

SECTION G — PHYSICS

G06 COMPUTING; CALCULATING; COUNTING

G06G ANALOGUE COMPUTERS (analogue optical computing devices G06E 3/00; computer systems based on specific computational models G06N)

- 1/00 Hand-manipulated computing devices** (planimeters G01B 5/26)
- 1/02 • Devices in which computing is effected by adding, subtracting, or comparing lengths of parallel or concentric graduated scales
- 1/04 • • characterised by construction (G06G 1/10 takes precedence)
- 1/06 • • • with rectilinear scales, e.g. slide rule
- 1/08 • • • with circular or helical scales
- 1/10 • • characterised by the graduation
- 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
- 1/16 • in which a straight or curved line has to be drawn through related points on one or more families of curves
- 3/00 Devices in which the computing operation is performed mechanically** (G06G 1/00 takes precedence)
- 3/02 • for performing additions or subtractions, e.g. differential gearing
- 3/04 • for performing multiplications or divisions, e.g. variable-ratio gearing
- 3/06 • for evaluating functions by using cams and cam followers
- 3/08 • for integrating or differentiating, e.g. by wheel and disc
- 3/10 • for simulating specific processes, systems, or devices
- 5/00 Devices in which the computing operation is performed by means of fluid-pressure elements** (such elements in general F15C)
- 7/00 Devices in which the computing operation is performed by varying electric or magnetic quantities** (neural networks for image data processing G06T; speech analysis or synthesis G10L)
- 7/02 • Details not covered by groups G06G 7/04-G06G 7/10
- 7/04 • Input or output devices (graph readers G06K 11/00; using function plotters, co-ordinate plotters G06K 15/22)
- 7/06 • Programming arrangements, e.g. plugboard for interconnecting functional units of the computer; Digital programming
- 7/10 • Power supply arrangements
- 7/12 • Arrangements for performing computing operations, e.g. amplifiers specially adapted therefor (amplifiers in general H03F)
- 7/122 • • for optimisation, e.g. least square fitting, linear programming, critical path analysis, gradient method [2]
- 7/14 • • for addition or subtraction (of vector quantities G06G 7/22)
- 7/16 • • for multiplication or division
- 7/161 • • • with pulse modulation, e.g. modulation of amplitude, width, frequency, phase, or form [2]
- 7/162 • • • using galvano-magnetic effects, e.g. Hall effect; using similar magnetic effects [2]
- 7/163 • • • using a variable impedance controlled by one of the input signals, variable amplification or transfer function [2]
- 7/164 • • • using means for evaluating powers, e.g. quarter square multiplier (evaluating powers G06G 7/20) [3]
- 7/18 • • for integration or differentiation (G06G 7/19 takes precedence) [3]
- 7/182 • • • using magnetic elements [3]
- 7/184 • • • using capacitive elements [3]
- 7/186 • • • • using an operational amplifier comprising a capacitor or a resistor in the feedback loop [3]
- 7/188 • • • using electromechanical elements [3]
- 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) [3]
- 7/195 • • • using electro-acoustic elements [3]
- 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 5/202, H04N 9/69) [3]
- 7/22 • • for evaluating trigonometric functions; for conversion of co-ordinates; for computations involving vector quantities (trigonometric computations using simultaneous equations G06G 7/34)
- 7/24 • • for evaluating logarithmic or exponential functions, e.g. hyperbolic functions
- 7/25 • • for discontinuous functions, e.g. backlash, dead zone, limiting, absolute value, or peak value [2]
- 7/26 • • Arbitrary function generators (using orthogonal functions, e.g. Fourier series, G06G 7/19; using curve follower G06K 11/02)
- 7/28 • • • for synthesising functions by piecewise approximation
- 7/30 • • for interpolation or extrapolation (G06G 7/122 takes precedence) [2]
- 7/32 • • for solving of equations
- 7/34 • • • of simultaneous equations (G06G 7/122 takes precedence) [2]

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- 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 (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 [2]
- 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, G06G 7/20 take precedence) [3]
- 7/54 • • for nuclear physics, e.g. nuclear reactors, radioactive fallout
- 7/56 • • for heat flow (G06G 7/58 takes precedence)
- 7/57 • • for fluid flow (G06G 7/50 takes precedence)
- 7/58 • • for chemical processes (G06G 7/75 takes precedence)
- 7/60 • • for living beings, e.g. their nervous systems
- 7/62 • • for electric systems or apparatus
- 7/625 • • • for impedance networks, e.g. determining response, determining poles or zeros, determining the Nyquist diagram (measuring impedance G01R 27/00) [2]
- 7/63 • • • for power apparatus, e.g. motors, or supply distribution networks [2]
- 7/635 • • • • for determining the most economical distribution in power systems [2]
- 7/64 • • for non-electric machines, e.g. turbine
- 7/66 • • for control systems
- 7/68 • • for civil-engineering structures, e.g. beam, strut, girder
- 7/70 • • for vehicles, e.g. to determine permissible loading of ships
- 7/72 • • • Flight simulators (Link trainers G09B 9/08)
- 7/75 • • for component analysis, e.g. of mixtures, of colours (G06G 7/122 takes precedence) [2]
- 7/76 • • for traffic
- 7/78 • • for direction-finding, locating, distance or velocity measuring, or navigation systems
- 7/80 • • for gun-laying; for bomb aiming; for guiding missiles [2]
- 99/00 Subject matter not provided for in other groups of this subclass [2009.01]**