

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### INSTRUMENTS

## G06 COMPUTING; CALCULATING OR COUNTING (NOTES omitted)

### G06G ANALOGUE COMPUTERS (analogue optical computing devices [G06E 3/00](#))

#### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

<p><b>1/00</b> <b>Hand manipulated computing devices</b> (<a href="#">planimeters G01B 5/26</a>)</p> <p>1/0005 . . {characterised by a specific application}</p> <p>1/001 . . {for medical purposes, for biological purposes}</p> <p>1/0015 . . {for computing periodic phenomena, e.g. fertility periods}</p> <p>1/0021 . . {for civil engineering}</p> <p>1/0026 . . {for machining}</p> <p>1/0031 . . {for hydraulics}</p> <p>1/0036 . . {for electricity, for electronics}</p> <p>1/0042 . . {for optics, for photography}</p> <p>1/0047 . . {for printing}</p> <p>1/0052 . . {for air navigation or sea navigation}</p> <p>1/0057 . . {for gun laying, for bomb aiming}</p> <p>1/0063 . . {for calculating fuel consumption}</p> <p>1/0068 . . {for conversion from one unit system to another, e.g. from British to metric}</p> <p>1/0073 . . {for commerce, bank or invoicing}</p> <p>1/0078 . . . {for calculating interests}</p> <p>1/0084 . . . {for calculating earned incomes}</p> <p>1/0089 . . . {for calculating taxes}</p> <p>1/0094 . . {for trigonometric computations}</p> <p>1/02 . . Devices in which computing is effected by adding, subtracting, or comparing lengths of parallel or concentric graduated scales (<a href="#">G06G 1/0005 takes precedence</a>)</p> <p>1/025 . . {decimal point positioning devices}</p> <p>1/04 . . characterised by construction (<a href="#">G06G 1/10 takes precedence</a>)</p> <p>1/045 . . . {with scales borne by bands}</p> <p>1/06 . . . with rectilinear scales, e.g. slide rule</p> <p>1/065 . . . . {construction of the cursor}</p> <p>1/08 . . . with circular or helical scales</p> <p>1/085 . . . . {borne by a cylinder}</p> <p>1/10 . . characterised by the graduation</p> <p>1/105 . . . {linear graduations}</p> <p>1/12 . . . logarithmic graduations, e.g. for multiplication</p> <p>1/14 . . in which a straight or curved line has to be drawn from given points on one or more input scales to one or more points on a result scale</p> <p>1/16 . . in which a straight or curved line has to be drawn through related points on one or more families of curves</p>	<p><b>3/00</b> <b>Devices in which the computing operation is performed mechanically</b> (<a href="#">G06G 1/00 takes precedence</a>)</p> <p>3/02 . . for performing additions or subtractions, e.g. differential gearing</p> <p>3/04 . . for performing multiplications or divisions, e.g. variable-ratio gearing</p> <p>3/06 . . for evaluating functions by using cams and cam followers</p> <p>3/08 . . for integrating or differentiating, e.g. by wheel and disc</p> <p>3/10 . . for simulating specific processes, systems, or devices</p> <p><b>5/00</b> <b>Devices in which the computing operation is performed by means of fluid-pressure elements</b> (such elements in general <a href="#">F15C</a>)</p> <p><b>7/00</b> <b>Devices in which the computing operation is performed by varying electric or magnetic quantities</b></p> <p>7/02 . . Details not covered by <a href="#">G06G 7/04 - G06G 7/10</a>, {e.g. monitoring, construction, maintenance}</p> <p>7/04 . . Input or output devices (<a href="#">graph readers G06K 11/00</a>; <a href="#">function plotters</a>, <a href="#">co-ordinate plotters G06K 15/22</a>, <a href="#">G09G 3/001</a>)</p> <p>7/06 . . Programming arrangements, e.g. plugboard for interconnecting functional units of the computer; Digital programming (<a href="#">hybrid computers G06J</a>)</p> <p>7/10 . . Power supply arrangements</p> <p>7/12 . . Arrangements for performing computing operations, e.g. operational amplifiers (<a href="#">amplifiers in general H03F</a>; {adapted for telemeasuring or for indicating or recording the results of the measurement <a href="#">G01D 1/10</a>, <a href="#">G01D 1/16</a>; for fuzzy computing <a href="#">G06N 7/02</a>)</p> <p>7/122 . . for optimisation, e.g. least square fitting, linear programming, critical path analysis, gradient method</p> <p>7/14 . . for addition or subtraction (of vector quantities <a href="#">G06G 7/22</a> {; computing the average by addition; differential amplifiers <a href="#">H03F 3/45</a>})</p> <p>7/16 . . for multiplication or division (<a href="#">G06G 7/19</a> and <a href="#">G06G 7/24 take precedence</a>; measuring electric power <a href="#">G01R 21/00</a>)</p>
---	--

- 7/161 . . . with pulse modulation, e.g. modulation of amplitude, width, frequency, phase or form [{\(pulse modulators H03K 7/00\)}](#)
- 7/162 . . . using galvanic- magnetic effects, e.g. Hall effect; using similar magnetic effects
- 7/163 . . . using a variable impedance controlled by one of the input signals, variable amplification or transfer function [{\(G06G 7/161, G06G 7/162 take precedence\)}](#)
- 7/164 . . . using means for evaluating powers, e.g. quarter square multiplier [\(evaluating powers G06G 7/20\)](#)
- 7/18 . . for integration or differentiation; for forming integrals [\(G06G 7/19 takes precedence\)](#)
- 7/1806 . . . [{with respect to a variable other than time}](#)
- 7/1813 . . . [{using electrochemical elements, e.g. solion}](#)
- 7/182 . . . using magnetic elements
- 7/184 . . . using capacitive elements
- 7/186 . . . . using an operational amplifier comprising a capacitor or a resistor in the feedback loop
- 7/1865 . . . . . [{with initial condition setting}](#)
- 7/188 . . . using electromechanical elements
- 7/19 . . for forming integrals of products, e.g. Fourier integrals, Laplace integrals, correlation integrals; for analysis or synthesis of functions using orthogonal functions [\(Fourier or spectrum analysis G01R 23/16; sound analysis or synthesis G10L\)](#)
- 7/1907 . . . [{using charge transfer devices}](#)
- 7/1914 . . . [{using a magnetic medium, a linear filter}](#)
- 7/1921 . . . [{for forming Fourier integrals, harmonic analysis and synthesis \(spectrum analysis G01R 23/00\)}](#)
- 7/1928 . . . [{for forming correlation integrals; for forming convolution integrals \(G06G 7/195, G06G 7/1907 and G06G 7/1914 take precedence\)}](#)
- 7/1935 . . . . [{by converting at least one the input signals into a two level signal, e.g. polarity correlators}](#)
- 7/1942 . . . [{for forming other integrals of product, e.g. orthogonal functions, Laplace, Laguerre, Walsh, Hadamard, Hilbert \(G06G 7/195, G06G 7/1907 and G06G 7/1914 take precedence\)}](#)
- 7/195 . . . using electro- acoustic elements
- 7/20 . . for evaluating powers, roots, polynomials, mean square values, standard deviation [\(G06G 7/122, G06G 7/28 take precedence; gamma correction in television systems H04N 5/20, H04N 9/69\)](#)
- 7/22 . . for evaluating trigonometric functions; for conversion of co-ordinates; for computations involving vector quantities [\(trigonometric computations using simultaneous equations G06G 7/34 {for computations in the complex plane; G06G 7/20, G06G 7/28 take precedence}\)](#)
- 7/24 . . for evaluating logarithmic or exponential functions, e.g. hyperbolic functions [{\(for multiplication, division or for evaluating powers or roots using logarithmic functions; gamma correction in television systems H04N 5/20, H04N 9/69\)}](#)
- 7/25 . . for discontinuous functions, e.g. backlash, dead zone, limiting absolute value or peak value [{\(measuring the maximum value of currents or voltages G01R 19/30\)}](#)
- 7/26 . . Arbitrary function generators [{\(using Fourier series or other orthogonal functions G06G 7/19; using curve followers G06K 11/02\)}](#)
- 7/28 . . . for synthesising functions by piecewise approximation
- 7/30 . . for interpolation or extrapolation [\(G06G 7/122 takes precedence\)](#)
- 7/32 . . for solving of equations [{or inequations; for matrices}](#)
- 7/34 . . . of simultaneous equations [\(G06G 7/122 takes precedence\)](#)
- 7/36 . . . of single equations of quadratic or higher degree [\(G06G 7/22, G06G 7/24 take precedence\)](#)
- 7/38 . . . of differential or integral equations
- 7/40 . . . of partial differential equations [{of field or wave equations}\(simulating specific devices G06G 7/48\)](#)
- 7/42 . . . . . using electrolytic tank
- 7/44 . . . . . using continuous medium, current-sensitive paper
- 7/46 . . . . . using discontinuous medium, e.g. resistance network
- 7/48 . Analogue computers for specific processes, systems or devices, e.g. simulators
- 7/485 . . [{for determining the trajectory of particles, e.g. of electrons \(measurement performed on radiation beams G01T 1/29; processing or analysing tracks of particles G01T 5/02\)}](#)
- 7/50 . . for distribution networks, e.g. for fluids [\(G06G 7/62 takes precedence\)](#)
- 7/52 . . for economic systems; for statistics [\(G06G 7/122, G06G 7/19 take precedence\)](#)
- 7/54 . . for nuclear physics, e.g. nuclear reactors, radioactive fall [{\(processing of scintigraphic or other radio-isotope data G01T 1/1647, G01T 1/2992\)}](#)
- 7/56 . . for heat flow [\(G06G 7/58 takes precedence\)](#)
- 7/57 . . for fluid flow [\(G06G 7/50 takes precedence\)}](#); for distribution networks
- 7/58 . . for chemical processes [\(G06G 7/75 takes precedence\)](#); [{for physico-chemical processes; for metallurgical processes}](#)
- 7/60 . . for living beings, e.g. their nervous systems [{; for problems in the medical field}](#)
- 7/62 . . for electric systems or apparatus [{\(G06G 7/78 takes precedence\)}](#)
- NOTE**
- This group covers only computers specially adapted for electronic systems or devices
- 7/625 . . . for filters; for delay lines [{\(measuring characteristics of electric networks, e.g. plotting Nyquist diagram G01R 27/28\)}](#)
- 7/63 . . . for power apparatus, e.g. motors, or supply distribution networks [{\(for control systems of electric power apparatus G06G 7/66\)}](#)
- 7/635 . . . . for determining the most economical distribution in power systems
- 7/64 . . for non-electric machines, e.g. turbine

## G06G

- 7/66 . . for control systems {(for optimisation [G06G 7/122](#))}
- 7/68 . . for civil engineering structures, e.g. beam, strut, girder, {elasticity computation}
- 7/70 . . for vehicles, e.g. to determine permissible loading of ships {, centre of gravity, necessary fuel}
- 7/72 . . . Flight simulator (Link trainers [G09B 9/00](#))
- 7/75 . . for component analysis, e.g. of mixtures, of colours ([G06G 7/122](#) takes precedence {; gas chromatography [G01N 30/00](#))
- 7/76 . . for traffic
- 7/78 . . for direction-finding, locating, distance or velocity measuring, or navigation systems
- 7/80 . . for gunlaying; for bomb aiming; for guiding missiles

**99/00 Subject matter not provided for in other groups of this subclass**