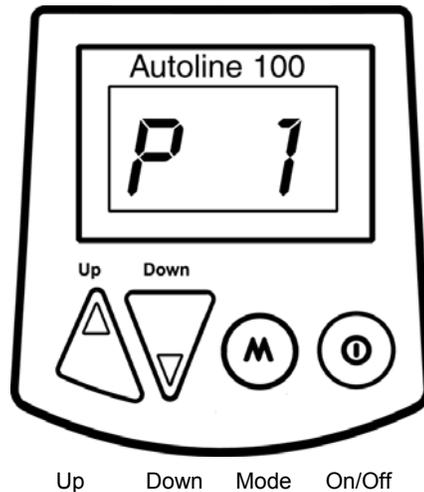## Autoline Measure Operating Instructions

Features
Quick, easy line measuring
Continuous speed readout
Automatic calibration
Measurement in metres
Measures at up to 100 km per hour
Stores Up to 70 operator allocated line patterns

Up   Down   Mode   On/Off

Specifications

Minimum Speed Threshold	0.2km per hour
Line Measurement	Metres
System Accuracy (Dependent on the encoder and system calibration)	Within 0.5% for modules greater than 1 metre in length.
Power Supply	+12/24 VDC
Maximum Supply Voltage	+30 VDC
Typical Supply Current Consumption:	40mA
Operating Temperature Range	-5°C to +60°C

Default Settings
Encoder Calibration Factor: 200 pulses/metre
Minimum Speed Threshold: 0.5 km/hour
Minimum Encoder Calibration: 12 pulses/metre
Maximum Encoder Calibration: 600 pulses/metre

Calibration
The Autoline Measure must be calibrated to the encoder on the vehicle.   Calibration can be done manually or automatically. Follow the instructions below to calibrate the Autoline.

Manual Calibration (nCAL)
1   Turn the Autoline off.
2   While holding down the Mode (M) button, press and release the On/Off button. The unit will flash between the normal calibration (nCAL) and the calibration value entered (default value 200 pulses/metre).
3   Use the Up/Down button to manually change the calibration value.
4   Save the setting by holding down the Mode (M) button until PROG appears. Release the Mode button and the Autoline will turn itself off. It is now ready for use.

Auto Calibration (ACAL)
1   Measure and mark out a 50 metre line.

2   Position the vehicle approximately 1 metre behind the start line and select a reference point on the vehicle to start/stop the calibration.
3   Turn the Autoline off.
4   While holding down the Mode (M) button, press and release the On/Off button. The unit will flash between the normal calibration (**nCAL**) and the calibration value entered (default value 200 pulses/metre).
5   Press the Mode (M) button once again. The unit will flash between **ACAL** and the calibration value entered.
6   Start driving. Immediately the reference point is on the starting line, press the trigger. The display will now show **rEdn**.
7   Drive the measured distance. Release the trigger when the vehicle reference point is on the finish line.
8   As soon as the trigger is released, the Autoline will calculate and display the new calibration value for the measured distance.
9   Save the setting by holding down the Mode (M) button until **PROG** appears. Release the Mode button and the Autoline will turn itself off. It is now ready for use.

Note: If the calibration value is below the minimum value (60 pulses/metre) or above the maximum (512 pulses/metre) an auto-calibration error message will be displayed (**E AC**).
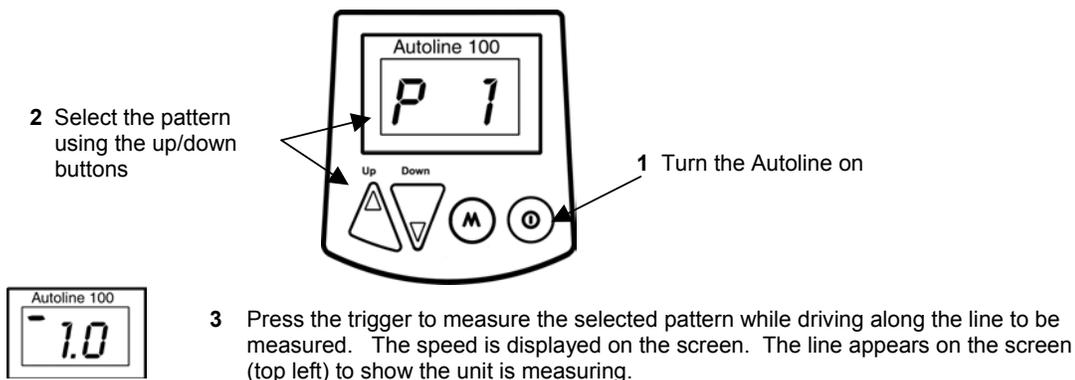
Aborting Calibration
Hold down the On/Off button until **Abrt** is displayed. Then release the On/Off button. The unit will now be
off.
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Measuring

Speed Threshold: Do not attempt to measure when travelling below the speed threshold (0.2 km.hour). If the unit is turned on and the speed is below the threshold (0.2km/hour) the display shows the last selected pattern eg **P 1**. As soon as the speed moves above the threshold, the display shows the speed.

During measuring if the speed goes below the threshold, all measuring stops, the speed error message is displayed: **SPEr** and, if the trigger is activated, the Autoline beeps every 3 seconds until the trigger is released.

2 Select the pattern using the up/down buttons

1 Turn the Autoline on

3   Press the trigger to measure the selected pattern while driving along the line to be measured.   The speed is displayed on the screen. The line appears on the screen (top left) to show the unit is measuring.

4 To stop measuring release the trigger

To Select a Different Pattern
Ensure the trigger is not activated. Then use the up/down buttons to select another pattern.

Viewing the Logged Distance Painted for Each Pattern (Displayed in kilometres eg **0.050** = 50 metres)
When the trigger is activated use the Mode (M) button to toggle between the speed and the distance measured.

When the trigger is not activated the screen will continue to display whatever was last selected ie speed or distance (or if the vehicle is moving below 0.2 km/hour - the pattern number). If it is displaying speed or the pattern number press the Mode (M) button once to display the logged value of the selected pattern.

To clear the value displayed. Hold down the On/Off button until **CLR** is displayed on the screen. This will clear the logged value to zero (0). The unit will beep rapidly until **CLR** appears.

Shut Down the Autoline
Press the On/Off button at any time to turn off the Autoline. All painting will stop and if the trigger is deactivated, the unit will shutdown. If the trigger is still active, the trigger error message will be displayed (**Trig**) and the warning beep will sound every 3 seconds until the trigger is released.

Trigger Active Warning: If the On/Off button is pressed when the trigger is active, a trigger error message is displayed (**Trig**) and a warning beep sounds every 3 seconds until the trigger is released.

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System Accuracy
For modules greater that 1 metre in length the Autoline is accurate to within 0.5%. Accuracy of the system is dependent on the encoder and the system calibration.

Load Factory Default Settings
Turn the Autoline off
Press the Up, Mode and On/Off buttons at the same time. Release all the buttons when the LCD display shows **Load Fact Def**. The settings will reload and the unit will turn itself off.