Montageanleitung alpha Racing Schaltassistent „Blipper"
Mounting instructions alpha Racing Quickshifter "Blipper"

1. Entfernen sie die Verkleidung auf der linken Seite des Fahrzeugs, demontieren sie die Tankabdeckung und bauen den Kraftstofftank aus.

   Remove the left side fairing, take off the tank cover and remove the fuel tank.

2. Trennen sie den Stecker des OEM Schaltassistenten vom Kabelbaum und bauen sie diesen aus. Die Kugelköpfe abbauen.

   Unplug the OEM quickshifter and dismount from footrest.

3. Aluminium Halteblech für Steuergerät Blipper mittels mitgelieferter Schrauben M6x35 an den Lichtmaschinendeckel schrauben (Anzugsdrehmoment 3 Nm + 90°).

   Fit the aluminum bracket for the blipper controller to the generator cover using the included screws M6x35, tighten with 3 Nm + 90°.

Bild 1 / picture 1

4. Kabel mit Stecker (Kennzeichnung „Schaltassi") und Blipper Sensor mit Stecker (Kennzeichnung „Gang") zwischen Rahmen und Motor in Richtung Heckrahmen durchführen.

   Pass cable with connector (marked „shifter") and Blipper sensor with connector (marked „gear") between engine and frame.

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5. Befestigen sie das Blipper Steuergerät mittels Kugelklett Band am Aluminiumhalter wie auf Bild 1 zu sehen.

   Fit the blipper controller to the aluminum bracket with dual lock tape.

6. Schaltsensor mit Schaltstange und OEM Kugelköpfen (unter Verwendung der mitgelieferten Gewindestifte) einbauen, siehe Foto.
   Achtung: die Schaltstange sollte immer im 90° Winkel zum Schalthebel und Getriebehebel verbaut werden!

   Mount shift sensor with shift rod and OEM ball joints (by using the added headless pins), see picture.
   Attention: take care that the angel between shift rod and gear lever/shift lever should always be 90°.

Bild 2 / picture 2

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7. Verbinden sie den Stecker mit Kennzeichnung „Gang" mit dem Stecker Gangsensor am Kabelbaum und den Stecker „Schaltassi" mit dem Stecker für den OEM Schaltassistenten.

   Connect the cable marked „gear" to the connector gear sensor and connector „shifter" to connector of OEM quickshifter.

Bild 3 / picture 3

8. Kabel mit Kennzeichnung „Masse" an die Masse (- Pol) der Batterie anklemmen.

   Fit the cable marked „ground" to battery negative.

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9. Verbinden sie den Stecker „Drosselkl" mit dem Anschluss am originalen
   Kabelbaum, siehe Bild 4.

   Connect the plug marked „throttle" to the connector at OEM loom, see picture 4.

Bild 4 / picture 4

10. Stecken sie das Kabel mit der Kennzeichnung „Zündung1" an die Zündspule von
    Zylinder 1 (Bild 5).

    Plug in the connector marked „ignition1" to the ignition coil of cylinder 1 as
    shown on picture 5.

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11. Bauen sie den Tank wieder ein.

    Fit the fuel tank.

12. Zur Kontrolle ob alles richtig angesteckt wurde, testen sie bitte wie folgt:
    Schalten sie die Zündung ein und drücken die Start/Stop Taste kurz auf „Run", die
    LED Anzeige des Blipper Steuergerätes blinkt kurz auf.

    To check if everything has been plugged in correctly please check as follows:
    switch on ignition and put the Start/Stop switch to "Run" position, the LED display
    on blipper controller should flash.

13. Montieren sie die linke Verkleidungsseite.

    Fit the left side fairing.

    Achtung: Blipper Schaltassistent ist auf Umkehrschaltung eingestellt!
    Bei Verwendung mit Seriendatenstand kann es sein, dass der Blipper nachjustiert
    werden muss (Pos. 3.6 „tS" im Einstellmenu des Blippers von „98" auf „80")

    Attention: Blipper quick shifter is preadjusted on revers shifting!
    If blipper shift sensor will be used on bikes with OEM ECU programming there
    might be a different adjustment necessary (pos. 3.6 „tS" in the adjustement
    menue from „98" to „80").

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The alpha Racing BLIPPER is our latest high performance creation; we have put down an enormous amount of energy both in time, technology and knowledge to create a reliable and innovative product. It is a "Strain Gauge" sensor type that, thanks to own electronic and manufacturing tricks, guarantees reliable and long lasting performances. This product is intended for use on a closed circuit only. It's not homologated for road use. The manufacturer of this product is not liable for any kind of damage or injury deriving to the operator, vehicle, or to third parties from the use of this product.

 DISCLAIMERS

- System setup must always be done with bike stop and on stands.
- A wrong setting could affect, partially or fully, the system effectiveness damaging the gearbox.
- System setting is responsibility of the user and not of the manufacturer. Take care of sensor fixing to avoid it unscrew or interfere with other parts of the bike.
- The use of this product is at the total discretion of the private parties.
- The manufacturer of this product is not liable for any kind of damage or injury deriving to the operator, vehicle or to third parties from the use of the product.
- Each system modification, both hardware and software and harness or single components could affect the system functionality with potential damage or injury caused to the operator, vehicle or to third parts and delete the product warranty.
- Installation must be done carefully following these instructions. It's strongly recommended to test the product and the bike after the installation.
- Installation is a very critical operation for system effectiveness. Be sure that it is done by competent and specialized personnel.

1. CONNECTIONS

Sensor has "magic threads" i.e. both right and left. Connect the sensor to the shiftrod (not included in the kit), cut it if necessary. Tight the nuts and the eventual grubs to avoid disconnections due to vibrations. Install sensor and rod with uniball links on both ends, most bikes have uniballs stock, check that the shiftrod does not rub or touch anything as this could impair sensing. Put sensor far from very hot parts. Make sure wire has a slight bend/loop so it does not tighten up and pull at the sensor during up or down shift. Warranty does <u>not</u> cover ripped out wires.
<u>**WARNING**</u>: To adjust sensor positioning act on the proper planes. Sensor failure could occur if acting on the cover.

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2. DISPLAY

After powering the ECU makes a general check and, if passed, the display will show the firmware version.

⚠️ **WARNING**: don't act on the sensor until this procedure has finished.

Whenever the pre load threshold is passed (par. 3.3) the display will show "--" .
In case of failure on the display will appear an "E" followed by a number. Give this code to the assistance.

3. INITIAL SET UP

Press both buttons to enter in the programming.
Push lower button to scroll the menus forward while push the upper one to scroll backwards.
Press and maintain the lower button to enter into the various menues. To exit from the menu and undermenues, press upper or both buttons. System will go out of programming if no buttons are pushed except the "r" menu. During programming the quickshifter is not working.

⚠️ **WARNING**: Act only on the following setup options.

3.1 Signal time programming "t"
Set at the maximum allowed value. Upshift timing will be managed by original BMW ECU not by SGRACE. If the ECU requires a different cut time, it can be adjusted within 20÷99ms.

3.2 Downshift rpm "rL"
The "Blip" will not work below 3,000rpm. Above this limit the timing of the blipper is automatically set in function of customer's choice. "rL" are the lower rpm limit level.

3.3 Downshift timing "SL"
Set the desired timing of the "blip" at "rL" rpm (see par. 3.2).

3.4 Upshift Pre Load adjustment "L"
Default setting "22" it's possible to change the load necessary to apply on the sensor for having the upshift signal. With ignition on, engine off, try to select the upper gear. Shift lever should move through the spring load in gearbox until gear resistance is felt. If rpm is above the set value at par. 3.8, The panel led should show "--" for a while. If this happen too early or too late consequently change the preload set.

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3.5 Actual Load displaying "S"

Entering in this menu it's possible to read the actual load value. Useful feature for preload adjustment and for gearbox check and maintenance.

3.5.1 Max Load displaying "--"

At this point, pressing and holding the lower button, the display will show blinking "--" for about 10s. Afterwards it will show the max load value registered in this period.

3.6 Downshift Timing "tS"

Set the "Blip" timing within 20÷98ms at 8,000 rpm. Default 98ms. The blip timing at 12,500rpm will be 70ms more than this value. In the between the CPU will interpolate the value. We suggest timings between 98 and 80ms. A too long timing allows gear in but then you'll feel the bike pushing a while. A too short timing doesn't allow a proper downshift. We suggest to start with high value and reduce it during the tests on road.

3.7 Downshift Pre Load adjustment "LS"

Default setting "14" it's possible to change the load necessary to apply on the sensor for having the downshift signal. With ignition on, engine off, try to select the lower gear. Shift lever should move through the spring load in gearbox until gear resistance is felt. The panel led should show "--" for a while. If this happen too early or too late consequently change the preload set.

3.8 Minimum rpm limit "Sr"

Set rpm below which the system is not cutting. Visualization: /1000.

3.9 Type of analog output "dS"

If your system has the analog output, this function allows to set the type of output: "dC": 0÷5V with 0 load at 2.5V. "dU": 0÷5V with 0 load at 5V. "DD": 0÷5V with 0 load con at 0V.

3.10 Bottom/Upper limits "dr"

If your system has the analog output, set "5"=±50Kg, "10"=±100Kg.

3.11 Pushing/Pulling"CE"

"C" Pushing, "E" Pulling.

4. WORKING CONDITIONS

8V - 17.5V; -20°C - +95°C.

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