



PLANE TABLE SURVEY: AN INTRODUCTION

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What is Plane Table Survey?

Plane table surveying is a graphical method of surveying. It is based on triangulation done geographically. It is one of the simpler methods of surveying.

Equipments used in Plane Tabling:

- Plane Table
- Tripod
- Alidade
- Trough Compass
- Spirit Level
- Ranging Rods
- U-Fork with Plumb Bob
- Chain or Tape
- Drawing Paper
- Water Proof Cover
- Thumb Pins
- Other Drawing Accesories

Equipments:

Plane Table

It is a drawing board fitted to a tripod. It can be rotated freely and fixed in any desired horizontal position.

Plane Table

Plane Table



Equipments:

Tripod

The tripod is generally of open frame type, combined rigidity with lightness. The tripod may be made to fold for convenience of transportation. The plane table is mounted on a tripod. IT is provided with three foot screws at its top for leveling of the plane table.

Tripod

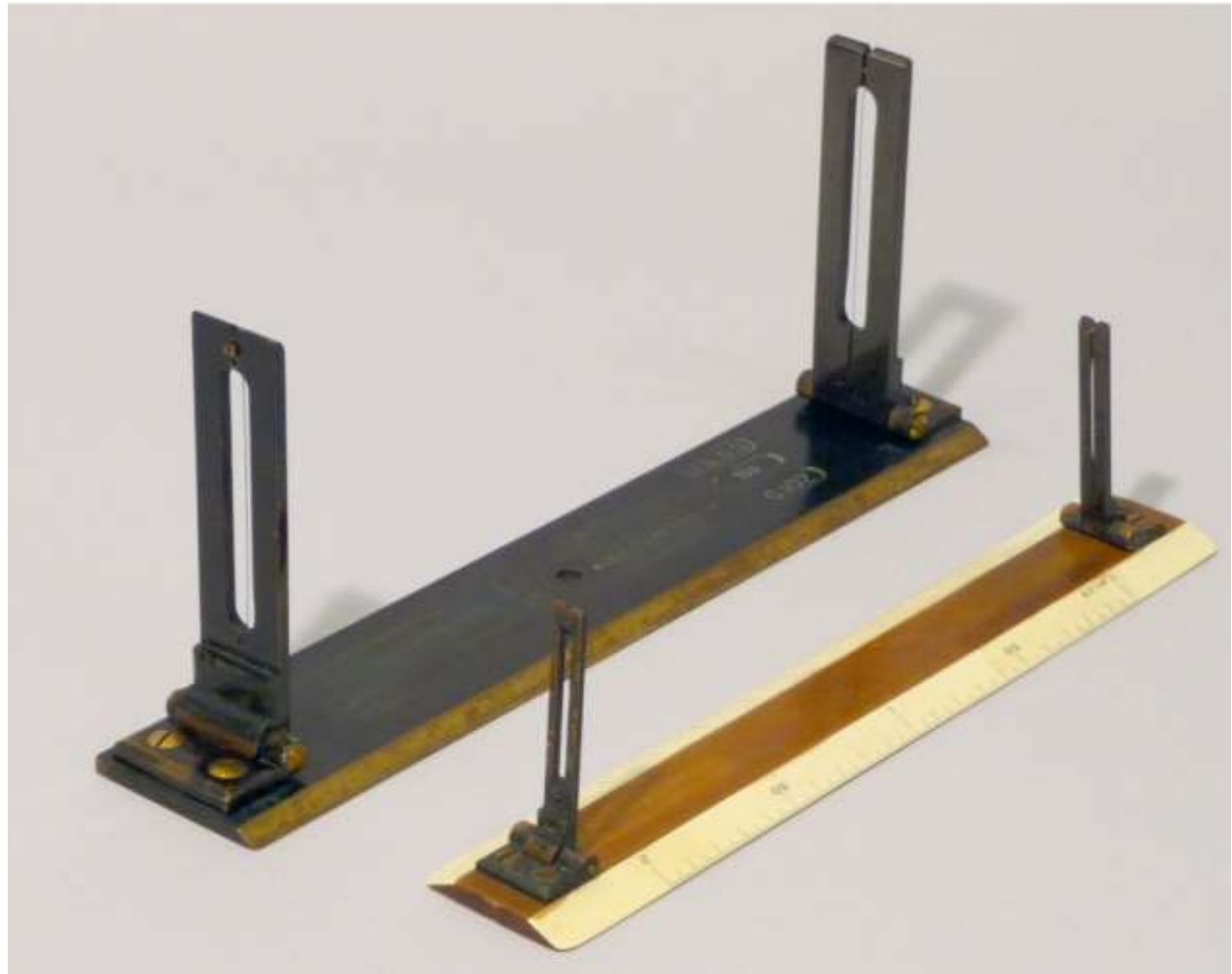


Equipments:

Alidade

The alidade is a ruler with parallel edges. It is generally consists of a metal or wooden rule with two vertical vanes at the ends. The eye vane is priveded with a narrow slit while the object vane is open and carries a horse hair.

Alidade





Equipments:

Trough Compass

A trough compass is a rectangular compass used to determine the magnetic north.

Trough Compass



Equipments:

Spirit Level

it is used to set the table in a horizontal position. There is an air bubble in the level. If the table is fixed horizontally, the bubble rests in the centre.

Spirit Level



Equipments:

Ranging Rods

These are needed for marking the stations or objects to be included in the survey.

Ranging Rods



Equipments:

U-Fork with Plumb Bob

U-Fork with plumb bob is used for centering the table over the point or station occupied by the plane table when the plotted position of that point is already on the sheet.

It is also used in the beginning of the work for transferring the ground point on the sheet.

U-Fork with Plumb Bob





Equipments:

Chain or Tape

A chain or tape is used to measure the base line.

Measuring Tape





Equipments:

Drawing Paper

Drawing paper is used for plotting the ground details.

Drawing Paper



Equipments:

Water proof Cover

An umbrella is used to protect the drawing paper from rain

Water proof Cover



Equipments:

Thumb Pins

Thumb pins are used for fixing the drawing paper to the table.

Thumb Pins



Equipments:

Other Drawing Accessories

Pencil, scale, eraser, pen etc. are also used in the plane table survey

Merits of Plane Table Survey:

- It is most suitable for preparing small-scale maps.
- It is most rapid.
- The field book is not necessary as plotting is done in the field concurrently with the field work, and hence the mistakes in booking the field notes are avoided.
- The surveyor can compare the plotted work with the actual features of the area surveyed and thus can ascertain if it represents them properly.
- It is particularly advantageous in magnetic areas where compass survey is not possible.
- It is less costly than a theodolite survey.
- No great skill is required to prepare a satisfactory map.

Demerits of Plane Table Survey:

- It is not suitable for work in a wet climate.
- It is heavy, cumbersome and awkward to carry.
- There are several accessories to be carried, and therefore, they are likely to be lost.
- It is not intended for accurate work.
- If the survey is to be replotted to a different scale or quantities are to be computed. It is great inconvenience in absence of the field notes.



THANK YOU