

**CPC****COOPERATIVE PATENT CLASSIFICATION****G06G****ANALOGUE COMPUTERS** ([analogue optical computing devices G06E 3/00](#))**G06G 1/00****Hand manipulated computing devices** ([planimeters G01B 5/26](#))

- G06G 1/0005 . { characterised by a specific application }
- G06G 1/001 .. { for medical purposes, for biological purposes }
- G06G 1/0015 .. { for computing periodic phenomena e.g. fertility periods }
- G06G 1/0021 .. { for civil engineering }
- G06G 1/0026 .. { for machining }
- G06G 1/0031 .. { for hydraulics }
- G06G 1/0036 .. { for electricity, for electronics }
- G06G 1/0042 .. { for optics, for photography }
- G06G 1/0047 .. { for printing }
- G06G 1/0052 .. { for air navigation or sea navigation }
- G06G 1/0057 .. { for gun laying, for bomb aiming }
- G06G 1/0063 .. { for calculating fuel consumption }
- G06G 1/0068 .. { for conversion from one unit system to another, e.g. from British to metric }
- G06G 1/0073 .. { for commerce, bank or invoicing }
- G06G 1/0078 ... { for calculating interests }
- G06G 1/0084 ... { for calculating earned incomes }
- G06G 1/0089 ... { for calculating taxes }
- G06G 1/0094 .. { for trigonometric computations }
  
- 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)}
- G06G 1/025 .. { decimal point positioning devices }
- G06G 1/04 .. characterised by construction (G06G 1/10 takes precedence)
- G06G 1/045 ... { with scales borne by bands }
- G06G 1/06 ... with rectilinear scales, e.g. slide rule
- G06G 1/065 .... { construction of the cursor }
- G06G 1/08 ... with circular or helical scales
- G06G 1/085 .... { borne by a cylinder }
- G06G 1/10 .. characterised by the graduation
- G06G 1/105 ... { linear graduations }
- G06G 1/12 ... Logarithmic graduations, e.g. for multiplication
  
- G06G 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

- G06G 1/16** . in which a straight or curved line has to be drawn through related points on one or more families of curves
- G06G 3/00** **Devices in which the computing operation is performed mechanically** ([G06G 1/00](#) takes precedence)
- G06G 3/02** . for performing additions or subtractions, e.g. differential gearing
- G06G 3/04** . for performing multiplication or divisions, e.g. variable-ratio gearing
- G06G 3/06** . for evaluating functions by using cams and cam followers
- G06G 3/08** . for integrating or differentiating, e.g. by wheel and disc
- G06G 3/10** . for simulating specific processes, systems, or devices
- G06G 5/00** **Devices in which the computing operation is performed by means of fluid-pressure elements** (such elements in general [F15C](#))
- G06G 7/00** **Devices in which the computing operation is performed by varying electric or magnetic quantities**
- G06G 7/02** . Details not covered by [G06G 7/04](#) to [G06G 7/10](#), { e.g. monitoring, construction, maintenance }
- G06G 7/04** . input or output devices (graph readers [G06K 11/00](#); function plotters, co-ordinate plotters [G06K 15/22](#), { [G09G 3/001](#) })
- G06G 7/06** . Programming arrangements, e.g. plugboard for interconnecting functional units of the computer; Digital programming { hybrid computers [G06J](#) }
- G06G 7/10** . Power supply arrangements
- G06G 7/12** . Arrangements for performing computing operations, e.g. operational amplifiers (amplifiers in general [H03F](#); { adapted for telemeasuring or for indicating or recording the results of the measurement [G01D 1/10](#), [G01D 1/16](#); for fuzzy computing [G06N 7/02](#) })
- G06G 7/122** . . for optimisation, e.g. least square fitting, linear programming, critical path analysis, gradient method
- G06G 7/14** . . for addition or subtraction (of vector quantities [G06G 7/22](#)) { computing the average by addition; differential amplifiers [H03F 3/45](#) }
- G06G 7/16** . . for multiplication or division { [G06G 7/19](#) and [G06G 7/24](#) take precedence measuring electric power [G01R 21/00](#) }
- G06G 7/161** . . . with pulse modulation, e.g. modulation of amplitude, width, frequency, phase or form { pulse modulators [H03K 7/00](#) }
- G06G 7/162** . . . using galvano- magnetic effects, e.g. Hall effect; using similar magnetic effects

- G06G 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 }
- G06G 7/164      ...      using means for evaluating powers, e.g. quarter square multiplier ([evaluating powers G06G 7/20](#))
- G06G 7/18      ..      for integration or differentiation; for forming integrals ([G06G 7/19](#) takes precedence)
- G06G 7/1806      ...      { with respect to a variable other than time }
- G06G 7/1813      ...      { using electrochemical elements, e.g. solion }
- G06G 7/182      ...      using magnetic elements
- G06G 7/184      ...      using capacitative elements
- G06G 7/186      ....      using an operational amplifier comprising a capacitor or a resistor in the feedback loop
- G06G 7/1865      .....      { with initial condition setting }
- G06G 7/188      ...      using electromechanical elements
- G06G 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](#))
- G06G 7/1907      ...      { using charge transfer devices }
- G06G 7/1914      ...      { using a magnetic medium, a linear filter }
- G06G 7/1921      ...      { for forming Fourier integrals, harmonic analysis and synthesis ([spectrum analysis G01R 23/00](#)) }
- G06G 7/1928      ...      { for forming correlation integrals; for forming convolution integrals ([G06G 7/195](#), [G06G 7/1907](#) and [G06G 7/1914](#) take precedence) }
- G06G 7/1935      ....      { by converting at least one the input signals into a two level signal, e.g. polarity correlators }
- G06G 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) }
- G06G 7/195      ...      using electro- acoustic elements
- G06G 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](#))
- G06G 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; [resolvers 74C5A1](#) })
- G06G 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](#) }
- G06G 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](#) }
- G06G 7/26      ..      Arbitrary function generators { [using Fourier series or other orthogonal functions G06G 7/19](#); [using curve followers G06K 11/02](#) }
- G06G 7/28      ...      for synthesising functions by piece-wise approximation
- G06G 7/30      ..      for interpolation or extrapolation ([G06G 7/122](#) takes precedence)

- G06G 7/32      ..      for solving of equations { or inequations; for matrices }
- G06G 7/34      ...      of simultaneous equations (G06G 7/122 takes precedence)
- G06G 7/36      ...      of single equations of quadratic or higher degree (G06G 7/22, G06G 7/24 take precedence)
- G06G 7/38      ...      of differential or integral equations
- G06G 7/40      ....      of partial differential equations { of field or wave equations } (simulating specific devices G06G 7/48)
- G06G 7/42      .....      using electrolytic tank
- G06G 7/44      .....      using continuous medium, current-sensitive paper
- G06G 7/46      .....      using discontinuous medium, e.g. resistance network
  
- G06G 7/48      .      Analogue computers for specific processes, systems or devices, e.g. simulators
- G06G 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) }
  
- G06G 7/50      ..      for distribution networks, e.g. for fluids (G06G 7/62 takes precedence)
- G06G 7/52      ..      for economic systems; for statistics (G06G 7/122, G06G 7/19 take precedence)
- G06G 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) }
- G06G 7/56      ..      for heat flow (G06G 7/58 takes precedence)
- G06G 7/57      ..      for fluid flow (G06G 7/50 takes precedence); { for distribution networks }
- G06G 7/58      ..      for chemical processes (G06G 7/75 takes precedence); { for physico-chemical processes; for metallurgical processes }
- G06G 7/60      ..      for living beings, e.g. their nervous systems; { for problems in the medical field }
- G06G 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

- G06G 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) }
- G06G 7/635      ....      for determining the most economical distribution in power systems
- G06G 7/64      ..      for non-electric machines, e.g. turbine
- G06G 7/66      ..      for control systems {(for optimisation G06G 7/122) }
- G06G 7/68      ..      for civil engineering structures, e.g. beam, strut, girder, { elasticity computation }
- G06G 7/70      ..      for vehicles, e.g. to determine permissible loading of ships, { centre of gravity, necessary fuel }
- G06G 7/72      ...      Flight simulator (link trainers G09B 9/00)
- G06G 7/75      ..      for component analysis, e.g. of mixtures, of colours (G06G 7/122 takes precedence; { gas chromatography G01N 30/00 })
- G06G 7/76      ..      for traffic

- G06G 7/78 . . for direction-finding, locating, distance or velocity measuring, or navigation systems
- G06G 7/80 . . for gunlaying; for bomb aiming; for guiding missiles
- G06G 99/00 **Subject matter not provided for in other groups of this subclass**