

# CPC COOPERATIVE PATENT CLASSIFICATION

## G PHYSICS (NOTES omitted)

### INSTRUMENTS

## G06 COMPUTING; CALCULATING; COUNTING (score computers for games [A63B 71/06](#), [A63D 15/20](#), [A63F 1/18](#); combinations of writing implements with computing devices [B43K 29/08](#)) (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.

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

- 7/14 . . for addition or subtraction (of vector quantities [G06G 7/22](#) {computing the average by addition; differential amplifiers [H03F 3/45](#)})
  - 7/16 . . for multiplication or division {(G06G 7/19 and [G06G 7/24](#) take precedence; measuring electric power [G01R 21/00](#))}
  - 7/161 . . . with pulse modulation, e.g. modulation of amplitude, width, frequency, phase or form {(pulse modulators [H03K 7/00](#))}
  - 7/162 . . . using galvano- 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, polynomes, 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](#))}

## G06G

- 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
- 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**