is not pre-stored in memory you can create your own:

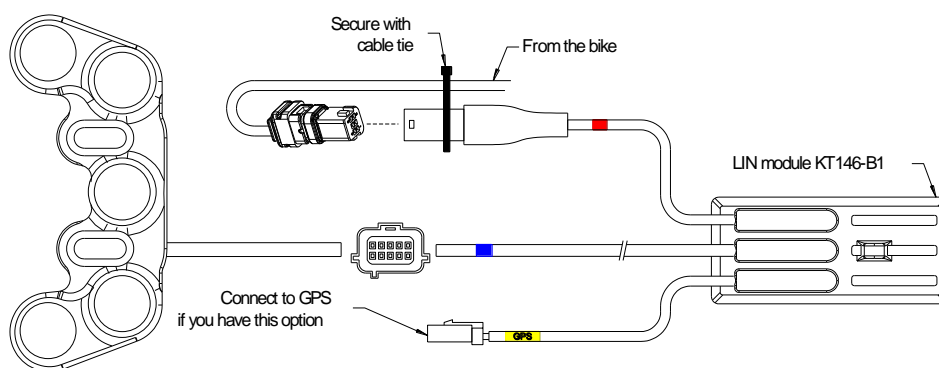
- Take the bike to the finish line (or only the module alone if self-powered, see below)
- Switch on the bike and wait for the LED to produce a slow and steady blink.
- Make a short press and release of the ‘SET’ button on the GPS module, the LED will now change to a double blink and gap to indicate that there is a stored location within 6km.
- Now it is ready to ride.
- This process could also be done while riding the bike, but not necessarily the safest option as you must be able to reach the ‘SET’ button on the GPS module.
- These manual locations are stored in memory even after power off/on, but are overwritten whenever a new location is visited. The internal fixed library does not self-learn and store all new locations.

**Solid LED ON** : This means the module is powered up correctly but there are either in-sufficient satellites visible or you have taken the bike to a new location and it could take up to 5 minutes to lock onto the new satellite array in that area. Just leave the GPS module powered up with a clear view of the sky and wait for the slow steady blink.

**Installation** : Simply plug the GPS module into the spare connector (yellow band) of our KT146 LIN module.

Locate the module on a flat surface with the LED and ‘SET’ button uppermost and with a clear view of the sky.

Use Velcro provided.



Tip: Avoid covering in carbon, and a metal surface under the GPS creates a stronger signal. An extension wire may be purchased to reach the rear of the bike.

**Self powering** – To take only the module to the finish line and manually set the position, power up the GPS module with 12v (battery positive) on the red wire and ground (battery negative) on the black wire.

### Electrical / Mechanical Characteristics

Wire..... Automotive / 550mm  
 Switch sealing ..... IP67

Housing ..... Potted ABS  
 Wiring ..... Plug n play

### Ordering Information

Part No.	Wire length	Description
KT170	550mm	GPS lap timer module – 50Hz

**Notes** – The module will always use the position you have set with the manual SET button, even if you are at a circuit which is in the fixed memory (list below). If this was done in error the only way to clear this is to take the GPS module at least 6km (10 is better) away from the track and make a new manual SET position. Then when you go back to the track it will again re-use the circuit stored in the fixed memory as that is the only stored location with 6km.

**Notes** - You can make as many manual SET operations as you want to refine the position. Each one overwrites the previous one.

LED solid On, not flashing	Looking for satellites or poor satellite reception
Slow flash	Satellite reception is OK but there are no finish lines with 6km, waiting for you to make a manual SET to store a location
2 x Flash plus a short gap	There is a finish line within 6km of where you are

**Circuits in memory**

<b>Track Proloaded 30/08/2017</b>		
<b>AFRICA</b>	<b>JAPAN</b>	N43_96E012_68_MISANO.TRK N44_00E011_37_MUGELLO.TRK N44_34E011_71_IMOLA.TRK N44_63E010_81_MODENA.TRK N44_68E010_02_VARANO.TRK N45_04E012_15_ADRIA.TRK N45_07E008_99_NUVOLARI.TRK N45_07E009_11_BRANDUZZ.TRK N45_09E010_31_CREMONA.TRK N45_24E007_72_LOMBARDO.TRK N45_51E010_01_FRANCIAC.TRK N45_62E009_28_MONZA.TRK
S26_00E028_07_KYALAM.TRK S27_90E026_71_PHAOKSA.TRK	N33_04E130_98_AUTOPOLI.TRK N34_84E136_54_SUZUKA.TRK N34_91E134_22_OKAYAMA.TRK N35_37E138_93_FUJI.TRK N36_15E139_92_TUKUJA.TRK N36_53E140_23_MOTEGI.TRK N38_14E140_78_SUGO.TRK	
<b>SOUTH &amp; NORTH AMERICA</b>	<b>AUSTRALIA</b>	<b>SPAIN – PORTUGAL</b>
N25_48W080_41_MAM.TRK N26_92W080_31_PBR.TRK N29_18W081_07_DAYTONA.TRK N29_89W090_20_NOLA.TRK N30_13W097_64_COTA.TRK N30_54W096_22_TWS.TRK N30_57W083_16_JENNINGS.TRK N32_17W081_32_ROEBLING.TRK N32_24W107_43_ARROYO.TRK N32_52W097_61_CRESSON.TRK N33_37W097_43_EAGLES.TRK N33_50W086_00_TGPR.TRK N33_51W112_39_AMP.TRK N33_53W086_62_BARBER.TRK N33_79W115_32_CHUCKWAL.TRK N34_09W117_50_FONTANA.TRK N34_19W083_81_ATLANTA.TRK N34_49W080_59_CMP.TRK N34_87W118_26_WILLOW.TRK N35_49W119_54_BRP.TRK N36_57W079_21_VIRGINIA.TRK N36_59W121_76_LAGUSECA.TRK N38_16W122_45_SONOMA.TRK N38_93W095_68_TROPEKA.TRK N39_24W077_97_SUMMIT.TRK N39_39W075_06_NJMLP.TRK N39_39W075_07_TBOLT.TRK N39_54W122_33_THDRHL.TRK N39_58W086_74_PUTNAM.TRK N39_79W086_24_INDIANAP.TRK N40_58W112_38_MILLER.TRK N40_69W082_64_MOHIO.TRK N40_69W080_35_BEAVERTON.TRK N41_09W075_51_POCONO.TRK N41_31W081_01_NELSON.TRK N42_41W086_14_GMAN.TRK N42_49W074_79_NYST.TRK N42_49W089_12_BUKHAWK.TRK N43_36W071_46_NHMS.TRK N43_80W087_99_ROADA.TRK N45_36W120_74_OREGON.TRK N45_60W122_69_PIR.TRK N46_42W094_27_BIR.TRK N47_29W123_19_RIDGE.TRK N47_32W122_15_PACIFIC.TRK S22_97W043_40_RIO.TRK S23_70W046_70_INTERLAG.TRK S34_69W068_46_BUENOSAI.TRK	S28_26E152_04_MORGAN.TRK S31_66E115_79_BARBAGAL.TRK S33_80E150_87_EASCREEK.TRK S34_84E149_69_WAKEFIEL.TRK S36_52E146_09_WINTON.TRK S38_50E145_23_PHISLAND.TRK	N36_71W006_03_JEREZ.TRK N37_09W002_27_ALMERIA.TRK N37_23W008_63_PORTIMAO.TRK N37_64W001_03_CARTAGEN.TRK N39_01W001_80_ALBACETE.TRK N39_48W000_63_VALENCIA.TRK N40_61W003_58_JARAMA.TRK N40_93E000_84_CALAFAT.TRK N41_08W000_20_ARAGON.TRK N41_57E002_26_CATALUNY.TRK N41_62E000_40_ALCARRAS.TRK
	<b>FRANCE</b>	<b>UK</b>
	N43_25E005_79_PARICARD.TRK N43_35E006_33_DULUC.TRK N43_49W000_53_PAUARNOS.TRK N43_54E001_39_CANDIE.TRK N43_77W000_04_NOGARO.TRK N43_92E002_12_ALBI.TRK N43_92E004_50_LEDENON.TRK N44_15E004_07_ALES.TRK N45_54E003_27_ISSOIRE.TRK N45_94E002_30_MASCLOS.TRK N46_20E000_63_VIENNE.TRK N46_56E005_33_BRESSE.TRK N46_59E002_01_CHATRE.TRK N46_71E002_95_LURCY.TRK N46_86E003_16_MAGNY.TRK N47_22E004_56_AUXOIS.TRK N47_34W001_80_LOIRE.TRK N47_36E004_90_DIJON.TRK N47_96E000_21_LEMANS.TRK N47_96E007_42_RHIN.TRK N48_98E002_52_CAROLE.TRK N49_11E003_51_ECUYERS.TRK N49_54E003_30_FOLEMBRA.TRK N50_38E002_30_CR_OIX.TRK N50_44E005_97_SPA.TRK	N51_21W001_61_THRUXTON.TRK N51_36E000_26_BRANDSHT.TRK N52_08W001_02_SILVERST.TRK N52_46E000_94_SNETTERT.TRK N52_60W001_34_MALLORY.TRK N52_83W001_38_DONINGTO.TRK N53_18W002_61_OULTON.TRK N53_31W000_06_CADWELL.TRK N54_46W001_56_CROFT.TRK N56_13W003_51_KNOXHILL.TRK
<b>ASIA</b>	<b>GERMANY</b>	<b>VARIOUS</b>
N02_76E101_74_SEPANG.TRK N14_96E103_08_CHANG.TRK N24_47E054_61_YAS.TRK N25_06E065_24_DUBAI.TRK N25_49E051_45_LOSAIL.TRK N26_03E050_51_BAHRAIN.TRK N31_34E121_22_SHANGHAI.TRK N40_96E029_41_ISTANBUL.TRK	N49_33E008_57_HOCKENHE.TRK N50_34E006_95_NURBURGR.TRK N50_79E012_69_SACHSEN.TRK N51_54E013_93_LAUSITZ.TRK N52_03E011_28_MOTOPARK.TRK	N41_07E023_52_SERRES.TRK N41_59W008_44_BRAGA.TRK N45_38E014_51_RIJEKA.TRK N47_30E017_05_PANNONIA.TRK N47_58E019_25_HUNGAROR.TRK N48_06E017_57_SLOVAKIA.TRK N49_20E016_45_BRNO.TRK N50_30E004_65_METTET.TRK N50_52E013_61_MOST.TRK N50_99E005_26_ZOLDER.TRK N52_96E006_52_ASSEN.TRK
	<b>ITALY</b>	
	N37_39E013_75_RACALMUT.TRK N37_52E014_31_PERGUSA.TRK N40_51E008_83_MORES.TRK N40_60E014_95_DELSELE.TRK N40_99E016_74_BINETTO.TRK N41_06E014_59_AIROLA.TRK N41_70E013_14_ISAM.TRK N42_16E012_37_VALLELUN.TRK N43_13E012_24_MAGIONE.TRK	