Installation and Operating Instructions for Motorcycle Alarm System
LEGOS 2-D „Edition“
(80651)

Introduction

You, as a selective motorcyclist will take much pleasure in this product out of the M+S® brand family. M+S® offers you reliable products with high benefit and easy operation with favourable cost/benefit ratio.

- These operating instructions are part of the product. They contain important information on installation, commissioning and operation.
- Please keep the operating instructions for future reference!
- Pass them together with this product on to third parties.

Intended use

LEGOS 2 „Edition“ alarm system is a reliable, easy to install high-tech radio alarm system with movement sensor and 2 remote controls.

It fits for all motor cycles, ATVs and Quads with 12V power supply.

After complete arming the alarm system gives a loud acoustic signal, if the vehicle is inclined by more than 1.5° or is moved by more than 1m.

ATTENTION – The alarm system does not react on shocks and vibration. A separate M+S® shock sensor is available, if required.

The alarm system is authorized by the German Kraftfahrt-Bundesamt and can be installed in the vehicle without any special type approval.

Safety instructions

Please read through the operating instructions completely before using the product. They include important information for correct operation.

We do not accept any liability for personal injury or damage of property caused by incorrect handling or non-observance of the operating instructions! The warranty will lapse in these cases. We will not assume any responsibility for consequential damage!

For safety and licensing reasons (CE), unauthorized conversion and/or modification of the device is prohibited.

If you assume that the safe operation is not possible any longer, take the device out of operation immediately. Protect it against inadvertent operation.

Use only fuses of the specified type and nominal current for replacement.

Function

- **Movement alarm** – A change of vehicle position initiates acoustic alarm
- **Panic alarm** – The owner can initiate acoustic alarm by pressing a button on remote control
- **STOP mode** – The alarm system automatically switches off after 10 days past last manual arming or disarming. Herewith a possible deep discharging of vehicle battery is avoided. The vehicle can still be started consequently.

OPTIONS

- **Additional sensors** – A shock- or microwave-sensor can be connected if required.
- **Pager** – An additional acoustic and optical signal can be created on a mobile pager by a separate transmitter. Working distance up to 600m.

Installation

1. Disconnect the cable between vehicle battery and body.
2. Jack in the cable harness in the alarm system and push the rubber gasket accurately over the body of the alarm unit.
3. Connect the siren with the alarm unit by connector (white).
4. Look for a splash-proof location at the vehicle to fix the alarm unit and the siren.
5. Avoid closeness to hot parts and radiant heat (exhaust, cylinder head etc.) and other electronic devices (ignition coil, CDI-unit, sparking plugs etc.)
6. **NOTE –** Components damaged by water or incorrect installation are bar from warranty!
7. Chose mounting position for central unit according sketch “MOUNTING POSITION“ (cross or along to forward direction; inclination out of horizontal position between 0° and 45°; decline cable harness alway s downwards - prevents intrusion of water).
8. For the installation of the “wake-up tip switch find a splash proof location” which is not open to the public
9. Drill a hole of 7mm diameter into a holding device or the vehicle case which fits for the fixation of the tip switch.
10. **ALTERNATIVE**: Replace the tip switch by installation how described under „tip for expert“.
11. Fasten properly the central unit, the siren and the tip switch at the chosen locations.
12. Look onto the CONNECTING DIAGRAM for the connection of all wires.
13. Connect the red wire (with fuse) with constant positive wire of vehicle (positive pole of battery).
14. Connect the black wire with the negative pole of battery or with body ground (bare metal part of frame).
15. Fix reliably all wires at the vehicle after installation of all components. Take care that cables can not bend, scrub or slip.
16. Hedge the rubber basket of cable harness with the enclosed elastic band or cable tie at the body of the alarm unit.
17. Connect the vehicle battery with the on-board power supply.

Optional connections:
Magenta: Input for additional sensors (Shock- or microwave- sensor)

- If no sensor is connected => insulate wire end with insulation tape.
- If a sensor will be connected => connect violet cable with the corresponding cable of the sensor (see instruction manual of relevant sensor)

Brown: Output (negative) for optional pager.

- If no pager is connected => insulate wire end with insulation tape
- If pager will be connected => connect brown cable with the corresponding cable of pager (see instruction manual of pager)

Operation

First start-up
System is in STOP mode
System was disconnected from on-board power supply (starter battery disconnected)
Press “wake up tip switch”. The alarm system is now (again) ready for operation.

Arming (activation) of alarm system
Press the small button of the remote control.

- ⇨ Two brief “BEEP” sounds chime for confirmation.
- ⇨ The internal movement sensor of the alarm system adjusts itself (duration approximately 30 seconds. No acoustic alarm is set off during this time! Any alarm triggers do not provoke an alarm but just a brief BEEP sound together with the resetting of the self adjustment time.)
- ⇨ When the self adjustment phase is over, the alarm system is armed and any alarm triggers will provoke an alarm.

Disarming (deactivation) of alarm system
Stop alarm signal
Press the small button of the remote control.

- ⇨ One brief “BEEP” sound chimes for confirmation.
- ⇨ If a “BOOP” (low tone) chimes after the “BEEP” => minimum one alarm was triggered during the armed period.

Panic alarm ON
Press the large button of the remote control.

- ⇨ Alarm is triggered for maximum 8 seconds.

Panic alarm OFF
Press the large button of the remote control.

- ⇨ Alarm is cut immediately.

STOP mode
The alarm system automatically switches off 10 days after last arming or disarming with remote control. That limits the consumption of current in the vehicle’s battery by the receiver stand-by. From now on the alarm system can no longer be controlled by remote controlled.

Wake-up after STOP mode
Press “wake up tip switch”. The alarm system is now (again) ready for operation and can be again operated by remote control.

Tip for expert

The following wiring replaces the „wake-up tip switch“ and simplifies the reactivation of the alarm system – after first start-up – after disconnection from vehicle battery – after system was in STOP mode.

Course of action:

1. Disconnect the cable between vehicle battery and body.
2. Cut the orange und the red wire at "wake-up tip switch“.
3. Insulate red wire end with insulation tape and fix it properly
4. Connect the orange wire with a wire of vehicle, which has positive voltage when ignition is ON (terminal 15)

„Ignition ON“ replaces now the pressing of „wake-up tip switch“. The alarm system starts STOP mode not before 10 days after last use of the vehicle.

Supplemental order of remote control – red CODE card

You can order some more remote controls directly at M+S by using the red code card. (See website www.m-u-s.com under download)

Therefore carefully keep the red CODE card at a safe place. Never at the vehicle!

A supplemental order of remote controls is **NOT** possible in case of loss of the CODE card.

No Code card – No remote control.

Without remote control – No function of alarm system. It would be worthless!

Teaching of new remote control
Press small button for several times in close distance of alarm system (~1m) till acoustic sound chimes.

Technical data:

Voltage:	12 Volt on-board power supply
Current consumption:	5mA, after ~ 30 seconds 2.5 mA, = 60mA/day
Current consumption STOP mode:	0.015 mA
Operating temperature:	-25° to +80° Celsius
Sensitivity of sensor:	change of decline by 1.5° S ec or ~ 1m
Sound level of siren:	114dB/1m
Battery remote control:	Lithium button cell type CR 1220 (2 pieces)
Range of remote control:	~ 10-15m

Subject to change. Updated 16.02.2011