

PPU INSTRUCTIONS 7600 COMPASS Version 2

| | | | | |
|------|-----|-----|---|--------|
| 01dm | LJM | m,d | Long jump to m(d) | 10-25 |
| 02dm | RJM | m,d | Return jump to m(d) | 15-30 |
| 03d | UJN | r | Unconditional jump to p+r | 7, 10 |
| 04d | ZJN | r | Zero jump to p+r | 5-10 |
| 05d | NJN | r | Nonzero jump to p+r | 5-10 |
| 06d | PJN | r | Plus jump to p+r | 5-10 |
| 07d | MJN | r | Minus jump to p+r | 5-10 |
| 10d | SHN | r | Shift (A) by r (left) or - (right) r bits | 6-34 |
| 11d | LMN | d | Logical difference (A) - d | 5 |
| 12d | LPN | d | Logical product (A) * d | 5 |
| 13d | SCN | d | Selective clear (A) | 5 |
| 14d | LDN | d | Load d → A | 5 |
| 15d | LCN | d | Load complement d → A | 5 |
| 16d | ADN | d | Add d + (A) → A | 5 |
| 17d | SBN | d | Subtract (A) - d → A | 5 |
| 20dm | LDC | c | Load c → A | 10 |
| 21dm | ADC | c | Add (A) + c → A | 10 |
| 22dm | LPC | c | Logical product (A) * c → A | 10 |
| 23dm | LMC | c | Logical difference (A) - c → A | 10 |
| 2400 | PSN | | Pass | 5 |
| 30d | LDD | d | Load (d) → A | 15 |
| 31d | ADD | d | Add (d) + (A) → A | 15 |
| 32d | SBD | d | Subtract (A) - (d) → A | 15 |
| 33d | LMD | d | Logical difference (A) - (d) → A | 15 |
| 34d | STD | d | Store (A) → d | 15 |
| 35d | RAD | d | Replace add (d) + (A) → d | 25 |
| 36d | AOD | d | Replace add one (d) + 1 → d | 25 |
| 37d | SOD | d | Replace subtract one (d) - 1 → d | 25 |
| 40d | LDI | d | Load ((d)) → A | 15, 25 |
| 41d | ADI | d | Add ((d)) + (A) → A | 15, 25 |
| 42d | SBI | d | Subtract (A) - ((d)) → A | 15, 25 |
| 43d | LMI | d | Logical difference (A) - ((d)) → A | 15, 25 |
| 44d | STI | d | Store (A) → (d) | 15, 25 |
| 45d | RAI | d | Replace add (A) + ((d)) → (d) | 25, 35 |
| 46d | AOI | d | Replace add one ((d)) + 1 → (d) | 25, 35 |
| 47d | SOI | d | Replace subtract one ((d)) - 1 → (d) | 25, 35 |
| 50dm | LDM | m,d | Load (m(d)) → A | 20, 30 |
| 51dm | ADM | m,d | Add (m(d)) + (A) → A | 20, 30 |
| 52dm | SBM | m,d | Subtract (A) - (m(d)) → A | 20, 30 |
| 53dm | LMM | m,d | Logical difference (A) - (m(d)) → A | 20, 30 |
| 54dm | STM | m,d | Store (A) → m(d) | 20, 30 |
| 55dm | RAM | m,d | Replace add (A) + (m(d)) → m(d) | 30, 40 |
| 56dm | AOM | m,d | Replace add one (m(d)) + 1 → m(d) | 30, 40 |
| 57dm | SOM | m,d | Replace subtract one (m(d)) - 1 → m(d) | 30, 40 |

| | | | | |
|------|-----|-------|---|---------------------|
| 60dm | FIM | m,d,t | Jump to m; input word flag on channel d | 10-15 |
| 61dm | EIM | m,d,t | Jump to m; no input word flag on channel d | 10-15 |
| 62dm | FRM | m,d,t | Jump to m; input record flag on channel d | 10-15 |
| 63dm | NIM | m,d,t | Jump to m; no input record flag on channel d | 10-15 |
| 64dm | FOM | m,d,t | Jump to m; output word flag on channel d | 10-15 |
| 65dm | EOM | m,d,t | Jump to m; no output word flag on channel d | 10-15 |
| 66dm | ORM | m,d,t | Jump to m; output record flag on channel d | 10-15 |
| 67dm | NOM | m,d,t | Jump to m; no output record flag on channel d | 10-15 |
| 70d | IAN | d | Input to A from channel d | 9+ device dependent |
| 71dm | IAM | m,d | Input (A) words to m from channel d | 9+ device dependent |
| 72d | OAN | d | Output from A on channel d | 9+ device dependent |
| 73dm | OAM | m,d | Output (A) words from m on channel d | 9+ device dependent |
| 74d | RFN | d | Send record flag on channel d | 5 |
| 7700 | ESN | d | Error stop | 5 |

6000 SERIES INSTRUCTIONS

| | | | |
|------|-----|-------|--|
| 260d | EXN | d | Exchange jump to CPU d |
| 261d | MXN | d | Monitor exchange jump CPU d |
| 270d | RPN | d | Read Program address of CPU d |
| 60d | CRD | d | Central read from (A) to d |
| 61dm | CRM | m,d,t | Central read (d) CM words beginning at CM (A) → PPU m |
| 62d | CWD | d | Central write from d to (A) |
| 63dm | CWM | m,d,t | Central write (d) CM words beginning at PPU m → CM (A) |
| 64dm | AJM | m,d,t | Jump to m if channel d active |
| 65dm | IJM | m,d,t | Jump to m if channel d inactive |
| 66dm | FJM | m,d,t | Jump to m if channel d full |
| 67dm | EJM | m,d,t | Jump to m if channel d empty |
| 74d | ACN | d | Activate channel d |
| 75d | DCN | d | Disconnect channel d |
| 76d | FAN | d | Function (A) on channel d |
| 77dm | FNC | c,d,t | Function c on channel d |

6416 INSTRUCTIONS

| | | | |
|------|-----|---|----------------------|
| 260d | ETN | d | Extended transfer |
| 270d | ERN | d | Extended read status |

CHARACTER SETS

| Char. | Display | Hollerith | BCD | | ASCII SUBSET | |
|-------|---------|-----------|------|------|--------------|------|
| | | | Ext. | Int. | Char. | Code |
| : | | 8-2 | 00 | 12 | 3A | 8-2 |
| A | 01 | 12-1 | 61 | 21 | 41 | 12-1 |
| B | 02 | 12-2 | 62 | 22 | 42 | 12-2 |
| C | 03 | 12-3 | 63 | 23 | 43 | 12-3 |
| D | 04 | 12-4 | 64 | 24 | 44 | 12-4 |
| E | 05 | 12-5 | 65 | 25 | 45 | 12-5 |
| F | 06 | 12-6 | 66 | 26 | 46 | 12-6 |
| G | 07 | 12-7 | 67 | 27 | 47 | 12-7 |
| H | 10 | 12-8 | 70 | 30 | 48 | 12-8 |
| I | 11 | 12-9 | 71 | 31 | 49 | 12-9 |
| J | 12 | 11-1 | 41 | 41 | 4A | 11-1 |
| K | 13 | 11-2 | 42 | 42 | 4B | 11-2 |
| L | 14 | 11-3 | 43 | 43 | 4C | 11-3 |
| M | 15 | 11-4 | 44 | 44 | 4D | 11-4 |
| N | 16 | 11-5 | 45 | 45 | 4E | 11-5 |
| O | 17 | 11-6 | 46 | 46 | 4F | 11-6 |
| P | 20 | 11-7 | 47 | 47 | 50 | 11-7 |
| Q | 21 | 11-8 | 50 | 50 | 51 | 11-8 |
| R | 22 | 11-9 | 51 | 51 | 52 | 11-9 |
| S | 23 | 0-2 | 22 | 62 | 53 | 0-2 |
| T | 24 | 0-3 | 23 | 63 | 54 | 0-3 |
| U | 25 | 0-4 | 24 | 64 | 55 | 0-4 |
| V | 26 | 0-5 | 25 | 65 | 56 | 0-5 |
| W | 27 | 0-6 | 26 | 66 | 57 | 0-6 |
| X | 30 | 0-7 | 27 | 67 | 58 | 0-7 |
| Y | 31 | 0-8 | 30 | 70 | 59 | 0-8 |
| Z | 32 | 0-9 | 31 | 71 | 5A | 0-9 |
| 0 | 33 | 0 | 12 | 00 | 30 | 0 |
| 1 | 34 | 1 | 01 | 01 | 31 | 1 |
| 2 | 35 | 2 | 02 | 02 | 32 | 2 |
| 3 | 36 | 3 | 03 | 03 | 33 | 3 |
| 4 | 37 | 4 | 04 | 04 | 34 | 4 |

① 11-0 and 11-8-2 are equivalent
 ② 12-0 and 12-8-2 are equivalent

| Char. | Display | Hollerith | BCD | | Char. | ASCII SUBSET |
|-------|---------|-----------|------|------|-------|--------------|
| | | | Ext. | Int. | | |
| 5 | 40 | 5 | 05 | 05 | 5 | 35 |
| 6 | 41 | 6 | 06 | 06 | 6 | 36 |
| 7 | 42 | 7 | 07 | 07 | 7 | 37 |
| 8 | 43 | 8 | 10 | 10 | 8 | 38 |
| 9 | 44 | 9 | 11 | 11 | 9 | 39 |
| + | 45 | 12 | 60 | 20 | + | 2B |
| - | 46 | 11 | 40 | 40 | - | 2D |
| * | 47 | 11-8-4 | 54 | 54 | * | 2A |
| / | 50 | 0-1 | 21 | 61 | / | 2F |
| (| 51 | 0-8-4 | 34 | 74 | (| 28 |
|) | 52 | 12-8-4 | 74 | 34 |) | 29 |
| \$ | 53 | 11-8-3 | 53 | 53 | \$ | 24 |
| = | 54 | 8-3 | 13 | 13 | = | 3D |
| space | 55 | space | 20 | 60 | space | space |
| , | 56 | 0-8-3 | 33 | 73 | , | 2C |
| ≡ | 57 | 12-8-3 | 73 | 33 | ≡ | 2E |
| ≡ | 60 | 0-8-6 | 36 | 76 | # | 23 |
| | 61 | 8-7 | 17 | 17 | [| 5B |
| % | 62 | 0-8-2 | 32 | 72 |] | 5D |
| ≠ | 63 | 8-6 | 16 | 16 | % | 25 |
| ≠ | 64 | 8-4 | 14 | 14 | ≠ | 22 |
| ≠ | 65 | 0-8-5 | 35 | 75 | ≠ | 5F |
| ∨ | 66 | 11-0① | 52 | 52 | ∨ | 21 |
| ∧ | 67 | 0-8-7 | 37 | 77 | & | 26 |
| ↑ | 70 | 11-8-5 | 55 | 55 | ' | 27 |
| ↓ | 71 | 11-8-6 | 56 | 56 | ? | 3F |
| ∨ | 72 | 12-0② | 72 | 32 | < | 3C |
| ∧ | 73 | 11-8-7 | 57 | 57 | > | 3E |
| ∨ | 74 | 8-5 | 15 | 15 | @ | 40 |
| ∧ | 75 | 12-8-5 | 75 | 35 | \ | 5C |
| ∨ | 76 | 12-8-6 | 76 | 36 | ∧ | 5E |
| ∧ | 77 | 12-8-7 | 77 | 37 | ; | 3B |

③ 11-0 and 12-8-7 are equivalent
 ④ 12-0 and 12-8-4 are equivalent