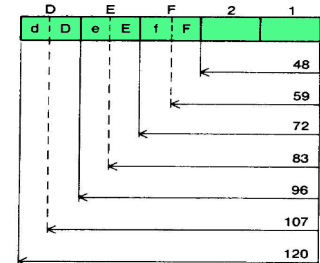
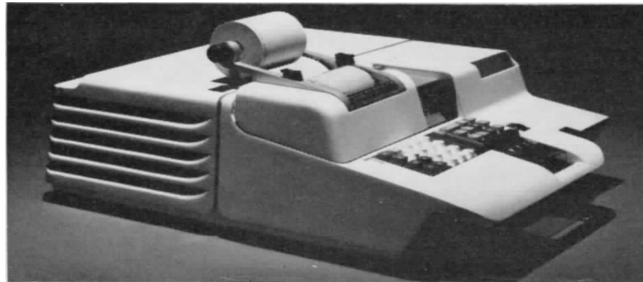


Programma 101
basic operating
instructions



MANUAL Operations

1. Turn the computer ON
2. Depress GENERAL RESET
3. RECORD PROGRAM off (out)
4. PRINT PROGRAM off (out)
5. Set DECIMAL LIMIT wheel

Enter numeric data and touch the desired operation keys

To RECORD a program

1. Turn the computer ON
2. Depress GENERAL RESET
3. RECORD PROGRAM on (in)

Enter in order, the instructions that comprise the program.

To correct an error, the CLEAR ENTRY key will clear only:

- a. the last instruction printed, or
- b. that portion of an instruction entered on the keyboard.

4. After writing the program:

RECORD PROGRAM off (out)

5. If constants are stored as part of the program, Enter the figure and transfer it to the register.

6. To permanently store the program:

RECORD PROGRAM on (in) and insert a magnetic program card.

To USE a program

1. Turn the computer ON
2. Depress GENERAL RESET
3. RECORD PROGRAM off (out)
4. PRINT PROGRAM off (out)
5. Set DECIMAL LIMIT wheel
6. Insert the program card
7. Depress the ROUTINE SELECTION

Follow the operating procedure on the protective jacket to complete the program.

To PRINT a program

1. Turn RECORD PROGRAM on (in), then turn off (out)
2. PRINT PROGRAM on (in)
3. Depress Print Key (◇)

The computer will stop at each S instruction; to continue printing depress the Print Key.

TRANSFERS

- ↓ To A Register
- ↑ From M Register
- ↕ Exchange with A Register
- RS Exchange D and R Registers
- /↓ Decimal Part to M Register

ARITHMETIC

- + Addition
- Subtraction
- x Multiplication
- ÷ Division
- √ Square Root
- A↑ Absolute Value

MISCELLANEOUS

- S Stop
- * Clear
- ◇ Print
- /◇ Vertical Space

JUMP OPERATIONS

Unconditional

Origin	Destination
Δ →	AΔ
CΔ →	BΔ
DΔ →	EΔ
RΔ →	FΔ

Δ = V,W,Y,Z

Conditional

Origin	Destination
/Δ →	aΔ
cΔ →	bΔ
dΔ →	eΔ
rΔ →	fΔ

Δ = V,W,Y,Z

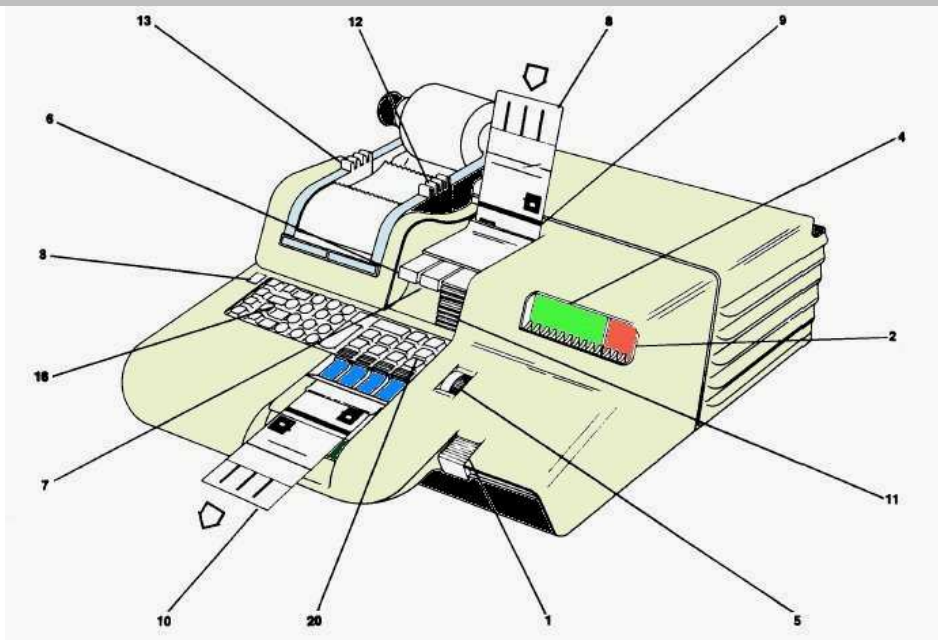
Unconditional

The point of origin instruction, when read by the computer, interrupts the sequential execution of instructions and jumps to its corresponding reference point to continue its performance.

Conditional

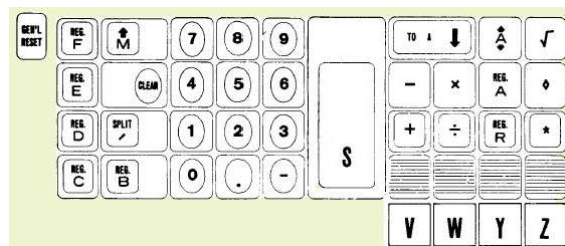
The point of origin instruction, when read by the computer, tests the contents of the A register for a positive value and if the content is positive interrupts the sequential execution of instructions and jumps to its corresponding reference point to continue its performance. If the content is found to be zero or negative the computer continues with its normal sequential execution.

The lower case letters are obtained by entering the Split Key (/).



- 1 On-Off Key
- 2 Error Light
- 3 General Reset Key
- 4 Correct Performance Light
- 5 Decimal Limit Wheel
- 6 Record Program Switch
- 7 Print Program Switch
- 8 Magnetic Program Card
- 9 Magnetic Card Read/Write Device
- 10 Magnetic Card Return
- 11 Keyboard Release Key
- 12 Tape Advance
- 13 Paper Release
- 20 Keyboard

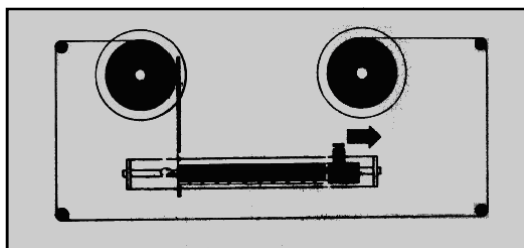
- CLEAR Clear Entry Key
- S Start Key
- REG Register Keys
- SPLIT/ Split Key
- ◇ Print Key
- * Clear Key
- TO A ↓ Transfer to A
- M ↑ Transfer From M
- ↑A ↓ Exchange
- + Addition
- Subtraction
- X Multiplication
- ÷ Division
- √ Square Root



Numeric Keyboard

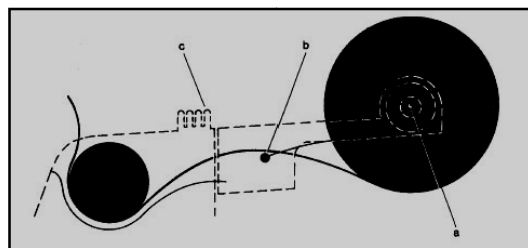
Routine Selection Keys

CHANGING THE RIBBON



1. Remove print unit cover and pull paper tape holder forward.
2. Move the ribbon reverse levers away from the spools (see diagram)
3. Remove spools and ribbon and discard.
4. Replace the spools and thread the ribbon as indicated in the diagram. Restore the ribbon levers.

INSERTION OF PAPER ROLL



1. Remove the paper roll bar (a) and discard the old spool.
2. Place the new roll between the two holders, so the tape feeds from underneath, and insert paper roll bar.
3. Turn Programma on.
4. Feed the tape over the guide bar (b) and under the print cylinder. Depress the tape advance lever (c) to feed tape through the printing unit.
5. Depress tape release lever to adjust tape alignment.

From the original Summary Card (adapted by L.C. - Sept. 2017)