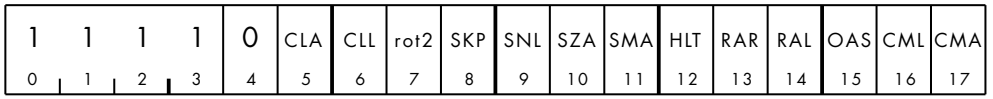
# PDP-4 summary

### MAIN INSTRUCTIONS


| | | |
|---|---|---|
| 00 CAL | JMS 20 | CALL |
| 04 DAC | C(Y) ← AC | DEPOSIT AC |
| 10 JMS | C(Y) ← PC. PC ← Y+1 | JUMP TO SUBROUTINE |
| 14 DZM | C(Y) ← 0 | DEPOSIT ZERO |
| 20 LAC | AC ← C(Y) | LOAD AC |
| 24 XOR | AC ← AC ⊻ C(Y) | XOR |
| 30 ADD | AC ← AC + C(Y) | ONE'S COMP. ADD |
| 34 TAD | L:AC ← AC + C(Y) | TWO'S COMP. ADD |
| 40 XCT | execute C(Y) | EXECUTE |
| 44 ISZ | C(Y) ← C(Y)+1. C(Y) = 0: SKIP | INDEX, SKIP IF ZERO |
| 50 AND | AC ← AC ∧ C(Y) | AND |
| 54 SAD | AC ≠ C(Y): SKIP | SKIP IF AC DIFFERENT |
| 60 JMP | PC ← Y | JUMP |
| 64 | | |
| 70 IOT | | IO TRANSFER |
| 74 OPR | | OPERATE |
| 76 LAW | AC ← inst. word | LOAD AC WITH INST. |

### OPERATE GROUP




| | | | |
|---|---|---|---|
| 750000 CLA | AC ← 0 | | CLEAR AC |
| 744000 CLL | L ← 0 | | CLEAR L |
| 741000 SKP | reverse SKIP condition | | SKIP |
| 740400 SNL | L ≠ 0: SKIP | OR | SKIP ON NON-ZERO L |
| 740200 SZA | AC = 0: SKIP | | SKIP ON ZERO AC |
| 740100 SMA | AC < 0: SKIP | | SKIP ON MINUS AC |
| 741400 SZL | L = 0: SKIP | AND | SKIP ON ZERO L |
| 741200 SNA | AC ≠ 0: SKIP | | SKIP ON NON-ZERO AC |
| 741100 SPA | AC ≥ 0: SKIP | | SKIP ON PLUS AC |
| 740040 HLT | HALT | | HALT |
| 740020 RAR | L:AC ← rotate L:AC right | | ROTATE AC RIGHT |
| 740010 RAL | L:AC ← rotate L:AC left | | ROTATE AC LEFT |
| 742020 RTR | RAR twice | | ROTATE TWICE RIGHT |
| 742010 RTL | RAL twice | | ROTATE TWICE LEFT |
| 740004 OAS | AC ← AC ∨ SR | | OR AC SWITCH REG. |
| 740002 CML | L ← ~L | | COMPLEMENT L |
| 740001 CMA | AC ← ~AC | | COMPLEMENT AC |

### IO TRANSFER