

APPENDIX H
 OS SUBROUTINE LIBRARY

| NAME | INPUT REGISTERS | | | | | | | | | | | | | | | | DESCRIPTION | SECTION |
|--------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | | |
| ACTIVATE | x | x | | | | | | | | | | | | | | | Moves pattern and color generator to VRAM | 3.2.2.4 |
| ADD16 | x | x | | | | | | | | | | | | | | | Adds 8-bit signed (A) to 16-bit unsigned (BL) → (BL) | 9.1 |
| CONF_SCAN | | | | | | | | | | | | | | | | | Moves controller port data to CRAM | 6.4 |
| DECLIN | x | x | | | | | | | | | | | | | | | Decrements least significant nibble pointed to by (BL) | 9.2 |
| DECLIN | x | x | | | | | | | | | | | | | | | Decrements most significant nibble pointed to by (BL) | 6.3 |
| DECODER | x | x | | | | | | | | | | | | | | | Calls CONF_SCAN | 6.3 |
| DILANGE | x | x | x | x | x | x | x | x | | | | | | | | | Doubles the size of the original object | 3.2.2.4 |
| FILL_VRAM | x | x | x | x | x | | | | | | | | | | | | Writes a specific value to VRAM | 3.1.5 |
| FREE_SIGNAL | | | | | | | | | | | | | | | | | Releases a timer to the free list based on SIGNAL-SUB | 5.8 |
| GET_VRAM | x | x | x | x | x | | | | | | | | | | | | Moves VRAM table entry to CRAM | 3.2.1.2 |
| INIT_SPR_ORDER | | | | | | | | | | | | | | | | | Initializes SPRITE_ORDER data area to zero | 3.2.3.1 |
| INIT_TABLE | x | x | | | | | | | | | | | | | | | Initializes the VDP base address for given table | 3.2.2.1 |
| INIT_TIMER | x | x | x | x | x | | | | | | | | | | | | Initializes timer data areas | 5.4 |
| INIT_WRITER | x | x | | | | | | | | | | | | | | | Initializes queue size, head and tail addresses and queue head and tail | 4.1 |
| LOAD_ASCII | | | | | | | | | | | | | | | | | Writes ASCII generator set to pattern generator table | 9.6 |
| MODE_1 | | | | | | | | | | | | | | | | | Sets VDP to graphics mode 1 and sprite size 0 | 3.1.6 |
| RENTOLSH | x | x | | | | | | | | | | | | | | | (BL) → byte.HSH to (BL) → byte.LSH | 9.4 |
| PLAY_FT | | | | | | | | | | | | | | | | | Called to start a sound | 7.3 |
| PLAY_SOUND | | | | | | | | | | | | | | | | | Moves frequency and attenuation data to sound chips | 7.5 |
| POLLER | | | | | | | | | | | | | | | | | Reads, decodes and debounces all active portions of both controllers | 6.2 |
| PUTOBJ | | | | | | | | | | | | | | | | | Changes an object's frame or location on the display | 3.3.0 |
| PUT_VRAM | x | x | x | x | x | | | | | | | | | | | | Moves data from CRAM to VRAM table | 3.2.1.3 |
| RAND_GEN | | | | | | | | | | | | | | | | | 16-bit random number generator | 9.5 |
| READ_REGISTER | | | | | | | | | | | | | | | | | Reads and returns the contents of the VDP register | 3.1.3 |
| READ_VRAM | x | x | x | x | x | | | | | | | | | | | | Reads from VRAM writes to buffer in CRAM | 3.1.1 |
| REFLECT_HORIZONTAL | x | x | x | x | x | | | | | | | | | | | | Reflection of generators about the horizontal axis | 3.2.2.2 |
| REFLECT_VERTICAL | x | x | x | x | x | | | | | | | | | | | | Reflection of generator about the vertical axis | 3.2.2.1 |
| REQUEST_SIGNAL | x | x | | | | | | | | | | | | | | | Sets up a timer for the caller | 5.6 |
| ROTATE_90 | x | x | x | x | x | | | | | | | | | | | | 90-degree clockwise rotation of generator | 3.2.2.3 |
| SOUND_INIT | | | | | | | | | | | | | | | | | Initializes various sound data areas | 7.2 |
| SOUND_RUN | | | | | | | | | | | | | | | | | Called every VDP interrupt, manages sound data base | 7.4 |
| TEST_SIGNAL | | | | | | | | | | | | | | | | | Tests for a time-out of a timer | 5.7 |
| TIMER_RUN | | | | | | | | | | | | | | | | | Maintains all OS software timers | 5.3 |
| UPDATE_SPINNER | | | | | | | | | | | | | | | | | Services controller spinner switch interrupts | 6.5 |
| WRITER | | | | | | | | | | | | | | | | | Performs deferred PUTOBJ operations | 4.2 |
| WRITE_REGISTER | | | | | | | | | | | | | | | | | Writes a value to a selected VDP register | 3.1.0 |
| WRITE_VRAM | x | x | x | x | x | | | | | | | | | | | | Moves data from CRAM to VRAM | 3.2.3.2 |
| WR_SPR_IN_VBL | | | | | | | | | | | | | | | | | Moves local sprite data to VRAM sprite attribute table | 3.2.3.2 |

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