



The Military Engineering Heritage Company

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“Does this measure up?”

Ground Elevation Meter (G.E.M.)

The GEM is built up on an USA GMC 305 Cubic inch (5 Ltr) V6 ‘Suburban’ light truck of 1964 vintage. The unit was operated by the Survey Corps and part of its uniqueness is that as well as being 4 wheel drive it was also 4 wheel steer. This was accomplished by replacing the rear axle with a second front axle and connecting the steering mechanisms together. The tyre pressure was maintained constant from inside the vehicle on both the drive wheels and the small distance measuring ‘5th’ wheel located under the drivers door. Note the air conditioning unit under the dash.



The unit was designed to measure elevation from a known point. It did the work of basic surveying with theodolite and staff but with the advantage of being able to traverse and record up to 100 miles (160km) per day. The basic ‘computer’ on board recorded distance and inclination which was printed out on paper tape which the map makers could use along with aerial images to manufacture very accurate maps. Below shows the inside of the GEM with its electronic equipment and ‘computer’.

(If you have or know anybody with images of this little GEM in service can we please obtain a copy!)



Thanks to our MLO (Phil Hurren) for submitting the information and images for this newsletter.

“Preservation of our heritage”

010 Survey Vehicle - GEM 230807