

**G06G****ANALOGUE COMPUTERS (analogue optical computing devices [G06E 3/00](#))****References****Limiting references***This place does not cover:*

Analogue optical computing devices	<a href="#">G06E 3/00</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Computing arrangements based on specific computational models	<a href="#">G06N</a>
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**G06G 1/00****Hand-manipulated computing devices****Definition statement***This place covers:*

Hand operated, mainly portable, mechanical devices using movable scales (linear or circular) for computing an analogue outcome as a result of the mechanical setting of the input scales.

These are very simple mechanical devices for solving specific problems involving the resolving of one or a limited number of mathematical equations by moving mechanically one scale relative to another scale and reading out the result on another scale. It does not involve electricity nor electronics.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring arrangements characterised by the use of mechanical techniques for measuring areas, e.g. planimeters	<a href="#">G01B 5/26</a>
Digital mechanical computers	<a href="#">G06C</a>
Electronic portable computers	<a href="#">G06F 15/02</a>

**Special rules of classification**

The documents should be classified in the subgroups of [G06G 1/0005](#) according to their field of application and in the subgroups of [G06G 1/02](#) according to their construction.

**G06G 1/0005****{characterised by a specific application}****Definition statement***This place covers:*

For the different applications see the titles of the subgroups.

### Special rules of classification

Documents should be classified in every subgroup dealing with a specific application where the hand manipulated analogue computing device is used.

Documents should also be classified in the subgroups of [G06G 1/02](#) according to their construction.

## G06G 1/02

**Devices in which computing is effected by adding, subtracting, or comparing lengths of parallel or concentric graduated scales {([G06G 1/0005](#) takes precedence)}**

### Definition statement

*This place covers:*

Hand-manipulated devices of the kind specified in the title are classified here independently from the specific application.

The different constructional arrangements of these devices are classified in accordance with the titles of the subgroups under [G06G 1/04](#).

### Special rules of classification

The documents should also be classified in the subgroups of [G06G 1/0005](#) according to their field of application.

## G06G 3/00

**Devices in which the computing operation is performed mechanically ([G06G 1/00](#) takes precedence)**

### Definition statement

*This place covers:*

Pure mechanical analogue computation mechanisms.

### References

#### Limiting references

*This place does not cover:*

Electric or electronic analogue computers	<a href="#">G06G 7/00</a>
Digital mechanical computers	<a href="#">G06C</a>

### Special rules of classification

Obsolete technology, there are currently almost no new publications on the subject.

**G06G 5/00**

**Devices in which the computing operation is performed by means of fluid-pressure elements**

**Definition statement**

*This place covers:*

Analogue computation mechanisms based on fluid-pressure elements, e.g. using water, oil, pneumatics.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Fluid-circuit elements predominantly used for computing or control purpose	<a href="#">F15C</a>
Digital fluid-pressure computing devices	<a href="#">G06D</a>

**G06G 7/00**

**Devices in which the computing operation is performed by varying electric or magnetic quantities**

**Definition statement**

*This place covers:*

General analogue computation performed by electric or magnetic elements.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Processor architectures or configurations for general purpose image data processing, e.g. using neural networks	<a href="#">G06T 1/20</a>
Speech analysis or synthesis	<a href="#">G10L</a>

**Special rules of classification**

Documents are to be classified in these subgroups only if they are used for pure computation per se.

Analogue computation for a specific application is classified in the specific application field only.

This is an old technology that is hardly used anymore for performing computation as such. It is mainly used as a component in larger systems such as analogue control systems and telecommunication devices.

**G06G 7/04****Input or output devices****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Methods or arrangements for graph-reading or for converting the pattern of mechanical parameters, e.g. force or presence, into electrical signals	<a href="#">G06K 11/00</a>
Arrangements for producing a permanent visual presentation of the output data using plotters	<a href="#">G06K 15/22</a>

**G06G 7/12****Arrangements for performing computing operations, e.g. {operational} amplifiers specially adapted therefor****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Amplifiers in general	<a href="#">H03F</a>
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**G06G 7/19****for forming integrals of products, e.g. Fourier integrals, Laplace integrals or correlation integrals; for analysis or synthesis of functions using orthogonal functions****References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Fourier or spectrum analysis	<a href="#">G01R 23/16</a>
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**G06G 7/20****for evaluating powers, roots, polynomes, mean square values or standard deviation ([G06G 7/122](#), [G06G 7/28](#) take precedence)****References****Limiting references**

*This place does not cover:*

Arrangements for optimisation, e.g. least square fitting, linear programming, critical path analysis or gradient method	<a href="#">G06G 7/122</a>
Arbitrary function generators for synthesising functions by piecewise approximation	<a href="#">G06G 7/28</a>

**Application-oriented references**

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Picture signal circuitry for gamma control in television systems	<a href="#">H04N 5/202</a>
Circuits for processing colour signals for modifying the colour signals by gamma correction in colour television systems	<a href="#">H04N 9/69</a>

**G06G 7/26**

**Arbitrary function generators (using orthogonal functions, e.g. Fourier series, [G06G 7/19](#))**

**References****Limiting references**

*This place does not cover:*

Arrangements for analysis or synthesis of functions using orthogonal functions	<a href="#">G06G 7/19</a>
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Methods or arrangements for graph-reading using automatic curve followers	<a href="#">G06K 11/02</a>
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**G06G 7/623**

**{for filters; for delay lines}**

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Arrangements for measuring resistance, reactance, impedance or electric characteristics derived therefrom	<a href="#">G01R 27/00</a>
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**G06G 7/627**

**{for impedance networks, e.g. determining response, poles or zeros or Nyquist diagram}**

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Measuring attenuation, gain, phase shift or derived characteristics of electric four-pole networks	<a href="#">G01R 27/28</a>
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**G06G 7/72****Flight simulators****References*****Informative references***

*Attention is drawn to the following places, which may be of interest for search:*

Simulators for teaching of control of aircraft, e.g. link trainers	<a href="#">G09B 9/08</a>
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**G06G 99/00****Subject matter not provided for in other groups of this subclass****Definition statement**

*This place covers:*

Subject-matter not provided for in [G06G 1/00](#) - [G06G 7/80](#).