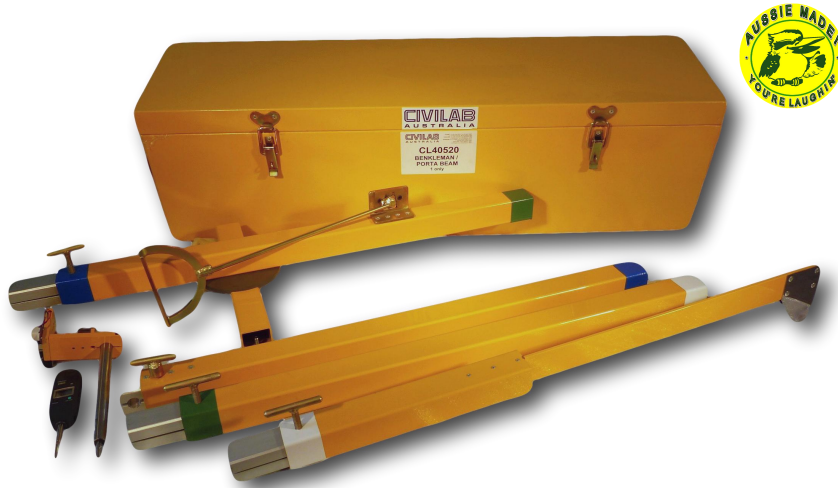


**CIVILAB CL40920 BENKELMAN BEAM DEVICE.  
FOR DETERMINATION OF STRENGTH OF NON-RIDGID PAVEMENTS**



The CIVILAB CL40920 Benkelman beam device is commercially known as the “Port-A-Beam” and is derived from a simple device developed during the 1980’s by the NSW Department of Main Roads. (The LEO Beam).

Features of the “Port-a- Beam” are its low cost, collapsibility, light weight and portability.

As a development of the Beam testing procedure CIVILAB have also developed a Data collection system that automatically logs the beam test in the field and records the deflection results. Utilizing a purpose built dual channel interface it has the ability to log left or right wheel paths individually or simultaneously.

The Port a Beam comes in a sturdy metal carry case and the recording mechanism is packed in its own padded metal attaché case.

The recording mechanism slips easily into the end of the beam and can be quickly removed when moving to subsequent sites to avoid damage. (FIG 1)



FIG 1

# ASPHALT 3



FIG 2

The Port-a-Beam is fitted with an ergonomic carry handle to limit bending for the operator and is shown here loaded onto the Data collection trolley ready for transport to the next measurement site.

The trolley is fitted with a battery and charger to power the lap top and a strobe light (not shown here). It is fitted with three pneumatic tyres for easy perambulation over rough ground and automatic brake for stabilization when at rest. Two beams of any design can be carried simultaneously. (FIG 2)



FIG 3

Once connected to a lap top computer the beam is ready to start a test. The measuring wheel is connected to the truck and as it slowly moves away, the test begins and zeros the digital indicators' readings. Measurements are taken typically at 0.2m, 0.3m, 0.6m, 0.9m, 2.7m and 9.0m but can be varied depending on the test requirements. (FIG 3)

The results are logged into the bottom of a display window providing live display of distance traveled and test being Performed. (FIG 4)

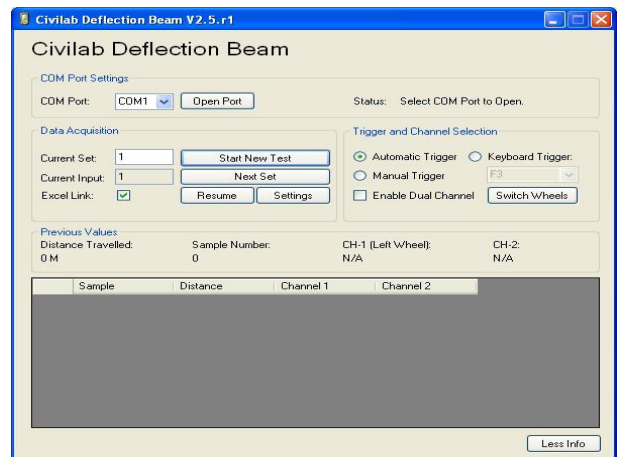


FIG 4

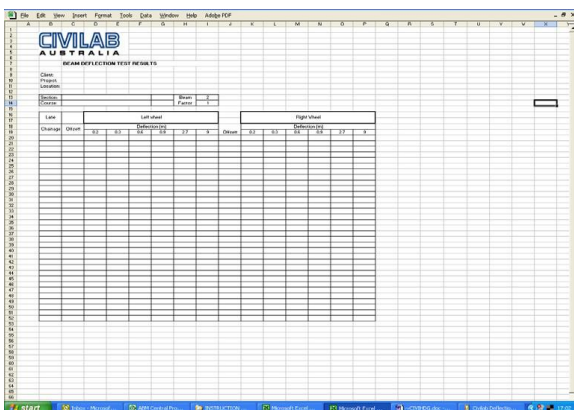


FIG 5

Results are also logged into right and left wheel passes automatically in an Excel spreadsheet template. Formulas are entered into the spreadsheet to automatically generate test reports. (FIG 5)