Turnkey Instruments Ltd

Agricultural BrakeSafe

Quick Reference Guide



Brake testing should be carried out on level ground, the deceleration will be lower if tests are done on a down slope, higher on an up slope.

Always choose a safe and designated test area.

Positioning: Position the **BrakeSafe** in the vehicle, preferably against a bulkhead, so that it cannot slide forward under hard braking. The instrument should be positioned with the arrows on its lid pointing forward. It should be as near parallel with the ground as possible.

As required, plug either the Pedal Force Transducer (PFT) or Hydraulic/Air Switching Unit (HSU) into the DIN socket on the side of its case.

Switching ON: Press and release **[RESET]**, and wait for the display to show the time and either **"Tractor Testing"** or **"Trailer Testing"**. Use **[↑]** or **[↓]** to switch between these two testing modes.

Brake Testing: press **[RESET]** at any time to end the testing procedure.

1. Press **[A]** to arm for a set of brake tests, the display shows the next test number. Press **[ENTER]** to confirm. It then displays **"Tractor ID"**, use **[↑]** or **[↓]** to select from the set of pre-loaded names; then press and hold **[ENTER]** for 2 beeps. In the *Trailer Testing* mode, repeat to select the **"Trailer ID"**. See below if you need to change any of the pre-loaded names.

2. For *Trailer Testing* (but only if the *Mass Ratio Calculation* has been enabled), you will also be prompted to enter the effective axle weights of the tractor and trailer. Use **[↑]** or **[↓]** adjust each digit, then **[ENTER]**, finally press and hold **[ENTER]** for 2 beeps.

3. The display then shows ***"Get SLOPE offset"***, press **[ENTER]** while the vehicle is stationary at a position representative of the gradient of the test course, it displays **"Please Wait"** while the reference level is set.

4. For *Tractor Testing*, select the type of brake you are testing; the choices are service, secondary, or parking brakes. Use the **[↑]** or **[↓]** buttons to select, then press **[ENTER]**. The name you select will appear on the test printout. Alternatively, you can choose for no name to appear.
5. Finally, move to the start of the test course. Check the course is safe and press ***"[ENTER] Before Accelerating"***. If test course gradient is constant, you could ***"Get SLOPE offset"*** here too.
6. The display shows ***ARMED for Test*** and the incremental speed increase. Accelerate at a constant rate to the safe test speed, and then carry out an emergency stop procedure.
7. Once stopped, hold the vehicle on the brake until the result appears on the display. For *Trailer Testing*, you will be prompted to measure the slope again by pressing the **[S]** button, do this after the suspension stops bouncing.
8. Press **[PRINT]** to immediately print-out the results.
9. Press **[A]** to re-arm for another test on the same vehicle (from step 4), or press **[RESET]** to finish.

Switching OFF: The instrument will switch itself off automatically.

Printing stored tests: press **[PRINT]** and then use the **[↑]** or **[↓]** buttons to select the test number, then press **[ENTER]**; alternatively press **[A]** to print all saved tests.

Measuring Slope: press **[S]** to measure slope, **[RESET]** to finish.

Editing Mode: press **[ENTER]** for the *Editing Mode*. Although these are normally downloaded, you can edit preset IDs by using the **[↑]** or **[↓]** buttons to select, then **[ENTER]**. Then use **[↑]** or **[↓]** again to change a character, **[ENTER]** to move to next character and so on. Press **[A]** to start again, **[S]** to set to all dashes, **[S]** again to set to spaces. Press and hold **[ENTER]** to save.

Erasing Tests: from the *Editing Mode*, use **[↑]** or **[↓]** to select ***'Clear my Memory'*** then press **[ENTER]**. You will be prompted to confirm, or press **[RESET]** to abandon. You can also over-write single test(s) my using **[↓]** to change the test number after pressing **[A]** to arm.

Configuration: this requires a password. Please refer to Operating Instructions.

Display Contrast Adjustment: hold **[RESET]** when first switching on.

Please refer to the **BrakeSafe Operating Instructions** for more detailed information about using this instrument.

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