

# AERIAL SURVEY INTERPRETATION

Aerial photography belongs to the field of Remote Sensing. Remote Sensing is the science of obtaining information about an object, phenomenon or area, by analysing data that were obtained via an instrument. This instrument has no direct contact with the object, phenomenon or area that is subject of the attention.

The most important advantages of aerial photography over observation in the field are:

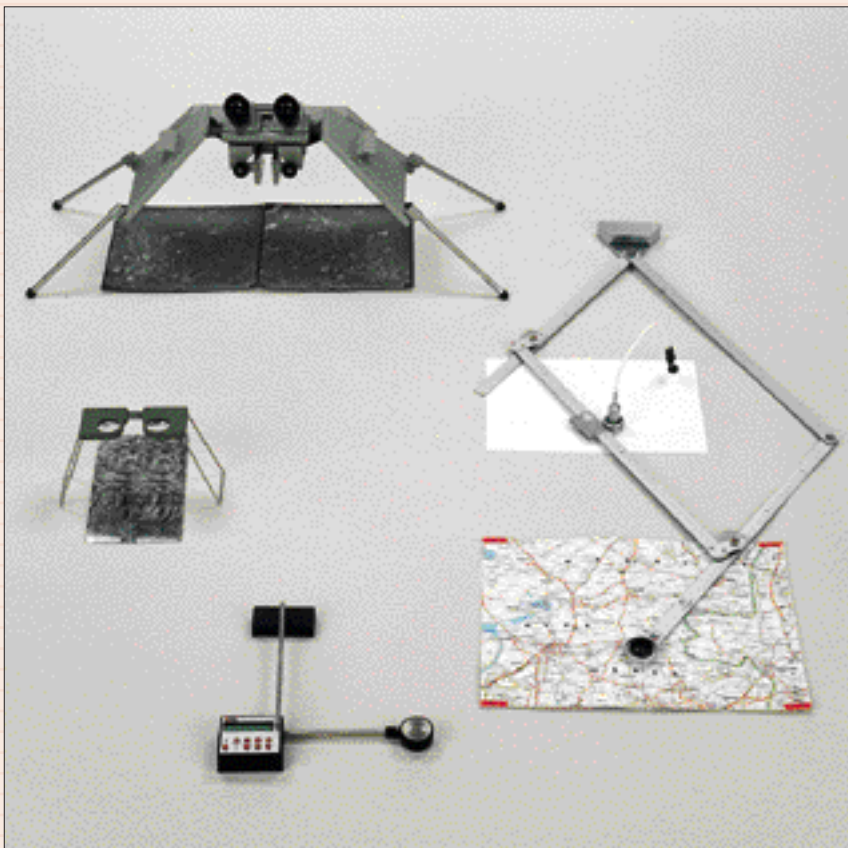
- ❑ The advantageous position for observation. High in the air a survey of the situation is obtained and the objects can be seen in their environmental orientation. Aerial photographs show all aspects and phenomena of the earth surface (can be interpreted by the different disciplines for different purposes).
- ❑ The aerial photograph can be produced in sequences with brief intervals (in case of maps these periods are much longer, approximately 10 years).

- ❑ The camera is more sensitive to light waves than the human eye (the spectral range of films is almost twice that of the human eye).

For all forms of aerial survey the field work remains necessary. Interpretation of aerial photography is, among other fields, applied in:

- ❑ The production of topographic- and thematic maps.
- ❑ Deriving cadastral data.
- ❑ City-planning.
- ❑ Making-up an inventory for forestry.
- ❑ Geological- or soil research or research of the vegetation.
- ❑ Geographical- and geomorphological research.

Aerial photographs contain rough material concerning the objects that were photographed. This material will only gain any importance after interpretation.

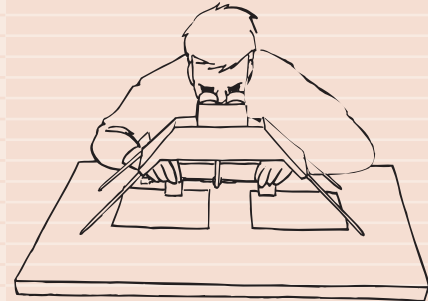


Instruments for aerial survey interpretation



P5.20  
Parts List  
Pg 419-420

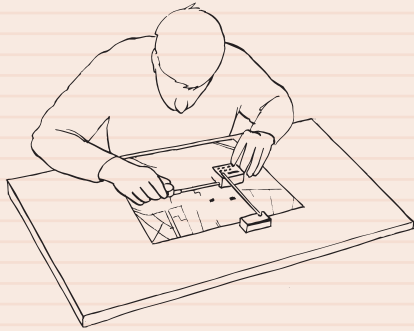
Using the mirror stereoscope aerial photographs are interpreted.



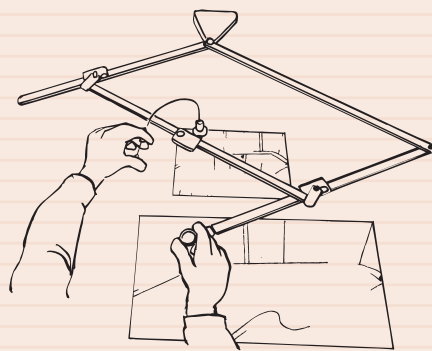
Interpretation of aerial photographs in the field using a pocket stereoscope.



**The planimeter is used to measure the surface of a certain area.**



**The map is enlarged using the pantograph.**



## AERIAL SURVEY INTERPRETATION

In a first phase the aerial photographs may be interpreted qualitatively (the identification of objects and/or phenomena).

### 17.43 Mirror stereoscope

The qualitative interpretation of stereoscopic aerial photographs is executed applying the mirror stereoscope with an observable surface of 180 x 240 mm (enlargement 1x).

The completely equipped mirror stereoscope comes in a carrying case.

### 17.42 Pocket stereoscope

The fold-up pocket stereoscope with an observable surface of 50 x 50 mm (enlargement 2x) can be used for interpretation of aerial photographs in the field.

The qualitative interpretation is followed by a quantitative interpretation.

Linear- (roads, channels, etc.) and two-dimensional- (objects with a surface) phenomena are measured.

### 17.44 Digital planimeter

Surfaces are measured using a planimeter.

In this procedure a moveable arm of the planimeter is guided along the circumference of the area.

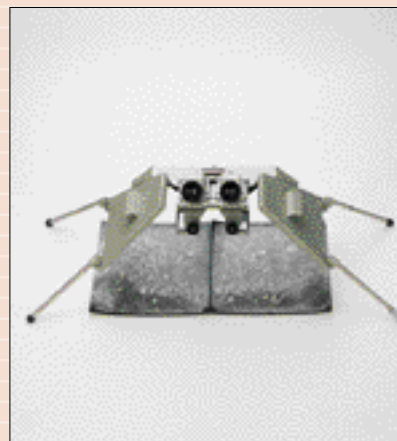
By previously setting the scalefactor it is possible to read the surface directly from the display. The planimeter is supplied including charging equipment.

The processing of interpretation-data is often realized in the form of a cartographic display. The maps produced in this way usually have the same scale as the aerial photographs.

### 17.41 Pantograph

Accurate transfer, enlargement or reduction of maps, drawings, etc. can be done using a pantograph.

The pantograph is quick and accurate in use and pivots easily and absolutely proportional in all directions.



Mirror stereoscope



Digital planimeter



Pocket stereoscope



Pantograph