

# DIGITAL RPM INDICATOR

# BUTTONS

The instrument is equipped with four buttons which are required for its proper functionality (Fig. 2). In their released positions, the buttons' functions (Up, Down Mode and Ctrl) are intended as OFF (N.A.).

The buttons' functionalities are inhibited when the message "SPEED MAX" is shown on the display.



# FUNCTIONAL CHARACTERISTICS

Basic functions

These are the functions which can always be displayed and cannot be de-selected from the Setup Menu; they also represent the output configuration with which every instrument produced by MAE is programmed. The basic functions include the following:

- Current speed (SPEED); this data is always visible, regardless of whether the vehicle is stationary or in movement. The default configuration uses Km/h as the unit of measure.
- Total distance travelled (ODO); this data can only be displayed by pressing the mode button, regardless of whether the vehicle is stationary or in movement. The default configuration uses Km as the unit of measure.
- Total vehicle operating time measured in hours (H); this data can only be displayed by pressing the mode button, regardless of whether the vehicle is stationary or in movement.

Current speed function (SPEED)

This data is always displayed on the right hand portion of the screen, along with the "SPEED" function indicator and the selected unit of measure. The unit of measure (km/h or mph) is indicated with the appropriate symbol and can be modified using the methodology described farther ahead in this manual (see Setup Menu). If the vehicle's speed exceeds 110 km/h for more than 20 consecutive seconds, the screen shown in the figure will be shown flashing on the display. At the same time, the backlighting will also turn on and off intermittently.

This signal will remain on the screen until the vehicle's speed goes below 110 km/h for at least 10 consecutive seconds. Note: while the alarm and message is being displayed, the buttons' functionalities will be inhibited.

## Odometer Function (ODO)

The data is displayed on the left hand portion of the screen, along with the "ODO" function indicator. The total distance travelled by the vehicle is always calculated in km. Nevertheless, the relative value can be displayed in either km or miles (see the section regarding the Setup Menu).

### H Function

This function describes the correct functionality/display of the H function. This function indicates the vehicle's total operating time in hours and can be displayed by pressing the mode button. When selected, this data is always displayed on the left hand portion of the screen. The data cannot be reset under the instrument's normal operating conditions. The data is displayed with a precision of 0.1 hours. In addition to the basic functions, the user can also access the Setup Menu to enable others.



## Current time function (CLK)

This function describes the correct functionality/display of the current time function. When selected, this function is always expressed in the format "hh:mm:ss".



The time can be adjusted while the vehicle is stationary by holding down the Mode button (while the CLK function is being displayed) until the screen illustrated in the figure appears on the display. Use the Mode button to sequentially select the hours, minutes, seconds and display mode (the data will be displayed flashing); at this point the data selected using the Mode button can be adjusted by pressing the Up and Down buttons. When finished adjusting the time settings, hold down the Mode button to return to normal operating mode.

Automatic trip function (TR1)

The displayed data represents the partial distance travelled by the vehicle; based on the selected configuration, the data is expressed in either km or miles (see the indications provided in the section regarding the Setup Menu). The counter associated with this parameter can be reset by holding down the Mode button (while the TR1 function is being displayed) until the value on the screen is set to 000.0 (see the section of this Manual entitled Button Functions). The TR1 parameter can be reset both while the vehicle is stationary, as well as while it is in movement. The value of TR1 is NOT saved to the permanent memory.



Automatic timer function (S1)

When selected, the data is displayed as shown in the figure, along with the "S1" function indicator.

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This data represents the vehicle's actual travel time, in the format "hh:mm:ss", associated with the parameters "A1" and "TR1"; it is therefore an automatic counter; the timer function starts automatically with the first impulse received from the speed sensor (the colons which separate the hours, minutes and seconds will be displayed flashing while TR1 is enabled and will be displayed fixed while TR1 is not enabled) and stops automatically after receiving the last impulse from the speed sensor. The counter associated with this parameter can be reset by holding down the Mode button (while the S1 function is being displayed) until the value on the screen is set to 00:00:00. The value of S1 is NOT saved to the permanent memory



Automatic average speed function (A1)

This function describes the correct functionality/display of the average speed associated with TR1 and S1. When selected, the data is displayed as shown in Fig.11, along with the "A1" function indicator. The data represents the average speed maintained by the vehicle (expressed in km/h or mph based on the selected unit of measure), calculated as the ratio between the distance travelled (represented by TR1) and the time in which the distance has been covered (represented by S1). The average speed is recalculated every 0.1 km (or 0.1 miles based on the selected unit of measure) travel by the vehicle. The counter associated with this parameter can be reset by holding down the Mode button (while the A1 function is being displayed) until the value on the screen is set to 0.0 (see the section of this Manual entitled Button Functions).

The resetting of the A1 parameter can be performed both while the vehicle is stationary as well as while it is in movement and also causes the TR1 and S1 parameters to be reset. If the data to be displayed exceeds the value of 512, the character – – – will be displayed. The value of A1 is NOT saved to the permanent memory.



Manual timer function (LAP)

This function describes the correct functionality/display of the manual LAP timer function. When selected, the data is displayed as shown in the figure, along with the "LAP" function indicator. Once displayed (in the format "hh:mm:ss"), the timer can be activated by pressing the Up button. Press the same button once again to stop the timer. The Start/Stop procedure can be performed both while the vehicle is stationary, as well as while it is in movement.



The activation of the LAP function is nevertheless signalled to the user by means of flashing colons between the displayed hours, minutes and seconds, if the LAP function is being displayed, otherwise the "LAP" function indicator will be displayed flashing; if the timer is in start mode, up to 10 partial times can be saved to a temporary memory (for subsequent review) by simply pressing the Down button; the displayed value will be reset, indicating to the user that the displayed LAP value has been saved to the temporary memory. Once 10 partial times (maximum) have been saved, pressing the Down button will not produce any effect. The counter associated with this parameter can be reset (without saving any data to memory) by holding down the Mode button (while the LAP function is being displayed) until the value on the screen is set to 00:00:00. The resetting of the LAP parameter can be performed both in Start mode as well as in Stop mode and will cause all of the previously saved partial times to be deleted.



Function TR2

This function describes the correct functionality/display of the TR2 on board odometer. When selected, the data is displayed as shown in the figure; the displayed value represents the distance travelled by the vehicle. In contrast to TR1, the value of TR2 can be modified manually using the button panel; in particular, the TR2 value can be increased by pressing the Up button and decreased by pressing the Down button. The counter associated with this parameter can be reset by holding down the Mode button for about 1 sec. (while the TR2 function is being displayed). The value of TR2 is NOT saved to the permanent memory.



## Manual timer function (S2)

This function describes the correct functionality/display of the manual timer function associated with S2. When selected, the data is displayed as shown in the Figure 15, along with the "S2" function indicator. This data represents the vehicle's travel time, in the format "hh:mm:ss"; in contrast to S1, this is a Manual counter: the timer can be started by pressing the Up button (the colons between the hours, minutes and seconds are flashing when S2 is in function and are fixed while S2 is not in function) and stopped by pressing the same button once again. The resetting of the S2 parameter can be performed both while the vehicle is stationary as well as



while it is in movement and will not cause the TR2 parameter to be reset. The value of S2 is NOT saved to the permanent memory.



### Average speed function A2

This function describes the correct functionality/display of the average speed associated with TR2 and S2. When selected, the data is displayed as shown in the figure, along with the "A2" function indicator. The data represents the average speed maintained by the vehicle (expressed in km/h or mph based on the selected unit of measure), calculated as the ratio between the distance travelled (represented by TR2) and the time in which the distance has been covered (represented by S2). If the data to be displayed exceeds the value of 512, the character – – – will be displayed. The value of A2 is NOT saved to the permanent memory.



### Maximum Speed Function (MAX)

This function describes the correct functionality/display of the maximum speed function. When selected, the data is displayed as shown in the figure, along with the "MAX" function indicator. The parameter identifies the maximum speed reached by the vehicle, expressed in km/h or mph based on the selected unit of measure. The counter associated with this parameter can be reset by holding down the Mode button (while the MAX function is being displayed) until the value on the screen is set to 0.0. The MAX parameter can be reset both while the vehicle is stationary, as well as while it is in movement.



### Setup Menu

From the Setup Menu, the user can select the desired functions and disable any functions which are not required; the setup menu can be accessed, exclusively while the vehicle is stationary, by holding down the Mode button (while the H function is being displayed) until the screen shown in the figure appears on the display (this screen shot illustrates the case in which the only displayed functions are ODO and H); the fixed indicators shown on the screen represent the functions which are currently enabled (with the exclusion of km/h and mph, which serve to change the unit of measure, and the WS indicator, which serves to modify the wheel circumference), while the flashing indicator represents the function which can be enabled or disabled by pressing the Up or Down buttons respectively; press the Mode button to select all of the available functions sequentially. When finished, press the Mode button for about 3 seconds to return to standard operating mode; after each procedure, the selected functions will be saved to the permanent memory.



Modifying the wheel circumference (WS)

Wheel circumference modification is always possible on the preconfigured models: Enduro and Motrad, as shown in the figure. From the setup menu, use the Mode



button to select the WS function indicator (once selected, the WS function indicator will be shown flashing); at this point, press the Up button to display the screen shown in Fig. 20 (or in Fig. 21, based on the saved model), which displays the actual wheel circumference (expressed in mm); use the Up and Down buttons to modify the displayed model; when finished, press the Mode button again to exit the WS screen and return to the Setup Menu. The selected circumference value is saved to the permanent memory.

Modifying the unit of measure (from Mph to Km/h or vice versa)

The unit of measure can be modified at any time and does not depend on the values of the ODO or H parameters. From the Setup Menu, use the Mode button to select the Km/h and Mph function indicators (once selected, they will be displayed flashing). Press the Up button to display the screen shown in Fig. 22, which displays the actual unit of measure; use the Up button (to select Km/h) or Down button (to select Mph) to modify the displayed value. When finished, press the Mode button again to return to the Setup Menu. The selected value is saved to the permanent memory. Changing the unit of measure will cause the current TR1/A1/S1/TR2/ A2/MAX values to be permanently deleted.

## Modifying the Total Distance Travelled

The counter associated with the total distance travelled can only be modified when the initial ODO value is null (or rather 00000). From the setup menu, use the Mode button to select the ODO function indicator. Press the Up button to display the screen shown in the figure, in which the only data shown is the total distance travelled; use the Up and Down buttons to modify the displayed value, based on the same logic already described for TR2: Pressing the Up or Down buttons will cause the immediate modification of the ODO value. Each time the Up or Down buttons are pressed, the ODO value will either increase or decrease, based on the button which has been pressed.



# Adjusting the backlight colour

The colour of the display's backlighting can be modified by holding down the Ctrl button until the screen illustrated in the Fig. 24 appears on the display. Use the Up and Down buttons to move the vertical bar indicator to the left (which corresponds to yellow backlighting) or else to the right (which corresponds to red backlighting); all of the intermediate colour tones are also available. When finished, press the Ctrl button for about 3 seconds to return to standard operating mode; the selected colour tonality will be saved to the non-permanent memory.



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