

CASIO®

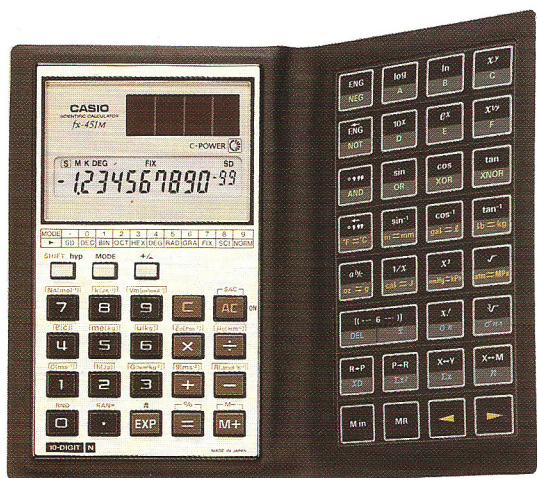
SCIENTIFIC

C A L C U L A T O R S



STUDENT CASIO

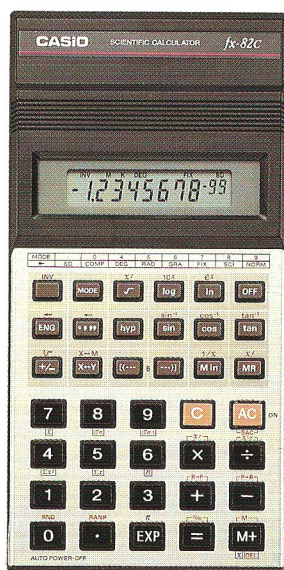
CALCULATORS



FX-451M

Wallet Style, 10 Digit, Solar Powered with Battery Back Up

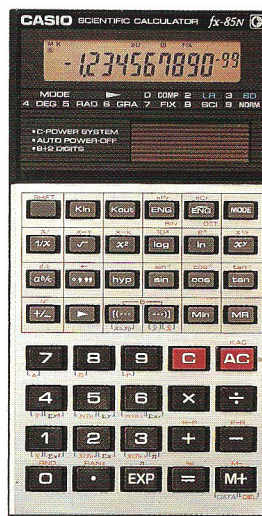
- Total number of functions 132
- 116 scientific functions
- 10 digit (10 + 2) LCD
- Number base (conversions/calculations)
- Logic operations
- Hyperbolic functions
- Fractions
- Percentages
- Engineering notation
- 16 metric conversions (US galls to litres only)
- 13 physical constants
- Power source: Solar cell and lithium battery GR927



FX-82C

Hand Held, 8 Digit

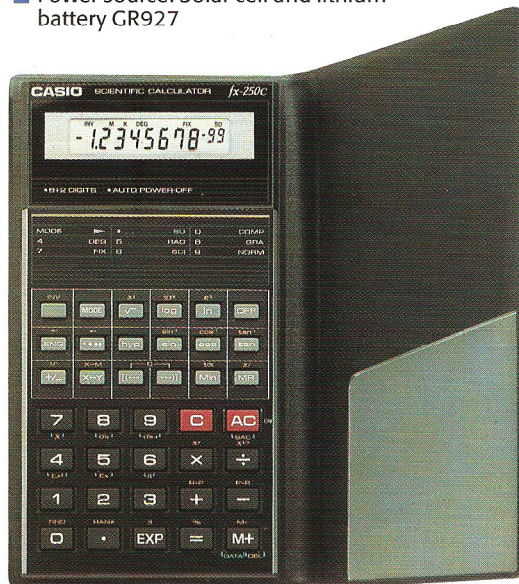
- Total number of functions 75
- 59 scientific functions
- 8 digit (8 + 2) LCD
- Hyperbolic functions
- Percentages
- Engineering notation
- Power source: Two AA size batteries



FX-85N

Hand Held, 8 Digit, Solar Powered with battery back up

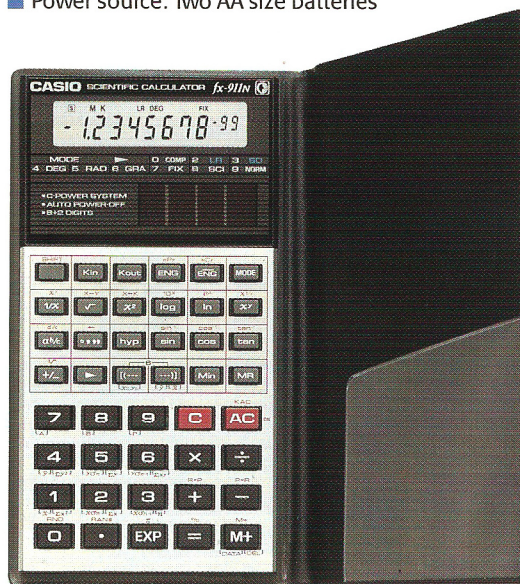
- Total number of functions 128
- 75 scientific functions
- 8 digit (8 + 2) LCD
- Hyperbolic functions
- Linear regression
- Fractions
- Percentages
- Power source: Solar cell and lithium battery GR927



FX-250C

Wallet Style, 8 Digit Compact

- Total number of functions 75
- 59 scientific functions*
- 8 digit (8 + 2) LCD
- Hyperbolic functions
- Percentages
- Engineering notation
- Power source: Two silver oxide batteries type SR44



FX-911N

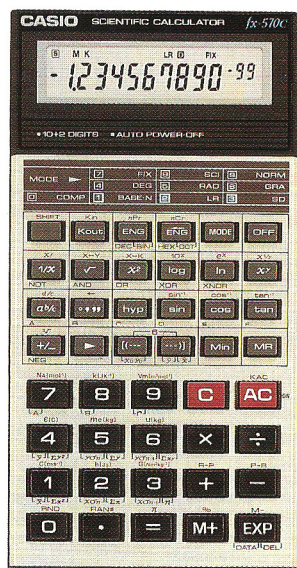
Slim, 8 Digit, Solar Powered with Battery Back Up

- Total number of functions 128
- 75 scientific functions
- 8 digit (8 + 2) LCD
- Hyperbolic functions
- Linear regression
- Fractions
- Percentages
- Engineering notation
- Power source: Solar cell and lithium battery type GR927

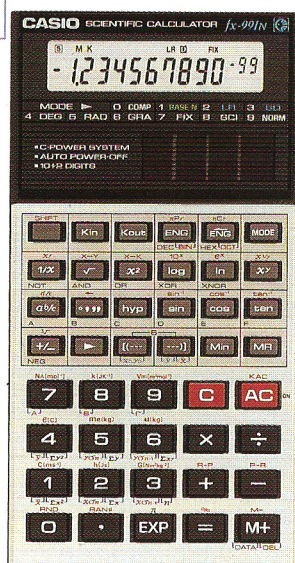
$$a^2 = b^2 + c^2 - 2bc \cos A$$

ADVANCED CASIO

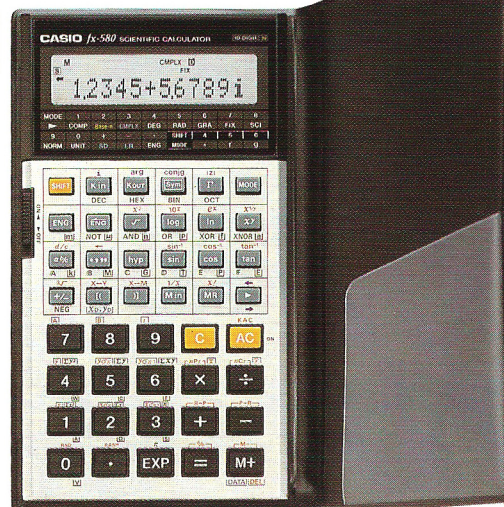
CALCULATORS



FX-570C



FX-991N



FX-580

Powerful Scientific and Statistical Calculator

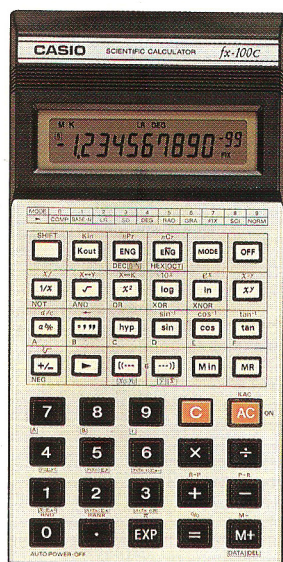
- Total number of functions 163
- 110 scientific functions
- 10 digit (10 + 2) LCD display
- Number base (conversions/calculations)
- Logic functions
- Linear regression
- Hyperbolic functions
- Fractions
- Percentages
- Engineering notation
- 9 physical constants
- Power source: One silver oxide battery type SR44

Hand Held, Solar with Battery Back Up

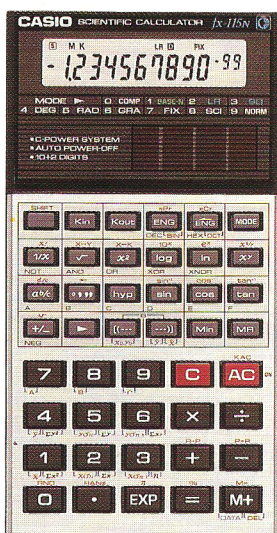
- Total number of functions 163
- 110 scientific functions
- 10 digit (10 + 2) LCD display
- Number base (conversions/calculations)
- Logic functions
- Linear regression
- Hyperbolic functions
- Fractions
- Percentages
- Engineering notation
- 9 physical constants
- Power source: Solar cell and lithium battery type GR927

10 Digit, Complex Number Calculator

- Total number of functions 180
- 128 scientific functions
- 10 digit (10 + 2) LC dot matrix display
- Complex number calculations
- Gamma function
- Number base (conversions/calculations)
- Linear regression
- Unit mode – electronic unit symbols can be entered along with variables
- Power source: Two lithium batteries type CR2032



FX100C



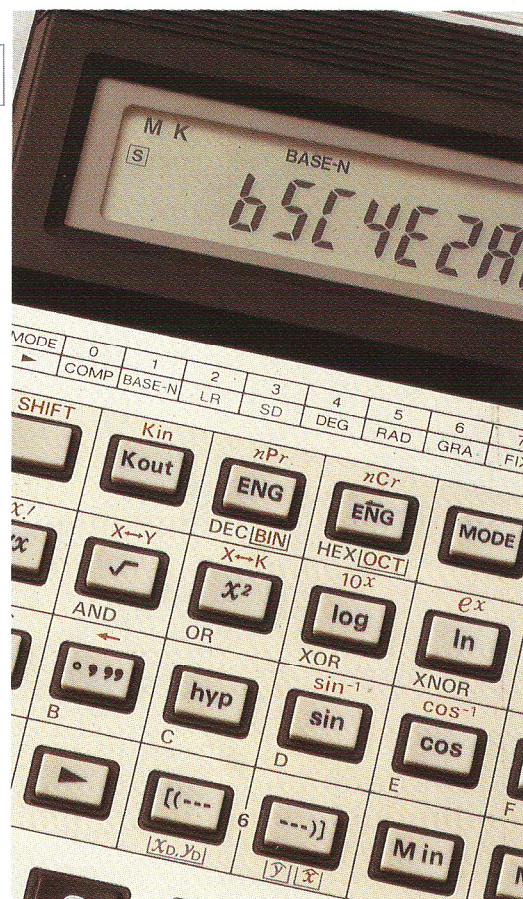
FX-115N

Hand Held, 10 Digit

- Total number of functions 154
- 101 scientific functions
- 10 digit (10 + 2) LCD
- Number base (conversions/calculations)
- Logic operations
- Hyperbolic functions
- Fractions
- Percentages
- Linear regression
- Engineering notation
- Power source: One AA size battery

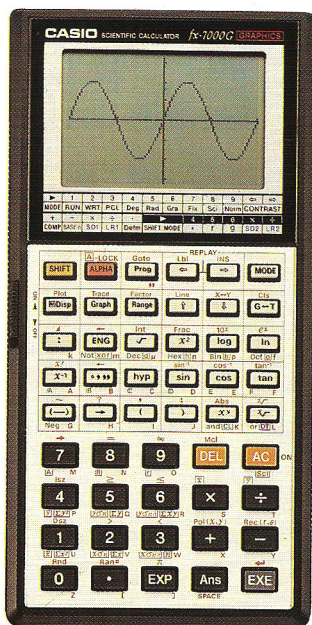
Hand Held, 10 Digit, Solar Powered with Battery Back Up

- Total number of functions 154
- 101 scientific functions
- 10 digit (10 + 2) LCD
- Number base (conversions/calculations)
- Logic operations
- Hyperbolic functions
- Linear regression
- Fractions
- Percentages
- Power source: Solar cell and lithium battery GR927



GRAPHIC

CALCULATORS



FX-7000G

Large Graphic Display Calculator

- 20 built in function graphs
- User generated function graphs
- Statistical graphs
- 16 character by 8 line dot matrix display
- (10 + 2) digit display for calculations
- Total number of functions 193
- 93 scientific functions
- Programmable – 422 steps over 10 program areas
- 26 memories (standard) expandable to 78
- Power source: Three lithium batteries type CR2032C



FX-7500G

Large Graphic Display Calculator

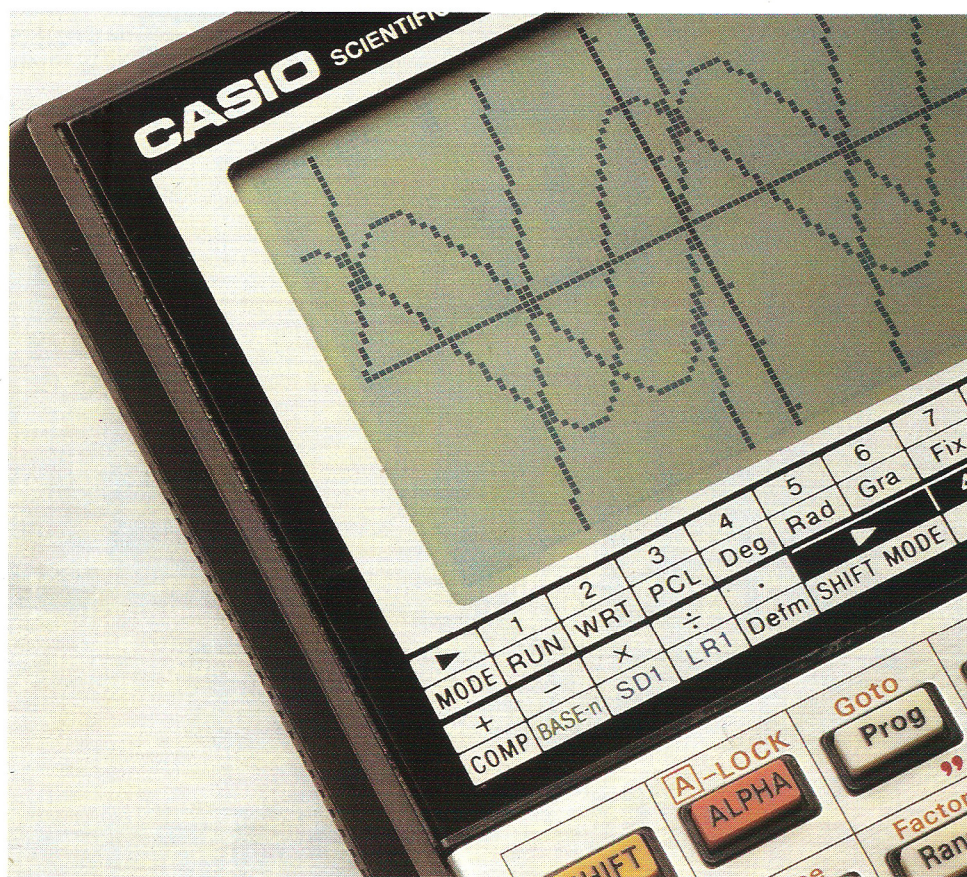
- 20 built in function graphs
- User generated function graphs
- Statistical graphs
- 16 character by 8 line dot matrix display
- Total number of functions 150
- 107 scientific functions
- Programmable – 4,006 steps over 10 program areas
- 26 memories (standard) expandable to 526
- Power source: Three lithium batteries type CR2025



FX-8000G

Large Graphic Display Calculator with Print Out and Tape Storage Option

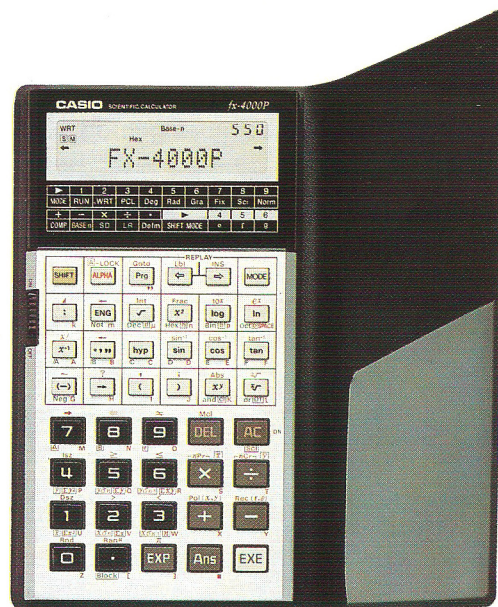
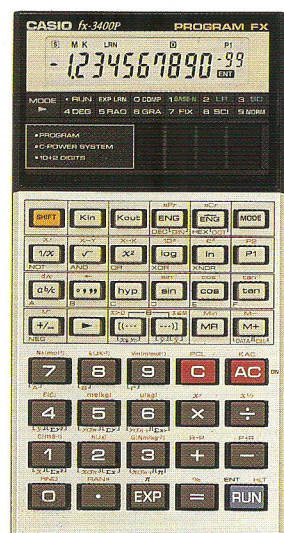
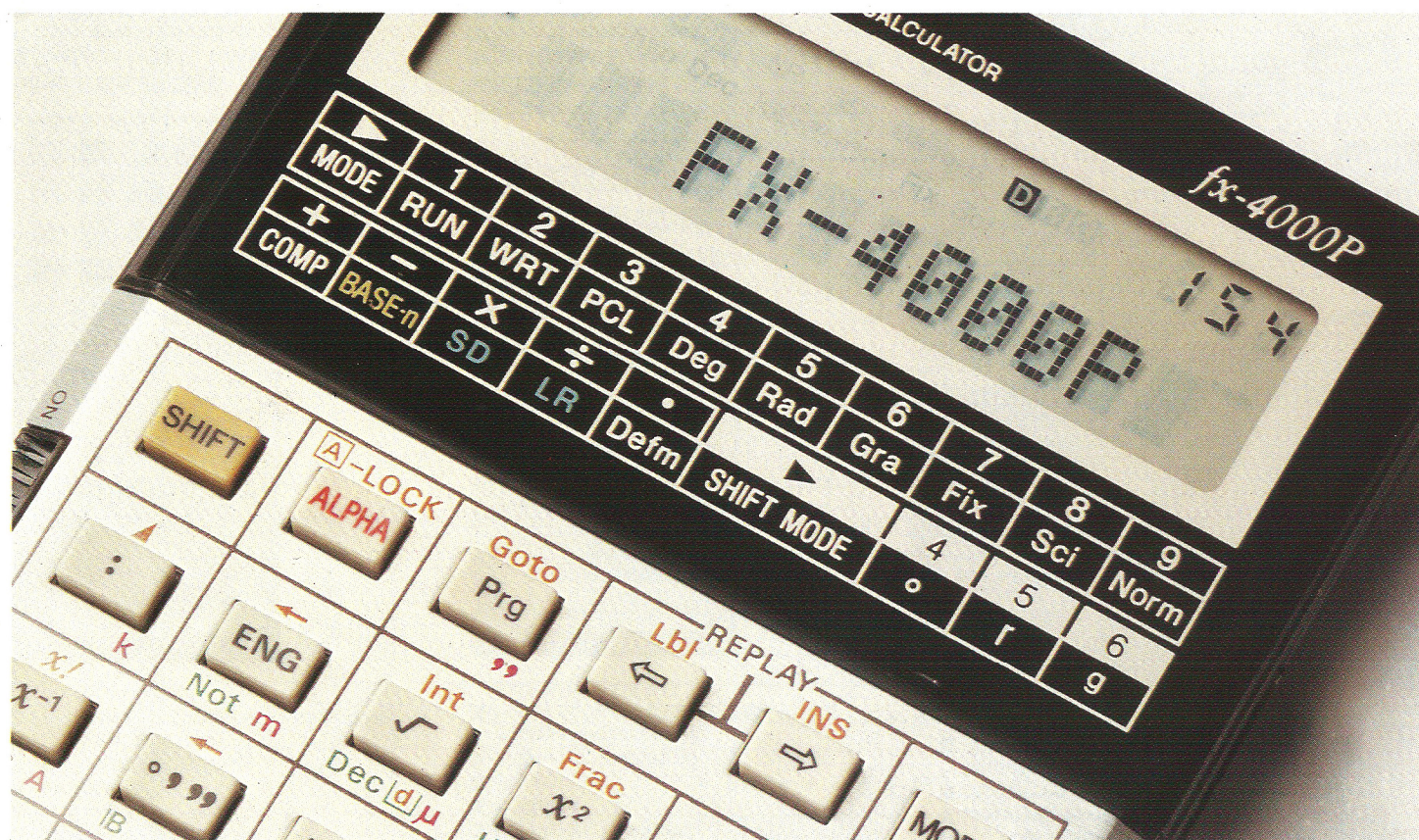
- 20 built in function graphs
 - User generated function graphs
 - Statistical graphs
 - Optional FA80 interfaces allows connection of an Epson* compatible graphic printer or plotter printer, and storage of data to tape
 - File editor – 1,917 steps – for easy storage of routine equations, or programs, which can be password protected
 - 26 constant memories (standard) expandable to 206
 - Programmable 1,446 steps over 10 program areas
 - Total number of functions 254
 - 93 scientific functions
 - 16 character by 8 line dot matrix display
 - (10 + 2) digit display for calculations
 - Power source: Three lithium batteries type CR2032C
- (*Epson is a registered trademark of Epson Corporation)



$$y = ax^2 + bx + c$$

PROGRAMMABLE

CALCULATORS



FX-3400P

Wallet style, 29 step programmable

- Total number of functions 171
- 110 scientific functions
- 29 program steps over 2 program areas
- 10 digit (10 + 2) LCD
- 1 independent memory and 6 constant memories – retained after power off
- Number base (conversions/calculations)
- Linear regression
- 9 physical constants
- Power source: Solar cell and one lithium battery type GR927

FX-3800P

Wallet Style, 135 Step Programmable

- Total number of functions 151
- 88 scientific functions
- 135 program steps over 4 program areas
- 10 digit (10 + 2) LCD
- 1 independent memory and 6 constant memories – retained after power off
- Number base (conversions/calculations)
- Linear regression
- Power source: One lithium battery type CR2025C

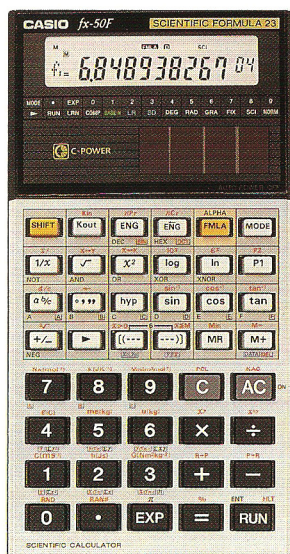
FX-4000P

Powerful, Programmable, Dot-matrix Display

- Total number of functions 160
- 95 scientific functions
- 550 program steps over 10 program areas
- Perfect entry system
- 10 digit (10 + 2) alpha numeric display
- 26 constant memories (expandable to 94)
- Number base (conversions/calculations)
- Logic functions
- Linear regression
- Power source: Two lithium batteries type CR2032

FORMULA

CALCULATORS

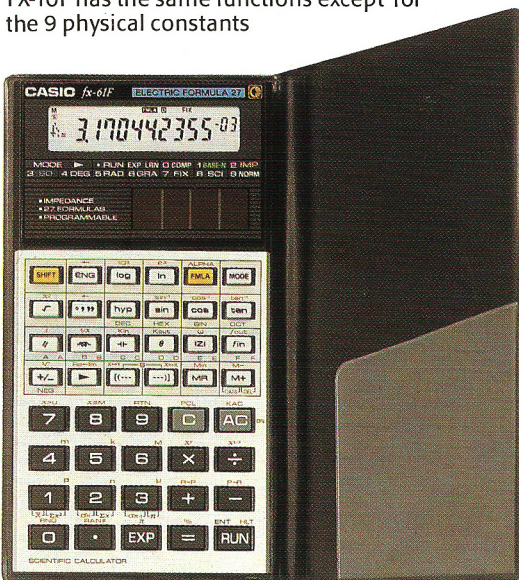


FX-50F

10 Digit, Built In Formula Calculator

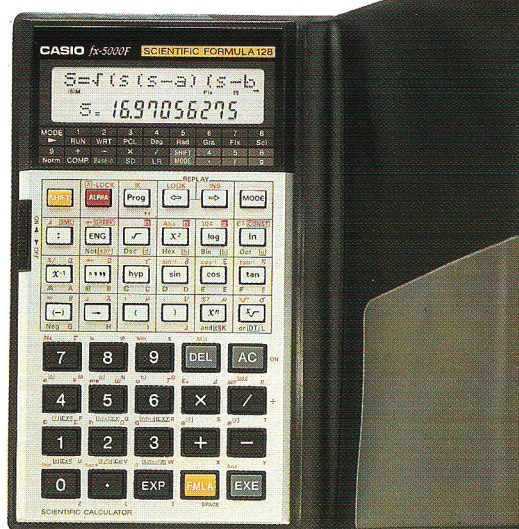
- Total number of functions 198
- 109 scientific functions
- 10 digit (10 + 2) LCD display
- 23 built in formulae for mathematics, physics, electricity, mechanics and statistical applications
- Formula memory allows programming of 2 original formulae (up to 29 steps total)
- Linear regression
- Number base (conversions/calculations)
- 9 physical constants
- Power source: Solar cell and one lithium battery type GR927

FX-10F has the same functions except for the 9 physical constants



FX-61F 10 Digit, Electrical/Electronic Formula Calculator

- Total number of functions 178
- 91 scientific functions
- 10 digit (10 + 2) LCD display
- 27 built in formulae for electrical and electronic calculations
- Formula memory allows programming of an original formula (up to 30 steps)
- Linear regression
- Complex number calculations
- Number base (conversions/calculations)
- Impedance calculations
- Power source: Solar cell and one lithium battery type GR927



FX-5000F

2-line Display Formula Calculator

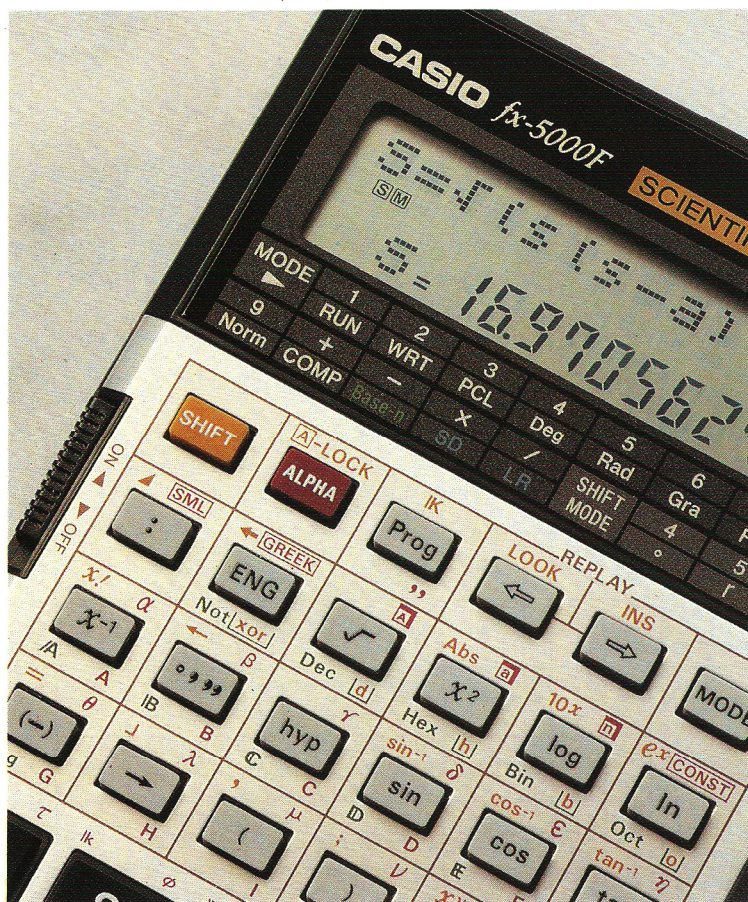
- Total number of functions 288
- 103 scientific functions
- 2 line LCD display
- 128 built-in formulae for mathematics, physics, electricity, mechanics and statistical applications
- Formula memory allows programming of up to 12 original formulae (up to 675 steps total)
- Linear regression
- Number base (conversions/calculations)
- 13 physical constants
- Power source: Two lithium batteries type CR2032

$$S = \frac{n(n+1)(2n+1)}{6}$$

BUILT-IN FORMULA LIST

FX-50F

Quadratic Equation Solution
Cosine Theorem
Heron's Formula
Normal Probability Function P(x)
Normal Probability Function Q(x)
Coulomb's Law
Resistance of a Conductor
Magnetic Force
Change in Terminal Voltage of RL in RC Series Circuit
Voltage Gain
Impedance in LRC Series Circuit
Impedance in LRC Parallel Circuit
Frequency of Electric Oscillation
Distance of Drop
Cycle of Simple Pendulum
Cycle of Spring Pendulum
Doppler Effect
Equation of State of Ideal Gas
Centrifugal Force
Elastic Energy
Bernoulli's Theorem
Calculations Using a Stadia (1)
Calculations Using a Stadia (2)



FX-61F

Resonance frequency
Change in terminal voltage in RC series circuit
Time constant in RC series circuit
> ϕ y conversion
y ϕ Δ conversion
Resistance of matched impedance
Power factor
Closed loop gain of operational amplifier inverting feed back circuit
Closed loop gain of operational amplifier non-inverting feed back circuit
Primary filter
Voltage gain
Current gain
Resistance of a conductor
Electronic capacity between parallel plates
Coulomb's law
Joule's law (1)
Joule's law (2)
Joule's law (3)
Energy density stored in electrostatic field (1)
Energy density stored in electrostatic field (2)
Energy density stored in electrostatic field (3)
Magnetic force
Induced electromotive force
Lorentz force
Force exerting on magnetic field
Energy density stored in electrostatic field
Magnetic energy of Inductance

FX-5000F

MATHEMATICS

- 1 Quadratic equation solution
- 2 Simultaneous linear equation with two unknowns
- 3 Simultaneous linear equation with three unknowns
- 4 Cosine theorem
- 5 Heron's formula
- 6 Area of a triangle
- 7 Sine theorem (1)
- 8 Sine theorem (2)
- 9 Rectangular $\rightarrow$ polar coordinate conversion
- 10 Polar $\rightarrow$ rectangular coordinate conversion
- 11 Logarithm with random base
- 12 Permutation
- 13 Combination
- 14 Repeated permutation
- 15 Repeated combination
- 16 Sum of arithmetic progression
- 17 Sum of geometric progression
- 18 Sum of squares
- 19 Sum of cubes
- 20 Inner product
- 21 Angle formed by vector
- 22 Distance between two points
- 23 Distance between point and straight line
- 24 Angle of intersect for two straight lines
- 25 Area of a triangle
- 26 Area of rectangle
- 27 Area of a parallelogram (1)
- 28 Area of a parallelogram (2)
- 29 Area of a trapezoid
- 30 Area of a circle
- 31 Area of a sector (1)
- 32 Area of a sector (2)
- 33 Area of an ellipse
- 34 Volume of a sphere
- 35 Surface area of a sphere
- 36 Volume of a circular cylinder
- 37 Lateral area of a circular cylinder
- 38 Volume of a pyramid
- 39 Volume of a circular cone
- 40 Lateral area of a circular cone

PHYSICS

- 41 Acceleration
- 42 Distance of advance
- 43 Distance of drop

- 44 Law of universal gravitation
- 45 Cycle of circular motion (1)
- 46 Cycle of circular motion (2)
- 47 Cycle of circular motion (3)
- 48 Simple harmonic motion (1)
- 49 Simple harmonic motion (2)
- 50 Cycle of spring pendulum
- 51 Simple pendulum (1)
- 52 Simple pendulum (2)
- 53 Cycle of simple pendulum
- 54 Centrifugal force (1)
- 55 Centrifugal force (2)
- 56 Potential energy
- 57 Kinetic energy
- 58 Elastic energy
- 59 Energy of rotational body
- 60 Sound intensity
- 61 Velocity of wave transmitted by a chord
- 62 Doppler effect
- 63 Relative index of refraction
- 64 Critical angle of incidence
- 65 Equation of state of ideal gas (1)
- 66 Equation of state of ideal gas (2)
- 67 Equation of state of ideal gas (3)
- 68 Equation of state of ideal gas (4)
- 69 Quantity of heat
- 70 Coulomb's law
- 71 Magnetic force
- 72 Resistance of a conductor
- 73 Frequency of electric oscillation
- 74 Average gaseous molecular speed
- 75 Electronic kinetic energy in magnetic field

ELECTRICITY/ELECTRONICS

- 76 Strength of electric field
- 77 Energy density stored in electrostatic field (1)
- 78 Energy density stored in electrostatic field (2)
- 79 Energy stored in electrostatic capacity (1)
- 80 Energy stored in electrostatic capacity (2)
- 81 Energy stored in electrostatic capacity (3)
- 82 Force exerting on magnetic pole
- 83 Magnetic energy of inductance
- 84 Electrostatic capacity between parallel plates
- 85 Impedance in LR series circuit
- 86 Impedance in RC series circuit
- 87 Composite reactance in LC series circuit

- 88 Impedance in LRC series circuit
- 89 Impedance in LRC parallel circuit
- 90 Series resonance circuit
- 91 Parallel resonance circuit
- 92 Power factor
- 93 Joule's law (1)
- 94 Joule's law (2)
- 95 Induced electromotive force
- 96 Voltage gain
- 97 Current gain
- 98 Power gain
- 99 $\Delta \rightarrow Y$ conversion
- 100 $Y \rightarrow \Delta$ conversion
- 101 Minimum loss matching
- 102 Change in terminal voltage of R in RC series circuit

STATISTICS

- 103 Probability function of binomial distribution
- 104 Probability function of Poisson's distribution
- 105 Probability function of geometric distribution
- 106 Probability function of hypergeometric distribution
- 107 Probability function of exponential distribution
- 108 Probability function of uniform distribution
- 109 Normal distribution (probability density function)
- 110 Normal probability function
- 111 Deviation

MECHANICS

- 112 Tension and compression
- 113 Shearing stress (1)
- 114 Shearing stress (2)
- 115 Enthalpy
- 116 Efficiency of Carnot's cycle (1)
- 117 Efficiency of Carnot's cycle (2)
- 118 Bernoulli's theorem (1)
- 119 Bernoulli's theorem (2)
- 120 Bernoulli's theorem (3)
- 121 Equation of continuity (1)
- 122 Equation of continuity (2)
- 123 Module (1)
- 124 Module (2)
- 125 Module (3)
- 126 Module (4)
- 127 Reynold's number
- 128 Calculations using a stadia

SCIENTIFIC

CALCULATORS

heffers:

Sidney Street Cambridge CB2 3HL
Telephone (0223) 358241

All Casio Scientific Calculators have these functions and use true algebraic logic for computation.

	FX82C	FX85N	FX250C	FX451M	FX911N	FX100C	FX115N	FX570C	FX580	FX911N	FX10F	FX50F	FX61F	FX5000F	FX3400P	FX3800P	FX4000P	FX7000G	FX7500G	FX8000G
Averages and Standard Deviation (SD)																				
Normal Log and Anti Logs																				
Normal and Anti Logs																				
Polar <-> Rectangular (R<->P)																				
Register Ex (X<->Y)																				
Trig and Arc Trig with																				
DMS <-> Decimal																				
Mathematical functions including																				
$\sqrt{x}$, X^Y , X^1/X , $1/X \pm P(\%)$																				
Decimal Places (Fix)																				
Significant Digits (Sci)																				
Shape																				
No. Scientific Functions	59	75	59	116	75	101	101	110	128	110	100	109	91	103	110	88	95	93	107	93
Total No. Functions	75	128	75	132	128	154	154	163	180	163	189	198	178	288	171	151	160	193	150	254
Base Conversions/Operations																				
(BIN/OCT/HEX)																				
Built in Formulae																				
Complex No.																				
Constants (K) AS stands for	1	7	1	1	7	7	7	7	7	7	7	7	7	10	7	7	26->94	26->78	26->526	26->206
ASSIGNED e.g. (6 assigned)	(6 AS)				(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)	(6 AS)					
Constants Built in				13				9		9		9		13	9					
Cube Root $\sqrt[3]{x}$				physical				physical		physical		physical		physical	physical					
Display	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD Dot Matrix	LCD	LCD	LCD	LCD	LCD Dot Matrix	LCD	LCD	LCD Dot Matrix	LCD Dot Matrix	LCD Dot Matrix	LCD Dot Matrix
Display Capacity (Characters)	8	8	8	10	8	10	10	10	12	10	11	11	11	14 x 2 lines	10	10	12	16 x 8 lines	16 x 8 lines	16 x 8 lines
Engineering Notation																				
Factorial (X!)																				
Fractions (a^b/c)																				
Gamma Functions (L)																				
Hyperbolic Functions/ARC Hyp																				
Improper Fractions (d/c)																				
Linear Regression																				
Logic Operations																				
Mantissa + Exponent	8 + 2	8 + 2	8 + 2	10 + 2	8 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	12 + 2	10 + 2	10 + 2	10 + 2
Memory (M+, M-, Min, MR)	3 Key	3 Key	3 Key	3 Key	3 Key	3 Key	3 Key	3 Key	3 Key	3 Key	2 Key	2 Key	2 Key	16 formulae	2 Key	2 Key	26->94	26->78	26->526	26->206
Memory Exchange (X<->M)		X<->K			X<->K	X<->K	X<->K	X<->K	X<->K	X<->K	X<->K	X<->K	X<->K	X<->K	X<->K	X<->K				
Memory Retention																				
Metric <-> Imperial																				
Conversions (US galls only)			16																	
Parentheses	18	18	18	18	18	18	18	18							18	18				
Percentages (%)																				
Permutations/Combinations																				
Power Source	AA x 2	Solar + CR927	SR44 x 2	Solar + CR927	Solar + CR927	AA x 1	Solar + CR927	SR44 x 1	CR2032	Solar + CR927	Solar + CR927	Solar + CR927	Solar + CR927	CR2032	Solar + CR927	CR2032	CR2032	CR2032	CR2032	CR2032
Program Areas																				
Programmable Steps											29	29	30	675	29	235	550	422	4,006	1446 + 1917 = 3363
Random Numbers (Ran #)																				
Roundoff																				

CALCULATORS ILLUSTRATED ARE NOT TO SCALE. WE RESERVE THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT PRIOR NOTICE.