The Motorcycle Computer that does everything!

IMO-100 R300
Version 1

Operator's Manual and Assembly

(English Translation of text)

PLEASE REFER TO THE PHOTOS AND DIAGRAMS
IN THE (GERMAN) INSTRUCTION BOOKLET.

Touratech recommends that you have a professional install the IMO-100 R300 and will not accept responsibility for damage done while installing device.

The IMO-100 R300 is an electronic all-in-one instrument to be installed in your vehicle. It can be used as a replacement for he instrument block or as an additional instrument. Besides the regular function of the speedometer and odometer, the IMO-100 R300 provides information on distance and calculates fuel usage. The sport driver may find the acceleration and maximum speed functions as well as the stop watch function useful. Additionally there is an outside temperature gauge. Finally the computer provides information on the condition of he motorcycle, including engine temperature and battery life.

You can utilize the computer as a rally computer. This function, which you can be used for course description, can be programmed by the driver with the assistance of road books. The IMO-100 R300 has proven to be a worthwhile rally computer during the toughest rallies in the world.

CONTENTS:

1.   General Information:

1.1 Functions
With your IMO-300R, you have the option of selecting twelve (12) options (different displays), by using either the keys on the computer or the remote control.

Road Book Function – Only reachable directly from computer keypad
Total Distance and Partial Distance Calculations
Date and Time

1. Basic Function
    Speed and RPM
    Total number of Kilometers
    Date and Time
2. Short Distance
    Short Distance Counter
    Average Speed
    Drive Time and Break times
3. Daily Distance (km)
    Daily distance counter
    Average Speed
    Drive time and break times
4. Long Distance
    Long Distance Counter (able to reset)
    Number of Drive Day and Total number of days driven
    Kilometers drive each day
5. Destination – Distance
    Distance to Destination
    Drive Time / Arrival Time
6. Fuel Tank Distance
    Distance since last refueling
    Fuel Consumption, calculated
7. Acceleration
    Acceleration times
8. Maximum Speed
    With Date and Time
9. Stop Watch
10. Outside Temperature
    Outside temperature with records of minimum and maximum temps
11. Engine Specifications
    Engine Temperature / Battery Life
    Programmed Warning Temperature

1.2   General Key Functions:

1.2.1   The E Key:

Using the E key, you can enter the editing mode to manually alter the values of the IMO-100 R300. Depress the E key for approximately one (1) second. You will enter the first edit field. The flashing indicates which field may be edited. You may correct these fields by using the ⇑ and ⇓ keys. If you do not wish to correct the field, simply press E. This allows you to move to the next field. The E key allows movement to the next field when the edits have been made. When all fields have been edited, the E key will turn off the Edit mode.
- The E key can also be used to set back values (see 3.1 and 3.12) in certain functions.
- The E key has special capabilities in the stop watch function (start and stop, see 3.9) and in the Long Distance Function (see 3.4)

1.2.2   The ⇑ and ⇓ Keys:

These keys will allow you to switch to the next display:
- From the Basic Function
  - ⇑ to the Road Book Function (see 3.1 and 3.12)
  - ⇓ to the next function (function 2 – 11, see 1.1)

1.2.3   Function of the Turn Knob:

The turn knob is for manually adjusting the contrast of the display. Regulate the brightness of the display by turning the knob. This is most useful at strong temperature changes and during strong direct sun.

2.   Basic Setting of the IMO-100 R300 (Adapting to Your Vehicle)

2.1   Start in the Basic Function

Are you in the Basic Function?	> Continue to "Parametrization" 2.2
Are you in the Road Book Function?	> Use the ⇓ key to move to the Basic function, Continue to "Parametrization" 2.2
Are you in any other function?	> Press the ⇓ key until you are in the Basic Function. Continue to "Parametrization" 2.2

2.2   Parametrization:
Hold down the E key (editing see 1.2.1) approximately one (1) second. Now you should be in the first edit field, "Time, Hour". The first edit field is blinking. Press the E key again and move to the next field. If using the remote control, you may use the +/- key to move to the next field.

2.2.1   Time:
The hours flash and can be altered using the ⇑ and ⇓ keys. Press the E key to enter the minute field. Press the E key again and you will enter the date field.

2.2.2   Date:
The day flashes and can be changed using the ⇑ and ⇓ keys. Press the E key and enter the month field. Press again to change the year. E again and you will enter the next field.

2.2.3   Wheel Size:
The wheel circumference size in mm must be entered here. Use the ⇑ and ⇓ keys to enter the value and E to move the next field.

2.2.4   Warning Temperature:
Setting the *Warning Temperature*. Even here, each blinking field is changed using the ⇑ and ⇓ keys. You can set the desired warning temperature or select 000 to turn the option off. If you reach the warning temperature, the display will switch to the Engine Specifications Display regardless of the display you are in. If you've selected 000, you will see Warning Temperature "off" in the Engine Specifications Display (see 3.11).

2.2.5   **Lighting Generator Warning Function:**
This warning function can be turned off using the ⇑ and ⇓ keys. If the warning is turned on, and the display is faltering, the display will switch to the Engine Specifications display regardless of the display you are in.

2.2.6   Total Kilometer Reading:
These are the total amount of km that your motorcycle has covered. Follow the directions for the wheel size and enter the total km reading from your motorcycle.

2.2.7   Road Book Display:
You may choose (using the ⇑ and ⇓ keys) whether you would like your stretch or the total distance driven shown in large font. (see 3.12)

2.2.8   Adapting the Rev Counter:
Correction Rotation appears in the display. Normally the divisor is 1. Entering "0.5" means that the value of speed displayed later is doubled. If "2" is entered, the value is halved, if you enter"3", the value is divided by 3, and so on. Depending on the ignition system and number of cylinders, the speed must be adapted.

2.2.9   For Remote Control Users:
         By using the Road Book Corrector, you have the option of setting
         distances of 10, 50, and 100meters. The entire distance will later be
         corrected via remote control.

2.2.10   Remote Control Option:
         The functions are determined in the menu selection. Remote control
         options are later selected through the use of the lever. For each of the
         pre-numbered functions (you may select ⇑ (yes) and ⇓ (no). See 1.1 for
         all the functions and corresponding numbers. (The Road Book Function
         does not have a number since it can not be selected via remote control.)
         In this example, you will note that the Daily Distance (03) and Outside
         Temperature (10) Functions can not be selected and will therefore be
         skipped over when flipping through the functions. You can change these
         selected functions at any time!

2.2.11   End of Parametrization:
         After your last entry, press the E key; the display should say Securing
         Data. Please wait. The values you've entered are now stored in
         memory. This memory does not rely on the battery so you will not lose
         data if the batter fails. You may change and save the data at any time.

3.   Operating the Functions

3.1   Basic Function – the basic function is intended to completely replace the vehicle instrument gauges.
- Speed
- RPMs
- Time and date

The function is located in the top right corner (as in all following functions). To enter into the Parametrization Function of the IMO, you must be in this function and you can only enter the Road Book function from here.

3.1.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: The ⇑ key allows you to enter the Road Book Function. There are no other alternatives to activate Road Book (see 3.12).
  - ⇓ Key: The ⇓ key allows you to switch to the next function which in this case, is the Short Distance Function (see 3.2)
  - E Key: Hold it down for approximately one (1) second to activate the parametrization (see 2.2).

- With the Remote Control (see 8.2)
  - +/- Key: You can also enter the next function by pressing the +/- . The – will take you to Short Distance Function (02), and the + key will take you to Engine Specifications (11) as long as you have selected this during parametrization. Otherwise you will enter the next function you chose.
  - 0 Key: This key does not have a purpose in this Function.

3.2   Short Distance – The Short Distance Function is a counter, which can be reset at any time.

Additionally, this function displays:
- Average speed without breaks (breaks are deducted from the calculation)
- Actual drive time since the counter was reset

Second Calculation:
- Average speed with breaks (breaks are included in calculation)
- Break time since beginning of the drive.

3.2.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Basic Function (01)
  - ⇓ Key: Switches the display to the next function, Short Distance (03)
  - E Key: Resets the course time back to zero, thereby also resetting the average speed and times back to zero.

- With the Remote Control
  - +/- Key: Switches you to the previous or next
  - 0 Key: Resets the Short Distance Function (like E key on device)

New calculations after resetting require a minimum of one-minute drive time and one km driving distance. Break times can only be calculated after this point.

3.2.2   Hint: The Short Distance Function can be utilized as an "automatic stopwatch" for lap times in motor cross or races: When starting, reset values to zero and upon reaching destination, record exact time (down to the second).

3.3   Daily Kilometer

The daily km counter displays the average speed driven since 12:00:01 am. This is a daily km counter.

Additional info:
- Average speed without breaks (breaks are deducted from calculation)
- The actual drive time since 12 a.m. of that day.

2nd Calculation:
- Average speed with breaks (breaks are included in calculation)
- Total break time since the beginning of the day.

3.3.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Short Distance Function (02)
  - ⇓ Key: Switches the display to the next function, Long Distance (04)
  - E Key: No function

- With the Remote Control
  - +/- Key: Switches you to the previous or next
  - 0 Key: No function (like the E key on the device)

New calculations after resetting require a minimum of one-minute drive time and one km driving distance. Break times can only be calculated after this point.

3.4   Long Distance / Add-on Feature
- The long distance counter can be reset to zero at any point.
- It counts the total distance since the last reset.
- The information "Trip Day" and total trip day are counted from last reset of values.
- Additionally this function calculates the average number of km driven per day.

3.4.1   Possibilities within the Function:
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Daily Kilometer (03)
  - ⇓ Key: Switches the display to the next function, Destination – Distance (05)
  - E Key: By pressing the 0, you will reach the add-on feature

- With the Remote Control
  - +/- Key: Switches you to the previous or next
  - 0 Key: By pressing 0, you will reach the add-on feature (like the E key on the device)
- Resetting the Long Distance Counter:

- Resetting the 0 and erasing of values can only be done in the add-on feature. You may use both the E and the 0 to enter this feature (see 3.4.2 and 3.4.3).

3.4.2   Add-on Feature – Previous Long Distances
By pressing either the E key or the 0 on the remote, you will enter the add-on feature to the Long Distance Function. 365 Drive days will be stored in memory from the day you reset the function. You can look at each previous individual drive day and get the following information:
- Drive Day
- KM driven on selected drive day
- Date of Drive Day

3.4.3   Possibilities in Add-On Feature:
- On the IMO-100 R300
  - ⇑ ⇓ Keys : Flipping through individual drive days both forwards and backwards
  - E Key:
    - Short press – takes you back to the Long Distance Function.
    - Long Press: Resets the Long Distance counter thereby erasing all values stored in memory. No drive days or km values will then be shown. In the Long Distance Function, the km shown are 0, no drive days and total days are shown.
    - Before erasing data, you will be given a warning. In the event that you accidentally held the key too long and you don't want to erase the data, you may discontinue by pressing the ⇑ key. You may continue with the reset option by pressing E.

- With the Remote Control
  - +/- Key: Flipping through individual drive days both forwards and backwards
  - 0 Key:
    - Short Press – takes you back to the Long Distance Function
    - Long Press – Resets the Long Distance Counter
    Before erasing data you will be given a warning. In case you held the key too long and you do not want to delete your data, you may return by pressing the + key. You may continue with the reset option by pressing 0.

3.5   Destination – Distance
This is where you can enter the distance to your destination.
- The display shows the remaining miles to your destination. The mileage counter operates backwards.
- The remaining drive time is calculated (based on km driven and drive time from start).
- Finally, your calculated arrival time is displayed.
3.5.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Long Distance Function (04)
  - ⇓ Key: Switches the display to the next function, Fuel Tank Stop (06)
  - E Key: By pressing the E key, you will enter the Edit mode. Now you can enter the distance of your destination.
    - The First edit field will blink

- Use the ⇑ and ⇓ keys to enter desired values
- The E key will move you to the next edit field
- After the last entry, the E key ends the edit option
- Now when you depart (after 1 minute and 1 km) the new information will be calculated

- With the Remote Control
  - +/- Key: Switches you to the previous or next (like the ⇑ and ⇓ key on the device)
  - 0 Key: Like the E key on the device: edits the distance of the destination

3.6 Fuel Tank Distance
This function is useful in calculating the average fuel usage.
- Fuel Tank Distance : km driven since last refill
- Fuel Usage: average fuel usage of vehicle before last refill (amount of gas refilled in liters / distance driven)

3.6.1 Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Destination – Distance (05)
  - ⇓ Key: Switches the display to the next function, Acceleration (07)
  - E Key:
    - For the first entry: After you fill your tank, press E to reset.
    - Further tank refills: After getting gas, you must enter the amount in Liters.
      - The first edit field will blink
      - Use the ⇑ and ⇓ key to select desired value.
      - Use E to move to the next edit field, correct value, and so on.
      - After the last entry press E to exit edit mode.
      - The calculated fuel usage will appear. The fuel tank distance will automatically be reset to zero.

- With the Remote Control
  - +/- Key: Switches you to the previous or next (like the ⇑ and ⇓ key on the device)
  - 0 Key: Like the E key on the device. Edits the amount of fuel refilled.

3.7 Acceleration (feature not available on English language IMOs)
This is where you can measure in counts of 10 your rate of acceleration (e.g. from 0-100 or from 80-120km/hr). A number appears in the display and with a quick pressing of the E Key will signal that the computer is prepared to begin the measurement (Active).
- Two examples follow:
- 0-100km/hr
The acceleration time will now show -,- until the computer acknowledges the 0km/hr (after 3 seconds). Now you may start with your measurement at any time. The measurement begins with the first impulse of acceleration. After reaching a distance of 100km/hr, the display will show you your time.
- 80-120km/hr
The acceleration time on your display will now show 00,0. Now you may start with your measurement at any time. After reaching the "from" value (80km/hr),

the measurement will begin. Finally, after you reach the "to" value (120km/hr), your display will show you the time (rate of acceleration).

3.7.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Fuel Tank Stop (06)
  - ⇓ Key: Switches the display to the next function, Maximum Speed (08)
  - E Key:
    - Long Press: Enter Edit mode by pressing the E key. Now you can enter values for "to" and "from":
      - The first edit field will blink
      - Use the ⇑ and ⇓ key to select desired value.
      - Use E to move to the next edit field, correct value, and so on.
      - After the last entry, press E to exit edit mode.
    - Short Press: Activates desired measurements

- With the Remote Control
  - +/- Key: Switches you to the previous or next (like the ⇑ and ⇓ key on the device)
  - 0 Key: Like the E key on the device.
    - Long Press: Edit
    - Short Press: Activates measurements

3.8   Maximum Speed

Shows the maximum speed that was held constant for a minimum of one second. The date and time of the maximum speed are recorded. By using the E key, you can erase values, which makes new measurements possible.

The maximum speed is still recorded if you are in a different function.

3.8.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Acceleration (07)
  - ⇓ Key: Switches the display to the next function, Stop Watch (09)
  - E Key: By pressing E, you will erase the recorded measurement (value). Now when you begin driving (after 1 minute and 1 km), the new measurement begins.

- With the Remote Control
  - +/- Key: Switches you to the previous or next (like the ⇑ and ⇓ key on the device)
  - 0 Key: Like the E key on the device. Erases the recorded measurements

3.9   Stopwatch

The stopwatch shows the time in hours, minutes, and seconds. With this tool you can track time up to 99 hours, 58 minutes. This tool is independent of any other functions. When the stopwatch is running, you will see the word "Active" in the display.

3.9.1   Possibilities within this Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Maximum Speed (08)
  - ⇓ Key: Switches the display to the next function, Outside Temperature (10)
  - E Key:
    Long Press: Sets the stopwatch back to zero, making it irrelevant whether the clock is running or not.
    Short Press: Starts and stops the stopwatch

- With the Remote Control
  - +/- Key: Switches you to the previous or next function (like the ⇑ and ⇓ key on the device)
  - 0 Key: Like the E key on the device.
    Long Press: Resets the stopwatch
    Short Press: Starts and stops the timer

3.10   Outside Temperature

This is where the outside temperature is recorded. The thermometer is on the outside of the device and to get accurate readings, should not be in direct sunlight. Additionally, maximum and minimum temperature readings, including date and time are displayed (since the last resetting).

3.10.1   Possibilities in the Function
- On the IMO-100 R300
  - ⇑ Key: Switches the display to the previous function, Stopwatch Function (09)
  - ⇓ Key: Switches the display to the next function, Engine Specifications Function (11)
  - E Key: Used to reset the recorded temperature. Hold for minimum of two (2) seconds to reset both minimum ad maximum temperatures.

- With the Remote Control
  - +/- Key: Switches you to the previous or next function (like the ⇑ and ⇓ key on the device)
  - 0 Key: Like the E key on the device: Resetting recorded measurements.

- The recording of minimum/maximum temperature does not work when engine is not running
- The temperature gauge requires that the engine be running at least 5 minutes to show accurate measurements.

3.11   Engine Specifications

The Engine Specifications function displays two important pieces of information:

- Engine Temperature. This is the actual engine temperature (either oil or cooling water) and the previously set warning temperature. If, while driving, you are in a different function and you reach the warning temperature, the display will switch to the Engine Specifications Display. You can turn the warning temperature off in the parameterization function. (see 2.2.4)

  Only engine temperatures between 40° Celsius and 160° are displayed. If outside this range, "---" will be displayed.

- Battery life display with built in warning: As soon as the RPMs are over 1,200 and the voltage is less than 12 volts, the display will switch to the Engine Specifications Function (11), regardless of the display it is in currently.

  The warning temperature can be turned off in the Parametrization Function (see 2.2.5)

3.12   Road Book Function

The Road Book Function is especially designed for Rallies and long drives.
The following is displayed:

- Partial Distance
- Total Distance
- Date and Time

The Partial Distance is easily reset by pressing either the E key or the 0 on the remote control.

The Total Distance can be edited by 10s, 50s, or 100s by pressing either the E key or the 0 on the remote control.

Depending on your Parameterization (see 2.2.7), either the partial distance or the total distance is displayed in Large Font on the screen; the other is shown in a smaller font on the display.
You can use both the Total Distance or Partial distance as a kilometer counter.

3.12.1   Possibilities within this Function:
- On the IMO-100 R300
  - ⇑ Key: Sets the Partial Distance back to zero
  - ⇓ Key: Switches the display back to the Basic Function (01)
  - E Key: The E key will allow you to enter the edit mode:
    - The first edit field is blinking, the thousandth field of the Total Distance.
    - Use the ⇑ and ⇓ keys to enter desired values
    - The E key will move you to the next edit field
    - After the last entry, the E key ends the edit option

- With the Remote Control
  - +/- Key: Corrects the Total Distance previously programmed values (see parameterization). For example, if you set the Correction factor to 50m, the total distance will always be increased or decreased by 50m.
  - 0 Key: Quickly resets the Partial Distance back to zero.

- If you would like to not only correct the Total Distance but reset it to zero, then press the E key for approximately one (1) second until the first field is blinking. Then press the "0" on the remote.

4.   Mounting the Attachment Plate
   4.1   Attention:
>   Secure the attachment plate so that the mounted device in no interferes with the operation of the vehicle.   The attachment plate has an opening for the connecting line that should be on the driver's right hand side.

   4.2   Assembly:
   - Use the Flathead screw (m6) to attach the rubber cylinder to the attachment plate. If necessary, insert the spring ring (m8). Select the appropriate bore hole.
   - Place fastening clip around the handlebar – use the six-sided nut and spring m6 to fasten.
   - Additional rubber cylinders or fastening clips can be ordered from Touratech.

5.   Mounting the Housing
   - Remove the 4 screws and take of housing lid.
   - The housing base then needs to be secured to the attachment plate with 4 screws (m4) and 4 nuts (m4).
   - Screw the housing lid back into place and cover the 4 screws with enclosed plastic covers.

6.   Mounting the Universal Wheel Sensor
   6.1   Assembly
   - Assemble the wheel sensor according to the drawing.
   - Don't forget the spring ring.

   6.2   Attaching to Motorcycle.
   - Adhere the magnet as close as possible to the wheel hub. The yellow side must be on the outside and point of contact must be clean and grease-free. We recommend using contact adhesive for rough surfaces.
   - Attach the pre-mounted wheel sensor with the pipe clip (or similar) to the fork.
   - The wheel sensor must point directly to magnet and should be no more than 1 mm from it. – Use the adjusting screw to set the distance to the magnet and set the alignment plate at required height.
   - The connecting lead must be securely attached to the fork leg with a cable clip. Ensure that the cable is laid without tension while the fork leg is extended and the handle is turned.

   6.2.1   If you wish to use your own magnet, make sure the south pole is pointing in the direction of the wheel sensor.

7. Temperature Sensor
   7.1   Assembly
   - The temperature sensor is mounted in place of the **oil drain screw.** The cable should be placed carefully. Place the plug very carefully.
   - The threads of the temperature sensor **must be grounded to the Vehicle.**
   - The temperature sensor can also be built into the **radiator circulator.**
   - For R11XXGS, use oil plug adapter 015-0052 (M16X1.5)

8. The Electrical Connection
    8.1   Attention:
        Before beginning work on your vehicle disconnect the battery!
- The IMO-100 R300 requires direct voltage between 9 and 17 volts!
- Vehicles without a battery must have a rectifier, regulator, and capacitor.
- Touratech offers these as accessories.

    8.2   General Information:
- The IMO-100 R300 requires only two leads to connect to the wiring system - an earthing lead and a 12-volt supply voltage.
- If the motorcycle is not being used, a supply voltage is not required. The built-in battery ensures that the clock continues to work for at least 5 years.
- You can tap individual leads of the motorcycle cable harness with the enclosed cable tap (red "flexible parts"). It is important that no more than 1qmm of the leads are clamped; the external lead diameter of the leads being used should be less than 2.8mm.

    8.3   The Connection Plate: (Diagram only)

    8.4   Connecting to the Wiring System
      8.4.1 **Preparation:** The Leads included in the assembly materials will now be insulated. Afterward, push a conducting terminal housing over the lead and pinch it with flat nosed pliers.

              Next screw the leads into the screw terminals on the IMO's terminal connection block which are also included in the assembly materials. The screw terminals are placed on the stripped ends of the wires, then crushed by the set-screw to become terminal ends.
      8.4.2 **GND:** Provide a clean connection to Vehicle either on the frame or on the battery.
      8.4.3 **+ 12V:** This is dependent on the precautionary voltage in the IMO-100 R300. This lead must be switched over the ignition lock. Generally this refers to "lead 15" on the motorcycle.
      8.4.4 Wheel Sensor
- This is where the 3-pronged screw terminal is plugged into the wheel sensor.
- If for assembly, you must disconnect the screw terminal from the lead, please notice the exact positioning of the leads so they can be reconnected properly. It is crucial that the order of the cables is the same as the diagram; otherwise the sensor may be damaged.

              Green
              White
              Brown

      8.4.5 Remote Control
           Now the 3-prong screw bracket from the remote control is plugged in.
      8.4.6 DZ
           This is the connection for the rev counter. Connect this line with the lead from the ignition, it is usually indicated with a "1 on the ignition coil. It is NOT the switched hot lead (wire 15) , it is the other lead (typically going to the points (or electronic ignition trigger). On the BMW R11xxGS it is the small black wire to the coil. To locate the coil, follow a spark plug wire.
      8.4.7 MT

This is where the screw terminals from the engine temperature sensor is plugged in.
- DZ and MT are connected through a screw bracket

8.4.8 PC
No function (stays inactive)

8.5 How to set the Rev Counter

8.5.1 General:
Because there are several different ignition systems on motorcycles, it is necessary to adapt the rev counter to the voltage. The rev counter adaptation on the connection plate (identified by "R3") prevents the IMO-100R from being damaged by a high interference voltage on the rev counter lead of your motorcycle.

8.5.2 Attention:
FOLLOW THESE DIRECTIONS PRECISELY TO PREVENT ANY DAMAGE TO YOUR VEHICLE!

8.5.3 Setting:
TURN THE POTENTIOMETER ON THE CONNECTION PLATE COUNTERCLOCKWISE AS FAR AS IT WILL GO BEFORE STARTING YOUR MOTORCYCLE!
Leave your motorcycle on and set your IMO-100 R300 on the Basic Function. Leave the motor running and turn the potentiometer carefully to the right (clockwise), until the motor speed on the field "rev counter" on the display is steady. Double check the rev counter for the entire speed range of the motor. (Rev the engine and evaluate does the number make sense, or is it double or 1/2 of realistic RPMs)

8.5.4 No Display?:
If you do not see a display, then you have chosen the incorrect control lead. Reconnect the lead. BEFORE YOU STRAT YOUR MOTORCYCLE AGAIN, TURN THE POTENTIOMETER AGAIN TO THE LEFT (COUNTERCLOCKWISE)! Reset the potentiometer (point 7.5.3)

8.5.5 Gluing into Position:
Glue the potentiometer into the set position using Loctite, Nail polish, instant glue or a similar adhesive.

8.6 Attaching of Connection Plate:
You must attach the connection plate in a protected place, for example under the fuel tank. Damage can occur if water is allowed to reach the PC board.

9 The Remote Control

9.1 Assembly:
The remote is fitted either to the handlebar next to the switch or with the adapter to the mirror. The distance to the handlebar can be determined using the supplied spacers. (In case the rubber grips or switch element obstruct.) Plug the connector into the connection plate of the IMO-100 R300.

9.2 Usage
- Rocker: the + and – key
- Key: The "0" Key

Color of the lines connected to the screw terminal. Green, Red, Blue

10   Trouble-shooting – When something doesn't Work

DESCRIPTION OF ERROR:	CAUSE and FAULT ELIMINATION
Lights function, but the display is inactive	The Potentiometer is set incorrectly: • Please turn until the display is legible (refer to 1.1.3)
The Display is dark	The Potentiometer is set incorrectly: • Turn until the display is legible (refer to 1.1.3)
No speed Display	The distance is too great between wheel sensor and magnet • Decrease the distance by regulating the adjusting screw or adjusting the alignment plate (6.1 and 6.2) • Foreign magnet? The south pole must point to sensor (6.2.1) • Turn the sensor in the alignment plate
Speed is reduced by half while driving or drops entirely to zero	The distance is too great between wheel sensor and magnet • Decrease the distance by regulating the adjusting screw or adjusting the alignment plate (6.1 and 6.2) • Foreign magnet? The south pole must point to sensor (6.2.1) Turn the sensor in the alignment plate
Device displays irregular speeds	Interference in electrical system • Connect earth connection directly too battery • Use screened 5k sparkplugs • Check the ignition electrical system for interference
Rev counter always indicates zero	Rev counter adaptation to your ignition system is incorrect • Adapt rev counter as described in 8.5 with the assistance of the potentiometer on the connection plate.
Rev counter displays irregular values	Rev counter adaptation to your ignition system is incorrect • Adapt rev counter as described in 8.5 with the assistance of the potentiometer on the connection plate. Please turn slowly to the right and do not in any account, keep turning to the right!
Time entry is requested each time you turn on engine	The Lithium Battery is empty • Send electronics in and renew battery
The clock runs slow and loses time	Every time you enter the parameterization and make a change (e.g.) wheel size change), the seconds of the clock are reset to zero. That means you can lose up to 60 seconds with each change.

11.   Entering in the Vehicle Documents

    11.1   General:

    The IMO 100 R300 fulfills all requirements of the EU guidelines 75/443/EU and can therefore be used in the form of a tachometer as a single instrument on motorcycles according to §57 StVZO.

    11.2   Characteristics:

- The IMO 100 R300 is water proof and weather proof
- It has illuminated display
- Even after internal battery is emptied, the date (e.g. wheel size, km) are stored a minimum of 100 years in a non-volatile, semiconductor memory.
- Exact matching is achieved by entering wheel size (in mm).
- To compensate for tolerances in the tires, the speed display has a lead of 3%.
- The IMO-100 R300 operates up to a speed of at last 500 km/hour
- The wheel sensor operates wear free will a Hall-C effect.

    11.3   TUV

    At delivery, the IMO is TUV approved.

    Touratech Motorcycle Accessories
    Herbert Schwarz and Jochen Schanz
    PO Box 1082
    D-78074 Niederschach

    F.R. Germany

    Tel: +49 (0) 77 28 / 92 79 - 0
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12.	EU-
	Name of Manufacturer	Touratech AG

	Address	Touratech AG
		Motorcycle Accessories
		PO Box 1082
		D-78074 Niederschach

	Details for the aforementioned product:

	Product Name:	Rally Computer / Complete Instrument

	Model	IMO-100 R / IMO-100 R+ / IMO-100 R300

	Constructed by	All

	If the rules and regulations are explained to the general public.

	Safety	EN 60950
		Classification III after VDE 0805

	EMC	EN 50081-1
		EN 50081-2
		EN 50082-1
		EN 5008-2

	This product fulfills all requirements of the Low Voltage Directive 73/23/EEC and the
	EMC Directive 89/336/EEC.

					Dauchingen, 19.December 1995

13. Accessories:
- Road Book Holder
    - Manual
    - Electrical
- Road Book Lighting
- Attachment plate to secure IMO-100 R300 to Road Book holder
- Additional rubber parts for attachment
- Additional large and small attachment clips
- Wheel sensor holder for upside down fork (white power)
- Rectifier – regulator – capacitor unit (see point 3.1, e.g. DR350 Sport)
- Remote Control
- Amp Uniformity Control

14. Further Products from Touratech:
- Akku-Lamp Chala 12 HD
- Aluminum Touring box Zega 41 with 36 and 41 Liter capacity
- Special holder for Aluminum box (universal attachment set)
- Road Book Editor (software for the PC)
- Special handlebar attachment for GPS Garmin 75/55/50
- Quick lock for fuel line
- Diverse bags for replacement hoses, etc.
- Map bag
- Foot rest BMW R100GS
- Pre-build for the rebuild BMW R100 GS to disguise the original instrumentation and controls

Upon request, we would be delighted to send you an additional information on any of our products.

15.   Notes

16.   Technical Data (Specifications)

Dimensions	120mm x 80mm x 34mm
Weight	Approximately 350g (without holder)
Protective System	IP 65 (waterproof)
Operating Voltage	9-15 volts
Current Consumption (ignition off)	0
Current Consumption (ignition on)	150 mA
Service Life of Clock	Approximately 5 years (per battery)
Deviation in Time	+/- 2 seconds / day (only recognized every 10 seconds)
Display	LCD graphics display
Illumination of Display and Keys	Green LED lighting
Deviation of battery life display	+/- 2%
Battery life display	7 – 20 volts
Deviation of Outside Thermometer	+/- 2° C
Deviation of Oil Thermometer	+/- 3° C
Outside Temperature Range	-40°C to + 80° C
Temperature Gauge Range Capabilities	-40°C to + 160° C
Maximum Speed	500 km/hour

Various speeds and distances covered and deviations from these values depends on the size of wheel that has been set.

Subject to technical alterations in the course of progress.