

I/O CODES

| CTAL CODE | FLEXOWRITER ^② | | 1232 I-O CONSOLE MOD. FIELDATA | TELETYPE | | OCTAL CODE | FLEXOWRITER | | 1232 I-O CONSOLE MOD. FIELDATA | 80 COLUMN CARDS | | 80 COLUMN CARDS | |
|--------------|--------------------------|---------------|--------------------------------------|---------------|----------------|---------------|-------------------|----------------|--------------------------------------|--------------------|-------|--------------------|-------|
| | UPPER CASE | LOWER CASE | | LETTERS | FIGURES | | UPPER CASE | LOWER CASE | | CHAR. | PUNCH | CHAR. | PUNCH |
| 00 | — | — | BLANK ^① | | | 41 | — | — | - | u | 0 | X | 0-7 |
| 01 | T | + | UPPER CASE ^④ | T | 5 | 42 |) | | + | 1 | 1 | Y | 0-8 |
| 02 | COLOR SHIFT | | LOWER CASE ^⑤ | CARRIAGE RET. | | 43 | STOP ^⑦ | | < | 2 | 2 | Z | 0-9 |
| 03 | O | o | LINE FEED | O | 9 | 44 | = | = | = | 3 | 3 | + | Y |
| 04 | SPACE | | CARRIAGE RET. SPACE | SPACE | | 45 | CARRIAGE RET. | | > | 4 | 4 | - ^⑧ | X |
| 05 | H | h | | H | # ^④ | 46 | (| | - | 5 | 5 | { | 0-4-8 |
| 06 | N | n | A | N | . | 47 | SHIFT UP | , | \$ | 6 | 6 | } | X-4-8 |
| 07 | M | m | B | M | . | 50 | - | | + | 7 | 7 | * | Y-4-8 |
| 10 | — | — | C | LINE FEED | | 51 | TAB | (| | 8 | 8 | / | 0-1 |
| 11 | L | l | D | L |) | 52 | 1 | 1 | | 9 | 9 | = | 3-8 |
| 12 | R | r | E | R | 4 | 53 | — | — | : | A | Y-1 | . | 0-3-8 |
| 13 | G | g | F | G | & | 54 | / | + | ? | B | Y-2 | \$ | X-3-8 |
| 14 | I | i | G | I | 8 | 55 | — | — | ! | C | Y-3 | . | Y-3-8 |
| 15 | P | p | H | P | 8 | 56 | - ^⑨ | - ^⑩ | | D | Y-4 | - ^⑪ | 4-8 |
| 16 | C | c | I | C | : | 57 | SHIFT DOWN | | ⊙ | E | Y-5 | | |
| 17 | V | v | J | V | . | 60 | 8 | 8 | ⊙ | F | Y-6 | | |
| 20 | E | e | K | E | 3 | 61 | BACKSPACE | | | G | Y-7 | | |
| 21 | Z | z | L | Z | " | 62 | 5 | 5 | 2 | H | Y-8 | | |
| 22 | D | d | M | D | \$ | 63 | — | — | 3 | I | Y-9 | | |
| 23 | B | b | N | B | ? | 64 | 4 | 4 | 4 | J | X-1 | | |
| 24 | S | s | O | S | 0 ^④ | 65 | — | — | 5 | K | X-2 | | |
| 25 | Y | y | P | Y | 6 | 66 | 6 | 6 | 6 | L | X-3 | | |
| 26 | F | f | Q | F | / | 67 | — | — | 7 | M | X-4 | | |
| 27 | X | x | R | X | / | 70 | 3 | 3 | 8 | N | X-5 | | |
| 30 | A | a | S | A | - | 71 | — | — | 9 | O | X-6 | | |
| 31 | W | w | T | W | 2 | 72 | 7 | 7 | ' | P | X-7 | | |
| 32 | J | j | U | J | . | 73 | — | — | : | Q | X-8 | | |
| 33 | 9 | 9 | V | FIGURES | | 74 | 2 | 2 | / | R | X-9 | | |
| 34 | U | u | W | U | 7 | 75 | — | — | ⊙ | S | O-2 | | |
| 35 | Q | q | X | Q | 1 | 76 | — | — | ⊙ | T | O-3 | | |
| 36 | K | k | Y | K | (| 77 | CODE DELETE | | ⊙ | U | O-4 | | |
| 37 | 0 | 0 | Z | LETTERS | | | | | ⊙ | V | O-5 | | |
| 40 | — | — |) | | | | | | ⊙ | W | O-6 | | |

NOTES

- ① PARITY BIT NOT INCLUDED
- ② STANDARD FOR NTDS and UNIVAC DEFENSE SYSTEMS

- ③ UPPER CASE K ON KEYBOARD "???" IS TYPED
- ④ "??" IS TYPED

- ⑤ "" IS TYPED
- ⑥ PRINTED ON TAPE BUT NOT ON PAGE

- ⑦ STOP THE FLEXOWRITER
- ⑧ MINUS
- ⑨ DASH

ANGULAR RESOLUTION EQUIVALENTS OF BINARY DIGITS

| n | 2 ⁿ | Ang. Equ. | Degree/bit | Rad/bit | ½ ⁿ |
|----|----------------|-----------|------------|-----------|----------------|
| 0 | 1 | 360.000° | 360 | 6.28318 | 1.00000000 |
| 1 | 2 | 180.000° | 180 | 3.14159 | .50000000 |
| 2 | 4 | 90.000° | 90 | 1.57079 | .25000000 |
| 3 | 8 | 45.000° | 45 | 0.78540 | .12500000 |
| 4 | 16 | 22.500° | 22.5 | 0.39240 | .06250000 |
| 5 | 32 | 11.250° | 11.25 | 0.19635 | .03125000 |
| 6 | 64 | 5.625° | 5.625 | 0.09817 | .01562500 |
| 7 | 128 | 2.813° | 2.813 | 0.04909 | .00781300 |
| 8 | 256 | 1.406° | 1.406 | 0.02454 | .00390600 |
| 9 | 512 | 42.188 m | 0.7031 | 0.01277 | .00195300 |
| 10 | 1,024 | 21.094 m | 0.3516 | 0.006136 | .00097700 |
| 11 | 2,048 | 10.547 m | 0.1758 | 0.003068 | .00048800 |
| 12 | 4,096 | 5.2734m | 0.08799 | 0.001534 | .00024400 |
| 13 | 8,192 | 2.6367m | 0.04395 | 0.000767 | .00012200 |
| 14 | 16,384 | 1.3134m | 0.02197 | 0.000384 | .00006100 |
| 15 | 32,768 | 39.55s | 0.01099 | 0.000192 | .00003050 |
| 16 | 65,536 | 19.78s | 0.005493 | 0.000096 | .00001530 |
| 17 | 131,072 | 9.89s | 0.002747 | 0.000048 | .00000760 |
| 18 | 262,144 | 4.94s | 0.001373 | 0.000024 | .00000380 |
| 19 | 524,288 | 2.47s | 0.000687 | 0.000012 | .00000190 |
| 20 | 1,048,576 | 1.24s | 0.000343 | 0.000006 | .00000095 |
| 21 | 2,097,152 | 0.62s | 0.000172 | 0.000003 | .00000047 |
| 22 | 4,194,304 | 0.31s | 0.000085 | 0.0000015 | .00000024 |
| 23 | 8,388,608 | 0.16s | 0.000043 | 0.0000007 | .00000012 |
| 24 | 16,777,216 | 0.08s | 0.000021 | 0.0000004 | .00000006 |

SPERRY RAND CORPORATION
UNIVAC
 Defense Systems Division